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## Sustainable Coffee: Neither markets nor labels nor shorter chains, but inclusive agreements. An Institutional Resource Regime analysis of Local Regulatory Arrangements in two Colombian regions.

Dussan López Pablo Andrés

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IDHEAP

Institut de hautes études  
en administration publique

FACULTE DE DROIT, DES SCIENCES CRIMINELLES ET D'ADMINISTRATION PUBLIQUE.

INSTITUT DE HAUTES ETUDES EN ADMINISTRATION PUBLIQUE.

**Sustainable Coffee: Neither markets nor labels nor shorter chains, but  
inclusive agreements.**

**An Institutional Resource Regime analysis of Local Regulatory  
Arrangements in two Colombian regions.**

**THESE DE DOCTORAT**

présentée à la faculté de droit, des sciences criminelles et d'administration publique de  
l'Université de Lausanne pour l'obtention du grade de

Docteur en administration publique

par

Pablo Andrés Dussán López

Directeur de thèse

Professeur Peter Knoepfel

Lausanne

2019





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en administration publique

## IMPRIMATUR

Le Décanat de la Faculté de droit, des sciences criminelles et d'administration publique, sur proposition d'un jury formé des professeurs Peter Knoepfel, Stéphane Nahrath, du docteur Stéphane Boisseaux et de la docteure Xiomara F Quinones-Ruiz, sans se prononcer sur les opinions du candidat, autorise l'impression de la thèse de Monsieur Pablo Dussan Lapez, intitulée :

**Sustainable coffee: Neither markets nor labels nor shorter chains,  
but inclusive agreements.**

**An Institutional Resource Regime analysis of local  
regulatory arrangements in two Colombian coffee regions**

Lausanne, le 8 mai 2019

Prof. Andreas Ladner  
Vice-Doyen de la Faculté de droit,  
des sciences criminelles  
et d'administration publique



*Dedicado a los productores, comercializadores y tostadores del Café.*

*En memoria de Luz Villegas de López  
1925-2018*

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## II. Abstract

Free markets encourage a highly-productive/low-cost coffee culture that denies farmers their expected income; communities their required healthy environment, indigenous population their vital cultural heritage, roasters their envisioned reputation; consumers their desired aromatic profile; NGO's their claimed fairness; authorities their needed social cohesion, etc. All of these deprivations are services demanded from the Resource Coffee, which interested actors have tried to obtain by activating institutions, such as voluntary sustainable standards based on private law, or organic labeling defined by public law, among others. These institutions (dis)incentivize farmers, traders, roasters, and consumers to behave differently than mandated by market forces.

Scholars have used the "lens of contract" to analyze the effectiveness of these institutions to provide a normatively defined combination of economic, social and environmental services, namely the three dimensions of sustainable development. However, the provision of such a combination can diminish the provision of other services like the exceptional aromatic profile demanded by high-end roasters or the cultural heritage demanded by the indigenous population. Expectedly, these deprived actors had activated institutions to fight for their demanded services that could cancel the effect of the previously activated institutions. The absence of a wide-accepted consensus of these institutional effects is not surprising.

We propose a different approach that evaluates the provision of services demanded by actors from the Resource Coffee in a given time and space using the "lens of negotiation". How do actors enhance the sustainable management of coffee, defined as the provision of this whole set of demanded services, by reaching local regulatory agreements (LRA)? To answer this question, first, we evaluate which type of LRAs optimize the level of services provision depending on the combined presence/absence of three conditions: extent or the regulation of uses of the Resource; coherence or the governance mechanism; and closure or the market power. Then, we explain the emergence of LRAs by actors' games conceptualized as a sequence of three analytical dimensions: actors' coalition or the joint action agreed by actors to tackle a shared threat for the provision of their demanded services; mobilization of action resources or the observable engagement of actors in the political arena to activate institutions using a closed-list of ten action resources; and institutional creativity or actors' capability to shape the final output in order to incentivize the uses of the Resource needed to profile the demanded services. We selected Riosucio and Buesaco, two Colombian municipalities where coffee sparked the highest quantity of services for the highest quantity of actors in the most antagonistic way: whereas the LRAs in Riosucio are characterized by labels, those in Buesaco are featured by shorter chains.

Results suggest that a LRA for the sustainable management of coffee is a result of an actors' game featured by: the proper dimension of the collective actor, so a negotiation among actors with different demands can be possible. Then, this interaction has to generate a power-balanced initial stage of negotiation so, the creativity for shaping the implementation of the institution can emerge, in order to produce a coherently regulated LRA. However, as there are services inherently incompatible, it is impossible to have one all-comprising LRA. So, further research should be done to study the substance of a set of minimum rules agreed between different LRAs.

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### III. Abbreviations

- ACE - Alliance for Coffee Excellence
- ACEDOC - *Asociación de Cafés Especiales de Riosucio*
- ACPC - Association of Coffee Producing Countries
- ANUC - *Asociación Nacional de Usuarios Campesinos*
- APC – Acuerdo de Política Cafetera
- Asoexport - *Asociación de Exportadores de Café de Colombia*
- Asprocafé Ingrumá - *Asociación de Pequeños Productores de Café Ingrumá*
- Asproinca - *Asociación de Productores Indígenas y Campesinos*
- BCP – Borderland Coffee Project
- CAltura – *Café con Altura Buesaco*
- CLAC - Coordinadora Latinoamericana y del Caribe de Pequeños Productores y Trabajadores de Comercio Justo
- CCEspeciales – *Cooperativa de Cafés Especiales de Buesaco*
- CCLC - Coffee Cultural Landscape of Colombia
- CIAT - *Centro Internacional de Agricultura Tropical*
- CNC – *Comité Nacional de Cafeteros*
- CNilson – *Café de Nilson.*
- CRIDEC - *Consejo Regional Indígena de Caldas*
- CRS - Catholic Relief Services
- CSV – Creating Shared Value
- DOP – *Denominación de Origen Protegida*
- FLO - Fairtrade Labeling Organizations International
- FNC – *Federación Nacional de Cafeteros de Colombia*
- FoNC – *Fondo Nacional del Café*
- GI – Geographical Indication
- GIP – Geographical Indication Protected
- GVC – Global Value Chain
- Ha – Hectares
- IAD - Institutional Analysis and Development
- ICA – International Coffee Agreement
- ICO- International Coffee Organization
- ICR - *Incentivo a la capitalización rural*
- INCORA - *Instituto Colombiano de la Reforma Agraria*
- IR – Institutional Regime
- IRR – Institutional Resource Regime
- LMMW - Legal monthly minimum wage
- LRA – Local Regulatory Arrangement
- MH - Max Havelaar

- NGO – Non-governmental organization
- NSAB - Nespresso Sustainable Advisory Board
- OCAD - *Órgano Colegiado de Administración y Decisión*
- PSF - *Permanencia, Sostenibilidad y Futuro*
- PCM - *Programa Café y Maíz*
- QCA - Qualitative comparative analysis
- RPO – Rural producer organization
- SACEV - *Socios y Amigos del Café Exótico La Vereda*
- SCAA – Specialty Coffee Association of America
- SCP1 - Specialty Coffee Program (2002 – 2007)
- SCP2 - Specialty Coffee Program (2007 – 2012)
- SDGs - Sustainable Development Goals
- SENA - *Servicio Nacional de Aprendizaje*
- SICA – *Sistema de Información Cafetera de la Federación Nacional de Cafeteros de Colombia.*
- UNCSD - United Nations Conference on Sustainable Development
- USDA - United States Department of Agriculture
- TRIPS – Trade-Related Aspects of Intellectual Property Rights
- VSS – Voluntary Sustainability Standards.

*“Porque para que haya política del café, necesario es que el café haga política”*

Mariano Ospina's words in the fourth *Congreso Cafetero Colombiano* on December 1930, which elected him as the first *Gerente General de la Federación Nacional de Cafeteros de Colombia*.

## IV. Introduction

When I started this uncharted journey sponsored by the Colombian Government<sup>1</sup> and generously welcomed at the IDHEAP's Public Policy and Sustainability research unit<sup>2</sup>, I had a goal to "design" the appropriate institutions to enhance the sustainability of the Colombian Coffee Cultural Landscape (CCCL), an UNESCO's world heritage site. These institutions would have produced the proper incentives to make actors behave "sustainable" because markets were rewarding a higher-yield lower-cost coffee culture that put this heritage site at peril.

But what was at peril? Since the International Coffee Agreement in 2001, the sustainability of coffee landscapes was defined from the "triple bottom line": a sustainable development that sparks economic prosperity while protecting social cohesion and environmental integrity. This objective guided public authorities' intervention in the CCLC to encourage the sustainable intensification of coffee farming. Namely, producing more coffee per unit of area while conserving natural Resources<sup>3</sup>.

However, when I started the exploratory research in this UNESCO's heritage site in the municipality of Riosucio, I faced an unexpected definition of the problem. The local indigenous organization perceived that it was the coffee culture itself that had triggered an unsustainable relation between their community and Mother Nature. The coffee culture changed the cosmovision of the indigenous farmers from a spiritual relationship in which the community humbly accepts the privilege and responsibility for using Resources in the quest for their collective wellbeing, to a capitalist one in which the land is a productive factor that has to be efficiently exploited to produce individual prosperity<sup>4</sup>.

Hence, well-designed institutions to encourage the sustainability of the CCCL according to the public authorities would forcefully diminish the sustainability for the indigenous organization, and the other way around.

For me, the different perspectives of the problem according to the various actors was not surprising. However, it was shocking to realize that there was no objective definition of the sustainability problem. Indeed, my previous academic experience was framed by the evidence-based policy, a positivist approach that predicts future outcomes through the past data analysis, usually through impact evaluation of public interventions. This approach is highly sophisticated in its statistic methods, but it is rather simplistic when discussing the desired outcome, privileging a literature review to define the problem and operationalize the look-for outcome.

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<sup>1</sup> *Convocatoria Colciencias "Doctorado Exterior" No 646 de 2014.*

<sup>2</sup> The Swiss Graduate School of Public Administration of the University of Lausanne.

<sup>3</sup> We will distinguish the "Resource" with capital letter from all other "resources".

<sup>4</sup> This personal reflection is sustained on the contextual chapter of Riosucio in Annex 2.2, which shows how coffee culture had affected social cohesion (when the prosperity triggered by the attractive prices of coffee encouraged land grabbing and caused dispossession) and endangered the environmental integrity (when synthetic fertilization needed for the high-density coffee crop to increase the yield, polluted the soils and water).

My first challenge in this journey was to separate the reality I perceived from this positivist epistemology because I considered that problems could be always objectively defined and, the different perspectives of actors were a symptom that the problem definition was still a work in progress by the researcher. Fortunately, I was shaken by the empirical unfolding, which showed that it cannot exist one solely definition of the problem because the sustainability of anything forcefully has two dimensions: the objective one that is linked to the physical existence of the “thing” and the subjective one linked to the actors’ expectations derived from its utilization. Indeed, following de Buren (2015), a thing become a Resource<sup>5</sup> only when human use it to produce goods and services. Furthermore, according to Merton (1995), humans behave according to their socially-constructed reality. Hence, the Resource is defined by both, the thing and the socially-constructed perception of its goods and services.

In this order of ideas, the Coffee Cultural Landscape of Colombia looked more like a socially constructed service from various Resources than a Resource itself. In fact, it is an extremely complex social construction because it is produced by the interaction among various Resources around the salient one, the Coffee Resource. For example, people from the urban area of Riosucio are so familiarized with the steep slopes embellished with the scattered family coffee farms and the guadua bamboo clusters alongside its creeks, that when the unprofitable coffee crops had to be chopped down for pastures, they feel losing a part of their own identity. On the other hand, for indigenous leaders in rural areas of Riosucio, the invasion of this African tree since the end of the eighteenth century<sup>6</sup> had extinguished the indigenous identity of the local community (annex 2.2). In both cases, the socially constructed service “the identity” was endangered by either the absence or the existence of the coffee crop.

Consequently, as it would be further developed, the urban *Riosuceños* tried to protect their access to the “coffee identity” service by inscribing the CCLC in UNESCO’s world heritage list. They expected that farmers in Riosucio would be encouraged to maintain their coffee crops because consumers would pay a higher price for their coffee due to the inscription. The indigenous-rural *Riosuceños* tried to protect their access to the “indigenous identity” by developing their schools’ curriculum around the “seed stewardship”. They expected that the same farmers would prioritize staple crops like maize and beans over cash crops like coffee. This example demonstrates the salience of the subjective dimension to explain actors’ engagement in the political arena to influence the uses of the Resource through the activation of institutions, namely the cultural public policy by the former and the education public policy by the latter.

Hence, sustainability has to be defined in terms of both dimensions. If the objective dimension can be assessed through a positive approach, which observes the uses of the Resource that eventually could lead to practices that protect the reproductive capabilities of the Resource, the

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<sup>5</sup> We will identify the Resource with capital letters to distinguish it from all other kinds of resources.

<sup>6</sup> According to Topik (2004), at the end of the first millennium, Arabians planted coffee trees in Yemen coming from Abissinia (coffee’s center of origin) and created the coffee culture, that afterwards was disseminated throughout the Turkish Empire and its commercial partners. Arabians lost the monopoly of coffee production when the Dutch planted coffee in Batavia (Indonesia) and then in Surinam in 1714, from where it was disseminated to Venezuela and Brazil (Palacios, 2009, p. 48) and to Riosucio in 1890 (Appelbaum, 2007, p. 181).

subjective one forcefully needs a constructivist approach, which takes into account the different socially-constructed demand for services by actors. Furthermore, the approach has to take into account the process through which actors decide which services are going to be obtained from the Resource. In this regard, it has to scale up the observations to the agreements among actors on the uses of the Resource to profile services.

The international consensus on the sustainability of the coffee crop privileges the objective dimension. It takes the triple bottom line definition and frames the problematic through the market failure lenses, inviting scholars to find well-designed institutions that correct the imperfection. As a result, a non-negligible amount of literature, which we will develop in chapter 1.3, had focused on this institution-effect relationship focusing on two main types of institutions: Voluntary Sustainable Standards (VSS) and Geographical Indications (GI).

Without undermining the explanatory power of economic tools for testing positive hypotheses and recommending better practices, we decided to scale up our research changing our “lens of contract” that focus on the institution by the “lens of negotiation” to focus on the agreement. Thus, we took the political sciences toolbox which fits much better with our constructivist approach.

Consequently, following Muradian and Cardenas (2015) recommendations, instead of asking which were the “well-designed” institutions that would increase the economic, social and environmental sustainability of the Coffee Cultural Landscape (which in the end, would have implied to take a position in favor of some actors at the expense of others), we ask which are the conditions of an agreement that explains the sustainable management of the Resource Coffee? Thereupon, how can we explain the emergence of these conditions?

In this sense, we moved apart from the normative perspective, which would have focused on the “objective” sustainability of the Coffee Cultural Landscape and moved towards an explanatory perspective which focuses on the “constructivist” sustainable management of the Resource Coffee.

The present four-part manuscript is the result of this epistemological change. The first part presents the analytical framework and the relevance of our object of study to answer these questions. The second and third parts are devoted to the empirical results and the last one ends with the conclusions and recommendations.

The first part is divided into four chapters. Chapter one (problematic and state of the art) presents the problem of the sustainable management of coffee that gives us a base from which we unroll insights from existing literature. We start developing the concept of sustainability to define the sustainable management of the Resource system in a given Resource perimeter, as an ideal-type state in which all demanded services are guaranteed in their expected life span. We conclude that the IRR framework is perfectly equipped for answering our questions thanks to its robustness to systematically analyze actors’ games to activate institutions steaming from the public policies and the regulatory system. This is lacking in other analytical frameworks for studying the

sustainable management of Resources like the well-known Institutional Analysis and Development framework (Elinor. Ostrom, Gardner, Walker, & Walker, 1994) and its further “politicization” (Clement, 2010, 2013; Whaley & Weatherhead, 2014).

The IRR principal hypothesis is that an integrated regime that coherently regulates the whole set of services derived from the Resource increases sustainability. However, empirical studies have questioned it. First, there is an implementation gap between the integrated regime and the actors’ behavior because actors act strategically to activate or not certain institutions known as the Local Regulatory Arrangement (De Buren, 2014; Schweizer, 2015). Second, there is an institutional complexity trap that impedes the consolidation of integrated regimes because transaction costs produce incoherencies when new regulations are introduced (Bolognesi, Nahrath, & Metz, 2018). At the state of the art of the IRR literature, the question regarding the sustainable management of Resources has to be redefined in terms of how do actors overtake transaction costs to produce LRAs that coherently regulates the whole set of services, before failing into the institutional complexity trap?

If we define sustainability through the provision of the demanded services by actors, an agreement on both the combination of services provided by the Resource and the distribution of the costs and benefits, known as the “negotiator’s dilemma” (Lax & Sebenius, 1987) becomes salient. “Parties to a negotiation have to deal with problems of production and problems of distribution at the same time... if they succeed, this mode of interaction is being described here as *positive coordination*” (Scharpf, 1997, p. 132).

As the higher the participation, the higher the transaction costs to reach an agreement, actor-centered institutionalism concept of *positive coordination* could solve this dilemma when individuals are aggregated in a few collective actors and there is a “recognition of the simultaneous existence and legitimacy of problems of distribution as well as of production problems and the willingness to deal with both of them explicitly” (Scharpf, 1997, p. 133).

We are interested in looking at the mechanisms that could explain the emergence of this *positive coordination* among actors, so they can agree on an LRA that coherently regulates the whole set of services enhancing the sustainable management of Resources, without failing in the complexity trap.

Chapter two (conceptual framework) adapts the IRR to assess the sustainable management of the Coffee as a Resource according to the configuration of the LRA, namely the combined presence of three conditions, the first two adapted from the IRR literature (Boisseaux, Knoepfel, Laesslé, & Tippenhauer, 2012; J. D. Gerber, Knoepfel, Nahrath, & Varone, 2009) and a last one proposed by the author:

- 1- *Extent* defined as the regulation of uses of the Resource.
- 2- *Coherence* defined as governance mechanisms that allow two-way actors’ alignment around the commonly agreed profile.

- 3- *Closure* defined as the strategies carried on by actors to erect barriers of entry and win a market position.

Thereupon, to assess the emergence of these conditions (*extent*, *coherence*, and *closure*) by the actors' games, we conceptualized them as a sequence composed of three analytical dimensions:

- 1- *Actors' coalitions*: a collective actor (as defined by Scharpf (1997)) in which members agree on joint action to use their own individual resources to tackle a shared threat for the provision of their demanded services. This dimension allows us to identify the closed set of actors interested in the Resource in a given time and space (including farmers, traders, roasters, consumers and stakeholders in consumption and production), giving us the ideal composition of an *actors' coalition* against which we can assess the observed one.
- 2- *Mobilization of action resources*: the observable engagement of actors in the political arena to activate institutions using a closed-list of ten *action resources* identified by Peter Knoepfel (2017). This dimension allows us to categorize the mobilizations depending on the intention.
  - a. *Selfish* when intends to impose a demanded service at the expense of other actors. As an example, from chapter 6.3.2. In Riosucio, the Indigenous movement selfishly mobilized their *law* (one of the ten action resources) to innovatively activate both the education and the cultural public policies to influence the behavior of the indigenous farmers and discourage the over-cultivation of coffee, clearly at the expense of the monetary services demanded by other actors like the Cooperative (a trader owned by the coffee farmers in Riosucio) and the FNC (authority in the coffee public policy).
  - b. *Strategic* when it moves forward demanded services neither at the expense nor in favor of other actors. As an example, from chapter 6.3.3. In Riosucio, an alliance between the Cooperative and Nespresso strategically mobilized their *personal* and *money* to concretize the specialty coffee program of the coffee public policy to incentivize farmers to produce both the "winy" taste related service and "monetary" services.
  - c. *Cooperative* when empowers the other actors so they could move forward their demanded services. As an example, from chapter 6.1.2. In Riosucio, an alliance between Max Havelaar, the Cooperative, and the FNC cooperatively mobilized their *organization*, *law*, and *property* to endow the indigenous movement with the *money* so they could consolidate an organization capable of exercising their constitutional right to cultural diversity. It balanced the power game so the indigenous movement could move forward their demand for services alongside the MH, the FNC and the Cooperative. Thus, they innovatively activated the coffee public policy to incentivize indigenous (coffee farmers) traders and roasters to profile both the "Fairtrade" and "indigenous coffee" symbolic services in order to produce "monetary services".

- 3- *Institutional creativity*: the actors' capability to shape the final output in order to incentivize the uses of the Resource needed to profile the demanded services, adapted from Laesslé (2016). This dimension allows us to systematize the presence of the *institutional creativity* through both the procedural element (the existence of a deliberative scenario) and, the substantive element derived from the negotiation dilemma that is observed in the final output composed of both the distribution (uses of the Resource) and the production (the combination of services).

The main contribution of this IRR adapted framework is that the constructivist definition of the sustainable management of the Resource is conceptualized as a collective action problem in which the greatest benefit is only possible if everyone cooperates even if participants can benefit individually if they deceive (Olson, 1965), so *positive coordination* is possible. Therefore, it can be analyzed. Contrary to the situation when sustainability is "objectively" defined because rivalries between "good" and "bad" uses of the Resource would direct the analysis towards *pure conflict* constellations, usually known as a zero-sum games, "in which one side must lose what the other side gains" (Scharpf, 1997, p. 73) .

In chapter three (empirical adaptation), we move into the empirical stage with a promising logic of generalization: if the theoretical mechanisms explain a complex Resource in which different actors demand different services, it would explain another less complex with fewer actors/services involved. But also, from a heuristical perspective, this complexity has to trigger LRAs that could be evaluated at a small-enough coffee harvest (a geographical space in a given time period) to make the research feasible, meaning we can observe LRA's effects on the uses of the Resource and explain LRA's emergence due to actors' games.

In this quest, the Coffee Resource happens to be a perfect candidate. Its international trade triggers a global and local demand for services (e.g. the fair distribution of value demanded by the International Fairtrade Organization; the organic production demanded by the US and EU public policies; the protection of biodiversity demanded by local environmental organizations; the economic development demanded by authorities; alongside many others services) that fulfill the "high complexity" requirement. Its cultivation in a clearly defined territory allows us to observe the effects of the LRA on the use of the Resource to produce the services (e.g. to cultivate avoiding synthetic fertilizers to produce the "organic" demanded service), and to explain its development by interviewing and analyzing data from participants in the actors' game, fulfilling the "feasibility" requirement.

If complexity works for generalizing among Resources, we use antagonism as our logic for generalizing among the LRA. Thus, we selected the two most antagonistic coffee harvests, according to the types of governance of global value chains (Gereffi, Humphrey, & Sturgeon, 2005), in which the global complexity is found at the local level: The municipalities of Riosucio and Buesaco in Colombia.

Chapter four (contextualization) contextualizes our empirical field describing the evolution of the coffee public policy in Colombia in two salient periods: before the breakdown of the international coffee agreement on quotas in 1989 that consolidated the commercial coffee farming and the posterior free coffee market that sparked the peasant coffee farming. We focus on the main policy instruments to (des) incentivize uses of the Resource in each period. Additionally, this chapter is complemented with annex II, which contains a similar exercise to describe the evolution of the IR on other productive factors (land and labor) at the national and local level (in Riosucio and Buesaco), which are needed to understand the socially constructed services demanded by actors.

The second part (Riosucio) and the third part (Buesaco) are composed of two chapters that develop sequentially the two questions; chapter five/seven (LRAs that explain the sustainable management of coffee) assess the sustainable management of the Resource coffee by identifying the closed list of services demanded through the identification of the LRAs that shaped the coffee harvest 2015/2016, then it puts on evidence the services provided because of the observed uses by each LRA, finally it compares LRAs depending on this provision. Thereafter, the presence of each condition is evaluated separately by each LRA so we can categorize all of them, and we can assess the services provided by the LRA's configuration. Chapter six/eight (actors' games that explain LRA's configuration) assess the LRAs' configurations according to four consecutive actors' games.

And finally, our fourth part is composed of two chapters: our conclusions and recommendations. Our results suggest that the key to enhancing the sustainable management of Coffee is the dialogue at the appropriate resource-perimeter level, in which interested individuals are aggregated in collective or corporate actors that represent the whole set of profilers and stakeholders in production and consumption. If they solve the first negotiation dilemma privileging a power-balanced initial stage, they could solve the second one by agreeing on both the combination of services and the distribution of cost/benefits through a minimum of regulated uses. Hence, they would trigger the kinds of LRAs that optimize the level of services provision.

## First Part: Conceptualization

### Chapter 1. Problematic and state of the art

The International Coffee Agreement (ICA) signed in 2001 and renovated in 2007<sup>7</sup>, problematized the free coffee market as responsible<sup>8</sup> for threatening the sustainability of coffee production<sup>9</sup> and raised the need for a new governance model that would guarantee a sustainable harvest that would reduce consumers' anxiety<sup>10</sup>. For the signatories, both farmers were responsible for maintaining practices that limited their income while affecting the ecosystem and local communities<sup>11</sup> and, consumers whose preferences fostered low-cost coffee<sup>12</sup>. Consequently, a logic of intervention targeted both actors, incentivizing farmers to adopt agricultural practices considered sustainable, and encouraging consumers to pay higher for coffee produced following these practices<sup>13</sup>.

In spite of the disagreement regarding the precise definition of which these practices were (Ponte & Gibbon, 2005, p. 289), the actors not only accepted the triad of sustainability (economic, social and environmental<sup>14</sup>) but also the approach of *market environmentalism*<sup>15</sup> to frame the problem: the coffee farmer does not internalize the socio-environmental costs of his economic activity and

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<sup>7</sup> Agreement signed between 50 producing countries and 34 coffee consuming countries that represent almost all coffee production and four-fifths of consumption (ICO, 2001).

<sup>8</sup> The free-market model prevailing since the breakdown of the negotiations on coffee quotas in 1989 (through which the coffee world market had been regulated since 1962 to align coffee-dependent tropical countries to the Western bloc in a cold war context, four successive International Coffee Agreements were signed in 1962, 1968, 1976, and 1983) motivated a downturn spiral (coffee overproduction, lower prices, more production diminishing costs to compensate, lower quality, less attractive for consumers, lower prices) that plunged the international coffee price to its historical minimum in the year 2000 of USD 0.425.

<sup>9</sup> Free markets has rewarded mega-productive agricultural companies that use fertilizers and pesticides for increasing agricultural yield. However, its prioritization on productivity withdraws soil nutrients at rates much higher than their reincorporation, leaving sterile lands, polluted rivers and threatening biodiversity on a planetary scale (Sachs, 2014, pp. 338-347).

<sup>10</sup> Decreasing prices had penalized the low productive coffee farmers and concerned consumers: on the one hand, it made impossible to implement good environmental and labor practices in entrepreneurial coffee farms and it impoverished family coffee farms at levels of malnutrition and emigration (Gresser & Tickell, 2002; Ramírez et al., 2002a); On the other hand, consumers felt anxious when consuming a coffee that was suspected of having negative effects both on his health and on the environment (Biltekoff, 2010; Fonte, 2002).

<sup>11</sup> "Encouraging members to develop and implement strategies to enhance the capacity of local communities and small-scale farmers to benefit from coffee production, which can contribute to poverty alleviation". Objective 12, art. 1 of the ICA 2007 (ICO, 2007, p. 2).

<sup>12</sup> "Promoting the development of consumption and markets for all types and forms of coffee, including in coffee producing countries" Objective 7, art. 1 of the ICA 2007 (ICO, 2007, p. 2).

<sup>13</sup> "The objective of this Agreement is to strengthen the global coffee sector and promote its sustainable expansion in a market-based environment for the betterment of all participants in the sector". Article 1, ICA 2007 (ICO, 2007, p. 2).

<sup>14</sup> "Encouraging Members to develop a sustainable coffee sector in economic, social and environmental terms" Objective 3, art. 1 of the ICA 2007 (ICO, 2007, p. 2).

<sup>15</sup> As defined by (Muradian & Cardenas, 2015)

the asymmetric information prevents the consumer from correctly assessing his purchase<sup>16</sup>. As a result, these international coffee agreements prioritized the market-based instruments to solve information failures creating higher-value markets for coffee growers, which had internalized the externalities of their activity<sup>17</sup>, supported on a project-based and public-private governance<sup>18</sup>.

Nevertheless, these ICAs overestimated consumers and underestimated other actors in shaping the "sustainable" behaviour of profilers along the coffee value chain: On the one hand, according to Panhuysen and Pierrot (2014), 40% of the world coffee harvest was cultivated under sustainable practices moved forward by the main market-based mechanism, known as the big seven voluntary sustainable standards: Organic, Fairtrade, Rainforest Alliance, UTZ, 4C, Starbucks' CAFE Practices, and Nespresso AAA. However, only 15% of this production was paid as sustainable coffee. On the other, some of these sustainable practices were seen invasive by different actors: Indigenous communities prioritized ancient knowledge over scientific evidence to decide how to crop, and the self-named specialty coffee traders favoured an extraordinary aromatic profile over a higher yield<sup>19</sup>.

Hence, prices paid by consumers are hardly the only incentive that influences coffee farmers' behaviour. Both the indigenous organization and the specialty traders activated other institutions like the education public policy to avoid cropping coffee in the first case (chapter 6.3), or the competitiveness public policy to increase the chances of high-scored coffee in the second one (chapter 8.3) to make coffee farmers explicitly resist the "sustainable" practices encouraged by the locally implemented policies derived from the ICA compromises.

More than the ICA, the approach to frame the problem is the one to be blamed. The *market environmentalism* framework overestimates the ability of consumers to influence the behaviour of the coffee farmer while underestimates the ability of other actors to influence it: not only those connected vertically by the material interest of money but also those connected horizontally by other more or less material interests linked to the production or consumption of coffee. This analytical framework assumes that institutions are powerful enough to change

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<sup>16</sup> Inspired in the seminal paper on asymmetrical information by Akerlof (1970).

<sup>17</sup> ICA 2007 prioritized market-based tools by "(8) developing, evaluating and seeking finance for projects that benefit members and the world coffee economy... (13) facilitating the availability of information on financial tools and services that can assist coffee producers, including access to credit and approaches to managing risk" (ICO, 2007, pp. 2,3). An example of this consensus on market-based mechanism can be read in the message written by *the Chef de la Promotion commercial* of the Swiss Secretariat for Economic Affairs SECO. "*Une première analyse comparative montre que l'application de critères labellisés contribue, grâce aux progrès effectués dans les processus de production, à réduire les incidences négatives sur l'environnement, à améliorer les conditions sociales, à élever les revenus nets et, enfin, à accroître la sécurité alimentaire des producteurs*" (Egler, 2010).

<sup>18</sup> A good synthesis of the agreement can be found in the message from the Federal Council (Swiss Government) to the Federal Assembly (Swiss Parliament). « *En général, le nouvel accord renforce le principe d'un développement durable du secteur du café en mettant explicitement l'accent sur les trois piliers fondamentaux de la durabilité, à savoir les dimensions économiques, sociales et environnementales. L'accord prévoit également la possibilité de renforcer la coopération avec le secteur privé et les organisations non gouvernementales appropriées. Ces développements répondent aux demandes clés de la délégation suisse*» (SECO, 2009, p. 210).

<sup>19</sup> Rivalries identified in the field by the author.

actors' behaviour. When behaviour did not change, the blame is on the institution: either its design was defective, or actors did not implement it correctly.

These lenses, for example, do not allow us to understand why certified/verified unpaid coffee almost double the paid one, in other words, why farmers maintain "sustainable" practices if they are not paid for doing it. Clearly, other phenomena besides the price could also influence the decision of the coffee farmer, but the market environmentalism framework is unfit to see it because it has an inherent flaw: the institution is the gateway for researchers to understand the effects on the territory, making local dynamics invisible through random samples of certified/verified farms in different regions to "control" by those territorial particularities.

Scholars would assume an objectively defined problem that could be solved through the "right" institution. So, to produce robust evidence, scholars conduct quasi-experiments to isolate the influence of other relevant factors to assess the effect of the treatment (the institution). As a result, this heuristic manipulation explicitly omits the horizontal actors, who are perceived unimportant, because they do not vertically participate in the input-output relation throughout the coffee value chain. In other words, the fact that some actors opposed the institution because their considered "legitimate" claims are simply out of the reach of this framework.

From our perspective, more than a technical issue to design the "right" institution supported by robust evidence, there is a substantial issue at the epistemological level. When we incorporate into the analysis other than the vertically-linked actors, one "right" institution would never appear because it is highly improbable that it could exist one objective definition of coffee sustainability.

Indeed, if we conceptualize coffee as a commodity that is solely used by actors in an input-output relation for adding value until its consumption, consumers could use their payments to reward or punish practices implemented by actors along the value chain. As information asymmetries usually are present, better institutions can correct these failures. However, as we demonstrate, coffee is a commodity for a set of actors (so the previous logic still is valid), but coffee also is a transmitter of identity for a group of people; it is a socio-cultural tissue to enhance social cohesion for the Colombian authorities<sup>20</sup>; it is an invasive foreign species that had negatively affected indigenous cosmovision and wellbeing for the indigenous organization; it is an irresponsible traded merchandise that pollutes and endangered biodiversity for the environmental NGO's, and so on. If we want to explain the sustainability of coffee, the concept of the commodity is unfit to the task.

We propose to conceptualize coffee as a Resource, so it is used by humans to produce services (de Buren, 2015) not only for consumers nor actors along the coffee value chain but also for other actors: citizens use coffee as an identity vector; authorities to enhance social cohesion; indigenous leaders to protect their cultural heritage and; the NGO's to trigger environmentally

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<sup>20</sup> *"El café más que un producto agrícola de exportación es ante todo un tejido social, cultural, institucional y político que ha servido de base para la estabilidad democrática y la integración nacional"* (Ramírez et al., 2002b, p. 16).

responsible coffee culture. In this sense, we have to acknowledge that the demand for services is a real consequence of a situation defined by actors as real, whether this situation is an objective statement or not (Merton, 1995). So, services are a social construction of a group of persons in a given time and space.

In this line of arguments, we assess the sustainability of coffee through two dimensions: the objective one linked to the physical existence of the Resource, and the subjective one linked to the actors' expectations derived from its utilization. If we can assess the objective dimension through a positive approach that observes the uses of the Resource, which eventually could lead to practices to protect the reproductive capabilities of the Resource's system, the subjective assessment forcefully needs a constructivist approach that scales up the observation to the agreements among actors on the uses of the Resource.

Without undermining the explanatory power of economic tools for testing a positive hypothesis and recommending better practices, we decided to scale up the research from institutions to the agreements among actors. So, we took a constructivist approach to which political sciences are much better equipped. As proposed by Muradian and Cardenas (2015) we would change the analytical framework to understand the threat to the sustainability of coffee growing, not as a product of market failures that demand the "right" institutions, but as a problem of collective action that demands the "right" agreement among interested actors.

In this order of ideas, this chapter presents the main elements that we have identified in the literature to frame our work in four sections. Firstly, we recover the discussion on the definition of sustainable management of Resources to claim that it should be constructed on both the objective and the subjective dimensions.

In the second section, we bring about some literature that had unrolled the sustainable management of Resource through the collective action problem, an empirically observable phenomenon, in which individual gains threatens the collectively preferred existence of the Resource. Scholars proposed the "lens of contract" to focus on the property rights transaction, and how institutions governed these transactions to craft order, mitigate conflict and realize mutual gains.

In the third section, we present literature on how scholars had used these "lens of contract" to study the sustainable management of coffee. Unsurprisingly, they have conceptualized coffee as a commodity governed by a global value chain in which its sustainability heavily depends on consumers expectations and in a lower degree on other actors along the value chain like producers. So, there has been an objective definition of the problem that could be tackled down through well-designed institutions. Voluntary Sustainable Standards (VSS) and Geographical Indications (GI) are the two central institutions evaluated to assess the sustainable management of coffee. This literature demonstrates that well-designed institution could incentivize a transaction of property rights that could solve the problem in the "objectively defined" terms.

However, different actors have their own "objective definition of the problem". The last section shed light on literature that thoughtfully incorporates the subjective dimension, broadening the research to the horizontal actors previously omitted, in addition to the relevant actors vertically linked throughout the coffee value chain. As money is not the unit of transactions for these horizontal actors, this literature focuses on the power game and how power is used to activate institutions that are expected to change actors' behaviour.

This last section briefly presents the Institutional Resource Regime framework literature and the two open issues that the IRR is facing around its primary explanatory variable: The Local Regulatory Arrangement (LRA). Then, we discuss the pertinence of the IRR to answer our questions by discussing both open issues: one is the need to focus on the integrality of the "Local Regulatory Arrangement" rather than on the integrality of the "Institutional Regime". Moreover, the other is the need to understand the mechanisms through which this integral LRA can be achieved, before reaching prohibiting transaction costs that would conduce towards an institutional complexity trap. In this order of ideas, we place our contribution through the "lens of the negotiation": to assess the integrality of the LRA and the mechanisms for triggering it, avoiding the institutional complexity trap.

### 1.1. A two-face definition of sustainable management of Resources.

As long as we know, Nature in the broadest sense is by definition, sustainable<sup>21</sup>. Galaxies could collide crashing its planets, but new galaxies will emerge<sup>22</sup>, and from the debris left over, new planets would be formed<sup>23</sup>. Life itself is sustainable: it could be at the edge of disappearance, but evidence shows that new species thrive following the extinction of others<sup>24</sup>. *Homo sapiens* behaviour could trigger a mass extinction, but it is highly possible that, even though this species and many others could disappear, after some thousands of years, new species would conquer the space left behind. Henceforth, if we talk about sustainability, it does not make sense to think on protecting Nature by itself but to protect Nature so the *Homo sapiens* as a species could continue living on this planet before an unstoppable force (like the predicted galactic collision) would make it impossible.

The last example shed light on two salient dimensions: the system and the time frame. Costanza and Patten (1995) relate both concepts through the scales: the higher the scale of the system (e.g. the Milky Way Galaxy), the higher the live span (e.g. 4 billion remaining years for this Galaxy). Then, planet Earth within the Galaxy, ecosystems within planet Earth, populations within ecosystems, organisms within populations, and so on. "A sustainable system in this context is

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<sup>21</sup> The Oxford Dictionary defines sustainability as the ability to continue or be continued for a long time.

<sup>22</sup> Like the milkdromeda Galaxi predicted to emerge after a collision between the Milky Way and the Andromeda Galaxy in 4 billion years (Dubinski, 2006).

<sup>23</sup> As an example, the giant-impact hypothesis to explain the moon genesis from a collision between the earth and another astronomical body known as the Thea impact (Halliday, 2000).

<sup>24</sup> Five mass extinctions events had been documented with losses from 70% to 96% of the total species on Earth (Raup & Sepkoski, 1982).

thus one that attains its full expected life span within the nested hierarchy of system within which it is embedded" (p. 195).

Costanza and Patten (1995) define unsustainability from the unconvincing argument of an external accident "the key is differentiating between changes due to normal life span limits and changes that cut short the life span of the system" (p. 195). So they use this argument to sustain their claim that "Humans' interventions in ecosystems frequently have deleterious consequences (...) interrupt normal function and both truncate natural longevity and hasten senescent decline" (p. 195). It is a weak argument because external accidents are part of the natural life span of any Resource, even if human behaviour is responsible. Any accident that is naturally possible is normal, only impossible accidents, like shutting down gravity, are not. Species had existed for millions of years before became extinct due to the quaternary glaciation or to human behaviour. In both cases, categorizing one as an external accident, and the other not imply a subjective position.

However, this argument stands when we transparently accept that they are no accidents in Nature and we assume that humans categorize as an accident a natural phenomenon that they would prefer to avoid because they are attached somehow, like the extinction of species. Henceforth, the socially defined "accidents" that could cut short natural life span of natural phenomena determines the time frame of systems and subsystems. As we cannot interfere with the trajectories of the Galaxies, at least we hope to control the human-made accidents.

From this anthropocentric point of view, sustainability only makes sense for systems that produce something useful for humans, from the oxygen produced by forest to disease control produced by bacteria. Pater and Cristea (2016), proposed a systemic definition of sustainability to capture this enormous complexity "as a prerequisite for humanity in the universe". However, we limit the scope to a particular system in which there is a clearly defined *thing* that is *used* by humans to produce *services* in a given time and space, namely a Resource.

Under this broad conceptualization, we can identify two branches of the literature on sustainability. The first focuses on the *uses* to guarantee the sustainability of the *Resource* because otherwise, *services* could not exist. The second focuses on the *services*, so the sustainability of the *Resource* is essential to the extent that it contributes to services provision. We will propose a third ideal type definition that empathizes on the salience of both the sustainability of the *Resource* and its *services*.

On the first branch, scholars agree on that services can be obtained to the extent that their uses do not affect the reproductive capability of the Resource. Kuhlman and Farrington (2010) argue that the concern about preserving systems for the future human use could have been present since the Paleolithic, but the concept of sustainability was initially coined in forestry in 1713 as "never harvesting more than what the forest yields in new growth" (p. 3437). (Tivy & O'hare, 1981) operationalized this idea as the maximum sustained yield: "(the) management of a resource for maximum continuing production, consistent with the maintenance of a constantly renewable stock". From a political sciences perspective, Peter Knoepfel and Nahrath (2005),

analyzed this resource-based approach, i.e. the management of the stocks and reproductive capacities of resource systems. They observe the process that ends in this management of the Resource as a multi-actor game in which diverse actors seek for various goods and services. There are actors interested in the wood of Forests, some in the ecosystem services like water purification and landslide protection, and others in the fertile soils for harvesting. Hence, they argue that sustainability "can only be guaranteed if all of the users jointly ensure that the quantities they extract or withdraw from a resource do not reach the limit of the reproductive capacity of the resource system" (p. 14).

The Brundtland Report, following this renewal logic, incorporated a more generous intergenerational life span that values both "needs" demanded from the living generation and the ones potentially demanded by unborn generations. It focused on the "needs" or *services* as the cornerstone of sustainability<sup>25</sup>.

This *service* perspective is much harder to assess. There are ambitious definitions of sustainability like "one that to all intents and purposes can be sustained indefinitely while giving optimum satisfaction to its members" (Goldsmith, 1974). Also, more general ones like "(the) ecologically sound development, a process of positive management of the environment for human benefit" (Holdgate and others 1982).

The international consensus has gathered around the widespread "triple bottom line" definition of sustainable development. It developed in the business management literature (Elkington, 1994) by adding to the economic success (understood as the underlying bottom), the well-being of societies (that is assumed that is not reached only by the former) and the protection of the environment.

On the one hand, there is an assessment defying the triple bottom definition that leaves vaguely defined socio-economic dimensions that could be used to justify the depletion of the natural resources<sup>26</sup>. On the other, it is inherently flawed. Kuhlman and Farrington (2010) discussed the inherent incoherencies of this triple bottom definition with the material renewal of the Resource. Indeed, by giving equal weight to each dimension, Resource management is sustainable even if it scores positively in both the economic and social dimension and negative in the environmental one. Peter Knoepfel and Nahrath (2005), in their analysis of environmental policies in Europe, reached a similar conclusion that "the pursuit of social, economic and even ecological sustainability at the level of selected goods and services will ultimately lead to the non-

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<sup>25</sup> In 1968, the United Nations Economic and Social Council, for the first time, called for a global conference that would focus on human interactions with the environment, ECOSOC resolution 1346 of 1968. It took place in Stockholm in 1972 and laid down the basis for the World Commission on Environmental and Development created by the United Nations in 1983. This Commission defined sustainable development as the one which "ensure that it meets the needs of the present without compromising the ability of future generation to meet their own needs" (WCE&D, 1987, p. 16).

<sup>26</sup> The triple bottom line definition is so general that it gave an ample leeway to actors to operationalize each bottom line as it suits them best. In some cases leading to "greenwashing" or misinforming for shaping a good reputation and image even though any substantial change had been made (Laufer, 2003).

sustainable management of the resource" (p. 13) when the management is based on the logic of pollution limitation independently of the reproductive capacities of the resource systems.

Nevertheless, scholars like Solow, Nordhaus, Romer solved this balance between socio-economic and environmental services through a model sustained in technological change provided by economic growth. It implies that economic development, at the expense of today's sustainable management of Resources, would produce the technological change that eventually would inverse the situation. This model informed 178 governments to adopt a non-binding action plan for achieving global sustainable development on the UN Conference on Environment and Development in Rio de Janeiro in 1992, according to Hickel (2018).

Indeed, the world economic system drives on the assumption that economic success would compensate the environmental depletion through the exchange between natural and manufactured capital. Assumption developed by Solow (1991) and his claim that, if the exchange is an "investment" in improving the future capacity to create well-being (and not a mere consumption of Resource), this exchange will trigger sustainability. That is why the emission of CO<sub>2</sub> to the atmosphere at the expense of global warming is justified because there could be "an effective strategy that maximizes overall net economic welfare (call it 'green GNP') (...) and includes all externalities from economic activity" (Nordhaus, 1991, p. 923). The mechanism is the endogenous technological change (Romer (1990): If the economy grows, market-encouraged actors could trigger a technological change that could diminish the negative impacts of Resource depletion. In this order of ideas, the "investment" of Resources would enhance the future capacity to create well-being<sup>27</sup>.

It does not surprise the contradictory evidence that this exchange, even as an investment, does not always produce the predicted well-being<sup>28</sup>. That is why scholars like Kuhlman and Farrington (2010) propose to divide this discussion between well-being which accounts for both the economic and social dimension and sustainability for dealing with the environmental one, and specifically "to recognizing the primacy of the ecological pole over the economic and social poles of the sustainability triangle" (Peter Knoepfel & Nahrath, 2005, p. 14).

However, this hierarchical focus on the Resource system's reproductive capacities is in itself so complex that the socio-economic dimensions are under-evaluated because either there are classified as "good/bad" due to the position of the researcher, or because of the unconvincingly

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<sup>27</sup> For example, that if forests had not been overexploited in the previous centuries sparking economic growth, we would not have the actual technologies that allow us to benefit from similar heating services without using wood. So, if previously having forests and heating services were rivals, thanks to the economic growth and the technological change, today humans can simultaneously enjoy both

<sup>28</sup> Even though there is evidence on the contrary "In 1900 one of the world's richest phosphate deposits was discovered on Nauru, and today, as a result of just over ninety years of phosphate mining, about 80 per cent of the island is devastated (...) Income from phosphate mining enabled the Nauruans to establish a trust fund estimated to be as large as \$1 billion (...) the Asian financial crisis (...) has wiped out most of the trust fund (...) Their island is biologically impoverished and the money Nauruans traded for their island home has vanished (Ayres, Van Den Bergh, & Gowdy, 1998, p. 3)

heuristic techniques. We are interested in bringing back the socio-economic dimensions to the forefront by facing both the inherent subjective actors' expectations and the heuristic technique defy, without changing the hierarchical salience of the environmental dimensions.

In this sense, we bring back the previous anthropocentric discussion. The definition of a Resource is built on the idea of a mean to produce an end. A Resource exists because humans used it to produce *services* (we incorporate into this single word everything that people sought for from Resources like goods, fruits, values, and so on); otherwise, it would be a "thing". Hence, the sustainability of Resources forcefully has two dimensions the objective and the subjective one. From the objective one, we can objectively measure the appropriated level of the stock and reproductive capacities of the Resource, through a positive approach that analyses the *uses* that eventually could lead to the "sustainable" practices. From the subjective one, the appropriated quantities and qualities of services during their expected life span depend on the actor's social construction. We follow the Thomas' theorem "if men define situations as real, they are real in their consequences" (Merton, 1995, p. 380). Thus, whether men think quantities and qualities of services are appropriated, or not, and whether the expected life span is long enough or not, depends on the actor' definition of a "real situation". That is why the analysis demands a constructivist approach that assesses the actors' expectations derived from the Resource's utilization. In this order of ideas, both the thing and the socially-constructed services define the Resource.

In this sense, we propose a Weberian ideal-type conception: A Resource is sustainable when all services demanded from the Resource are guaranteed in their expected life span. So, it must fulfil two conditions sequentially: Following the hierarchical salience of the environmental sustainability, the stock and reproductively capacity of the Resource must be guaranteed in the expected life span so the second condition, the provision of the whole set of services demanded, can also be guaranteed.

In this logic of life span within a nested hierarchy of systems, the *services* are a subsystem of the Resource system. So, a particular citric-acid aroma (a taste related service from the Resource coffee) has a life span featured by consumers' preferences. If the demand for this service disappears, roasters will look for other aromatic profiles encouraging traders and farmers to profile other aromas, sustainably ending this service life span. On the other hand, a phenomenon caused by human behaviour that "accidentally" cut the life span of this citric-acid aroma service, like blending coffee from different regions before export, would be considered unsustainable. In the end, the services' life span as well as the "accidents" that could reduce it depend on an actor's perception grounded in the physical reality. So, it is susceptible to varying due to both changes in the perception itself or the physical reality.

Thus, this conception of sustainability can only be measured in a given time and space when the actors and the socially-constructed demanded services are identifiable. When new actors arrive, or when incumbents change their perceptions, the previous measurement is useless and a Resource that was "sustainable" in "!"#\$%" could be "unsustainable" in "!"#\$&

## 1.2. The sustainable management of Resources: a problem of collective action.

If the Resource system is sustainable when its subsystems (including the demanded services subsystems) are guaranteed in their expected life span, and the expected life span of these (sub)systems is at risk because of “accidents” caused by human behaviour, then, we must shift our focus to human behavior to understand the sustainable management of Resources.

We start with an assumption: Human beings cooperate when they fail to control individually the “accidents” that would reduce the life span of a Resource system or one of its services subsystems. From the game theory perspective, “one individual pays a cost for another to receive a benefit” (Rand & Nowak, 2013, p. 413). We can say the cost refers to measures taken to control the “accident”, and the benefit refers to the continued enjoyment of services demanded from the Resource. Individuals either cooperate in obtaining the collective benefit or they deceive, obstructing the emergence of it.

We can observe that individuals cooperate in some occasions and deceive in others. Scharpf (1997) explains both results through a conceptual tool, the actors’ constellations built on the expected benefit for the actors involved. He distinguishes among several actors’ constellation between two extremes: the pure coordination in which all actors optimize their benefit by cooperating and, the pure conflict in which one actor must lose the benefit that the other would gain. There is one constellation in particular where the most significant benefit is only possible if everyone cooperates, but the participants can individually benefit from deceiving. So the expected outcome is that all actors would deceive and there would be no collective benefit. Olson (1965) defined this social dilemma as a collective action problem.

The collective action problem is the core of the sustainable management of Resources: deceivers that in pursuit of individual benefit diminish the life span of the Resource at the expense of the collective benefit. Two generations of scholars had tried to understand the mechanisms that trigger this problem in order to propose recommendations to solve it. A first-generation used the “lens of choice”<sup>29</sup> to frame the problem as a market failure that demanded public intervention, and a second-generation used the “lens of contract”<sup>30</sup> to frame the problem as an institutional defy.

At the beginning of the twentieth century, scholars considered that the authority was required to impede deceptive action. Pigou (1932) studied the collective action problem using the neoclassical “lens of choice”, meaning that markets would encourage agents to maximize profit at their marginal private interest. He demonstrated that when the marginal social interest was higher than the private one, agents do not have incentives to internalize this social cost. He

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<sup>29</sup> According to Williamson (2002, p. 172), the lens of choice follows the assumption of utility maximization that leads to an efficient allocation of resources by markets.

<sup>30</sup> According to Williamson (2002), the lens of contract focus on the voluntary exchange. “This latter is what I refer to as private ordering, which entails efforts by the immediate parties to a transaction to align incentives and to craft governance structures that are better attuned to their exchange needs” (p. 172).

conceptualized this market failure as a negative externality that justified the governmental action to internalize the social cost in the private decision.

Using the same “lens of choice”, Coase (1960) demonstrated that this governmental action was unnecessary because under zero transaction cost (assumption of the “lens of choice”) negotiation would maximize wellbeing no matter the initial assignment of rights. The literal reading implied that by defining property rights in a free market environment, deceptive action could diminish because utility maximization in a costless negotiation would lead to an efficient internalization of social costs.

However, this following conclusion was inadvisable by the same Coase (1991), who recommended the study of positive transaction cost because costless ones were hardly present in real-life situations. In this quest, the second generation of scholars used the “lens of the contract” to zoom into the transaction. Through this lens, the transaction was not automatically linked to the price mechanism but was also affected by several institutions, among them, agreements between actors to refine the transaction, in the words of Williamson (2002, p. 172), the contracts “to realize better the mutuality of advantage from voluntary exchange”.

These scholars that could be considered affiliated to the New Institutional Economics recognize the positive transaction cost and focus on the *institutions* through which actors manage their interaction. According to (Williamson, 2000) individuals agree on how to govern their property rights transactions: “governance is an effort to craft *order*, thereby to mitigate *conflict* and realize *mutual gains*” (Williamson, 2000, p. 599). Governance could range from markets at one side and hierarchies at the other depending on the complexity of the transaction. This complexity could generate mutual dependency because of asset specificity, meaning property rights on an asset that is valuable in that transaction but has no value in others. Low complexity transaction can be easily procured in markets, once complexity increases, procurement can be guaranteed through contracts until security costs to avoid opportunism are so high that unified ownership, or hierarchy, is preferred (Williamson, 2010).

Elinor Ostrom (1990) used the “lens of the contract” to study the collective action problem in the management of some Resources. Namely the Resources that “share the attribute of subtractability with private goods and difficulty of exclusion with public goods” (Elinor Ostrom, 2010, p. 645), in practice, Resources that could maintain its reproduction capability if actors cooperate, however, there are strong incentives for them to benefit individually. For doing so, she developed the Institutional Analysis and Development Framework (IAD onwards) to explain how the actor situation (the problem of collective action) is affected by three independent variables: the rules in use, the attributes of the community and the biophysical conditions (Elinor Ostrom et al., 1994). She demonstrated that communities overtake individual deception to bring about the collective benefit if the institution to manage the commons follows eight design principles to craft order to mitigate conflict and produce mutual gains<sup>31</sup>.

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<sup>31</sup> Elinor Ostrom (2010, p. 653) provided an updated version of these design principles.

### 1.3. The “lens of contract” to study the problem of collective action of the Coffee Resource.

Having conceptualized sustainability as a problem of collective action and presenting the two "lenses" to frame this problem, we turn our attention to an exciting literature that makes use of both the "lens of choice" to frame the problematic as a market failure and, the "lens of contract" to focus on the institutions that govern actors' transactions, to study the sustainable management of the Resource coffee. This literature privileges the triple bottom line definition of sustainable coffee brought about by the ICA 2001 and 2007. It frames the problem as a problem of information asymmetry, inviting scholars to find a well-designed institution that corrects this imperfection. As a result, a non-negligible amount of literature had focused on this institution-effect relationship focusing on two main types of institutions: Voluntary Sustainable Standards (VSS) and Geographical Indications (GI).

A worldwide consensus is that the main challenge of the coffee global value chains is to achieve socially-inclusive and environmentally-sustainable economic growth (FAO, 2015; ICO, 2001, 2007). Using the "lens of the contract" proposed by Williamson (2010), these socio-environmental concerns increase complexity. It implies non-market information and different capabilities on supply partners to meet customers' expectations for a "sustainable" bean. The coffee bean has to "encapsulate" <sup>32</sup> specific agronomic practices from the planting to the harvesting, post-harvesting, and so on, which implies a "sustainable" use of property rights. E.g.

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“1A. *User Boundaries*: Clear and locally understood boundaries between legitimate users and nonusers are present.

1B. *Resource Boundaries*: Clear boundaries that separate a specific common-pool resource from a larger social-ecological system are present.

2A. *Congruence with Local Conditions*: Appropriation and provision rules are congruent with local social and environmental conditions.

2B. *Appropriation and Provision*: Appropriation rules are congruent with provision rules; the distribution of costs is proportional to the distribution of benefits.

3. *Collective Choice Arrangements*: Most individuals affected by a resource regime are authorized to participate in making and modifying its rules.

4A. *Monitoring Users*: Individuals who are accountable to or are the users monitor the appropriation and provision levels of the users.

4B. *Monitoring the Resource*: Individuals who are accountable to or are the users monitor the condition of the resource.

5. *Graduated Sanctions*: Sanctions for rule violations start very low but become stronger if a user repeatedly violates a rule.

6. *Conflict Resolution Mechanisms*: Rapid, low cost, local arenas exist for resolving conflicts among users or with officials.

7. *Minimal Recognition of Rights*: The rights of local users to make their own rules are recognized by the government.

8. *Nested Enterprises*: When a common-pool resource is closely connected to a larger social-ecological system, governance activities are organized in multiple nested layers”.

<sup>32</sup> Using the term coined by Acampora and Fonte (2009)

a farmer renounces a higher yield by cultivating fewer coffee trees per hectare and more canopy trees in order to protect biodiversity. This complexity can go up to a point in which the investment (that commercial partners have done) is so valuable to that particular transaction, that it spurs vertical integration. E.g. an experimental roaster that seeks for rare coffee aromatic profiles encourages farmers to invest in unconventional post-harvesting methods, which make their coffee unmarketable through other buyers. So, to avoid farmers' opportunism (farmers could take advantage and unilaterally increase the price of the coffee), the experimental roaster would take over their supplier<sup>33</sup>. Even though "complexity" in the coffee industry is increasing according to Rhinehart (2009), the high complexity that could motivate vertical integration hardly would reach the 1% that today is sold as specialty coffee. However, the socio-environmental concerns had increased complexity for the 40% of the coffee world harvest that is harvested and traded following "sustainable practices"(Panhuysen & Pierrot, 2014), whereas the 59% remaining is harvested and traded as a commodity using market information like quantities and qualities evaluated through standardized methods.

The Global Value Chain (GVC) analysis provides a conceptual framework to understand how these chains are organized by examining the structure and dynamics of the actors involved from two contrasting vantage points: *Governance*<sup>34</sup>, as a top-down control process exerted by leading firms, and *Upgrading*<sup>35</sup>, as a bottom-up improving process, in which firms, regions, and countries try to advance and capture more benefits within the GVC (Gereffi & Fernandez-Stark, 2011). This framework categorized the governance of mutually dependent value chains depending on three variables: 1- the complexity of knowledge required by product specification; 2- the degree in which this complexity can be mitigated through codification (and then low-cost replication in other firms); 3- the capability of suppliers to meet buyer's requirements (Gereffi et al., 2005). In between the two extremes of market and hierarchies, high complexity, high codification, and low capabilities led to a *captive value chain*, in which suppliers are entirely dependent on their leading firm like maquilas which manufacture goods according to detail instruction from the buyer; when complexity, codification, and capability are high a *modular value chain* is expected in which actors can exchange complex information with little coordination like the car-parts industry. When complexity and capabilities are high, but codification is low because actors cannot codify the product specification, they reinforce mutual dependency, and a *relational value chain* can arise "regulated through reputation, social and spatial proximity, family and ethnic ties, and the like" (Gereffi et al., 2005, p. 86).

The complexity associated with the socio-environmental concerns as drivers of change within the GVC analysis encouraged Ponte and Gibbon (2005) to take a step forward by merging GVC analysis with the Convention Theory. They claim that socio/environmental expectations are absorbed by

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<sup>33</sup> An example is *Café Libertario* in the business district in Bogotá, an experimental roaster integrated with *La Palma y El Tucán* a coffee farm in Zipacón that is well-known for their post-harvesting methods.

<sup>34</sup> Gereffi (1994) seminal paper on the governance of the GVC focused on how purchase power shaped production networks: Sometimes driven by producers in capital/technology-intensive industries or by buyers in labor-intensive sectors.

<sup>35</sup> Humphrey and Schmitz (2002) identified four types of upgrading (process upgrading, product upgrading, functional upgrading, and inter-sectorial upgrading).

"quality standards" which details the whole set of uses of property rights, and through them, leading firms will govern the GVC. Muradian and Pelupessy (2005), in their work on the governance of the coffee chain, show how Voluntary Sustainable Standards (VSS) create stronger coordination by codifying information and exchanging "extra standards" information. It contradicted Gereffi's claim that higher codification implied weaker coordination. In the same line, Bitzer, Francken, and Glasbergen (2008) highlighted the influence of actors outside the value chain (meaning outside the input-output relation), namely NGOs and activists among others that integrate socio/environmental issues into the governance of the coffee value chain through partnerships that increase complexity.

Barrientos, Gereffi, and Rossi (2010) developed the Global Production Network analysis, which emphasized on the institutional and social context of the GVC by understanding people both as an input (labour as a productive factor) and as actors (workers as social agents) that influence global production. So, participants in the coffee value chain are both input and output factors that use their resources (of action) strategically to shape the GVC in their advantage, mainly through conventions/institutions.

González and Nigh (2005) merged this conceptualization of actors as an input-output factor with the normative goal of the sustainable management of the coffee value chain, to redefine the latter as a common pool resource that could be managed by a well-designed institution according to Elinor Ostrom (1990).

In this order of ideas, the socio-economic-environmental effects of coffee are a common-good resource resultant of a complex interaction within participants in the global coffee value chain that is governed by an institution. A non-negligible amount of literature had focused on this institution-effect relationship. We will focus on the two main types of institutions: Voluntary Sustainable Standards (VSS) and Geographical Indications (GI).

### 1.3.1. Voluntary Sustainable Standards

From the GVS analysis framework, the VSS are detailed product specifications that should be followed by actors throughout the coffee value chain, to produce the economic-socio-environmental attributes demanded by consumers, characteristic of a *modular value chain*. From the IAD framework, VSS are governance mechanisms to solve the problem of collective action in the way that coordinate actors to produce the common: the triple bottom sustainability of the coffee value chain. Both perspectives use the "lens of contract" to observe the influence of VSS on the uses actors made of their property rights. Moreover, in both cases, scholars have assessed VSS' effects on the economic social and environmental dimensions with mainly positive outcomes but unequally distributed.

On the one hand, Dragusanu, Giovannucci, and Nunn (2014, pp. 222-223) resented a summary of several studies that had found an increased utility in consumers who bought products overpriced due to how is produced rather than its physical features. They performed a meta-analysis to assess Fairtrade certifications in producers' wellbeing and concluded that "the existing

empirical evidence, based primarily on conditional correlations (...) Fair Trade farmers do on average receive higher prices, have greater access to credit, perceive their economic environment as being more stable, and are more likely to engage in environmentally friendly farming practices" (Dragusanu et al., 2014, p. 234). Max Havelaar argues that the price received by the Fairtrade producer is between 19% and 26% of the retail price (F. International, 2006) and consumer not only recognizes the label but they are confident in it<sup>36</sup>.

In the same line, *El Centro de Estudios Regionales Cafeteros y Empresariales - CRECE* evaluated the impact of sustainable programs in Colombia using data for 3,372 coffee farmers participating in seven voluntary sustainability standards<sup>37</sup> during three years. Researchers showed an average improvement of participant farmers in those schemes in a social index (4.3 points), an environmental index (8.1 points) and an economic index (5.4 points) compared with non-participant farmers (Garcia, Ochoa, Garcia, Mora, & Castellanos, 2014). Additional empirical evidence on positive effects of VSS in the three dimensions of sustainability (social, environmental and economic) in Colombian coffee zones were provided by Rueda and Lambin (2013). They assessed the effects of one VSS (Rainforest Alliance) in Santander (Colombia) and showed that comparing to non-participant farmers, participants "had adopted significantly more environmentally friendly practices, such as tree diversity, watershed protection through fencing and reforestation, and infrastructure for water-use efficiency and wastewater management (...) children had significantly higher educational levels (...) the median educational achievement of children was two years higher (...) and farmers also joined associations and informal groups significantly more frequently" (Rueda & Lambin, 2013, pp. 5-7). S. Arango et al. (2014) evaluated the effects of one VSS (Nespresso AAA) in five departments of Colombia. They showed a continuous increase during three years in the three economic, social and environmental index of participant farmers which consistently remained 25% superior to non-participant ones.

On the other hand, VSS are seen as arrangements that impede market efficiency through both overpricing for consumers and resource allocation traps for producers. For Paul Collier quoted by Dragusanu et al. (2014, p. 217) producers involved in fair trade certifications "get charity as long as they stay producing the crops that have locked them into poverty". Mostly, critics come from concerns about distributive issues in access, governance, and benefits. According to Lozano, Samper, and García (2011), VSS impose expensive practices that erect a barrier of entry for unsupported small coffee farmers. Indeed, exclusivity to access to the VSS market is at the core of labeling. If there is free entry, VSS premiums would attract producers and, if consumption did not increase at the same rate, the premium would decrease to a level in which producers would not be interested in continuing with the regulated practices. A similar situation was identified in Mexico in which the expensive practices demanded by the organic certification allow larger producers to take over the niche market at the expense of small ones (González & Nigh, 2005).

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<sup>36</sup> "D'après une étude réalisée auprès des consommateurs suisses par GlobeScan en 2015, 88 % des personnes interrogées connaissent Fairtrade Max Havelaar, 84 % lui font confiance, ce qui se traduit par 82 % d'acheteurs fidèles" (Havelaar, 2014). Also, at the global level "nearly 6 in 10 consumers have seen the Fairtrade mark of those, 9 in 10 trust it" (F. T. International, 2014, p. 18).

<sup>37</sup> Four certifications (Fairtrade, Organic, Rainforest Alliance and UTZ Certified) and three codes of conduct (Nespresso AAA, 4C and Starbuck's C.A.F.E. Practices).

Dragusanu et al. (2014, pp. 229-231) summarized some studies in which contradictory evidence is presented about Fair-Trade effects on local governance. On the one hand, farmers who identify strongly with their cooperative and on the other, farmers which are distrustful and dissatisfied with the cooperative management. Giovannucci and Ponte (2005) draw attention to sizeable commercial roasters that entered the VSS realm to achieve recognition while minimizing cost. Silla (2014) argue that intermediaries, including the labeling initiatives, are the real financial beneficiaries of those services. In the case of Fairtrade "to take the case of the United States, for each dollar paid by "ethical consumers" to buy a fairtrade coffee product, only 0.03 dollars are transferred to producer organizations" (Silla, 2014, p. 5). Bitzer et al. (2008) show the uneven distribution of benefits among partnership members (including producers, traders, roasters, and NGO's). Hiscox (2007, p. 59) argue that producers receive just one-quarter of the extra price because tradable costs are higher<sup>38</sup>. The situation increases suspicions for the business model and reduces its capacity to solve the misalignment between private and social incentives<sup>39</sup>. Part of the answer for the latter finding is explained by a certification boom of coffee farms that rapidly overtook demand for certified coffee, creating an oversupply that reduced prices and re-commoditized the coffee market in the roasters' benefit by "greening" their activity (Benoit. Daviron & Vagneron, 2011).

In response to this distributive issue cause, Lozano et al. (2011) proposed an alternative institution, so farmers could upgrade within the coffee value chain in order to redistribute the value created on their favor: the Geographical Indications.

### 1.3.2. Geographical indications

A Geographical indication (GI onward) is an indication for consumers that links a specific good with its geographical origin, and the quality and reputations that come alongside<sup>40</sup>. It tries to both encourage consumers to identify the geographical origin of the product and to associate its consumption to an offer-driven bundle of sensations mainly associated with the reputation of the geographical origin<sup>41</sup> and, coordinate producers to follow the practices that maintain or enhance their product reputation.

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<sup>38</sup> According to Hiscox (2007), incomplete information about the tradable product restricted consumers to purchase coffee with other appreciated features (e.g. shade-grown coffee) in addition to just sensorial characteristics: they are willing to pay more, but they decide not because nothing guarantees that the extra price reaches its social goal. Consequently, roasters who want to offer coffee with those features struggle to distinguish their product. If high investment in publicity is so they are going to receive the same lower price for a costly product, in the end, they either lose margin/market share or abandon the enterprise.

<sup>39</sup> See for example (Harford, 2008; Rodrik, 2007)

<sup>40</sup> "indications which identify a good as originating in the territory (...), where a given quality, reputation or other characteristics of the good is essentially attributable to its geographical origin". Article 22 of the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) of the World Trade Organization (WTO).

<sup>41</sup> Indeed, cultural identity and the more appreciated cultural heritage, is the result of social construction in which the past comes to the present to inspire local communities and give meaning to indigenous products in order to differentiate them in the market according to (Boisseaux et al., 2012). In contrast with marks owned by roasters,

From the GVS analysis framework, when this coordination to encapsulate the territorial features (especially the aromatic profile) in a coffee<sup>42</sup> is so complex that actors cannot codify it, we expect a *relational value chain* in which coffee growers individually "work closely with roasters, buyers and importers to establish a direct, long-term trading partnership for coffees that have high-quality cup profiles" (Hernandez-Aguilera et al., 2015, p. 4).

This close relationship could be referred to as coordination. D Barjolle and Sylvander (2002) analyzed 21 supply chain featured by GIs in seven countries and concluded that upgrading success depends primarily on the effective coordination of objectives in three main areas: product quality and control, research & development, image promotion. As the complexity and incomplete information make optimum solutions unattainable, collectively setting objectives based on their competencies is a crucial step to find acceptable solutions to be coordinated. Hence, "many firms jointly managing the same product in the way one large firm might do" (D Barjolle & Sylvander, 2002, p. 6)

From the IAD framework, the GI can be conceptualized itself as a common pool Resource that helps producers to upgrade their commoditized coffee to a differentiated one. So, scholars analyze the sustainability of the GI according to the fulfilment of GI's objectives. Interesting enough, the monetary dimension overshadows the socio-environmental ones. Scholars might have assumed that a successful GI automatically protected the latter because it is feasible that the code of conduct developed by the interested community of producers would internalize the social cost of production.

Xiomara F. Quiñones-Ruiz, Penker, Vogl, and Samper-Gartner (2015) analyzed the management of the GI of Café de Colombia in the light of Ostrom's eight design principles for the governance of the commons to illustrate the coordinated effort to govern this GI. They argue, as D Barjolle and Sylvander (2002) empathized, that it is not enough to effectively coordinate the collective effort: intrinsically features of the market play an important role. The "Café de Colombia" for example, cannot fully attain its objectives because it is a commodity traded in the green coffee market. Therefore, roasters "are not obliged to add the GI-symbol on the package of third-country GI-products. Thus, it will be up to the consumer demand and the willingness of international roasters and brand owners to communicate origin coffee" (Xiomara F. Quiñones-Ruiz et al., 2015, p. 434). Similarly, in the case of countries like Kenya, where *sui generis* GI's legislation contributed to the quality management (actors used trademarks law to protect the reputation because the absence of a proper GI Law) but it did not produce the expected outcomes because they had no control over the transformation and marketing stages (Dominique Barjolle, Quiñones-Ruiz, Bagal, & Comoé, 2017, p. 116).

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which encourage consumers to identify the origin of the product at the company level and to associate its consumption to a demand-driven bundle of sensations designed through sophisticated marketing campaigns.

<sup>42</sup> "la encapsulación del territorio en un producto" in terms of Ray quoted by Acampora and Fonte (2009, p. 16).

The very recent use of GI for coffee in the developing world has restricted the number of empirical studies on its effects<sup>43</sup>. Teuber (2010) demonstrates that country and region of origin are an essential price determinant. Using data that she describes as "informal GI" (it means coffee sold because of its origin but without legal protection) analyzed through a hedonic price model, she shows that single-origin coffee receives significantly higher retail prices (from 3 to 13 times more than all roasted coffee). Chabrol, Mariani, and Sautier (2015) analyzed a project implemented by the *Organisation Africaine de la Propriété Intellectuelle*, and show that after the producers obtained the GI for the Ziama-Macenta coffee in 2014, the international market was opened increasing purchase prices in 10%.

To conclude, the "lens of contract" literature, both the GVC analysis and the IAD framework, focused on institutions and their effects on sustainable coffee. In this sense, there is an objective definition of the problem that could be solved if definite goals are set out, and institutions could produce the incentives needed to accomplish them. In the case of the VSS, it emphasized on the institutions' characteristics and mainly its socio-economic and environmental positive effects, however unequally distributed. In the case of GI, this institution might internalize the socio-environmental costs, so scholars have mainly focused on the economic dimension. They claim success depends on coordination among actors which is particularly tricky in the highly complex coffee value chain.

This message is highly relevant to our research. Whenever there is an objective definition of the problem of sustainability in the coffee culture, a well-designed institution *could* incentivize a transaction of property rights that *could* solve the problem in the defined terms. We highlight the conditional because of the asymmetry of consequences (Favre, 2005): if actors implement an institution, the institution could attain, or not, its objectives. If actors do not implement an institution, the institution will not attain its objectives. Hence, institutions are a crucial component of our research.

#### 1.4. Should we use the "lens of negotiation" to study sustainable management of Resources?

However, as we discussed previously, there is never an objective definition of the problem because different actors demand different services from the Resource, and each one could probably have their own "objective definition of the problem". So, we should look on the other way around: How do actors, who had a different definition of the problem, play the game to produce the institutions that are going to play a significant role to govern their transactions?

##### 1.4.1. Actors' negotiation matters.

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<sup>43</sup> According to Dominique Barjolle et al. (2017, p. 116), in addition to Colombia in 2007, only both Guinea in 2014 and Thailand in 2016 successfully obtained the GI for coffee. Jamaica started their process in 2014 and Kenya and Ethiopia used the Trademarks legislation to protect the reputation.

Xiomara F Quiñones-Ruiz et al. (2016) used the IAD Framework to understand the process that ended with a particular GI protected under the European Legislation. They compared five cases according to *time* and *resources to create and maintain property rights*, two independent variables stemming from the empirical transaction cost analysis. They showed that “the most critical and demanding phases were the conception of a consensus on the GI-strategy (phase I), followed by the definition of an agreement on the Product Specification (phase II)”. (Xiomara F Quiñones-Ruiz et al., 2016, p. 113). This process perspective draws attention to a seminal piece of the puzzle: the actors’ negotiations as an explanatory factor of the final shape of the institution.

Boisseaux et al. (2012) disentangle this process using the lens of political sciences. They produced a framework to observe the actor’s negotiations in order to develop a GI sustained on the cultural identity to increase revenue in markets, which had an inherent dilemma: on the one hand the heritage conservation is conditioned by the flow of revenues produced by its exploitation, on the other, the exploitation of the heritage put at risk its value as a heritage. Some actors are mainly interested in one side of the dilemma (like owners of the land interested on the high reputation of wine to increase rents in the long-term) and others with the other side (like traders interested in volume to increase their profit in the short term). Designing an institution that satisfies the whole set of participants in this dilemma is not automatic.

Indeed, scholars criticised the idea that a well-designed institution can orderly regulate actors’ uses of their property rights for their mutual gain because it ignores actors’ games. Power relations between actors “highly matter, in order to explain why institutions emerge and what function they perform” (Johann Dupuis & Knoepfel, 2014, p. 17).

This remark has motivated new contributions to study the sustainable management of Resources. Clement (2010) “politicised” the AID framework by incorporating two exogenous variables (politico-economic context and discourses) to the previous three considered (biophysical conditions, rules-in-use, attributes of the community) to study the state afforestation policies in Vietnam, taking into account not only the collective action among local communities but also the influence of higher government institutions<sup>44</sup>. This contribution shed light on the need to take into account politics, but as an abstract concept hardly systematically observed to produce robust explanatory claims.

A more comprehensive framework built on the property rights theory of the new institutional economics, incorporated the public policy analysis to systematically observe the politics and its effects on the (un)sustainable use of Resources. The Institutional Resource Regime (IRR onwards) framework developed by J. D. Gerber et al. (2009) focuses its attention on the actors’ uses of (their property rights on constituents of) the Resource to produce services that are affected by institutions and, simultaneously, on the actors’ strategies to play the power game in order to influence the institutions. This game is systematically observed by looking how actors mobilise

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<sup>44</sup> Other applications of this framework (Brodrechtová, Navrátil, Sedmák, & Tuček, 2016; Clement, 2013; Whaley, 2018; Whaley & Weatherhead, 2014)

ten types of action resources (Peter Knoepfel, 2017) to activate institutions steaming from the Institutional Regime (IR onwards): namely those that (not)allow uses of their property rights through the regulatory system, or that (des) incentivise uses of their property rights through public policies. Its principal hypothesis is that actors increase the sustainable management of the Resources if an integrated regime coherently regulates the whole set of demanded services.

Empirical studies using the IRR framework pointed out two mechanisms that question this hypothesis, encouraging further improvements. First, actors do not directly apply the IR in the field. There is a gap between what actors pretend to implement and what actors finally implemented on the ground. The IRR framework explains this gap through the strategical behaviour of actors to activate or not<sup>45</sup> certain institutions in different manners (Schweizer, 2015). This post-activation phenomenon<sup>46</sup>, observable in a given time and space, is known as the Local Regulatory Arrangements (LRA onwards) that “is the result of the activation process that is effectively used by the actors to stabilise their uses of the Resource. It is always worded in concrete terms that allocate use-rights” (de Buren, 2015, p. 21). Secondly, there is a paradox that impedes the consolidation of integral regimes: when regulations increase to cover the whole set of services demanded from the Resource, it could produce higher incoherencies. Consequently, before approaching an integrated regime, the regime goes into an institutional complexity trap caused by both transaction cost and transversal transaction costs (Bolognesi et al., 2018).

These contributions do not refute the basic idea that unregulated and incoherent regimes tend to decrease sustainability, but we have to untangle other mechanisms. At the state of the art of the Institutional Regime literature, we redefined the question as follows: how do actors overtake transaction costs to produce LRAs that coherently regulate the whole set of services demanded from a Resource to avoid falling into the institutional complexity trap and increase Resource' sustainability.

#### 1.4.2. Our contribution: mechanisms that explain positive coordination.

An immediate challenge of such an actor-oriented approach is that as long as the provision of services does not endanger the stock and reproductive capability of the Resource, all demanded services are "legitimate". So, participation in the agreement to govern the Resource is not just a normative desire. It is an explanatory factor of the Resource's sustainability: if the agreement excludes some actors, it will no produce their demanded services, risking the agreement's survival.

However, participation implies a rise in transaction costs due to the higher number of players to coordinate. Not only it is complicated to arrange an adequate combination of services provided

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<sup>45</sup> Schweizer (2015) systematised five types of activation: passivity (no activation); concretisation (activation as close as possible); diversion (activate a rule with an intention other than the original one); circumvention (resist the rule by activating another) and innovation (develop a tailor-made solution to address the issue).

<sup>46</sup> De Buren (2014) claim that the IR influences the LRA depending on the level of coherent regulation of the whole set of services. In its maximum level, the IR fully influence the LRA. In the minimum level, when the IR is inexistent, the leeway for action that actors have will influence the LRA.

by the Resource, but also it is difficult to agree who should assume the costs of the change of use and receive the benefits from it.

The latter had been described by Lax and Sebenius (1987) as the “negotiator’s dilemma” as the “negotiator's dilemma” in which the intrinsic competition derivate from distribution counterbalances the needed cooperation among actors for reaching the adequate combination of services. Depending on these two dimensions (saliency of both production and distribution). Scharpf (1997) distinguished between four modes of negotiation: *spot contracts* when both are low; *distributive bargain* when the result itself is not relevant, but the distribution of costs and benefits is essential; *problem-solving* on the other hand, distribution does not matter but the joint effort to produce the result is pivotal; *positive coordination* when both issues are of high relevance.

Scharpf (1997, p. 133) observed the *positive coordination* through the work done by successful inter-ministerial project groups to deal with problems affecting jurisdictions of several departments: "the members of such task forces were, for a limited period, excused from their ordinary duties and free from hierarchical directives within their home departments (...) it was expected that such task forces would be able to develop innovative approaches that departed from the established policy routines of the ministries involved but that the solution proposed would, in the end, also be acceptable to these ministries (...) these elaborate arrangements were thought necessary to overcome the conservative bias (...), in which each department developed project ideas only with a view to its own responsibilities and capabilities and opposed other initiatives that would have encroached on its own routines".

Because positive coordination becomes prohibitive when transaction costs escalate due to the increase in the number of actors, Scharpf (1997, p. 146) moved into the direction of aggregated preferences in which individual actors group together as collective actors (like coalitions; club, movements; association) or corporate actors <sup>47</sup> . So, his theoretical focus shifts from the interaction among actors to the internal interaction within actors.

Assuming that this aggregation of actors makes it feasible to overcome the transaction costs (because just a few collective actors are involved in the negotiation, not thousands of individuals) we focus our research on the positive coordination among these few actors. We retrieve the elements transcribed of the previous example of successfully inter-ministerial project groups

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<sup>47</sup> According to four characteristics (action; purpose; resources; decisions) there are six types of actors: *aggregate actors* when action, purpose, resources, and decisions are all individual; *coalitions* when action is joint, and decisions are agreed whereas purpose and resources remain individual; *clubs* when purpose remain individual but actors joint action, collectively use resources and vote for making decisions; *movement* when action is joint, and the purpose is collective, so even resources are individual decisions are consensual; *association* when actors joint action, share purpose, collectively use resources and vote for making decisions; *corporate actors* when hierarchies determine action, purpose, resources and decisions.

because they shed light on some salient dimensions. Firstly, a "deliberative scenario" for negotiating both the production and the distribution; secondly, "innovative solutions" (on both production and distribution) must be embedded in the Institutional Regime because this gives legitimacy to the agreement so representatives of the collective actor can convince their members; thirdly the overcoming of the conservative bias to maintain an immovable position.

In the Institutional Resource Regime literature, Laesslé (2016) developed the concept of *Institutional Creativity* as the capacity of local actors to make use of the strategies of (in) activation of institutions to shape the final output to produce the demanded services. We consider that this concept could be refined by adapting it to the elements observed by Scharpf (1997, p. 133) in the previous example of positive coordination. Firstly, this concept could implicitly incorporate the deliberative scenario, but we consider relevant to make it explicit because hardly any agreement can be reached without it; Secondly, the "innovative solutions" embedded in the IR are fully incorporated through a systematized observation of the final output to produce the demanded services; thirdly, this "immovable position" is operationalized in terms of the power game, namely strategies to mobilize the action resources in order to shape the output in the actor's interest.

We are particularly interested in this third dimension. We conjecture that there is a negotiation to overcome the conservative bias related to the initial distribution of power among the actors. A considerable imbalance would maintain the conservative bias because powerless actors would not be able to put forward their position, hence the production (of demanded services) and distribution (who pays the costs and obtains the benefits) agreements would be solved in favour of the powerful actors, leaving forcefully behind the services demanded by the excluded actors, therefore decreasing the Resource sustainability.

In this order of ideas, we conjecture that a power-balanced starting point could explain the overcoming of the conservative bias in order to trigger positive coordination that could end in a negotiated agreement which produces the whole set of demanded services. Clearly, as the power-unbalance is the most common starting point, we conjecture that the "negotiation dilemma" starts when powerful actors face the initial dilemma either to deceive and take advantage to govern the Resource in its favour putting at risk sustainability, or to cooperate and endow enough the powerless to "balance" the initial discussion and open the door for the positive coordination needed to guarantee the sustainable management of Resources.

### 1.5. Intermediary synthesis: A research to analyze the two-face sustainable management of Resources through the "lens of negotiation".

We started this chapter criticizing the international consensus on the sustainability of coffee because it was built on an objective definition of a group of actors, namely the actors vertically linked in an input-output relation. Then, we demonstrated that we should evaluate sustainable management of Resource systems on two dimensions: the objective one that assesses the appropriated level of the stock and reproductive capacities of the Resource, and the subjective one, that assess the socially constructed services demanded from the Resource.

We showed that this problem only makes sense when humans produce accidents that limit the expected life span of the Resource system, so we conceptualize it as a problem of collective action and we briefly presented how scholars had dealt with it. We focus on the “lens of contract” to study this collective action problem of the sustainability of the coffee Resource, and we showed that a well-designed institution *could* incentivize a transaction of property rights that *could* solve the problem in the defined terms. However, as different actors have their own subjective “objective definition of the problem” we propose to use the “lens of negotiation”.

We place our contribution in enriching the IRR framework to explain the sustainability of both the Resource and the socially constructed services through the local regulatory arrangement. At the state of the art of the IRR literature, the main question is how do actors overtake transaction costs to produce LRAs that coherently regulates the whole set of services demanded from the Resource before falling into the institutional complexity trap. So, we conjecture that this could be possible through the *positive coordination* that actors can reach when, in a first negotiation dilemma, actors cooperate to empower their weaker counterpart, so the negotiation is balanced enough to solve the second negotiation dilemma on both the production and distribution.

We intend to test this conjecture using the Institutional Resources Regime Analytical Framework (chapter 2) to identify possible causal mechanisms that could improve collective action and the sustainable management of coffee culture (chapter 3).

## Chapter 2. Conceptual framework

To address the problem of collective action in the sustainable management of coffee culture, we propose to use the Institutional Resource Regime framework (de Buren, 2015; J. D. Gerber et al., 2009) and particularly, its adaptation for the analysis of heritage Resources (Boisseaux et al., 2012; Laesslé, 2016).

Using the “lens of negotiation” we do not focus on the institutions but on the agreements. Thus, the analysis intends to understand how the actors negotiate the activation of institutions to influence the use of the Resource in order to guarantee a provision of services that satisfy them all, increasing the sustainable management of the Resource.

We propose to develop this conceptual framework in two stages, firstly a general approach that develops the link between our two main concepts: The Resource System and the Local Regulatory Arrangement. Secondly, we dig deeper into the detailed description of the explanatory mechanism from an operative perspective, through which we present the variable to explain: the level of services provision; the intermediary explanatory variable: The Local Regulatory Arrangement; and the explanatory variables: the actors’ games.

### 2.1. The general model

We start analyzing the Resource System from three elements: The *Resource constituents* that are *profiled by actors* to produce the demanded *services*. Then, we describe the link between these three elements through a conceptual tool that we denominate the Local Regulatory Arrangement.

#### 2.1.1. The artificial Resource Coffee

The coffee trees and their fruits in a forest are not a Resource. They only become a Resource to the extent that human beings use them to obtain services. The Resource could be composed of a dozen of coffee trees planted in a yard owned by one person, who harvest 37 kilos of coffee cherries annually. He then hulls to remove the pulp; ferments the byproduct for few hours with the last layer of pulp until it is washed away; and then, he dries the beans to obtain 7.5 kilos of parchment coffee (the type of coffee usually sold by farmers). Afterward, he threshes it into 6 kilos of green coffee (the type of coffee usually bought by roasters), so he can roast it into 5 kilos of roasted coffee. Finally, he mills so he can brew two cups of coffee daily all year long<sup>48</sup>. In this

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<sup>48</sup> Assuming an annually production of 3.1 kilos of coffee cherries per three (equivalent to 0.62 of parchment coffee; 0.5 kilos of green coffee and 0.42 kilos of roasted coffee) and a cup containing 7 grams of roasted/milled coffee. (conversion factors to convert different types of coffee by Pérez et al. (2008)). This example pretends to briefly familiarize the reader with the profiling process.

case, the Resource system is composed of a dozen coffee trees whose fruits are used to produce one service: the pleasure of drinking two cups of coffee per day<sup>49</sup>.

Also, the Resource system could be composed of the whole coffee harvest equivalent to 150 million green coffee bags produced by two-dozen millions of coffee farmers in tropical countries (ICO, 2014), plus traders, roasters, brewers and so on, for producing services to hundreds of millions of human beings all around the globe.

This conceptualization allows us to analyze Resource systems at different levels (e.g. a country level or a subnational one). But at least, in a given time, the stock of the Resource (a coffee crop identified in a geographical area) and the group of users interested in its services (hereinafter referred to as actors) must be defined. We denominate this heuristic division: The Resource perimeter.

However, if the coffee crop can be straightforwardly defined as an area planted with *coffea*<sup>50</sup> trees, the group of actors might be tricky to identify because services are both materially produced and cognitively constructed by humans.

From the point of view of the “material production”, services are not autonomously derived from the Resource, it is necessary a set of human processes to produce them. Following Nicol (2012, pp. 26-27), we considered Coffee as an artificial Resource that produced services because of human intervention. We denominate this process “to profile” (the Resource) and the resulting combination of services as “the profile” (of the Resource) following Boisseaux et al. (2012).

In this sense, we can identify the first type of users of the Resource and the first type of services: The *profilers* who demand *monetary services*. They are natural or juridical persons that use the Resource in a logic of input-output throughout the coffee value chain to add value, in exchange for money. We have described the Resource system as a very small perimeter with a dozen coffee trees and just one profiler. If we focus on a bigger geographical space (e.g. the coffee harvest in one municipality), it is highly probable that we can observe a larger group of profilers.

Initially the *profilers-farmers* who conduct the first three processes of the profiling process: **planting** the coffee trees of a certain variety, with a particular density and renovation cycles, alongside (or no) other plants species, in a portion of their owned land; **cultivation** of the coffee crop providing the conditions for a good picking of coffee cherries: managing the soils, the pest and diseases, the nutrition and the natural protection; **post-harvesting** activities to initiate the transformation of the bean, adding value through the hulling, fermentation, drying (in some cases waste management and reselection), developing the aroma precursors<sup>51</sup> within the parchment coffee beans.

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<sup>49</sup> In a real case, there could be several services, to maintain the example as simple as possible we assume just one service.

<sup>50</sup> A genus of flowering plants in the family Rubiaceae (Arcila, Farfán, Moreno, Salazar, & Hincapié, 2007)

<sup>51</sup> The changes in the chemical composition of green coffee beans are due to metabolic activities that occurred on farm and fermentation after the harvest (Lee, Cheong, Curran, Yu, & Liu, 2015).

Then, local merchants, coffee cooperatives, exporters, international commodities merchants among others, which we denominate *profilers-traders*, **trade** the coffee between farmers and roasters. Usually, they buy parchment coffee directly from the farmer, or indirectly among them. Eventually, a trader will add value by threshing the parchment coffee in green coffee and sorting by quality in coffee bags of 70 kilos (an internationally accepted practice). Afterward, the trader will bulk and ship the quantities needed by its clients: local or international roasters (frequently the highest quality is exported and the lowest quality goes to the domestic market).

Finally, *Profilers-roasters* would **roast** coffee to add value selling to consumers. They buy green coffee from traders and in some cases directly from farmers, to offer a consistent value proposal for the final consumer either a roasted-packaged coffee or a **brewed** coffee cup. This value proposal depends on both the aromatic profile and the bundle of sensations attached to its consumptions. The aromatic profile results from a series of Maillard Reactions (a chemical reaction of sugars, proteins, amino acids, and phenolic compounds amino acids and reduced sugars that produce coffee aroma induced by heat when the green coffee is roasted (Lee et al., 2015)). Two ingredients are essential: the aroma precursors on the green coffee, affected by external factors like availability and purchase prices, and the completely controlled S-Curve Roast Profile, meaning the relationship between temperature and time. Hence roasters are incentivized to rely on their roasting technique and to diminish their vulnerability by blending coffee coming from different origins easy to acquire from different suppliers. The bundle of sensation is shaped through the **communication strategy**, usually, a marketing strategy that defines a clear message and a set of promotional activities to spread it like personal selling, advertising, publicity, etc.

We have briefly described the seven human processes into which we divide the profiling of the Resource coffee. Each process is composed of innumerable activities, the vast majority has not a relevant influence on the profile of the Resource but there are some who are essential to produce services. We have identified a closed list of 26 activities in which profilers face tradeoffs between one expected profile or potential alternative ones that we present in Annex 1, with a brief description and the identified tradeoff. For example, farmers have to choose between two *coffee arabica* varieties, the pest-resistant *Castillo* or the pest-vulnerable *Borbón*, the latter does require pesticides (negatively affecting the environment) but it is believed that has a higher possibility of producing a high-scored coffee (positively affecting its aromatic profile) that could be better paid in the upper-market segment (positively affecting the monetary services). The former could have a lesser impact on the environment, but a common aromatic profile which would be paid at standard market prices.

The “choice” between different profiles in one activity is observed through the uses of the Resource made by an actor in that particular activity. To systematize the observation, we conceptually divide the Resource into three components categorized by Boisseaux et al. (2012, p. 17) as the Resource constituents (hereafter constituents).

- 1- *Infrastructures*: the basic structures that give existence to the Resource. The soil in which the coffee tree is planted and the plant itself are essentials to its existence; also, the

logistic structure that permits its trading and shipping to multiply the services demand at a global scale; and the distinctive sign which encapsulates the bundle of sensations that defines the Resource, among other basic structures. Particularly relevant is the coffee fruit in a given state, namely: coffee cherry, parchment coffee, green coffee, roasted coffee.

- 2- *Know-how*: human interventions that consume the activity using particular techniques and/or utensils. For example, planting practices according to the moon cycle using ancestral ceremonies for encouraging a good harvest; blending different doses of synthetic fertilizers to compensate soil deficiencies previously evaluated, namely the chemicals elements demanded by the coffee crop; attaching a chip to the coffee bags to trace coffee origin; using certain colors in the packaging to attract consumers attention, etc.
- 3- *Know-to-appreciate*: the social construct of the Resource links it to a meaning that once activated, produce a sensory and/or cognitive experience. For example, if a high-scored coffee cultivated under the organic legislation by indigenous communities from a Unesco's world heritage site, is served to a person who does not have any meaning attached to the coffee beverage, he could use it to rinse its shoes. On the other hand, if a person appreciates the complex aroma delighting himself; travels on his mind to this heritage site with astonishing landscapes; feels safe drinking a product that avoided toxic pesticides, and responsible protecting cultural diversity, the Resource produces its full potential. In both cases, actors had used their *infrastructures* and *know-how* to influence (un)successfully the use of the *know-to-appreciate* of both consumers.

This last constituent highlights the cognitive construction of services. "Humans, unlike other animals, "eat with the mind as much as the mouth" and are "immersed in the symbolic nuances of food" (Alan Beardsworth and Teresa Keil quoted by Biltekoff (2010, p. 175)). Starting from coffee taste classification as "delight" or "disgusting" to the reputation of the roaster that produces "affection" or "repulsion", or the labeling that produces "confidence" or "distrust" and the coffee crop defined as "lush" or "predatory". Adjectives that are just limited by the vocabulary.

This social construction of services in human minds, triggered by the whole profiling process triggers, allows us to identify two additional types of actors: *consumers* and *stakeholders*, and two additional types of services *taste related* and *symbolic*.

For *consumers*, the beverage acts as a transmitter of meaning created by the social context and their own experience, including the communication strategy move forward by profilers or by stakeholders. For them, coffee is a vector of sensations derived from the sensory experience that we denominate *taste related services*, like the sweet citric acid of a coffee grown in Buesaco or the fruity aroma of a natural coffee (a long fermentation in which coffee is left to ferment with the pulp for several days until it dries completely). Also, coffee consumption triggers feelings derived from the cognitive experience that we denominate *symbolic services*, like the

environmentally responsibility of a coffee grown under a trusted environmental label, or the prestige when drinking a worldwide reputable coffee appellation. Usually, consumers perceive both services.

*Stakeholders* are individuals or groups of individuals from whom the profiling of coffee is defined as a collective issue that demands collective action: E.g. The coffee crop is perceived as a cultural killer that has to be eradicated or an opportunity to improve income and well-being that has to be encouraged. In both cases, the social construction is moved forward by stakeholders to encourage collective action and provide the symbolic service. In the first case the sensation of the “cultural protection”, in the second the impression of “well-being”. Collective issues are horizontal to the vertically linked input-output relationship among profilers, so following Abdulsamad, Stokes, and Gereffi (2015) we will use the terms of *stakeholders in production* and *stakeholders in consumption* to differentiate between the origin of the collective issue, namely public authorities, NGOs, agricultural associations, consumer associations, etc.

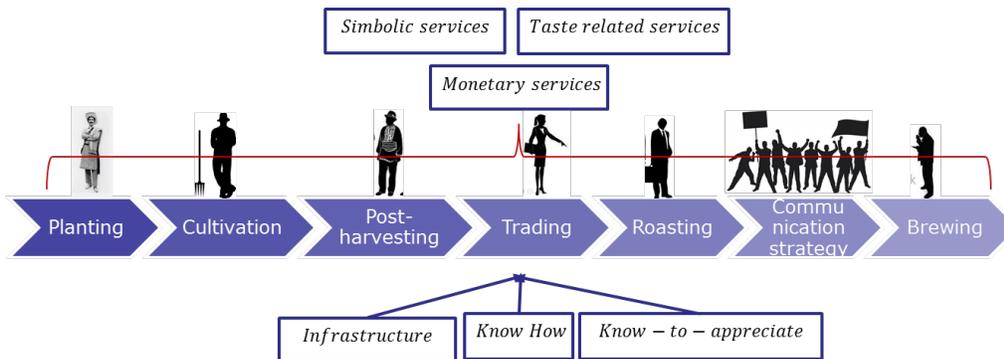
Moreover, a specific profile does not automatically imply that actors obtain their demanded services. Rather insufficiencies on the demanded services are the norm because of the inherent rivalry between profiles that maximize monetary services through the intensification of coffee farming at the expense of the taste related services when aromatic precursors were poorly developed. Or a profile that privileges taste related services through complex fermentation techniques that implies several washing cycles at the expense of the symbolic services by polluting water creeks. Or a profile that focuses on the symbolic services derived from ancestral-indigenous production at the expense of the monetary services, and so on. Eventually, these rivalries would put at risk the provision of a particular service. Then, it could be expected that actors who value the endangered service would react to ensure the provision of it, in quality and quantity, during the life span they consider appropriate. Analyzing through the IRR framework, actors may engage in the political arena to activate institutions steaming from the public policy and the private law to influence the use of constituents made by other actors, which in turn could generate new rivalries.

It is through these claims for services that we identify the whole set of actors and the whole set of services that are included within the perimeter of the Resource. Indeed, we can assume that each individual that has a relationship with the Resource demands a particular combination of services, from the inhabitant affected by the polluted water due to his coffee farmer neighbor to the tourist astonished by the coffee landscapes or the urban citizen that feels his identity attached to the coffee crop. To make the analysis feasible, we use the criterion of critical mass developed by Jean-David Gerber (2004). It implies that only the services demanded through a legal, a political, or a contractual claim on the uses of the Resource are taken into account. For example, the winy-like taste related service produced in some terroirs when the coffee cherry is picked just after it is properly ripe, is taken into account if there is a group of actors who demand this particular use (late-picking), by activating either institutions coming from the private law (like contracts) or public policies (like the technology transfer public policy). Hence, we only consider as an actor the persons or the group of persons that have moved forward their political, legal or

contractual claim because they are the only ones that could affect the final profile of the Resource.

To conclude this initial section, to analyze the Coffee resource system in a given perimeter (composed of a geographical zone and the whole set of actors and services demanded from the Resource in a given time and space), it must be observed the uses<sup>52</sup> actors made of the constituents in each one of the 26 activities throughout seven processes, to profile a combination of services (figure 1).

Figure 1 Resource System: Resource constituents; profiling processes and actors; services. Source: The author



### 2.1.2. The Local Regulatory Arrangement

We ended the previous section describing briefly the rivalries between actors. By demanding a particular service, an actor encourages some uses of the constituents that could endanger the provision of services demanded by others. The affected actor could fight back encouraging other uses that could put the first service at risk, and the cycle restarts. So, the common sense says that the ideal solution would be to ensure a combination of services that satisfy all the actors.

However, the social construction of services makes this ideal situation hardly reachable. It can happen that the whole set of actors interested in services from the Resource in a given perimeter reach a profile in “balance”. But then, for unpredictable reasons like a weather phenomenon or a new trend in consumers’ habits, some individuals perceive that this profile put at risk they demanded services and gather together with other individuals to activate institutions to influence the uses of constituents producing a new imbalance<sup>53</sup>.

This inherent dynamic of the profile demands a heuristic tool, which like a photo, can assess the profile, or profiles, of the Resource in a given perimeter. The IRR has a conceptual tool that we consider fit for our purposes developed firstly by P. Knoepfel, Imesch, Bonnefond, and Larrue (2011): The Local Regulatory Arrangement (LRA hereafter). Once defined the Resource

<sup>52</sup> When we are using the word “use(s)” as a substantive, we are referring to “use(s) of the Resources constituents”.

<sup>53</sup> It must be said that also, it can happen that an “imbalanced” profile threatens the provision of services for a group of people, but as they do not react, the profile could remain for a while.

perimeter, namely the Resource system in a given time and space, it can be observed the uses of constituents by profilers. Thus, it can be assessed the services provision. E.g. If we can observe that the whole population of coffee farmers, traders, roasters, and consumers within a Resource perimeter are using the constituents following the organic legislation, we can claim that the organic symbolic service is produced.

Once this photo is taken, one can doubt that the observed uses spontaneously appeared. Indeed, profilers can use the constituents because they have the ownership over them: the commercial *infrastructures* and *know-how* to both transform the coffee from the fruit to the beverage and influence the non-commercial *know-to-appreciate* owned by consumers. But, when tracing back their origin, one would realize that uses were a result of various (dis)incentives to make profilers modify their behavior.

Analyzing through the IRR lenses, this behavior is observable because actors had activated institutions steaming from the Institutional Regime (IR onwards) for encouraging the provision of their demanded services: namely institutions that (not)allow uses of their property rights through the regulatory system, or that (des)incentivize uses of their property rights through public policies. For example, the observed planting of a pest-resistant coffee variety is a consequence of a subsidized loan produced by an output of the coffee public policy. When using the IRR's lens: the institution incentivized the change on the farmer use of his ownership on *infrastructures* namely the land and the coffee tree. Also, the unobserved natural coffee (the mentioned long fermentation) in Colombia is a consequence of a prohibition to export other than washed coffee (once the coffee is hulled, coffee cherries are fermented with the mucilage for a few hours, then, the mucilage is removed with water). The institution forbids farmer a particular use of his ownership on both the *infrastructures* (the coffee cherry) and the *know-how* (the fermentation equipment and knowledge).

- [The profiling institution on which an LRA is built.](#)

As we showed in the previous chapter and will be further developed in chapter four, the coffee issue has been part of the international public agenda for a while, thus actors had developed some institutions like the mentioned GI and the VSS that play a major role during the profiling process.

Laesslé (2016), using the IRR framework showed the institutional mechanisms that profile the Resource analyzing the actors' games that produce LRAs derived from the GI for wine in Switzerland and New Zealand. However, we take distance from his conceptualization of the Resource: for him, the Resource is the wine profiled by an LRA that concretize at the local level the institution "*appellation d'origine*". The wine produced outside this LRA cannot produce the services sought by it and therefore is not considered a Resource<sup>54</sup>.

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<sup>54</sup> E.g., the wine produced by the vine growers of Beudon (an organic crop of the Fendant strain in the commune of Fully) was not accepted by the tasting commission of l'interprofession (competent body the ARL Fully) to be sold as

For our research, we utilize Laesslé (2016) idea of the profiling power of an institution, however, we disagree with his narrow definition of the Resource: By defining the Resource through the activation of a GI, forcefully it is biased towards a group of actors. This institution is usually activated by producers to guarantee the services they demand. Other actors like traders, roasters, and stakeholders in production and consumption could mobilize other institutions like the VSS for example. Hence, we do not define the Resource from an institution like the GI or a VSS that would produce a single LRA with some producers included and others excluded. We define the Resource through the Resource System in a Resource Perimeter in which different LRAs derived from different institution could be found. These LRAs would reflect the whole set of actors' strategies to guarantee the different combinations of services demanded.

In fact, the observable reality in coffee culture is the production of this kind of institutions created and activated by different actors that have the potential to extend vertically (profilers farmers/traders/roasters and consumers) and horizontally (stakeholders in the production and consumption) throughout the whole Resource system. Once activated, these institutions would assign, at an individual and concrete level, rights and obligations of use of Resource constituents, creating constraints and opportunities for constituents' owners. Following Schweizer (2014, pp. 37, 79-86), we call a final output this last state of the institutional cycle.

We identified six types of this kind of institutions that we denominate profiling institutions<sup>55</sup>: official quality standards (based on the Law); private quality standards (developed by companies or organizations like the standards and protocol of the Specialty Coffee Association of America SCAA); protected geographical indications (based on the rules of origin legal framework); Voluntary Sustainability Standards (the seven main ones mentioned Organic, Fairtrade, Rainforest Alliance, UTZ, 4C, Starbucks' CAFE Practices, and Nespresso AAA); and Heritage Protection (based on international conventions for the protection of cultural heritage). All this profiling institutions comes either from the public law like the Organic Standards established by the Organic Food Production Act of 1990 passed by the Congress of the USA; or in private law like the SCAA standards and protocols created in 1982 by a group of associates to define the Specialty Coffee as a coffee that scores higher than 83 over 100 in their cupping protocol.

- [The purchase transaction to identify the LRA.](#)

Laesslé (2016) identifies the LRAs through a specific wine GI, whose scope is operationalized through the possibility that the wine could be sold under the aforementioned wine appellation. We similarly identify the LRAs through a specific profiling institution but we reduce the scope to the actual portion profiled by the institution in a given Resource perimeter.

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AOC Valais and therefore was excluded from the LRA and the production of services from it (Laesslé, 2016, pp. 228-229).

<sup>55</sup> Initially we identify a set through the documentary analysis that was enriched through our exploratory interviews and finally validated in our field work in Colombia. However, this set of profiling institutions could be enlarged by replicating the research in other coffee regions.

Our heuristic technique is to use the purchase transaction between coffee growers and the traders, in one region and one harvest, to identify the various LRAs present at this Resource perimeter. We select this transaction (which itself is a final output) because it reflects the effect of all the previous final outputs (intended to (dis) incentivize farmers' use of constituents) to produce the services sought by profiling institutions. Reusing a previous example, the "IG Café de Colombia" profiling institution regulates uses of *infrastructures* and *know-how* during the post-harvesting process to conduct a short fermentation. If the coffee grower uses *infrastructures* and *know-how* during the post-harvesting process differently (e.g. by doing a long fermentation), at the time of the purchase transaction, it would be excluded from the LRA derived from the "IG Café de Colombia" profiling institution, but it can join another LRA, whose profile accepts the taste related services associated with the long fermentation. In the end, the scope of the LRAs is the amount of coffee that was bought because it fulfilled the minimum requirements demanded by a profiling institution. Therefore, once the total purchases of the coffee harvest in a given Resource perimeter are exhaustively categorized in different LRAs through this heuristic technique, we can recognize the entire set of profiling institutions activated by the actors. And through this set, we can identify the whole set of demanded services that had been the object of legal, political, or contractual vindication.

- The features of the LRA.

The Local Regulatory Arrangement is an *arrangement* because the profilers agree to modify (or not) their behavior. Even if in some cases it is perceived as an imposition, profilers can always decide not being part of an LRA (either by limiting the flow of services or by diminishing the stock of the Resource, e.g. cultivating another crop) because the high costs of constriction make it unfeasible, in comparison with the coffee price in the highly competitive green coffee market. It is *regulatory* because the profilers change their use of the constituents according to pre-established (regulated) uses of constituents to profile an expected combination of services; it is *local* in the sense that it is localized on the Resource System featured by a local geographical origin (the coffee lands); an international profiling processes (local and foreigners profiling actors use constituents throughout the seven described processes) and a global demand of services (consumers and stakeholders around the world).

In the following section, we will dig further into this general statement looking into the regulations of the uses of Resource Constituents through a conceptual tool we denominate the *extent*; we will disentangle the arrangement focusing on the governance mechanism to reach agreements and to enforce them through a conceptual tool we call *coherence*. And, we will critically observe the previous two elements "localized on the Resource System", through a third conceptual tool we call *closure* because the fact of being localized does not mean that it is "equally" localized, especially when talking about the distribution of cost and benefits among participant actors.

This voluntary nature does not imply that all the actors feel completely satisfied with the LRA's services production/distribution. Some actor' demands could be better satisfied than another's, but the latter must maintain the services provision (in quality and quantity) that it considers, at least, appropriate. Otherwise, this unsatisfied actor would seek to activate other institutions from the public policy and private law, including other profiling institutions, creating instabilities that insecure the life span of the incumbent profile.

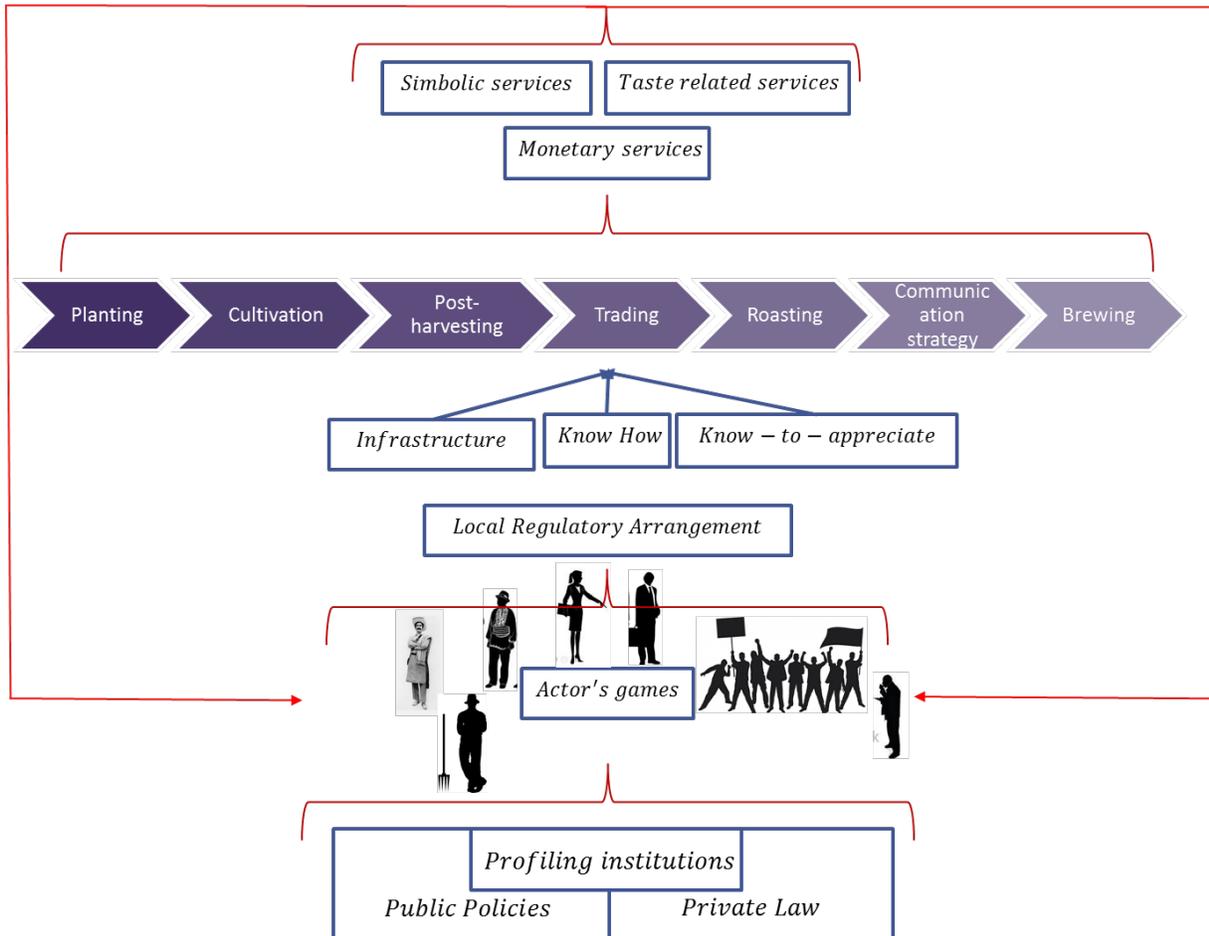
Of course, as we said before, this could be solved if the LRA produces (and distributes) the combination of services that satisfy all actors. It implies that services provision is decided in advance, therefore, uses of constituents must forcefully be negotiated. Otherwise, the chances to profile this ideal type of all-demanded-services combination would be too low when each profiling actors, throughout the seven processes, use the constituents in their own interest.

We will use the "lens of negotiation" to focus on the actions that actors had done to reach these agreements on the uses of constituents: actors' games. We conceptualize it as a three-step process in which firstly actors who share similar demands get together into *actors' coalitions*; secondly, they move forward their demands of services using the power that we systematically observe through a conceptual tool called *mobilization of action resources*, and finally, they reach the agreements activating in different ways the institutions to shape the final output that we denominated *institutional creativity*.

### 2.1.3. Intermediary synthesis: General model.

Figure 2 shows our general model in which the Resource System in a given Resource perimeter is profiled through a Local Regulatory Arrangement resulted from the activation through actors' games of profiling institutions and other institutions coming from the public policy and the private law.

Figure 2 Model for profiling the Resource System in a given Resource Perimeter. Source: the author adapted from (Boisseaux et al., 2012a)



## 2.2. Operational model

Having explained the general model for profiling the Resource System in a given Resource perimeter, we take out our magnifying glasses to look into the three main components of our research and we will explain in detail each of them from an operational point of view, to end with an intermediary synthesis.

- 1- The level of services provision as the variable to explain.
- 2- The Local Regulatory Arrangement as an intermediary explanatory variable.
- 3- The Actors' games as the explanatory variable.

### 2.2.1. Level of services provision

Our dependent variable is the profile of the Resource that produces a particular combination of taste-related, symbolic and monetary services in a given time and space, satisfying a percentage

of the actors that demand services of the Resource. Indeed, services provision varies by external factors among territories and periods of time, for example, the monetary services could be affected by economic dynamics<sup>56</sup> or the taste related services by the climate<sup>57</sup>. Given our interest in analyzing the relationship between the LRA and the level of service provision, we favor the synchronous approach: we compare several LRAs in the same territory during the same period of time. Other explanatory factors (such as climate/markets shocks) similarly affect all the LRAs present in the territory<sup>58</sup>, therefore, the differences in the level of services provided are plausibly explained by the differences between LRAs.

- Monetary services

Monetary services are measured quantitatively as the average annual income (kilos of coffee multiplied by the price per kilo) received by the family farm<sup>59</sup> participant in an LRA. We do not subtract the costs of production because of both a substantial and practical reason.

The cost of production itself could hinder valuable information for our purpose to assess the level of services provision: two coffee farmers have the same cost structure but what one spends on the cost of pesticides the other spends on the cost of weeding wages. The former cannot sell through an LRA that forbids pesticide use whereas the latter can. Hence even with the same cost structure, a different combination of services can be provided. Similarly, cost structures vary significantly among coffee farmers within an LRA and its average cost of production hinders again value information: two coffee farmers belong to the same LRA that forbids the use of synthetic fertilizers, one increases their costs by investing a significant portion in fertilization wages to provide the organic nutrition demanded by the plant while the other just skip fertilization and maintain a very low-cost structure. Hence the average cost of production hinders the information that explains the different level of monetary services within the LRA. Therefore, in both cases, it is more important to focalize on the uses of Resource constituents than in the cost of production itself.

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<sup>56</sup> The fall in oil prices since the end of 2014 decreased the income of foreign currency into Colombia and increased the price of the dollar. As a result, monetary services of coffee growers increased in Colombian pesos due to their coffee exports in US dollars.

<sup>57</sup> The Niño phenomenon in Colombia during the first semester of 2015 significantly increased the portion of *averanado* coffee in some regions: low density beans that produce a grass and dry straw taste related services due to the lack of water that limit the proper bean development.

<sup>58</sup> An example of an external factors that affects all LRAs is the correlation between climate shocks and international coffee prices provided by (Flury, 2015) which affects all the LRA in a given time and space.

<sup>59</sup> Family farmers are a subgroup of farmers who own a Family Farm: it implies that the family lives and works in the farm cultivating coffee alongside other economic activities. *“Esta definición implica que: i) la familia es una unidad tanto económica como social; ii) una porción importante de los ingresos proviene de actividades agropecuarias, aunque pueden incluir otras fuentes; iii) la fuerza de trabajo preponderante es la de la familia, aunque pueden contratar en forma parcial u ocasional mano de obra asalariada; iv) los ingresos son normalmente diversificados (no dependen de un solo cultivo, o actividad pecuaria), aunque en algunos casos provienen de un solo producto; v) el jefe de la familia participa en las actividades productivas y vive en la parcela, o cerca de ella, con otros miembros de la unidad familiar; y vi) cobija a productores agropecuarios familiares propietarios y poseedores a cualquier título a pescadores artesanales y acuicultores”* (FNC, 2014).

Secondly, cost of production is extremely difficult to collect in family farms: there is not a clear difference between the crop and the family expenses because both are attended according to urgencies rather than strategic planning, so records of these transactions are barely used.

Furthermore, since most of the coffee in a territory can be followed to the threshing (given that once it is blended with coffee from other regions/countries it would be impossible to identify the other profilers) we have to extrapolate the monetary services received by other profiles according to the monetary services received by coffee farmers. Supported in our exploratory interviews, we assume that the monetary services received by each profiling actor, in the LRA that grants the greatest monetary services to the coffee grower, will be equal to or greater than those received by profilers of other LRAs that grant fewer monetary services to the coffee grower<sup>60</sup>.

- Symbolic and taste related services

Different from the quantitative nature of the monetary services, the symbolic and taste related services can only be qualitatively evaluated through both the narratives that actors are using to communicate to other actors and, the regulated uses of Resource constituents through the activated institutions. Using an example from the empirical chapters, to assess the winy-like taste related service that we identified in the LRA Nespresso during the purchasing transaction, we analyzed both the narrative of “grand crus” Nespresso used to influence the *know-to-appreciate* associating their single-dose coffee capsules with the upper-segment of wines, and the activated institution that regulates the uses to profile this service. Once the exercise is done from the whole set of LRAs, we produce a closed list of services demanded from the Resource in a given time and space.

As we mentioned, IRR scholars have shown there is not an automatic link between the rule and its implementation “as expected”. For Schweizer (2015) in reality there is a wide spectrum of possibilities ranging from the non-application at one extreme, and the application to the letter at the other, in the middle there are different combinations in which the rule is somewhat implemented: in some cases in an unforeseen direction maybe even contrary to the spirit of the rule, or it goes further than expected in the right direction. Hence, predictably there is a gap between the narrative and the regulated uses, and also between both and the observed uses of constituents by actors, which are the ones that matter to produce the services.

In some cases, the narrative of the “grand crus” is not partnered with a crucial regulation like the late-picking. In others, the narrative “grand crus” is far behind the regulations that are not only producing a wine-like taste related service but also a panoply of other symbolic services (e.g. a

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<sup>60</sup> Exporters and traders joined the LRAs which granted higher monetary services to farmers because there were higher margins even though they had to assume additional costs in procurement and logistics. Those that stayed in LRAs which granted lower money services to producers said that they have to compensate the lower margins with greater volume.

permaculture-like regulation that produce the “environmentally responsible” symbolic service). And of course, there is another gap between the regulated uses written down in the paper like the late-picking and the observed uses of Resource constituents by profilers, in which farmers are picking earlier because a major two-week long national celebration is scheduled for example.

So, we incorporate a four-step assessment process: We start identifying a closed list of services demanded from the Resource. Secondly, we describe how these services are expected to be produced by analyzing how each LRA regulates the uses of Resource constituents. Thirdly, we summarize observed uses of resource constituents by each LRA to, finally, put on evidence the services provided by the Resource because of the observed uses<sup>61</sup>. The data we use will be further explained in the next chapter.

In this sense, we can evaluate if the observed services are equal to the demanded ones, or they are lower in quantity and quality, or even, the observed services could be higher when observed uses compatible with several services.

- [Level of services provision](#)

Finally, we evaluate the level of services provided by comparing from the table of services demanded from the Resource in a given time and space, the number of services provided by each LRA.

Following our definition of sustainability, two ideal-type LRAs can be drawn: the completely sustainable LRA which can guarantee in the long run the provision of the whole set of demanded services by the actors and the completely unsustainable that cannot provide a single one. From these two highly unlikely (in the real word) LRAs, we define the level of services provision: high when the proportion of the demanded services is closer to the former case, low when is closer to the latter.

Our logic is that LRAs with a low level of services provision is unsustainable because some actors would feel their demanded services poorly provided or at risk, thus they will fight in the political arena to challenge it, and sooner or later the LRA will change. On the other hand, if the level is high, actors would judge provision of their demanded services guaranteed in their expected life span, thus they would not engage and the LRA would prevail. In other words, the LRA succeeds in solving the problem of collective action by regulating the uses of Resource constituents in such a way that the serviced demanded by different actors are provided.

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<sup>61</sup> It should be noted that we prioritized the observed uses of Resource constituents in the 16 activities of the first four processes (from planting to trading) given that as green coffee (before being blended and roasted), the Resource is at its maximum potential capacity to produce services. Subsequently, the services necessarily have to be prioritized (for example, a complex green coffee can produce a variety of sensory profiles depending on the roasting, so the roaster has to decide to highlight the profile of citric acidity).

Hence, we conduct a synchronic analysis in which we compare the proportion of the demanded services<sup>62</sup> that are produced by each LRA. The LRA that optimizes the provision of services is under our conceptualization, the closest to solve the problem of collective action among the LRAs present in the territory.

### 2.2.2. The Local Regulatory Arrangement

Recapitulating, the combination of monetary, symbolic and taste related services are a result of the use of Resource constituents in the 26 activities distributed among the seven processes described in Annex 1. When “deciding” a particular use to favor one combination there could be a tradeoff against another combination. Eventually, in a given time and space one combination of services is produced because of the observable uses of the Resource constituents. Uses become observable because institutions were activated in the range of implementation-to-the-letter to the complete omission. This time-and-space fixed picture of observed services (because of) observed uses (because of) (in)activated institutions is what we call the LRA.

Our heuristic technique is to identify the LRA through the purchase transaction, in which coffee farmers sell their coffee beans to an intermediary in one region and one harvest. We use this transaction as the classification criteria because it is the juridical act that concretizes, at the individual and concrete level, a promised purchase price in exchange for the expected profile of the Resource. I.e. the coffee bean in its state (coffee cherry, dry parchment coffee, green coffee) could produce the services demanded by other actors because Resource constituents were used, so far, as expected.

- [Conditions overview](#)

From a neoclassical economics perspective, if there were not any agreement between actors on the uses of Resource constituents, the whole Resource would produce in the long run, the combination of services encouraged by market forces, namely those resulted from the highest efficiency of productive factors. Their idea is that, in perfect competition, there is no product differentiation and, as economic agents are interested in maximizing their profit, it is expected that only the agents that produce the highest quantity at the lowest cost would remain in the market. In this order of ideas, in that hypothetical world, there would be just one type of LRA that “regulates” all uses in order to optimize production, so in the end, the whole Resource would produce the same combination of monetary, symbolic and taste related services.

Nevertheless, actors are not just economic agents that want to maximize the income, they have diverse concerns that we have previously conceptualized as services. Thus, actors produce additional regulations on uses of constituents to produce their demanded services over services encouraged by market forces. The more uses are regulated, the better the predictability on

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<sup>62</sup> In the case of monetary services more than the proportion we prefer to show an absolute number in COP and its equivalent in l.m.m.w (legal monthly minimum wage) in place during that time in Colombia.

services provision. E.g. To guarantee the winy-like taste related services actors have to use their constituents very precisely on various activities, at least on the variety planted, the late-picking, the short fermentation, the documentary traceability, the proper roast, and the communication strategy, thus it is highly implausible to reach this profile if actors do not regulate uses of constituent. Therefore, regulation of uses in the different activities along the seven process is a condition that we denominate *extent*, which explains the capacity of the LRA to provide services.

The regulation does not mean implementation. Actors attached to the winy-like service could regulate the variety to be planted, the late-picking, the short fermentation, the separate storage, the proper S-curve for roasting and so on, but profilers do not follow. It is needed some sort of governance mechanisms to coordinate profilers so uses are implemented as expected. This second condition is called *coherence*.

The governance mechanisms put in place to profile the Resource coffee are closely related to the market position of the actors: It is not the same relation between profiling actors if one concentrates all production<sup>63</sup> or on the contrary if it concentrates the distribution<sup>64</sup>. In both extremes, the monopolizing actor will decide the governance mechanism to be implemented<sup>65</sup>. In the coffee industry, there are neither these two extremes nor perfect competition<sup>66</sup>, but of course, LRAs are located in between, with some that look as monopolies in production or distribution, whereas others look more competitive. To capture this market-position influence in the observable uses of resource constituents by profilers belonging to an LRA, we propose a third condition, the *closure*.

So, we categorize the LRA depending on the combined high (presence) or low (absence) of these three conditions.

- Extent

If one actor was both the owner of the Resource constituents and the only interested in the services it produces, he would use them to produce his demanded services. The exact opposite happens when talking about Coffee, both ownership of the Resource constituents and services

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<sup>63</sup> As it happened during the Rasulids Dynasty which governed Yemen from the 13<sup>th</sup> to the 15<sup>th</sup> century. They controlled the seaport of Adean, a main trade route from the Indian Ocean to the Red sea, through an extensive bureaucratic apparatus. It allowed them to maintain the monopoly over coffee production and its profitability (Caton, 2013).

<sup>64</sup> As it happened for a few years after 1873, in which Ariosa started to sell roasted and packed coffee. It was the first successful national brand of packaged coffee in US (Ukers, 1922, p. 523).

<sup>65</sup> Gereffi (1994) goes in deep in his seminal paper on the governance of the GVC focused on “Big Buyers” and how purchase power shaped production networks.

<sup>66</sup> A market is classified as oligopoly if the first four firms concentrate more than 50% of market share. In the roasted coffee market, the first nine have a combined market share of 40%: Both Nestle and JAB Holding Company with 11% and the other 18% distributed between Smucker’s, Strauss, Starbucks, Tchibo, UCC, and Lavazza. (We used data coming from Panhuysen and Pierrot (2014, pp. 20-21), from which we aggregated the percentages of all companies bought by JAB Holding between 2014-2016.

demanded are widespread in the world<sup>67</sup>. Therefore, actors interested in services who have neither ownership nor right of use over Resource constituents should act over the ones who had it to provide their demanded services. Forcefully, the former had to communicate to the later the expected change in behavior through regulation.

Thus, the first condition of the LRA is its capacity to regulate (or not) the uses of the Resource constituents in each one of the closed list of 26 activities throughout seven processes, which we selected because of its effect in the final profile of the Resource.

Processes and activities are detailed in Annex 1 but we list them below:

1. Planting: diversification; variety; renovation cycles; density; shade.
2. Cultivation: soil and weed management; coffee borer beetle handling; pest and disease management; nutrition; hedge rowing; picking; farm management.
3. Post-harvesting: hulling; fermented; drying; waste management; reselection.
4. Trading: procurement; threshing and sorting; bulking and export.
5. Roasting: blending; roasting; Packaging and retailing.
6. Communication strategy: communication.
7. Brewing: grinding; brewing.

It is worth reiterating that in our conceptualization, we do not only focus on institutions regulating the uses, but also on the effects of regulations on the behavior of the actors with ownership over the Resource constituents. That is why we define extent as the number of observable uses regulated by the LRA, thus, it is taken into account only the activities in which the observed use was conducted as it was regulated.

Furthermore, it is considered that there is a high extent if two conditions are met: more than half of the activities weighted by the process are regulated<sup>68</sup>, and regulations are evenly distributed between the seven processes<sup>69</sup>.

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<sup>67</sup> Because of its production (150 million coffee bags produced annually by both thousands of capital intensive enterprises and tens of millions of family farms), its commercialization (70% of the world coffee harvest is consumed in non-producer countries), and its consumption at a global scale (ICO, 2014)

<sup>68</sup> There are seven processes but they differ in the number of activities, e.g. the cultivation process has six activities whereas the communication strategy has only one activity, so to give the equal weight to each process we use a weighted average. To be completely transparent we present our formula to calculate it. The letter A means "activity"; the first number codes the process (planting=1; cultivation=2; post-harvesting=3; trading=4; roasting=5; communication strategy=6; brewing=7) and the second number codes the activity in the same order as it is shown in the list of activities of annex 1

$$\frac{((A1.1+A1.2+A1.3+A1.4+A1.5)/5*3.6)+((A2.1+((A2.2.1+A2.2.2)/2)+A2.3+A2.4+A2.5+A2.6)/6*3.6)+((A3.1+A3.2+A3.3+A3.4+A3.5)/5*3.6)+((A4.1+A4.2+A4.3)/3*3.6)+((A5.1+A5.2+A5.3)/3*3.6)+((A6.1*3.6)+((A7.1+A7.2)/2*3.6))}{((A1.1+A1.2+A1.3+A1.4+A1.5)/5*3.6)+((A2.1+((A2.2.1+A2.2.2)/2)+A2.3+A2.4+A2.5+A2.6)/6*3.6)+((A3.1+A3.2+A3.3+A3.4+A3.5)/5*3.6)+((A4.1+A4.2+A4.3)/3*3.6)+((A5.1+A5.2+A5.3)/3*3.6)+((A6.1*3.6)+((A7.1+A7.2)/2*3.6))}$$

<sup>69</sup> Similarly, we present our formula to calculate the concentration:

$$\frac{(((A1.1+A1.2+A1.3+A1.4+A1.5)/5*3.6)+((A2.1+((A2.2.1+A2.2.2)/2)+A2.3+A2.4+A2.5+A2.6)/6*3.6)+((A3.1+A3.2+A3.3+A3.4+A3.5)/5*3.6))}{(((A1.1+A1.2+A1.3+A1.4+A1.5)/5*3.6)+((A2.1+((A2.2.1+A2.2.2)/2)+A2.3+A2.4+A2.5+A2.6)/6*3.6)+((A3.1+A3.2+A3.3+A3.4+A3.5)/5*3.6)+((A4.1+A4.2+A4.3)/3*3.6)+((A5.1+A5.2+A5.3)/3*3.6)+((A6.1*3.6)+((A7.1+A7.2)/2*3.6))}$$

The first condition develops the assumption that only regulations can produce foreseeable services. On the contrary, if there is not any regulation it is impossible to predict which service would be produced. So, if more activities are regulated, more predictability on the services to be produced. The second condition adjusts the first one by including in the analysis, the distribution of regulations. If more than half of activities are regulated (first condition) but all of them are concentrated in a few processes, predictability over their final profile is also impossible because of unregulated processes would produce random services. So, with both conditions, we are assuming that to produce foreseeable services they must be regulations, evenly distributed, throughout the value chain.

- **Coherence**

From the regulated uses to the observed uses there is not a linear and automatic relation. There are governance mechanisms that encourage profiling actors to behave as expected in order to match as close as possible the observed uses with the regulated ones. So, the institutionalist character of the extension is complemented by a neo-institutionalist perspective of coherence, to the extent that the actors refine institutional instruments to align the profilers around the desired profile of the Resource. Coherence, as a condition, tries to capture this relation in order to complement the previous one (the extent) as a combined condition needed to trigger the provision of demanded services.

Indeed, assuming there is no coherence, only markets, and its prices will encourage profilers in one unique direction: more production with lower cost. We can imagine one farmer investing in a costly practice to treat water. When he goes to the market, he might encounter other farmers that did not treat water selling at lower prices than his own production cost. Buyers will take advantage of paying the minimum price accepted by the polluting farmer, so the responsible farmers either abandon that practice or abandon the business. Coherence, on the other hand, allows profiling actors to align themselves using *infrastructures*, *know-how*, and *know-to-appreciate* to profile the Resource in such a way that a panoply of services demanded by different actors could be provided.

Thus, transparency is a condition of coherence. The profilers must be identifiable from the origin, and actors must be able to communicate among themselves to fine-tune both their uses of Resource constituents and the desired services to be provided. This implies the existence of a two-way coordination bridge along the value chain. In one direction, the same services are profiled by the LRA and in the other, the same LRA is profiled by the actors.

**Actors** develop mechanisms to define the combination of **services** and profile them from the selection and prioritization of (profiling) **institutions**. **Governance** of the LRA is developed (formally or informally) whose objective is to produce (either intermediary or final) **outputs** in order to change the behavior of participant profilers and produce the demanded services.

To systematize our observation, we analyze coherence using five elements.

- 1- **Services:** The starting point of coherence is that there are some services that could not be produced without an agreement.
- 2- **Actors:** There are some actors that must be coordinated to produce the expected profile. Not only profilers but also stakeholders in the consumption and in the production.
- 3- **Institution:** We identifies the main (profiling) institutions that are activated to trigger the change in the behavior.
- 4- **Governance:** We describes how actors govern the LRA in both directions from services to actors, and from actors to services.
- 5- **Output:** It describes how the output causes a change in behavior.

As a result, high coherence implies that the five elements managed to align actors around a commonly agreed profile, hence profilers use the Resource constituents as expected.

- Closure

The extent and the coherence are necessary conditions explained by local actors games, as showed by the empirical applications of the IRR for Resources like forest (De Buren, 2014), heritage (Laesslé, 2016), landscape (Jean-David Gerber, 2006) because the very existence of the Resource can be extinguished due to overexploitation motivated by the local demand for services<sup>70</sup>. Indeed, Resources are fully controlled by actors at the local level so market forces can be contained, even annulled by prohibiting uses of the Resource to produce goods and services regardless of the existence of a demand for them and using force for effective enforcement.

But in the case of artificial Resources that are profiled through a long chain, the property rights over the Resource constituents are in the hands of both local and foreign actors (constituents of the Resource coffee are usually in the hands of producers, traders, and stakeholders at the local level, and roasters, stakeholders and consumers at the global level). Actors' games at the local level are not enough to profile the Resource because foreign profilers, through prices, can generate incentives to expand or reduce the local stock according to the consumption of its fruits<sup>71</sup>. Hence, the extent and coherence are explained by the actors' games but "given" the markets. These are not considered controllable or voidable, but they could be influenced.

In this regard, there is an actors' game on one board whose objective is to profile the Resource that is captured by both conditions of extent and coherence. But there is another actors' game on a bigger board that seeks to influence the market. The results of the game in this second board strengthen the position of the actor in the first one. To capture this relative market power that

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<sup>70</sup> Using the concept of strong durability (Peter Knoepfel & Nahrath, 2005) a consumption of fruits of the resource faster than the capacity to supply them by the stock of the resource, causes its exhaustion.

<sup>71</sup> In the case of the coffee resource, the crop (coffee trees) is the stock and the coffee beans its fruit. When consumption exceeds supply, the increase in prices motivates new plantings that increase the stock and with two years of delay, the fruits for consumption. If prices tend to fall, it is likely that the stock will be reduced (by knocking down the coffee trees) and with it, the quantity of coffee beans that would be collected in the next harvest.

ends up prioritizing (in favor of some actors) the services to be obtained from the Resource, we propose closure as a third condition.

We define closure as the result of strategies carried on by actors to create barriers of entry in order to counter competition forces<sup>72</sup> and win a market position that allows them to profile the Resource in their advantage by producing in higher quantity and/or quality their demanded services.

Like the previous two conditions, the absence of closure could allow a perfect competition coffee market that would incentivize uses of constituents to profile the Resource prioritizing a high-productive-low-cost coffee farming. The activation of intellectual property rights such as rules of origin, trademarks or patents, for example, created barriers of entry to shield the provision of a lower-productive profile (usually because it was prioritized symbolic and sensory services) from the forces of a competitive market.

Profilers that strategically manage to constitute barriers of entry in their market segment (production of coffee cherries, procurement of parchment coffee, trading of green coffee, roasting/retailing roasted coffee and brewing a coffee cup<sup>73</sup>), strengthen their position in the actors' game to define not only the profile of the Resource but also the set of profilers in the profiling process.

As we define sustainability as the result of collective action to produce all services demanded from the Resource in a given time and space, we conjecture that the closer the barriers to the territory, the greater the production of services demanded by local actors. So, we are interested in the production of services that satisfies the majority of actors in a specific territory, hence we scale the barriers of entry from the farm to the community of relatively close farmers located in a geographical area that shares the same soils and climates.

To systematize our observation, we analyze closure by looking throughout the coffee value chain the barriers of entry identified by M. E. Porter (2008, pp. 7-13): economies of scale; product differentiation; capital requirements; cost disadvantages independent of scale; access to distribution channels; government policy.

- Configuration

Due to the combined presence/absence of LRA's condition, there are eight different configurations which are both exhaustive and excluding. Theoretically, any LRA could be

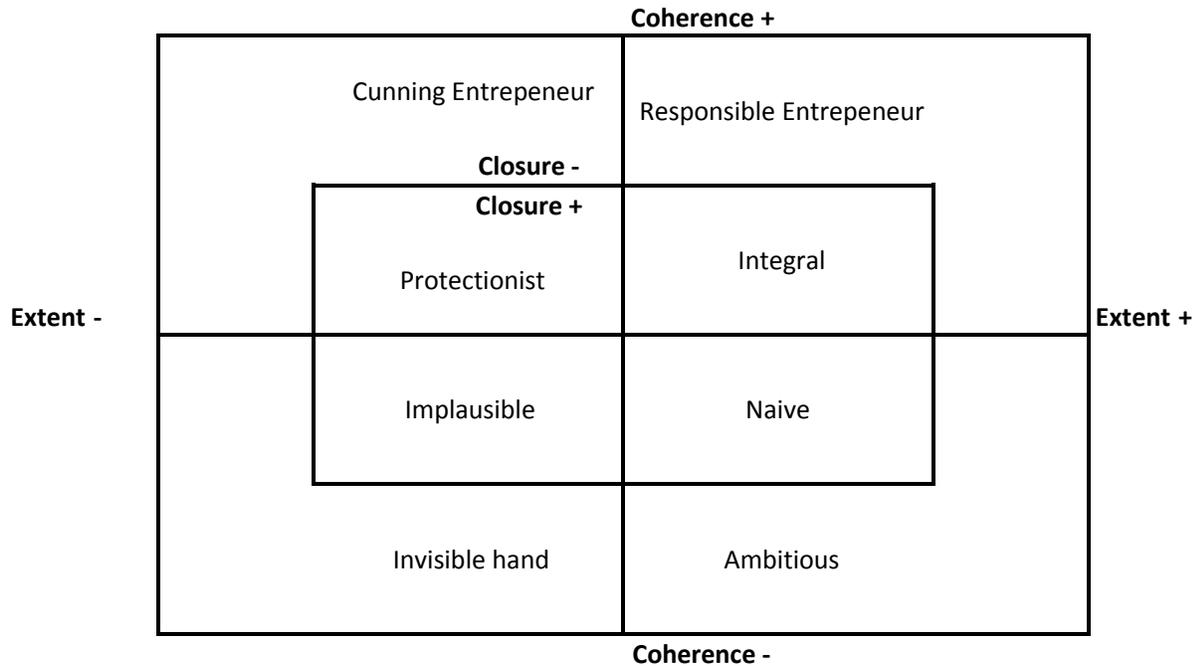
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<sup>72</sup> According to the five competition forces proposed by M. E. Porter (2008, p. 4): 1-Industry rivalry; 2- Threat of new entrants; 3- Threat of substitutes; 4- Bargaining power of suppliers; 5- Bargaining power of buyers. If the combined effect of these forces reduces overall profitability, as it is the case in "pure competition", the industry is unattractive (M. E. Porter, 2008, p. 4).

<sup>73</sup> In its two main segments: Sale of roasted coffee retail (soluble coffee, roasted / ground coffee, coffee in personal doses) and sale of roasted coffee drink (mainly coffee shops).

incorporated in a box of figure 3. We will make the first traditional division of the IRR between the extent and coherence (four boxes), and then, we open them to incorporate the closure condition (eight boxes are possible but seven are plausible).

Figure 3 Seven plausible configurations. Source: the author



- Inexistent regime: low extent and low coherence.
  - **Invisible hand:** More than an inexistent regime, this term coined from economics signs us that there are economic forces that regulate the use of Resource constituents. Neither non-farmers nor farmers regulate and coordinate uses of constituents. That is why even though visually this box is divided into two sections, conceptually both are the same because the presence of closure is implausible when both extent and coherence are completely absent: Barriers of entry are a result of regulations to provide services not achievable through perfect competition.
- Simple: low extent and high coherence when the coalitions have a consensus to regulate just a few uses of the Resource.
  - **Cunning entrepreneur:** A coalition led by non-farmers coordinated very well a few regulated uses of constituents crucial for profiling the Resource. E.g. an LRA lead by a “big buyer” who defines the few uses to be regulated and the governance mechanisms.
  - **Protectionist:** Similarly, a coalition led by farmers regulates very well a few crucial uses of constituents. E.g. an LRA lead by an organized group of producers who do not allow rules imposed by outsiders to maintain control on the few uses they consider must be implemented.

- **Complex:** high extent and low coherence. The consensus is more the exception than the rule. More actors tend to bring new regulation on more uses, increasing the extent at the expense of the coordination, meaning the uses are regulated but there are not implemented as expected.
  - **Ambitious:** A coalition led by non-farmers in which plenty of uses are regulated but observed uses by profilers are different. E.g. an LRA derived from a profiling institution developed by an NGO, in which costs of implementation of regulated uses are unaffordable for farmers.
  - **Naïve:** Similarly, farmers led a coalition in which too many uses are regulated but are not implemented as expected. E.g. a community organized around a geographical indication that regulates uses from production to consumption but cannot influence the behavior of other profilers like roasters.
- **Integral:** high extent and high coherence in which observed uses are similar to regulated uses.
  - **Responsible Entrepreneur:** A coalition led by non-farmers, in which all actors have a saying in the development of both regulation and its ends, manages to motivate profilers so they use constituents as expected. E.g. an LRA led by a Roaster who open the table to discuss with all actors, the uses to be implemented by the whole set of profilers.
  - **Integral:** All actors are coordinated around farmers, so they all have a saying in the regulation of uses and the profile sought. E.g. an LRA featured by a coalition of roasters, traders, local authorities, NGOs, associated with the reputation of one community of producers.

### 2.2.3. Actors' games

The observed LRA's configuration and the final profile of the Resource in a given time and space are produced by the (in)activation of institutions steaming from both the public policy and the regulatory system (Schweizer, 2015) that would encouraged/discouraged uses of constituents to provide the services that actors (usually grouped together in coalitions) want to produce. This (in)activation is neither automatic nor guided, but following Peter Knoepfel (2017) it is a result of a power game between different actors' strategies in the use of *action resources*<sup>74</sup> as it has been validated by IRR literature (de Buren, 2015).

The analytical concept of activation process overcame the traditional dichotomy between strategies to activate institutions "to the letter" and complete avoidance. It depends on the actors' capability to take advantage of institutions by hand-picking their elements that support the provision of their demanded services. This capability denominated institutional creativity (Laesslé, 2016) becomes visible in the final output (the juridical act that creates, at the individual and concrete level, rights and duties for using Resource constituents in a particular manner). Using as an example an empirical observation in chapter six, the board of administration of the Fairtrade Coffee in Riosucio (composed of the farmers' cooperative interested in monetary

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<sup>74</sup>We will differentiate them from the Resource coffee using italics and minuscule.

services and the indigenous organization in the indigenous symbolic service) agreed to use the Fairtrade premium in technical assistance, in which members of the indigenous community selected by the indigenous organization would be trained by the farmers' cooperative to become extension agents. Therefore, when the final output (the extension service that would incentivize producers to use constituents) reaches the farmer, it would incorporate both the indigenous organization and the farmers' cooperative demand.

Henceforth, from the IRR literature mentioned (Boisseaux et al., 2012; Laesslé, 2016) we conceptualize the actor's game as a sequence composed of three explanatory factors: *Actors' coalition*; *mobilization of action resource* and *institutional creativity*. These are our analytical dimensions to assess the actors' games and their impact on the LRA's configuration.

- *Actors' coalitions*

The public problem, the perceived risk on the provision in quality and quantity of a demanded service from the Resource during its expected life span, is a social construction<sup>75</sup>. In this sense, "if men define situations as real, they are real in their consequences" (Thomas theorem quoted by (Merton, 1995, p. 380)). Thus, what explains actors' involvement in the problem of collective action is the actors' definition of a "real situation" in which their demanded services are at risk.

This definition is an actor's perception (it could be a one-person or a shared belief by a group of people) grounded in the physical reality. So, it is susceptible to varying due to both changes in the perception itself or in the physical reality. A change in the external-to-the-actor consensus (e.g. the International Coffee Agreement 2001 that spread socio-environmental concerns); a change in the internal-to-the-actor consensus (e.g. a new decision in the administrative board of the Fairtrade Foundation to create a certification mark in order to correct market failures); or a change in the physical reality (e.g. a climate event which affected the coffee harvested and changed actors' perception towards a diversified and climate adapted coffee culture).

Furthermore, as this definition (of a real situation in which demanded services are at risk) is defined in terms of the behavior of those actors who use the Resource constituents, it could change if actors change their perception that behaviors are (in)compatible. Using again an example of chapter six, the indigenous movement defined the "indigenous coffee" symbolic service in terms of the threat to the indigenous culture due to coffee cultivation and considered the behavior of those who use the *infrastructures* to plant coffee as incompatible. But some years later, they redefined the same "indigenous coffee" symbolic service in terms of *buen vivir* and therefore using the *infrastructures* to plant coffee was compatible by providing some cash for the material wellbeing of the household.

In the case of the coffee Resource, as for many others, there is not a single actor that seeks to appropriate a single service (regardless of how it is defined) as the literature on the IRR has shown

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<sup>75</sup> A claim that has been validated by my predecessors in the empirical application of the IRR (de Buren, 2015; Laesslé, 2016; Schweizer, 2015).

(de Buren, 2015). Usually, there is a group of actors that demand similar (or different) service (s) and qualify as a public problem the risk of its provision. Thus, they gather together to consolidate coalitions in order to influence uses of constituents compatible with their demanded services and, to get access during the life span they consider appropriate. In this sense, this public problem is not necessarily tackled down by public authorities but by actors (among whom authorities could be part (Schweizer, 2015, p. 62)).

Coalitions, as defined by Scharpf (1997, p. 57), are one kind of collective actor in which some individuals, collective, and corporate actors (like companies, associations, public entities) gather together to joint action in order to profile a particular combination of services from the Resource, using their individual resources to fulfill their individual purposes, through an agreement.

Coalitions can be developed among actors in the same category or in different categories: Coalitions among profilers (e.g. producers, traders and roasters); or among some profilers and some stakeholders in the production (e.g. producers and the local public authority) or among stakeholders in production and stakeholders in consumption (e.g. indigenous movement and consumers' foundations).

We operationalize the actors' coalition by describing both the perceived common threat that is at stake and the participant actors.

- Mobilization of *action resources*

Then, the second explanatory factor is the *mobilization of action resources* to activate institutions.

We bring back our consideration through which, due to the empirical difficulty of exhaustively assessing the legal/political claims over the Resource, the IRR empirical studies have privileged an analysis of rivalries in which different actors fight for different services but eventually a final output is delivered solving the rivalry in favor of one of the groups of actors. From our regard, this focus would systematically provide a zero-sum competitive game, in which some actors would win and their services would be provided at the expense of other actors and services.

As expected, the evidence is robust when claiming that actors' coalitions mobilized their *action resources* strategically in order to counter other coalitions. Indeed, among IRR scholars the strategic mobilization of *action resources* is a fact that has not been contested. The strategic mobilization was victorious if it was smarter<sup>76</sup>; or cooperative (meaning it has partnered with

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<sup>76</sup> The case of Green Peace when strategically using their *resource money* to have access to the *resource law* by buying a plot of land near to the Bonfoil landfill (Johann. Dupuis & Knoepfel, 2013)

appropriate actors)<sup>77</sup>; or it was better endowed in action resources<sup>78</sup>; or it had activated the “right” institution<sup>79</sup>, among others<sup>80</sup>.

If we assume that the production of the whole set of demanded services during the appropriate life span is the objective of collective action, it cannot exclusively focus on rivalries between a couple of uses (and services). It forcefully has to analyze synchronically all the services demanded from a Resource in a given time and space. So, the mobilization of *resources of action* is assessed not on the base of its success to stabilize a rivalry in the favor of one actor (meaning its service provision was guaranteed) but on the basis of its capacity to stabilize rivalries so the higher number of actors are satisfied.

This opens a window to question the intention of the mobilization of *action resources* itself. Common sense tells us that if all actors are interested only in the provision of their demanded services without thinking in the demanded services of others, profiling the Resource so it provides the whole set of demanded services by all actors would be an extraordinary casualty<sup>81</sup>. In this case, the actor obtains a benefit at the expense of the long-term sustainability of the Resource unraveling what we are going to denominate the *first negotiation dilemma*. Either the actor deceives to take advantage at the expense of the sustainability, or the actor cooperates by empowering other actors to move forward their demanded services, enhancing the chances for a collective action that improves the sustainable management of the Resource.

In this order of ideas, we incorporate as an analytic dimension this intention of the mobilization of *action resources* that could range between two extremes. Either it is done with a visible intention to impose a demanded service at the expense of the service of another actor, which we call **selfish**. Or it is done with a visible intention to empower another actor so it could move forward their demanded services, which we denominate **cooperative**. Between these two, there is a reactive intention that usually tries to counterbalance previous mobilizations, which we call **strategic**.

So, we conjecture that actors’ coalitions mobilize **selfishly; strategically** or **cooperatively** their *action resources* to (in) activate institutions from the private law (contracts or conventions) or from the public law (public policies), in order to produce intermediary or final output to incentivize uses of Resource constituents to profile their demanded services.

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<sup>77</sup> Partnership with apparently not-engaged actors like the landowners during discussions about the geographical indications for wine in Switzerland (Laesslé, 2016)

<sup>78</sup> (Jean-David. Gerber, 2005)

<sup>79</sup> Property rights are more powerful than public policies (de Buren, 2011)

<sup>80</sup> Additionally, the normative approach when studying non-renewable Resources is unavoidable. There is always better uses that do not deplete the Resource and other who put it at higher risk, and of course, some long-term thinkers prioritized the former while other short-term the later. This provides an additional reason why the IRR has focused on the rivalries analysis.

<sup>81</sup> In fact, game theory scholars would say that if the dominant strategy for each actor is to deceive, collective action is not possible because the equilibrium is not to cooperate (Nash, 1951).

It could be said, that even though they have not been distinguished, the first two types of mobilization are developed by the IRR literature (de Buren, 2015; Johann Dupuis & Knoepfel, 2014; Jean-David. Gerber, 2005; Laesslé, 2016; Schweizer, 2015; Tippenhauer, 2014). We are interested in providing evidence of the third type that has not been explored in depth in previous IRR studies. In this cooperative mobilization, the actors' intention intends not only to guarantee the provision of their own demanded services, but also that third actors can be supplied with their demanded services. This mobilization is featured by the intention of increasing the allocation of *action resources* of the actor whose initial endowment is so poor that their demand for services is not taken into account.

Thus, using the classic definition of cooperation in game theory "one individual pays a cost for another to receive a benefit" (Rand & Nowak, 2013, p. 413), we define the cooperative mobilization in terms of collective action: the transfer of *action resources* from one (coalition of) actor(s) to other (coalition of) actor(s) to empower them so that their demands for services could be effectively incorporated into the LRA.

We operationalize it by describing how the (coalition of) actor mobilized their *action resources* from a portfolio of ten identified by Peter Knoepfel (2017): law, personnel, money, information, organization, consensus, time, property, political support, force. We focus on the intention of the mobilization which is exposed in three ways when conducting the diachronic analysis. 1- At the origin of the actors' game in minutes, rapports and public information written down by the actors involved; 2- At its conclusion once the output was produced; and 3- From the activities carried on during the sequence. We would triangulate the data to convincingly categorize the mobilization in one of the three categories proposed.

- Institutional creativity

In between of the mobilization of *resources of action* and the LRA, there is the third factor with explanatory force: the institutional creativity originally proposed by Laesslé (2016).

*"Dès lors, la présente recherche met l'accent sur la créativité institutionnelle dont font preuve les acteurs et qui se reflète dans les modalités concrètes de régulation que revêt, in fine, l'arrangement. Plus exactement, la créativité institutionnelle renvoie à la capacité locale à contourner, ignorer, détourner ou compléter les règles institutionnelles du régime (...) et à les articuler avec les règles non locales (cantonales, nationales, etc.)"* (Laesslé, 2016, p. 91).

We slightly adapt this concept to highlight the accent on the provision of the demanded services due to our interest in collective action. So, we define the institutional creativity as the capacity of participant actors in the LRA to make use of the strategies of (in) activation of institutions from the IR with the objective of shaping the final output in such a way that their demanded services are produced.

We propose to analyze this capacity using the “lens of negotiation”. Hence, we divide this construct into two elements: one procedural: how do participant actors in the LRA reach an agreement? And one substantive: what do participant actors in the LRA agree upon?

From the procedural point of view, there should be some form of deliberative scenario so actors could discuss, argue, debate, etc., to eventually agree on something. In this sense, actors have to be able to meet, so both a scenario is needed (either real or virtual) and a coordination mechanism to bring them in contact. As these kinds of negotiations on the uses of constituents are complex and dynamic, usually the deliberative scenario starts informally with some phone-calls and spontaneous personal meetings but eventually could become formalized with elected members with the right to speak and/or vote, and periodically predefined meetings.

From the substantive perspective, actors have to solve the traditional negotiation dilemma by agreeing on both the profile and the distribution of the cost/benefit of changing the incumbent uses of constituents. Hence, actors negotiate on the final shape of the final output, which would influence the uses of constituents to anticipate the final profile of the Resource. We denominated it as the *second negotiation dilemma* to differentiate from the *first negotiation dilemma* previously described.

We conjecture that as long as there are deliberative scenarios in which all the participant actors in the LRA can negotiate, an agreement can be reached on the uses that should be (dis) incentivized through a collectively shaped final output to produce (on the entire Resource or a portion of it) the set of the actors’ socially constructed demanded services.

We operationalize the institutional creativity among participant actors in the LRA, describing its presence or absence through both the procedural and the substantive element:

- 1- Presence of institutional creativity.
  - a. Deliberative scenario: The existence of a scenario and a coordination mechanism.
  - b. The second negotiation dilemma: The shape of the final output to influence inclusive (in any profiling actor) or exclusive (only in selected profiling actors) uses of Resource constituents was a result of:
    - i. Negotiation of the profile of the Resource.
    - ii. Negotiation on the distribution of the cost/benefit of the uses of Resource constituents.
- 2- Absence of institutional creativity.
  - a. Deliberative scenario: The inexistence of a scenario or/and a coordination mechanism.
  - b. The second negotiation dilemma: The shape of the final output to influence inclusive (in any profiling actor) or exclusive (only in selected profiling actors) uses of Resource constituents was a result of:
    - i. The imposition of the profile of the Resource

- ii. The imposition of the distribution of the cost/benefit of the uses of Resource constituents.

- Outcome

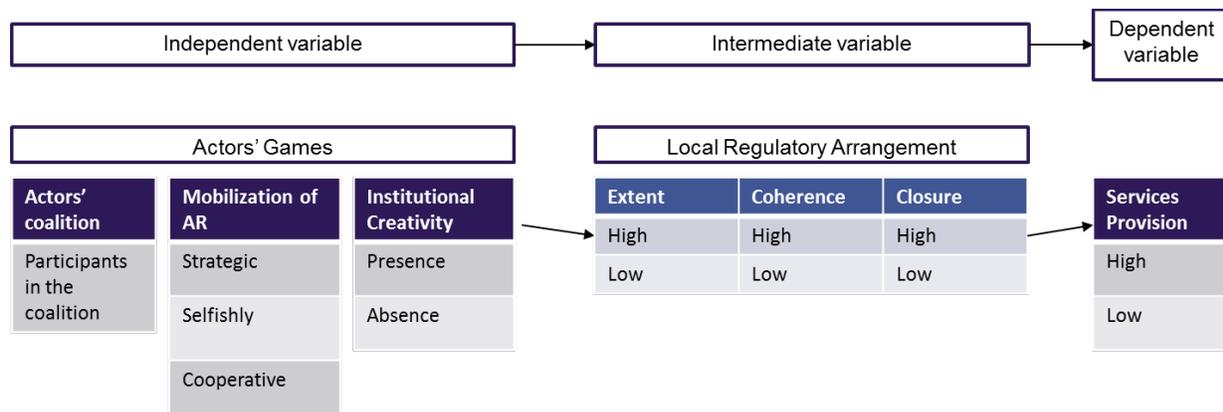
This sequence through which we analyze the actors' games starts with an incumbent LRA perceived as hostile towards a demanded service and have two possible ends: either new agreements on the uses of Resource constituent to provide this threatened service would be negotiated or no agreement would be reached. In the former, the configuration (the combined presence/absence of the extent, the coherence, and the closure) of the incumbent LRA would change. In the latter, the incumbent LRA configuration would remain stable but eventually, the unsatisfied actors would either renounce their pretensions or create a newborn LRA.

In the first case, the actors' games manage to enhance the collective action needed to change LRA's configuration in order to provide the demanded services of the whole set of participant actors, increasing the sustainable management of the Resource system. In the second, the leading coalition maintains an LRA that provide its demanded services, leaving behind the demands of excluded actors and reducing the sustainable management of the Resource system.

#### 2.2.4. Intermediary synthesis: Operational model.

Figure 4 shows our operational model in which the services provision is explained by the combined presence of the three conditions (*extent*, *coherence*, and *closure*) of the Local Regulatory Arrangement. And, the LRA is explained because of the actors' games (*actors' coalitions*; *mobilization of action resources* and *institutional creativity*).

Figure 4 Operational Model. Source: the author.



## Chapter 3. Hypothesis and adaptation for the empirical study of the Resource Coffee

By conceptualizing the threat to the sustainable management of the coffee Resource System through the IRR framework, the Resource coffee is sustainable in a given time and space, when collective action succeeds in stabilizing LRAs that provides all of the services demanded in their expected life span. As an ideal type, LRAs that optimize the provision of services are more sustainable.

Using the operative model presented in the previous chapter, we formulate the following research question: How do actors negotiate LRAs that optimize the provision of symbolic, sensory and monetary services from the Resource Coffee?

Two sub-questions emerge:

- 1- How can we explain the optimization of symbolic, sensory and monetary services by variations of the conditions of the LRA?
- 2- How can we explain the variation in the conditions of the LRA due to the actors' games?

To answer these questions, we propose to divide the research into two main stages.

The first is interested in the relationship between the long-term provision of all the services demanded of the resource and the Local Regulatory Arrangement (operationalized through the combined presence/absence of three conditions: extent, coherence, and closure). We propose a synchronic approach by using the Qualitative comparative analysis - QCA (Rihoux & Ragin, 2009) to test insofar services provision depends on the combined presence/absence of the three conditions of the LRA.

The second analyzes the relationship between the actor's games (operationalized through the three analytical dimensions: *actors' coalitions*; *mobilization of action resources* and *institutional creativity*) and the LRA. We propose a diachronic approach in which we describe the process that ends in a selected LRA by using Process Tracing (Bennett, 2010; Collier, 2011) to identify those actions that transmit causal forces.

This chapter is divided into three sections, firstly, we present our hypothesis; secondly, we would like to explain why we selected Coffee as a Resource, how we selected our contexts of study and how we reached our cases of studies, namely the LRAs. Thirdly, we would like to transparently present the data we used.

### 3.1. Hypotheses

The IRR literature establishes a positive relationship between an integrated regime (high extent and high coherence) and the sustainable management of the resource (J. D. Gerber et al., 2009).

This relationship has been questioned by the persisting gap between the behavior as regulated in the regime and the behavior observed in the field.

Schweizer (2015) explains this gap because the implementation process is far away from linear because actors use activations strategies that range from the concretization to the letter to the complete passivity in which the rules are ignored. Hence, it prevents the integrated regime to be translated into the changes in behavior necessary to ensure the sustainable management of the Resource.

To exclude this implementation gap problem, we evaluate the extent, the coherence and the closure on the Local Regulatory Arrangement, which we have previously defined from the “observed” uses of Resource constituents, following de Buren (2015, p. 31) “thus, the hypothesis should focus (...) on a causal relationship between the LRA (post-activation) and the sustainability”.

In response to our first question, we propose the following hypothesis.

- *LRAs that are lacking high extent, high coherence and high closure cannot simultaneously optimize the provision of symbolic, taste related and monetary services.*

To answer our second question, we mobilized the literature on public policy analysis (Peter Knoepfel, Larrue, & Varone, 2006) in particular the notion of power as the endowment in *action resources* to participate in the actors’ game and influence the production of outputs that would change profilers’ behavior (Peter Knoepfel, 2017). Likewise, we mobilized the IRR application for patrimonial resources (Boisseaux et al., 2012), in particular, the *institutional creativity* developed by Laesslé (2016) through which, the winners (actors who cleverly used their *action resources*) shape the final output to profile their combination of demanded services.

On the basis of IRR literature, it is evident that some actors’ coalitions mobilized their *action resources* to counter other coalitions (de Buren, 2011; Johann Dupuis & Knoepfel, 2014; Jean-David. Gerber, 2005; Schweizer, 2015). Given the empirical difficulty of assessing synchronically the legal, political or contractual claims of the totality of services demanded from a given Resource perimeter, IRR’s analyses had prioritized particular claims over certain uses that reflected a zero-sum competitive game, in which services are forcefully produced at the expense of others.

If we assume that the production of the whole set of demanded services during the appropriate life span from a given Resource perimeter is the objective of collective action, a synchronic analysis of the whole set of services provided by an LRA would make possible a diachronic analysis to assess other types of *mobilizations of action resources* categorized depending on their “intention”. If the mobilization intends to back up other actors’ interests, it could produce a non-zero-sum game. Moreover, if the *institutional creativity* could shape the output to produce the combination of services of some actors, as Laesslé (2016) showed, it is plausible to assume that

the same *institutional creativity* could shape the output to profile the combination of services demanded by most of the actors, as long as all have equal chances to influence it.

This last sentence demands the “lens of negotiation” approach, because if all actors have an equal chance to influence the use of the Resource, the number of participating players increases and the transaction costs will increase: not only it is complicated to arrange an adequate combination of services provided by the Resource but also it is difficult to agree who should assume the costs of the change of use and receive the benefits from it.

Bolognesi et al. (2018) have shown the mechanisms through which the transaction costs impede the consolidation of integral regimes: when regulations to cover the whole set of services demanded from the Resource produce higher incoherencies, the regime falls into an institutional complexity trap.

Scharpf (1997, p. 146) argues that transaction costs due to large numbers can be reduced through “the aggregation of individuals and corporate actors into larger units that are capable of representing the aggregated preferences or interest of their members in negotiations with other such units”, like negotiation among coalitions of actors. Nevertheless, in this small negotiation is the conservative bias that impedes the positive coordination, meaning the agreement on both the “production” and the “distribution” (Scharpf, 1997, p. 133).

We conjecture that there is a negotiation previous to the traditional one, which concerns the initial distribution of power among the actors. A huge imbalance would maintain the conservative bias essentially because powerless actors would not be able to put forward their position, hence the production (services to be produced from the Resource) and distribution (who pays the costs and obtain the benefits) agreements would be solved in favor of the powerful actors, leaving forcefully behind the services demanded by the excluded actors. Hence, obtaining a benefit at the expense of the sustainable management of the Resource System.

In this order of ideas, we conjecture that a power-balanced starting point could explain the overcoming of the conservative bias in order to trigger positive coordination that could end in a negotiated agreement which produces the whole set of demanded services. As the power-unbalance is the most common starting point, we conjecture that the “negotiation dilemma” starts when powerful actors face the initial dilemma either to deceive and take advantage to govern the Resource in its favor putting at risk sustainability, or to cooperate and endow enough the powerless to “balance” the initial discussion and open the door for the positive coordination needed to guarantee the sustainable management of the Resource.

- *If actors’ coalitions do not cooperatively mobilize their resources of action to bring about institutional creativity, actors’ games will not produce LRAs with high extent, high coherence, and high closure.*

### 3.2. Case selection

So far, we have claimed that a Resource is sustainable only if all interested actors feel provision of their demanded services guaranteed in their expected life span and, that there is an LRA, which depending on its configuration, could explain how far the actual use of the Resource is sustainable by measuring the gap between demanded and observed services.

To generalize our results, we are interested in choosing a Resource, which on the one hand, sparks the highest quantity of services for the highest quantity of possible actors while on the other, the actors' games are played at the smallest possible geographical space to make the research feasible.

Firstly: As we said before, we focus on artificial Resources because its capacity to adapt to market demands frees us from the normative perspective that encompasses the literature on the sustainable management of natural resources. I.e. when the Resource itself could disappear, it could be understood a "Resource oriented" analysis that, in a given time and space, recommends the "best" use of the Resource to produce the services demanded by actors while maintaining its reproductive capacity.

For artificial Resources, its disappearance is not a concern but rather the services it produces. Services disappearance is not an issue from a positive perspective. There is not one service that must be preserved hence there is not one "best" use of Resource constituents. When no use of Resource constituents is preferred, the scientist is free to focus rather on the process through which the highest quantity of services is produced avoiding the normative approach <sup>82</sup>. Henceforth, the scientist could focus on the collective action itself not on the collective action to reach a desirable "use". The latter forcibly would end in a zero-sum power game which would bias the collective action analysis.

Secondly: artificial Resources Systems could be studied at different perimeters: Micro in which the profiler is the owner of all the Resource constituents and is the only interested in the services it produced. Small in which different members of one community are the owners of Resource constituents and the services are claimed by the whole community. Worldwide, in which owners of Resource constituents are dispersed all over the world and services are produced for the worldwide population.

Thirdly: What could look like an impossible quest is feasible with an informed selection of the geographical space to focus on. Indeed, this complexity at the global level could reach a very small geographical area. I.e. users of Resource constituents and actors who demand services from all over the world could converge in some uses of some Resource constituents attached to a territory, so making the analysis feasible. Nonetheless, if the area is too small, the complexity

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<sup>82</sup> It has to be said that this one is rather a minority position. The gross body of literature takes a normative approach to this kind of renewable resources when claiming that a combination of monetary services for producers and socio-environmental services for communities must be prioritized.

would be lost and just a couple of actors would be identified. So, the filigree is to reach the proper balance in this tradeoff: the smallest area with the highest complexity, so the research is both feasible and representative.

### 3.2.1. Why coffee

Coffee could be one of the more complex artificial Resources on the planet both for the dispersion in the use of Resource constituents throughout the world and the production of services at a global scale.

Uses of Resource constituents is shared between profilers in different countries: According to ICO (2014) from roughly 150 million green coffee bags produced annually both thousands of capital intensive enterprises and tens of millions of family farms established in the global tropics<sup>83</sup>, 70% of which was imported into non-producers countries. Moreover, according to the MIT's Observatory of Economic Complexity (Simoes, 2010), just a couple of dozen of countries from 170 in their sample did not register any export of coffee, meaning that the value added (the use of Resource constituents during the last processes) is performed at a global scale. E.g. in 2015 an emblematic case could be Switzerland which imported USD 758 million in coffee and exported USD 1.58 billion in coffee<sup>84</sup>, but there are plenty of non-emblematic cases like Greece which imported USD 214 million and exported 21.8 million<sup>85</sup>.

On the other hand, as any local Resource, it provides services for actors involved in its value chain and the communities positively or negatively affected by its production. Especially like other agricultural products, its close relation to the territory usually brings about different services associated not only with the economic activity, but also with the social and political life, and moving further meaning associated with the spiritual and the environmental dimensions. Moreover, its consistent physical presence in billions of households around the globe sparks several kinds of services far away from its native land.

The international demand of services that is translated into global coordination of economic activities is studied in economics as the governance of global value chains categorized by Gereffi et al. (2005) in the previously described between *markets* and *hierarchies: modular, relational, captive*. In the coffee industry, the product specification could be high or low depending on the services to be provided, and of course, depending on them, it could be codified or not. But in any case, the capabilities in the supply-base are high because each activity demands knowledge, flexibility, and adaptability depending on various factors like weather, water availability, raw material cost, etc. Thus, both *captive* and *hierarchical* are highly unusual and we would identify

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<sup>83</sup> The Coffee tree thrives between the tropic of Cancer (23°27' N) and the tropic of Capricorn (23°27' S).

<sup>84</sup> Statistics are present for the product "coffee" but it included both the raw material (green coffee) and the final product (roasted packaged coffee among others).

<sup>85</sup> A geographical visualization accounting from the total value of imports and exports by country could be consulted in the following link [https://atlas.media.mit.edu/en/visualize/geo\\_map/hs92/import/show/all/0901/2015/](https://atlas.media.mit.edu/en/visualize/geo_map/hs92/import/show/all/0901/2015/)

three out of five types of global value chains in the coffee industry: *markets, modular and relational*.

As we have said before, *market type* provided the baseline services and over it, regulations are put in place to profile different services. A good example of the *modular type* are the 68 different standards for the production of coffee from the 244 “standards, codes of conduct, audit protocols addressing sustainability hotspots in global supply chains” (ITC, 2018) that were listed in the Sustainability Map<sup>86</sup>. These standards, which detail the uses of Resource constituents by different owners, are a result of a political/juridical claim for services demanded from the Resource. So, they are a straightforward vector towards the services demanded from the Resource. E.g. the “Alliance for Water Stewardship”<sup>87</sup> demands uses that protect the water resources or the “Bird Friendly® coffee” demands 100% shade-grown coffee so birds do not lose their habitats. Nonetheless, they are not the only one: groups of consumers and companies with different demands put in place other than standards mechanism to (dis)incentivize uses of Resource constituents and provide their demanded services. E.g. artisan coffee roasters<sup>88</sup> who value the aromatic profile of coffee, or Stakeholders like the Swiss Max Havelaar organization<sup>89</sup> who value symbolic services, in a given territory, partnered with a group of profilers to agree on the uses of Resource constituents and ensure the access to the Resource. In this case, a more *relational type* of global value chain is in place.

In fact, since the two-thousands, there was a global consensus on the necessity to move away from the *market type* governance into firstly the *modular type* and more recently the *relational type*.

The ICA-2001 reinforced by the ICA-2007 posed their hope in a *modular type* around an institution (The VSS to enhance in their terms the economic, social and environmental impacts of coffee culture) to correct the information failures and consequently to correctly align the social-environmental preferences of the consumers that, via prices, would encourage the implementation of good practices by the coffee growers.

As presented, an extensive literature has shown mixed results on the sustainability of coffee growing produced by the VSS. However, there is a consensus that the impacts are reduced by the fact that the demand for VSS products is significantly lower than the supply of them. Panhuysen and Pierrot (2014) claimed that 40% of the world coffee production in 2013 was certified or

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<sup>86</sup> One output of the partnership-based program “trade for sustainable development” which help business to better understand the sustainability initiatives (ITC, 2018).

<sup>87</sup> “Our Vision is that water users and managers are responsible water stewards, who protect and enhance freshwater resources for people and nature” (ITC, 2018).

<sup>88</sup> Like Peet’s house founded in 1966 in San Francisco and considered to be one of the first Specialty Coffee Roaster.

<sup>89</sup> Founded in 1992 the by Third World aid organisations Brot für alle, Caritas, Fastenopfer, HEKS, Helvetasand Swissaid.

verified in one of the 7 main VSS<sup>90</sup>, but only 15% was actually purchased as certified/verified coffee. This phenomenon has superimposed a mantle of doubt on this model of governance to which the actors have responded insinuating two ways: Reinforcing or changing it.

In the first case, Governments, NGOs and major players in the coffee value chain, which have converged (through a political process around the concept of sustainability according to Levy, Reinecke, and Manning (2015)) in the Global Coffee Platform<sup>91</sup>, proposed to align the different VSS around a common baseline code. The big roasters would commit to acquiring all of their coffee verified with this code. Likewise, national platforms are proposed as public-private deliberative scenarios that could design and implement a national curriculum (sustainable agricultural practices at the national level) aimed at maximizing the profitability and sustainability of coffee farms in a climate change environment. Given marginal differences predictable by the standardization of sustainable coffee (verified in the common code), profitability is achievable only through increased production in the farm. This *modular type* wants to dig further by standardizing coffee culture at a global level.

In the second case, actors outside the VSS model such as artisan coffee roasters or excluded players such as producers whose practices are not certifiable, take advantage of the coffee trade fairs (the Global Specialty Coffee Expo in Seattle or *Expospeciales* in Bogotá) to propose a reorientation of the public-private effort towards the aromatic profile of coffee, namely incentivize farmers to enhance quality (measured through the cupping protocol of the Specialty Coffee Association of America (SCAA hereafter)). At the same time, they advocate for sophistication in the commercial channels to directly link that offer with a demand that values it, so the producer captures more value and improves his income. The direct contact between consumers, roasters, and producers must be translated into information flows that result in an improvement in environmental and labor practices.

The latter approach has been described as a *relational type* by Hernandez-Aguilera et al. (2015). This approach is sustained on the assumption that sustainability is enhanced because of transparency: Services demanded by consumers are transmitted to farmers through prices, thanks to a short and transparent value chain managed by highly coordinated traders and roasters that guarantee traceability at the farm level. This costly traceability operation is offered by traders specialized in the Specialty Coffee Market.

### 3.2.2. Why coffee in Colombia

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<sup>90</sup> Four certified by external audit: Fairtrade Labelling Organization (FLO), Organic (IFOAM), Rainforest Alliance (RA) and UTZ Certified (UTZ). Three verified by internal audit: Starbucks' Coffee and Farmer Equity Practices (C.A.F.E. Practices), Nespresso AAA, and the 4C Code of Conduct.

<sup>91</sup> The 4C Association merged with the Sustainable Coffee Program (both programs funded by government cooperation entities: German, English, Dutch, Danish and Swiss) to give life to the Global Coffee Platform in March 2016 during the fourth World Coffee Conference in Ethiopia. It aimed to align more than 300 stakeholders from the coffee industry around the implementation of the commitments of the Vision2020 agenda developed by the first two entities and the International Coffee Organization in 2015.

We select Colombia as the best case in which the global complexity can be found at the local level because the three types of governance models of the global coffee value chain are present, namely the *market type*, *modular type*, and the *relational type*.

Colombia is the third exporter of coffee after Brazil and Vietnam<sup>92</sup>, but whereas Brazil and Vietnam had let market forces to shape almost their entire harvest as a low-cost/high-productive bean (Esguerra & McAllister, 2014) Colombia, still in the “market forces” game, had tried to fight back producing regulations to profile the Resource differently in order to provide a different combination of symbolic, taste related and monetary services.

Colombia has a national quality norms system to protect the reputation of Café de Colombia which is protected through intellectual property rights in its main markets (it would be developed further). From roughly 14 millions of coffee bags produced in Colombia during the harvest 2015, 12.7 million were exported because it fulfilled the quality norms (the difference that could not be exported was sold to the domestic market), of which 71% was sold as standard café de Colombia (FNC, 2015, p. 34), meaning that almost nine million coffee bags were sold through a *markets type* governance.

Coffee produced as regulated could have represented more than 6 million coffee bags according to Panhuysen and Pierrot (2014, p. 12). However, roughly three million of coffee bags, equivalent to the 23,5%, was sold through the *modular type*, by more than 209 thousand farms (from nearly 550 thousand) cultivating coffee in 391 thousand hectares (from 941 thousand), associated to the big seven VSS (Fairtrade, Organic, Rainforest Alliance, UTZ, 4C, Nespresso, CAFE Practices) (FNC, 2015, p. 34).

The *relational type* is less evident because it is featured by numerous small transactions that are registered as standard café de Colombia, but when visiting artisanal roasters and following specialty coffee magazines it is quite clear that Colombia is one important supplier of Specialty Coffee (coffee bought because of its cupping score that would be developed further). So, to identify the Specialty traders (that bough and sell coffee depending on their cupping grade) we used the FNC reports of coffee exports by company (FNC, 2017b) to sort the first 54 exporters in 2016 (equivalent to 99% of the total exports)<sup>93</sup>. Then we reviewed their coffee products offered to their clients in their webpages to identify which companies were offering high-scored coffee: 45 of them, including the biggest exporters<sup>94</sup>, traded both standard Café de Colombia and coffee

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<sup>92</sup> In 2015 Brazil produced 37 million coffee bags, Vietnam 20.6 million, Colombia 12.7 million, Indonesia 8.3 million, and India 5 million. (I. C. O. ICO, 2018)

<sup>93</sup> They were 131 more companies that exported the least 1% coffee

<sup>94</sup> 75% of the eleven million coffee bags exported from Colombia were exported by eleven companies: 23% FNC (COL); 8% Espinosa (COL); 7% Carcafe (GBR); 6% Louis Dreyfus (CHE); 6% Expocafé (COL); 6% La Meseta (COL); 4% Neumann (DEU); 4% Olam (SGP); 3% Engel (BGR); 3% COFCO (CHN). ISO Codes represent the country in which headquarters are placed.

certificated/verified under different VSS<sup>95</sup>. Nine companies mainly sold coffee because of their cupping scores: two of them were farms (so, trading is not their main business) and the other seven<sup>96</sup> were the specialized traders that participate in the *relational type* governance model.

Furthermore, in addition to this global demand for services, Colombia also has six regional denomination of origin that highlight the local demand for a particular profile featured by the terroir's aromatic profile and its reputation of the origin to increase the monetary services of producers in that protected area. And, it has the only coffee cultural landscape inscribed in UNESCO's world heritage list that reflects a local demand for the "identity" symbolic service provided by the coffee culture that was escalated at the global level.

### 3.2.3. Why Riosucio (Caldas) and Buesaco (Nariño)

We focus on the two Colombian coffee regions in which we can show how that complexity in the global level, landed at the local one in the most antagonistic way. So, one that is featured by the *modular type*, which represents the global consensus about the intensification model through public-private governance and market-based mechanisms. The other featured by a *relational type*, which represents a liberal approach sustained in private governance and shorter and transparent value chains. As the *market type* is the baseline, it will be present in both regions.

Thus, to select both territories we focus on profiling institutions that could produce both *modular* and *relational* types. Firstly we did a pre-selection among the fifteen departments that cultivate coffee in Colombia analyzing the *Informe de los Comités Departamentales de Cafeteros al Congreso Cafetero 2014* (FNC, 2014)<sup>97</sup>, which provide a picture of the coffee culture in each department. Caldas and Nariño were the departments that could replicate this diversity of profiling institutions: in both they apply the national norms; Caldas has 64% of the total area cultivated in coffee certified/verified in at least one of seven big VSS (it is the only department in which the entire set are present), Nariño has 59% of the total area cultivated in coffee in six VSS but are quite concentrated in two main VSS; both are participating in the Specialty coffee market but while in Caldas it is a minimum portion, Nariño could have the highest proportion among all the Colombian coffee departments. From the local perspective, Caldas is part of the Coffee Cultural Landscape of Colombia inscribed in the UNESCO's World Heritage List, whereas Nariño had the first Protected Denomination of Origin for a region in Colombia. In the same reports, a few municipalities within the departments are already highlighted because of the presence of profiling institutions.

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<sup>95</sup> If they sold a lot of coffee because of cupping score, it was because they had participated in a contest, but it remained marginal to their business. Interview with the President of the Asoexport (*Asociación Nacional de Exportadores de Café de Colombia*).

<sup>96</sup> Colombia based: Banexport (37.465 coffee bags); Caravela (35.912 bags); Café Condor (35.161 bags); Loha Beans (31.610); Selecto (31.188); Azahar coffee (12.713 bags); Inconexus (11.993 bags).

<sup>97</sup> The collection of annual reports of the Comités Departamentales can be consulted since 2004 in the official webpage of the FNC. [www.federaciondecafeteros.org](http://www.federaciondecafeteros.org).

With this pre-selection of Departments and municipalities, we made some exploratory interviews firstly at the national level<sup>98</sup> and then, when both departments were confirmed, at the local level<sup>99</sup>. This allows us to select the coffee territories of two municipalities, Riosucio in Caldas Ecotopo 106B (L. Gómez et al., 1991, p.48) and Buesaco in Nariño Ecotopo 220A (L. Gómez et al., 1991, p.75).

Figure 5 Riosucio and Buesaco among the six regions with a regional reputation. Source: FNC/Café de Colombia.



Through the first rounds of interviews with local traders, we obtain data on purchases. And with stakeholders (*Comité Municipal/Departamental*) we obtain data on land cultivated and farmers, we could depict a statistical description of both regions in table 1: Both territories sold more than half of their 2015 coffee harvest through different profiling institutions that profiled a different services combination, including monetary services in terms of the premium over the standard Café de Colombia. And both have similar conditions of land tenure: Riosucio has 3,099 hectares cultivated in coffee by 3,771 coffee farmers, Buesaco has 2,950 hectares cultivated in coffee by 2,925 farmers.

Nonetheless, the governance types are completely opposed. Riosucio is a very well representative of the *modular type* because almost the entire harvest is bought by the Coffee

<sup>98</sup> Interviews with the founders and CEOs of the Colombian Specialty Export companies: Banexport, Caravela and Selecto. Then with commercial representatives of two of the main Exporters of standard coffee: Caravela and Olam. And with both employees at the FNC, Espinosa and Olam.

<sup>99</sup> In Caldas with the *Comité Departamental de Cafeteros de Caldas* and el *Centro de Estudios Regionales Cafeteros y Empresariales*. In Nariño also with the *Comité Departamental de Cafeteros de Nariño*, la *Universidad Javeriana* y la *Fundación Social*.

farmers' cooperative and distinction is based on different VSS (Organic, Nespresso AAA, Fairtrade, Starbucks CAFE Practices, and Rainforest Alliance). On the other hand, Buesaco is a very well representative of the *relational type* because from the seven traders in the municipality, three are in the specialty coffee business in which the final consumer could trace back the origin of its beverage to the farm because of the short and transparent value chain.

Table 1 Statistical description of the coffee culture in Riosucio and Buesaco. Source: the author

	Riosucio		Buesaco	
	Number	Percentage	Number	Percentage
Coffee Ha 2014	3,099 Ha		2,950 Ha	
Change 2008/2014	-452 Ha	-13%	+850 Ha	40%
Coffee growers	3,771		2,925	
Coffee growers with purchases data	3,009	80%	92 (Veracruz)	This census in Veracruz represents the 3% of coffee growers in Buesaco.
Purchases (kilos/2015)	4,575,984	100%	2,832,500	100%
Purchases with +800/kilo premium	126,429	3%	372,000	13%
Purchases with 400/kilo premium	1,474,206	32%	385,000	14%
Purchases with +/- 200/kilo premium	1,128,147	25%	168,000	6%
Purchases with +/- 100/kilo premium	366,890	8%	540,000	19%
Purchases without premiums (kilos/2015)	1,480,316	32%	1,367,500	48%

### 3.3. Data

We divide this subchapter into two sections devoted to our two contexts of study. In each one, we briefly present some features of the municipality and then, we describe the data collection process.

#### 3.3.1. Riosucio (Caldas)

Riosucio is a dynamic municipality in the northwestern edge of the Department of Caldas at 91 km of Manizales, the capital city. Bordering with the departments of Antioquia to the north, and Risaralda to the west.

It has a long history of communication between the historical southern Cauca (bordering with Ecuador) and northern Antioquia (with a coast on the Caribbean Sea). Natural resources had attracted people since pre-Columbian times for its salt mines at the top of the Cordillera, and Gold mining on the basins during the conquest and the early republic. Even today alluvial gold is an important economic activity but it had been longtime overtaken by agriculture. More than

two-thirds of the 62 thousand habitants predominantly live in the rural area in small farms (On average, 43% of farms are smaller than 1 ha; 40% have between 1 and 3 ha, and 17% are bigger than 3 has). A small proportion in the highly concentrated (in a few owners) five thousand hectares (40% of the total agricultural area in Riosucio) devoted to raising 29 thousand cattle in both the highlands for dairy farming and lowlands for fattening cattle, and the majority in the small farms in between that produce 28 different agricultural products including coffee (Planeación, 2012, pp. 55-57).

Almost all (96%) of the rural households are owners of their land and 77% of them had an *adjudicación del resguardo* (the collective land is owned by the Resguardo, and they gave a property right on the use of the land to the farmer) while 18% have an *escritura pública* (an individual property right on the land) (Planeación, 2012, p. 58). In fact, with the exception of the urban area of Riosucio (highlighted in white in figure 6), the whole municipality is divided among the four Indigenous Resguardos.

Figure 6 Resguardos Indígenas en Riosucio (Duque Escobar, 2014)



Coffee farming in Riosucio is located in the middle strip (between 1,400 and 2,000 m.a.s.l.) on the eastern side of the western Andes of Colombia, of two tributary basins (Supia and Imurra Rivers) of the Cauca River that flows into the Caribbean Sea. The warm winds of the Cauca River valley (+/- 800 m.a.s.l.) rise through the basin of both rivers while the cold winds of the high part of the Western Mountain range (+/- 3.000 m.a.s.l.) descend. This encounter stabilizes the



and the purchasing database of the Cooperative that contains information on the supply of coffee by type (profiling institution) and by coffee grower, we consolidated a database of 3.056 coffee growers in Riosucio who have 2,723 hectares grown in coffee and sold to the Cooperative 3,788,674 kilos of coffee in 2015<sup>100</sup> (hereinafter the Coop / SICA database).

Of the 3.056 coffee growers, 2.943 coffee growers (96% of the total) have registered a total area (on one or more farms) of less than 5 ha in their name and sell 86% of the coffee purchased by the cooperative<sup>101</sup>, equivalent to 3.25 million kilos of coffee in 2015. While 113 coffee growers (4% of the total) have registered in their name (on one or several farms) a total area of more than 5 ha and sell 14% of the coffee purchased by the cooperative, equivalent to 540 thousand kilos of coffee in the year 2015<sup>102</sup>.

Additionally, this Coop/SICA database contains information on the observed uses for the whole activities during the planting process: total area; area cultivated in coffee; variety of coffee planted; age of the coffee crop; number of coffee trees per hectare and percentage of the coffee tree with shade.

To gather information about the observed uses on the processes of cultivation and post-harvesting, the author conducted a survey with 21 coffee growers belonging to different LRAs. They were randomly selected from a sample of coffee growers, from the SICA database, with a similar number of coffee trees and with farms located in a similar altitudinal fringe. As this aleatory sample cannot be generalized, it was checked against a database of 832 of coffee farmers associated with Asprocafé who belongs to four LRA (Fairtrade, la Vereda, Nespresso and Organic) and enriched with information from the Cooperative's and Asprocafé's annual reports. Also, we relied on qualitative information gathered by the author in interviews conducted in Riosucio, Manzales, and Bogotá with the profiling actors who were participating in each LRA identified in Riosucio.

### 3.3.2. Buesaco (Nariño)

Buesaco is located in the northwestern part of the department of Nariño, 37 kilometers north of Pasto, the capital, and 50 kilometers south of la Unión, the regional hub in the north. Pasto-

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<sup>100</sup> The difference of 17% with the total supply of the cooperative in Riosucio can be explained because farmers of neighboring municipalities sell their coffee production in the purchase points of the Cooperative. The difference of 19% with the total number of coffee farmers registered in the SICA can be explained because the farm belongs to one person but the sale is made in the name of another.

<sup>101</sup> 582 coffee growers (19% of the total) have less than 0.49 ha and sell 7% of the coffee purchased by the cooperative; 1,552 (51% of the total) have between 0.5 ha and 1.49ha and sell 36% of the coffee purchased by the cooperative; 809 (26% of the total) have between 1.5 ha and 4.99ha and sell 44% of the coffee purchased by the cooperative.

<sup>102</sup> The above are figures relative to the total area, but if we only take into account the area of the crop, we would have to say that only 24 coffee growers (0.8% of the total) have an area cultivated in coffee of more than 5 ha: 17 coffee growers between 5 ha and 10 ha; six coffee farmers between 10 ha and 16 ha and one has 23 ha.

Buesaco-La Unión are connected through the ancient roadway to Popayán and the rest of the country, built in the thirties and completely restored in 2015.

As it can be noted in figure 8, Nariño is divided into three main zones: The Pacific Plain on the west, a dense tropical forest below 500 m.a.s.l., in which hot temperatures are combined by high humidity; the Andes on the east, characterized by a lush and fertile plateau at 2.900 m.a.s.l., enriched by mineral provided by the seven active volcanoes<sup>103</sup> in the department; finally a small portion (and the gateway) to the Amazonian basin on the Southeast. It should be highlighted that the zone within the Cordillera placed at the range 1.000 – 2.000 m.a.s.l., have the proper altitude to cultivate *Arabica coffea*. In addition to the one rainy / one dry season a year and favorable solar irradiation near the equator line, it was/is favorable enough for coffee harvest.

Figure 8 Physical Map of Nariño. Source : Adapted from Viloría De la Hoz (2007)



Buesaco is a poor<sup>104</sup> rural municipality featured by both smallholders that cultivate coffee as a cash crop and other staple crops below 2.2 thousand m.a.s.l., and, foreign landowners of pasture lands over it. According to the municipality<sup>105</sup>, three-fourths of its 22.000 inhabitants lived in the rural area and 90% depend on agriculture. There are 62 thousand hectares: 40% to natural

<sup>103</sup> Galeras, Chile, el Cumbal, el Cerronegro, Doña Juana, Tajumbina y el Azufral

<sup>104</sup> Unfortunately, there is not more actualized data, but my personal opinion is that the percentage would be lower if a new poverty survey is conducted. If three million kilos of coffee were bought in Buesaco in the harvest 2015-2016 at seven thousand the kilo during the main harvest, three thousand farmers and its families (equivalent at least to the half of the population) obtained COP\$ 20 billion (USD\$ 7 million). Assuming all coffee farmers sold the same amount of coffee, each one obtained COP\$ 7 million (USD\$ 2.333) or COP\$ 583 (USD\$ 194), equivalent to 85% of the minimum monthly legal wage in 2016 (two times the threshold income to be placed under the poverty line for a household). Even though there are different sizes farms that would concentrate the income in the relatively big ones, there are not “big” coffee farms in Buesaco (the biggest one I knew had 70 thousand coffee trees or 10 hectares).

<sup>105</sup> Official web page of the municipality of Buesaco. Last visited 11-17-2017.

forests; 40% in pasture land and 20% in agricultural crops of coffee, maize, kidney beans, peas, citric fruits, and legumes (with the exception of coffee, 80% of production goes to local consumption). The land is distributed between 5.658 properties in the hands of 7.913 owners, 55% of them are smaller than 2 ha; 32% between 2 and 10 ha; 13% are bigger than 10 ha. Using data from 2005 and 2009, the average per capita expenditures was USD\$ 82.7, placing them in the third superior quartile in the department in which poverty affected 70.8% of the population (Béland, 2012, pp. 15-19). 58.64% of the population of Buesaco had its basic needs unsatisfied<sup>106</sup> according to the national statistic office's last available actualization in 2011<sup>107</sup>.

In 2014, the 2.950 ha coffee crop was cultivated by 2.925 coffee farmers in Buesaco (FS, 2014), producing 2.1 million kilos of coffee in the harvest 2013-2014 (FS, 2014, p. 5). In August 2016 when we conducted our fieldwork, we did not find more updated data on area of number of coffee farmers but if the tendency is followed it could be assumed 3.149 ha<sup>108</sup> that produced 2.8 million kilos of coffee, approximate the figure obtained through interviews with the traders as it can be seen in table 2.

Table 2 Coffee from the harvest 2015-2016 bought by Buesaco merchants. Source: the author.

	Especial	Nespresso	Estándar plus	Estandar	Pasilla	Total
Coop del Norte		295,000		5,000		300,000
Coop de Occidente		90,000		10,000	2,500	102,500
CAltura	90,000		540,000			630,000
CNilson	72,000		168,000			240,000
CCespeciales	200,000			800,000	200,000	1,200,000
Rodrigo Viveros	10,000			200,000	50,000	260,000
Jairo Romero				50,000	50,000	100,000
Total	372,000	385,000	708,000	1,065,000	302,500	2,832,500

Geographically speaking, the South and East portion of the municipality is characterized by the highlands of the Andes reaching more than four thousand m.a.s.l., which descent smoothly until the two thousand m.a.s.l., and then, sharply until the one thousand m.a.s.l., creating the breathtaking *canon del Juanambú* which flows directly into a depression known as *la Hoz de Minamá* (at 400 m.a.s.l it cuts in two the western Andes). Similar to Riosucio, this geographical feature allows cold winds from the Andes highlands descend towards the Pacific plain, whereas following the opposite direction, the hot winds from the lowlands are channeled through the canyon to climb up the Buesaco mountains, increasing the relatively moisture and producing an optimal physiological temperatures for coffee production at higher altitudes than on average in Colombia (Gast et al., 2013, p. 191). High altitude coffee is highly appreciated by specialty

<sup>106</sup> The NBI (*Necesidades Básicas Insatisfechas*) is a method to characterize poverty (widely used in Latin-American), according to the lack of basic needs. Namely access to housing, sanitation system; education and economic capacity.

<sup>107</sup> Dane, official webpage, "Necesidades Básicas Insatisfechas, actualización cifras cabecera y resto 30 de junio de 2011". Last visited 11-17-2017.

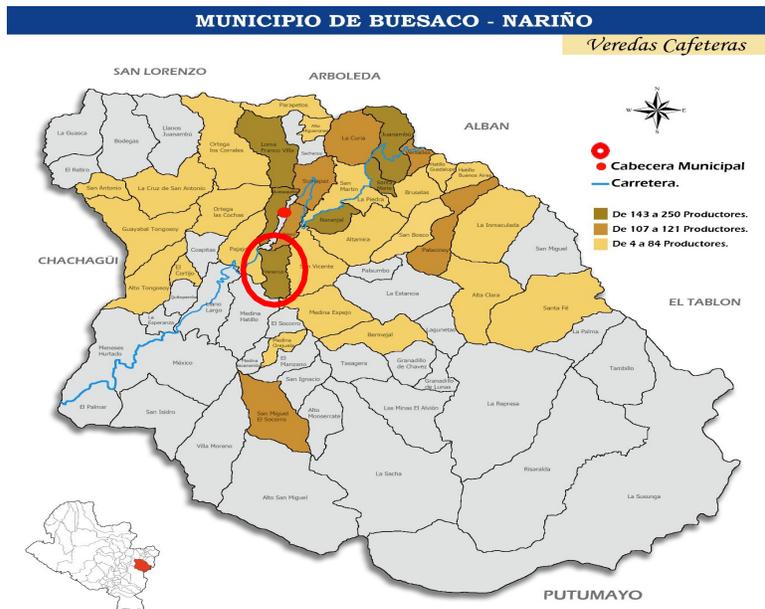
<sup>108</sup> From the 2.100 ha in 2008 claimed by the Gobernación de Nariño and the 2.950 claimed by Café con Altura, we can use the same annual growing rate of 6.7% to project in 2015 a total of 3.149 ha cropped in coffee.

markets because it assists in the creation of aroma precursors: the coffee tree tends to slow its metabolism in order to survive in an ecological niche that is at the edge, reducing total coffee cherry production while increasing sugars and acids concentration within the coffee cherries produced. If we add the already mentioned volcanic ash soils that characterized a Department with seven active volcanoes, and the fact that is just one degree north from the equatorial line, which implies perpendicular solar irradiation of 1620 sunshine-hours per year Colombia (Gast et al., 2013, p. 191). Buesaco has the proper soil and climate conditions to produce a complex coffee, which will depend on the agricultural practices that will be discussed afterward.

In figure 9, the 73 veredas in Buesaco are shaded depending on the number of coffee farmers. The northwestern of the municipality are low lands which few coffee farmers, as it is the highlands to the South and East over 2.300 m.a.s.l. We can roughly say that from Buesaco urban center at 1.959 m.a.s.l., coffee farms to the north and west are at a lower altitude, whereas to the south and east are higher. So, specialty traders supply mainly from those veredas.

One of them is la vereda Veracruz, which happens to be located in that portion of the Cordillera between 1.950-2.200 m.a.s.l where soil and climate are the most appropriated for specialty coffee. In addition, as it is very close to the urban center (and the main route), it had 143 coffee farmers in 2014 according to (FS, 2014).

Figure 9 Map of the municipality of Buesaco and the vereda Veracruz. (FS, 2014, p. 5)



- Data collection

We decided to do our fieldwork in la vereda Veracruz because it had two main features that increased the probability of finding different LRA. On the one hand, it has the ecotope so it was probable that different kinds of specialty traders would be present, in addition to the other

established in Nariño. On the other, as it has a high number of coffee producers, it was more probable to find an acceptable amount of coffee producer in each LRA, thus we were going to be able to compare means.

Two main organizations had data on coffee farmers in Buesaco: the *Fundación Social* and the FNC, both of them did not allow the use of their databases. Nevertheless, the *Fundación* allowed the author to “ask” questions that were answered by the data manager using some descriptive statistics. With almost one thousand coffee farmers in Buesaco with whom they have a relation, information about the area, number of coffee trees, production, and commercial relations was key to select the vereda Veracruz and the relevant figures to obtain a sample of coffee farmers in this vereda. Afterward, a representative random sample was amiably provided by the FNC, produced from their coffee information system known as the SICA<sup>109</sup>.

The author conducted a survey on August – September 2016. The method to reach the farmers was through the community members who describe the directions<sup>110</sup> (because the sample had only the names), but unfortunately, the author was not able to reach half of the coffee farmers in that sample. It could be possible that farmers were not reached because they had already sold their land and the information was not updated. Because on the one hand, during a period of expansion (as in other industries) newcomers are attracted while others are ejected. On the other, one technical assistant in charge of five or six hundreds of coffee farmers in various veredas, as it is the case in Buesaco, make it difficult to properly update the information. So, in the end, the information gathered was not representative of the Vereda.

We decided to conduct a second round in which we surveyed the whole population of coffee farmers: the data was collected by Viviana Ramos, a local agronomist that surveyed the whole population of the Vereda Veracruz during two months (June-July 2017) about the previous harvest that ended in September 2016. The survey was divided into four sections:

- Household data (geolocation, altitude, identification, member of the FNC, etc.)
- Income (sources of income, farm area, coffee area, canopy, number of coffee trees, variety of coffee, number of coffee trees by age)
- Coffee income (Kilos of coffee produced during the harvest 2015-2016, proportion sold as dry parchment coffee, through whom (intermediaries) and how (regulations) those kilos were sold)
- Agricultural practices (soil management, pest and diseases management, nutrition, picking, reselection, farm management, hulling, fermentation, drying, water, waste management)

This database that we will call “Veracruz Data Base”, contains 92 coffee growers, the whole population in the vereda Veracruz.

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<sup>109</sup> *El Sistema de Información Cafetera – SICA* is a dynamic information system with georeferenced data at the household level, from nearly half a million coffee farms in Colombia. It is constantly updated by the technical assistance service.

<sup>110</sup> I started by a local rural store, who supply farmers with daily consumption goods. And then, to each farmer I was visiting, I asked directions from the other farmers I did not have information.

- 13 of them did not sell any kilo of coffee during the previous harvest because all their coffee trees were too young. Either because they had planted a new coffee tree or they had pruned them.
- In a similar case, 4 farmers sold a production lower than 0.04 kilos of coffee per coffee tree<sup>111</sup> that was caused by an external factor (a fire in one case, a heritage issue in another, etc.), so we drop their data.
- Four farmers that sold through a neighbor that could have sold to one of the merchants in Buesaco, or not. So, we cannot classify them properly and we have to drop them.
- One farmer that is an outlier, so we preferred to exclude him.

So, we use the data on 70 farmers with information on coffee production and sales, and all other items described above.

### 3.4. Intermediary synthesis: the research design at a glance.

We started this chapter with the following question: How do actors negotiate an LRA that optimizes the provision of symbolic, sensory and monetary services from the Resource Coffee?

To answer this question, we propose a research design divided into two stages: First, the sustainable management of the Resource is originally defined as a proportion between the services provided and the services demanded from it that is explained by an agreement among actors: The Local Regulatory Arrangement (LRA) categorized through eight configurations (the combined presence/absence of two conditions, *extent* and *coherence*, stemming from the IRR literature and a third one, *closure*, as an original contribution). Second, the LRA configuration that is explained by the actors' games, originally conceptualized as a sequence of three analytical dimensions: an *actors' coalition* which could decide on a cooperative, strategic or selfishly *mobilization of action resources* to produce or not *institutional creativity*.

We move into the empirical stage with a promising logic of generalization: if the theoretical mechanisms explain a complex Resource in which different actors demand different services, it would explain another less complex. Hence, we use coffee as a Resource because its international trade produces the highest quantity of services for the highest quantity of possible actors, while the very local coffee cultivation allows us to observe the power game played at a small-enough geographical space to make the research feasible.

We use antagonism as our logic for generalizing among the LRA. So, we select the two most antagonist coffee zones according to the classification of the input-output relation between actors of the coffee value chain. So, we selected Riosucio (Caldas) and Buesaco (Nariño) in Colombia.

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<sup>111</sup> The range of production per coffee tree varied in Veracruz from 0.73 kilos per coffee tree per year to 0 (in the case of coffee trees with less than two years), on average it was 0.2 kilos/tree/year.

## Chapter 4. Contextualization: Coffee in Colombia

Both the actors' social construction of the problem and the action to face this problem are dependent on the Institutional Regime (IR onwards). Indeed, if actors perceive a threat to the provision of a service it is because the actual uses of Resource constituents are either allowed or not by the Institutional Regime. To change those uses, actors activate, menace to activate, or do not activate the institutions of this IR, or they change the institutions from the IR.

Our research focuses on the mobilization of actions resources to activate institutions from the coffee public policy. So, we propose this chapter to describe the evolution of this coffee public policy using secondary documentary analysis. It is complemented with annex 2 which privileged the evolution of the IR on other productive factors (land and labor) to understand the creation (and dissolution) of two contextual institutions: Resguardos Indígenas and Haciendas.

Our objective of this chapter is that the reader can understand the evolution of the main coffee public policies that provided a contextual framework from our both contexts of study divided into two sections: A first one in which an international agreement produced a regulated coffee market that empowered a coffee farmers' elite who would shape the coffee public policy to encourage the commercial coffee farming; and a second one in which the international agreement was dismantled and produced a free market that would allow demand of services at the global level to reach the very local coffee farming sparking the peasant coffee farming that features our both contexts of study.

### 4.1. A coffee-quota regime that disintegrated ancient structures to consolidate coffee commercial farming before 1990

Since the beginning of the 19<sup>th</sup> century coffee crops was an attractive enterprise in today's Colombia<sup>112</sup> due to the independence of the Caribbean French Colonies (who were in that period the main coffee producers in the world) to supply a market that had growth since coffee introduction in Europe by Venetian merchants, Marseilles sailors and Turkish ambassadors in the sixteenth and seventeenth centuries from the Ottoman empire (Topik, 2004, p. 25). Coffee originally came from Venezuela and the first plantations were located near these borders<sup>113</sup>. From there, it moved south to neighboring departments before crossing westwards to the departments of Antioquia and Cauca in 1870 until it covered the whole Cordillera in 1890.

Coffee prospered from 1880 to 1940 because of two main forces in the international coffee market: On the one hand, the increase of consumption in United States, characterized by concentration of imports and innovations in roasting and the retail business that created demand for Colombian coffee; and on the other hand the increase in coffee production in Brazil characterized by an active intervention in markets, mainly by private companies, to guarantee a higher international coffee price that directly benefited Colombians producers (Renard & Hennequin, 1999; Topik, 2004; Ukers, 1922)

According to Palacios (2009), owners of commercial capital used their trade expertise and financial networks in Europe and North America to start the coffee culture in their haciendas (see annex 2), and then spreading it throughout peasant farms<sup>114</sup>. As local capital markets were very small at the end of the nineteenth century, they had to obtain funds with European and North American companies to buy the local coffee harvest, thereafter they would pay the loan with green coffee. Locals took the entire risk: They buy coffee at the local price to resell it at highly volatile international prices. If the latter were lower than the former, they had to assume the loss because they were bound by financial ties. As a countermeasure, they implemented two strategies: the first was to collude between other local buyers in secret agreements to force down purchase prices. The second, allowed by the emerging financial market in Colombia at the beginning of the 20<sup>th</sup> century, was to open commercial offices in the main markets and operate as importers and brokers. It was common that Hacendados export their own brand coffee by

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<sup>112</sup> "A esta hora concidero que la hacienda de Añil estará muy adelantada, y la de Cafeé ya comensada como degé dispuesto pues aun quando hayan habido algunos tropiesos... De este modo no deberán poner incombeniente a que se establezca la hacienda de Cafeé proyectada. Cada día tengo más ancias de ber en Ceuce una hermosa hacda. de cafeé porque es un fruto este que infaliblemente ha de tener buen precio como lo tiene en el día, mientras que las Colonias Francesas no se restablezcan" (Sic) Bolívar (1804). These words, with the original orthography, were written in Cadiz by Simón Bolívar the 29th of January in 1804 to his steward in the Viceroyalty of New Granada.

<sup>113</sup> There are testimonies of coffee cultivation in Colombia since 1730 (FNC, 2010b)

<sup>114</sup> According to M. Arango (1977), the *Hacienda* was not a unique productive unit but a sum of smallholdings individually exploited by sharecroppers families, which were owned by an *hacendado*. He argued that coffee prospered mainly in regions in which the relation between *Haciendas* and sharecroppers were more of less capitalist. In those regions like the *Cundiboyacense* plateau in which the relation could be describe as pre-capitalist coffee expanded slower: sharecroppers cultivate staple food for their own (crop coffee was forbidden and the surplus had to be sold to the Hacienda) and paid in labor by cultivating coffee in the land of the *hacendado*. On the other hand, were sharecroppers had contracts to exploit the land avoiding forcing labor like Antioquia the crop expanded and *hacendados* were able to buy a significant amount of coffee to commercialize it in the international markets.

both harvesting in their own land and processing the coffee obtained/bought from their sharecroppers and other smallholders<sup>115</sup>.

Bejarano (1987) added that vertical integration allowed the appropriation of more value and acted to counterbalance higher labor costs, which in 1880 represented 55% of total production costs, but made them vulnerable to severe fluctuations on international prices due to technological advances that encouraged speculation<sup>116</sup>. Volatility eventually bankrupted the Colombian trading companies<sup>117</sup> which were absorbed by North American Banks: the former became local agents of the latter. With a few but very powerful players in the international capital market, and several intermediaries in the local trading markets, the small prices received by producers broke out the vertical integration and spurred the peasant economy<sup>118</sup> tripling production<sup>119</sup>. Bejarano (1987, p. 198) explained the smallholding success through both the cost structure of the coffee crop and the coffee market features: The small size of farms allowed them to rely on *Trabajo Familiar* (unpaid work done by family members) and the precarious life of peasants to maintain their lifestyle with little income; The separation into different productive and trading agents reduced the impact of price volatility, allowing more stability for small coffee producers and for the economy as a whole.

In any case, for Palacios (2009), the Hacendados triggered the infrastructures to link ports with coffeelands, created the international commercial network and create a coffee consciousness that paved the way for a successful coffee peasant economy in Colombia that fueled local

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<sup>115</sup> "Todavía en la década de 1920 eran frecuentes las "marcas" de las haciendas que se negociaban en los mercados extranjeros mediante un sistema similar al de los vinos franceses" (Palacios, 2009, p. 60).

<sup>116</sup> "When a submarine cable tied South America to New York and London by telegraph. (1870) Information about prices and demand and supply became internationally homogeneous... (And) the creation of the New York Coffee Exchange in 1882... (Hamburg, Le Havre and London followed with major coffee exchanges)" (Topik, 2004, p. 27).

<sup>117</sup> By the end of 1918 prices increased 71% due to both a frost in Brazil and the end of the WWI. As foreign capital was scarce since Colombian companies settled down in New York, they funded the harvest purchase with local capital, smothering other local economic activity. "Las restricciones monetarias internas eran tan severas que fue casi imposible comprar la cosecha de café en 1920. En Manizales la escasez de numerario llegó al punto en que el comercio local tuvo que organizar de prisa un sistema de trueque, utilizando el café pilada de primera clase como medio de pago" (Palacios, 2009, p. 411). Unfortunately in 1920 prices fell dramatically. "En la plaza de Medellín estas empresas habían comprado café desde octubre de 1919 hasta mayo de 1920 a un promedio de 6.50 pesos la arroba; en diciembre de este último año la arroba se pagaba a 2.10 pesos" (Palacios, 2009, p. 412). Banks were unable to recover their money and were very close to suspending their payments, it was the kind of situation that North American companies were waiting for to regain control in the Colombian coffee trade. "El Banco López de Bogotá, el Banco Sucre de Medellín y el Banco Ruiz de Manizales recibieron fuertes inyecciones de dólares para sacarlos a flote, y quedar dominados por los negocios extranjeros. Al finalizar 1920 The Bank of New York y The Battery Park National Bank, anunciaron en Nueva York que tomaban en sus manos el café que embarcaban las compañías de Alejandro Ángel, Vásquez & Correa y la Antioquia Commercial Co" (Palacios, 2009, p. 412).

<sup>118</sup> The first Coffee Census conducted in Colombia in 1932 showed a coffee land featured by the smallholding: 86% of coffee trees were cultivated in farms with less than 10ha. "Si definimos hacienda de café como la unidad con más de 60.000 arbustos en producción, en 1932 había en Colombia 645 haciendas, fundadas en su gran mayoría entre 1870 y 1895; representaban apenas 0.45% de todas las unidades agrarias cafeteras y 14% de los cafetos" (Palacios, 2009, p. 59).

<sup>119</sup> This structural change from Haciendas to smallholdings spurred an astonishing tripling of coffee production: from 1.1 million bags in 1918 (Ukers, 1922, p. 279) to 3.4 million bags in 1932 (FNC, 1933, p. 119).

markets with foreign currencies<sup>120</sup>. It was materialized in the foundation of the *Federación Nacional de Cafeteros de Colombia*<sup>121</sup>, FNC onwards in June of 1927 in the II National Congress of Coffee Growers in Medellín to, officially, improve the wellbeing of the coffee producers and representing the industry interest in allocating public revenues<sup>122</sup>. Scholars claim other reasons like counterbalancing the subordination of the commercial houses to the foreign capital<sup>123</sup> and to tackle down the deterioration of the social cohesion in the coffee lands<sup>124</sup>.

During its early days, the FNC required capital for operating, and after an intense internal debate<sup>125</sup>, the path of what is now known as the parafiscal contribution was decided<sup>126</sup>. The Colombian National Congress established a tax on coffee exported that was going to be effective after the signing of a provision-services contract with the FNC. Indeed, the *Ley 76 de 1927. Sobre protección y defensa del café*, delegate in the FNC provision of public services under a ten-year renewable contract using as monetary resources the taxation of coffee exports (USD 0.10<sup>127</sup> for 60k bag of coffee exported): promotion of Colombian coffee (numeral a); crop health protection (numeral b); commercial services (c); research (numeral d); industry promotion (numeral e); data

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<sup>120</sup> In 1932 reached USD\$ 42 million, equivalent to 61% of the USD\$ 69 million total exports (FNC, 1933, p. 115).

<sup>121</sup> The FNC has its roots in the SAC *Sociedad de Agricultores de Colombia* created in 1870, a landowner's organization, which by sharing technical and market advice, oriented the political position of its members. Divergent interests within the agricultural sector showed the need for a specialized coffee union and after two meetings, the FNC was founded in 1927.

<sup>122</sup> "The growth of the railways, the funding of public utilities, and the financing of the roads: all significantly depended on revenues derived from the coffee industry" (Bates, 1998, p. 60) In fact, the coffee regions on the Andes were completely connected through railways to both the Pacific Ocean to the west, and the Atlantic Ocean to the North through the Magdalena River (Meisel-Roca, Ramírez-Giraldo, & Jaramillo-Echeverri, 2016).

<sup>123</sup> "(fue resultado de) una unión ente la burguesía comercial exportadora y una burguesía cafetera terrateniente, para enfrenar el capital extranjero que amenazaba sus intereses". Machado (1982, p. 182)

<sup>124</sup> "Se produjo como una reacción frente a los graves problemas sociales que estas burguesías (burguesía conservadora terrateniente y comercial de Medellín y la burguesía liberal terrateniente y comercial de Bogotá) percibían en las zonas cafeteras de Colombia y con el apoyo entusiasta del gobierno conservador". Saether (1999, p. 139).

<sup>125</sup> See Saether (1999, p. 157) about the first meetings of the National Committee of Coffee Growers in which the producers were divided among those who expected to finance the activities of the FNC with their own contributions and others with the contributions of the Government.

<sup>126</sup> Incorporated into the Colombian legal system by the 1991 Constitution, *la parafiscalidad "hace referencia a unos recursos extraídos en forma obligatoria de un sector económico para ser nuevamente invertidos en el propio sector, con exclusión del resto de la sociedad"* (Corte Constitucional C-449 del 9 de junio de 1992 citado por Villegas (1998, p. 19)). However, for the coffee sector, coffee resources have been decreed under different denominations since the same year the FNC was founded. Currently, article 25 of Law 1151 of July 24, 2007 established a coffee contribution of 6 cents per pound of coffee exported that was made permanent through article 5 of Law 1337 of July 21, 2009 (effective field work in 2016).

<sup>127</sup> We will use the ISO currency code in which USD replace the United States Dollar. Also, we will use the COP for the Colombian Peso. In all cases, we will provide an equivalence in USD taking into account the exchange rate in that period using as a reference the average annual value according to dolar web, a colombian company that provides exchange rate data from 1923 in the following webpage: <https://dolar.wilkinsonpc.com.co/dolar-historico/index.html>. To give an idea to the lector, in 1923 the exchange rate was UDS 1 = COP 1. The COP slowly lost its value until 1956 in which the relation was USD 1 = 2.5 COP. From this year forward the COP needed to buy one USD increased faster: In 1966, it was needed 13.5; in 1976 it was 33; in 1986 it was 175; in 1996 it was 987; in 2006 it was 2.225; and in 2016 it was needed COP 2.833 to buy 1 USD.

collection (numeral g); communications within coffee producers (numeral f) and planning (numeral h)<sup>128</sup>.

Afterward, the structure of the FNC was agreed through *El Acuerdo 2º del IV Congreso Nacional de Cafeteros en Bogotá el 14 de diciembre de 1930 sobre los Estatutos de la FNC*. It gave the federated-coffee-producers<sup>129</sup> the right to elect representatives<sup>130</sup> to the main decision-making bodies of the coffee public policy through the *Comités Departamentales y Municipales de Cafeteros: El Congreso Nacional Cafetero*<sup>131</sup> and *El Comité Nacional de Cafeteros*<sup>132</sup>. The first one guides all the FNC's apparatus and the second one that articulates the coffee public policy among the FNC and the Government<sup>133</sup>.

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<sup>128</sup> The first contract between the Government and the FNC was signed on October 15, 1928. In 1930 they received from the government the product of the coffee export tax (Ocampo Gaviria, 1987, p. 251). Since then, ten contracts have been signed, the last signed between both parties on July 9, 2016, with a term of 10 years until 2026 (as the most of the above)

<sup>129</sup> In its first article of the Statutes of 1930 the federated were "*productores y demás interesados en la industria del café*". But in time it concentrated only on coffee farmers. Currently according to art. 4 of the Statutes of the FNC 2003 (reformed in 2007), only the coffee producer "owner or holder of a farm" with an area sown with coffee equal to or greater than average (0.5) hectare, and that have at least 1,500 coffee trees, in the aforementioned area, can be federated. Art 6 establishes that also legal persons whose corporate purpose is coffee production, and communities, illiquid states and de facto corporations that own coffee farms (in all cases a person must be designated to be the owner of the register as federated) and people who have cultivated a property without possession for more than five years as long as the owner has renounced trade union rights.

<sup>130</sup> Art 17 of the statutes of 1930 empowered them to elect the 3 members of the Comité Municipal, which in turn elected three of the five members of the Comité Departamental, and the latter in turn (Article 12) elected the delegates to the Congress National. Today "*los caficultores cedulados eligen directamente Delegados al Congreso Nacional de Cafeteros y Miembros de los Comités Municipales de Cafeteros. Los Delegados al Congreso Nacional de Cafeteros integran el Comité Departamental de Cafeteros (...)*." Art. 40 FNC statutes 2007. From the half a million coffee farmers in Colombia, more than 300 thousand coffee farmers are federated, and each four years they elect their representatives directly, for example in 2014 there were polling stations (also it was possible to vote by cellphone) in 559 municipalities in 17 departments which elected with more than 60% of participation, 4.608 representatives to both the *Comités Municipales de cafeteros* and *Comités Departamentales de Cafeteros* (which are the ones elected to participate in the *Congreso Nacional Cafetero*). (FNC, 2015)

<sup>131</sup> Since its founding, it has been the main governing body of the FNC. Today, the article 13 of the FNC statutes 2007, gives it both institutional (*numeral c "adoptar iniciativas que propendan por un mejor desempeño de las instituciones y la organización cafeteras"*) and substantial duties (*numeral d "estudiar los problemas de la caficultura y dictar las medidas que considere adecuadas para su solución" y numeral e "aprobar el Presupuesto de la Federación y el Plan Estratégico que someta a su consideración el Comité Directivo y evaluar sus resultados"*).

<sup>132</sup> The art. 7 of the statutes of 1930 integrated it with the Minister of Industries and five members elected by the *Congreso Nacional de Cafeteros*. Currently, four senior government officials (the ministers of finance; agriculture; commerce and planning) and one representative elected by each of the 15 *Comités Departamentales de Cafeteros* (approved by the National Coffee Congress, participate). This composition depends on the Contract signed between the FNC and the Government. Art. 14, FNC statutes 2007.

<sup>133</sup> Since its foundation, this body has been responsible for "*cumplir y velar por que se cumpla el Contrato entre el Gobierno Nacional y la FNC*" (art. 7, numeral a de los estatutos 1930). Today "*actuar como órgano de concertación de la política cafetera del país entre el gremio y el Gobierno*" (art. 20, numeral b de los estatutos 2007).

Currently, the *Ley 101 del 23 de diciembre de 1993 “General de Desarrollo Agropecuario”* establishes the public goods and services to be financed with the parafiscal contribution<sup>134</sup>. They would be prioritized by the FNC’s Strategic Plan approved by the Congreso Nacional Cafetero in order to be provided by the FNC as a union entity representative of the coffee sector<sup>135</sup> through its hierarchies: the *Comité Departamental de Cafeteros* implements from a top-down perspective the FNC’s policies<sup>136</sup> while the *Comité Municipal de Cafeteros* is featured by both the bottom-up and the top-down: they have competences to escalate demands from the farmers to the Department level (which in turn have to do the same to the national level<sup>137</sup>), at the same time to provide legitimacy and support for the implementation process at the local level<sup>138</sup>. This double-face feature can be seen in the article 7, numeral f from FNC’s statutes in which the *Comité Municipal de Cafeteros*, cooperates to implement the initiatives of the national order but it shapes them to be locally adapted<sup>139</sup>.

In the practice, the FNC has focalized its energy in three main policy areas: purchase guarantee; quality control and reputation; and technology transfer.

#### 4.1.1. Purchase guarantee

The oligopsony structure in international trade allowed merchants to capture more than half of the utility at the expense of producers (Ocampo Gaviria, 1987, p. 251). To tackle this problematic and sustained on the legal framework provided by the Ley 76/1927, the FNC established in 1929 the *Superintendencia General de Almacenes* a network of local purchase points to compete

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<sup>134</sup> “Los recursos que se generen por medio de contribuciones parafiscales agropecuarias y pesqueras deben ser invertidos en los subsectores agropecuario o pesquero que los suministra, con sujeción a los objetivos siguientes: 1. Investigación y transferencia de tecnología, y asesoría y asistencia técnicas. 2. Adecuación de la producción y control sanitario. 3. Organización y desarrollo de la comercialización. 4. Fomento de las exportaciones y promoción del consumo. 5. Apoyo a la regulación de la oferta y la demanda para proteger a los productores contra oscilaciones anormales de los precios y procurarles un ingreso remunerativo. 6. Programas económicos, sociales y de infraestructura para beneficio del subsector respectivo”. Art. 31 de la Ley 101 de 1993

<sup>135</sup> “La administración de las contribuciones parafiscales agropecuarias y pesqueras se realizará directamente por entidades gremiales que reúnan condiciones de representatividad nacional de una actividad agropecuaria (...) y que hayan celebrado un contrato especial con el Gobierno Nacional”. Art. 30 de la Ley 101 de 1993

<sup>136</sup> Art. 30, Numerals o and p of the FNC’s Statutes give the competence to the *Comités Departamentales* to orientate the extension services and the education program strictly linked to FNC’s policies; and to execute the diverse campaigns ordered by the General Management of the FNC.

<sup>137</sup> “servir de voceros de los productores de café para las solicitudes que éstos deseen hacer a los *Comités Departamentales*” Art. 37, numeral c, FNC Statutes 2007.

<sup>138</sup> “Adelantar, en coordinación con el *Comité Departamental*, campañas para el mejoramiento del cultivo, el control de plagas y enfermedades, la renovación de los cafetales, el correcto beneficio del café, y todas las que redunden en el mejoramiento de las condiciones sociales y económicas de los productores de café”. Art. 37, numeral b, FNC Statutes 2007

<sup>139</sup> “cooperar para el buen éxito de las campañas que en sus Municipios adelante el *Comité Departamental*, para lo cual harán oportunamente las sugerencias que estimen convenientes”. Art. 37, numeral f, FNC Statutes 2007

against international merchants and its local branches. It did not work because the FNC did not have the financial muscle to pay for the harvest, but it was valuable learning<sup>140</sup>.

As a consequence of WWII and the virtual disappearance of the European coffee market, prices plummeted to a historical minimum. According to Palacios (2009), the USA supported the Inter-American Coffee Agreement that was signed in Washington in November 1940<sup>141</sup> to maintain political stability in the region and guarantee alignment against the Axis powers<sup>142</sup>. Indeed, to fulfill it, the Colombian Government through *El Decreto-Ley 2078 del 22 de noviembre de 1940* created a special account to accumulated the capital needed to be known as the *Fondo Nacional del Café - FoNC*<sup>143</sup>. *La Ley 66 de 1942* prorogated the agreement and in its article 4, declared FNC's ownership over all assets needed to fulfill the quota commitment. This institutional framework accompanied by a fortunate combination of events<sup>144</sup> allowed them to consolidate a nationwide purchase network (48 purchase points and 200 private agencies), its milling capacity (13 mills) and its exporting activity (a shipping company known as *Flota Mercante Gran Colombiana*). In the end, they were able to storage 3.4 million bags annually and to export directly one quarter or the total (CEPAL, 1958, pp. 95-98).

Consumption increased faster than production during postwar recovery, resulting in booming prices from 25 cents per pound in 1947 to more than 60 cents per pound in the first half of the fifties that stimulated new plantations in new regions and countries<sup>145</sup>. With the end of this hemispherical agreement in 1948, oversupply plunged prices and again Latin-American countries tried unsuccessfully to negotiate new quota agreements during the fifties<sup>146</sup>. According to Renard (1999), in a cold war context featured by the imminent victory of the Cuban Revolution, the USA

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<sup>140</sup> During the thirties, according to Ocampo (1990), the "valorization" policy implemented by the coffee producers in Brazil was a heavy burden that they needed to share. At the London Economic Conference of 1933, the Brazilian government made a quota-agreement proposal to the Colombian one. A secret agreement was reached in 1936 between the two countries that worked for the first year, but then the FNC's financial capacity was insufficient to maintain the coffee purchasing. Together with the ceased exportations to Germany, the agreement was disbanded in 1938 but the lesson was learned: financial muscle was needed to support these kinds of agreements.

<sup>141</sup> "with a view to assuring terms of trade equitable for both producers and consumers by adjusting the supply to demand" (IACA, 1941, p. 160) using a quota system to distribute the 15.5 million coffee bags consumed in United States between 14 Latin-American producing countries (art I). United States consumption accounted in those days for the 80% of world's imports (Renard, 1999, p. 92).

<sup>142</sup> Some Latin-American countries were heavily dependent on coffee exports: before the WWII coffee represented 80% of Colombian exports and more than 70% of Brazilian exports (Sacco dos Anjos, Belik, & Velleda, 2011).

<sup>143</sup> art 8º "*crear una cuenta especial bajo el nombre de Fondo Nacional del Café*". Art. 9, "*para la adquisición y demás gastos anexos a ella de las cantidades de café que sea necesario comprar como consecuencia de la perspectiva de aplicación del Convenio de Cuotas Cafeteras*". *El Decreto-Ley 2078 del 22 de noviembre de 1940*

<sup>144</sup> As Brazil did not fulfill its promises due to wartime difficulties, Colombian inventories were used to cover the gap. As the coffee tax that was implemented to finance the FoNC operations was an obligation to sell the dollar obtained at a fixed price of 1 (against 1.75) over a minimum international price, and the price was quickly surpassed, the amount received by the FoNC was the equivalent of 21% of the international price. Also, as an obligation to guarantee the quota,

<sup>145</sup> Especially in new areas like African colonies and countries, and others Brazilian regions like *Paraná*, in which Brazil doubled its production to 44 million in 1959 (Renard, 1999, p. 94),

<sup>146</sup> *el Acuerdo de México* in 1957, and then *El Acuerdo Latinoamericano del Café* as an extension of the previous agreement.

Government lead negotiations that ended with almost all coffee countries, both producers and consumers bounded by the International Coffee Agreement in 1962<sup>147</sup>.

The ICA-1962 focused on increasing the income of coffee-exporters<sup>148</sup> through a quotas system as the principal instrument to guarantee a minimum price<sup>149</sup> governed by the International Coffee Organization (ICO hereafter) to supervise its fulfillment<sup>150</sup>. There were three subsequent International Coffee Agreements (in 1968, 1976 and 1983) without fundamental changes in the quota system that nursed a powerful FNC. Indeed, once it was guaranteed an international minimum price, the Colombian Government through the *Decreto-Ley 444 del 22 de marzo de 1967* institutionalized a local minimum price in its art. 256 that had to be fixed by a committee with both the Ministry of Finance and the Ministry of Agriculture in addition to the General Director of the FNC, and the purchase mechanisms with the explicit aim to benefit coffee producers<sup>151</sup>. In parallel, they reshaped their supply network: deconcentrating its purchases in the *Cooperativas de Caficultores* at the local level, owned and operated by local farmers themselves which would work as multi-active entities<sup>152</sup>. *El Congreso Nacional Cafetero* decided that the FNC would not only fund cooperatives' purchases of coffee<sup>153</sup> but also gave to them their warehouses infrastructures and commercial activities previously concentrated in the FNC's hands<sup>154</sup>. Additionally, they created the *División de Cooperativas* as a department within the FNC

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<sup>147</sup> "Finding reason to expect a tendency toward persistent disequilibrium between production and consumption... Believing that, in the absence of international measures, this situation cannot be corrected by normal market forces" (ICO, 1962, p. 2).

<sup>148</sup> "to assist in increasing the purchase power of coffee-exporting countries by keeping prices at equitable levels and by increasing consumption" (ICO, 1962, p. 2). Paragraph 4 of the Art. 1. ICA 1962.

<sup>149</sup> "To attain these purposes through the fixing of quotas as provided for in this Chapter and in other ways carrying out the provisions of the Agreement, the Members agree on the necessity of assuring that the general level of coffee prices does not decline below the general level of such prices in 1962" Art. 27. *Ibíd.*

<sup>150</sup> The idea was to control prices by controlling the supply. At the beginning of the coffee year in September the quotas were distributed between producers depending on the consumption forecast. The mechanism to control was by reducing quotas if prices were lower than negotiated. In 1962 the agreement was to avoid a price lower than the one of that year, from 1972 onwards it was to establish a range between 120 – 140 cents/pound and the mechanism also allowed the increase of quotas if prices were higher than negotiated (Renard, 1999, p. 103).

<sup>151</sup> "Los precios internos del café para las compras que realice la Federación Nacional de Cafeteros de Colombia con recursos del Fondo Nacional de Café se señalarán por un comité integrado por los Ministros de Hacienda y Agricultura y por el Gerente de la Federación. Este mismo comité adoptará medidas que faciliten la compra del café de los pequeños productores directamente por la Federación, con el objeto de que los precios que se fijen para tales operaciones los beneficien efectivamente"

<sup>152</sup> "Con un criterio de unidad empresarial se prestan (...) varios servicios, tales como comercialización de café, crédito a los socios, suministros (venta de artículos de consumo, droguería, y provisión agrícola) (...) servicios asistenciales de salud, seguridad y educación cooperativa" (D. C. FNC, 1978, p. 1)

<sup>153</sup> "la aprobación de dos líneas de crédito: una creada mediante la Resolución Nº 8 de mayo 4 de 1977, emanada de la Gerencia General, cuyo monto asciende a \$ 150.000.000.00, con el objeto de financiar la apertura y ampliación de las Secciones de Consumo de las cooperativas de Caficultores; otra creada mediante el Acuerdo Nº 4 del 21 de abril de 1977 del Comité Nacional de Cafeteros, cuyo monto asciende a \$ 50.000.000.00, destinada a financiar programas de mercadeo de productos alimenticios de origen agropecuario producidos en las zonas cafeteras y de influencia geoeconómica cafetera." (D. C. FNC, 1978, p. 2)

<sup>154</sup> "las agencias de compras de grano a las cooperativas de caficultores y además, los Almacenes de Depósito y en algunos Departamentos el manejo de los Almacenes de Provisión Agrícola" (D. C. FNC, 1978, p. 1)

that was going to provide both legal and administrative assistance and, control and supervision. Finally, they would concentrate and modernize the logistics needed to export coffee through a new entity called Almacafé.

So, with the capital accumulated through the FoNC, the fixation of a local minimum price<sup>155</sup> and the FNC presence in all the coffee regions during the whole year<sup>156</sup>, the FNC could buy in cash during the whole year, all coffee produced by Colombian coffee farmers (both federated or not to the FNC): This policy is known as *la garantía de compra* (the purchase guarantee).

#### 4.1.2. Quality control and reputation

*La Ley 76 de 1931* in its article 2 delegated in the FNC the authority to classify and define green coffee<sup>157</sup> quality<sup>158</sup> depending on the region and, to prohibit coffee exports without regard of this classification; to be enforced, it vested the FNC's employees with the authority needed in its article 4. Afterward, for protecting Colombian Coffee's reputation during the validity of the ICA, *el decreto 444 de 1967* authorized only exports of coffee bags with minimum quality requirements (known as *Excelso Coffee*). Coffee bags that were not able to fulfill this threshold had to be sold for domestic consumption. In 1969 the FNC created the Unity of Quality Control which defined the *Excelso Coffee* depending on the size of bean and the number of grains with defects that were found in a sample of 500 grams, but in practice, inspectors applied the norm subjectively, and were more or less tolerant depending on the port location and the exporter (Moreno Gonzales, 2015, p. 17).

In the nineties, *La Ley 9 del 17 de enero de 1991* maintained this competence in the hands of the FNC, but it was only when they released the *Resolución 5 del 6 de junio de 2002 del Comité*

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<sup>155</sup> The minimum price is daily calculated by the FNC: The closing price of coffee (USD per pound for arabicas ex-dock) in the New York Board of Trade; plus, the Colombian premium; multiplied by the exchange rate USD/COP minus the trading expenses assumed by the FNC from the point of purchase to the dock in the consumer country.

<sup>156</sup> Today there are 36 *cooperativas de caficultores* with 541 points of purchase throughout the country. [https://www.federaciondecafeteros.org/particulares/es/que\\_hacemos/cooperativas\\_de\\_caficultores/](https://www.federaciondecafeteros.org/particulares/es/que_hacemos/cooperativas_de_caficultores/). Last visit 01-30-2017.

<sup>157</sup> The green coffee is obtained after picking (from the coffee tree), hulling (to remove the pulp), ferment (to remove the mucilage), drying and milling (to remove the parchment). This presentation is the preferred one to transport coffee because it preserves at the lower cost, the integrity of the coffee bean and its aromatic potential before it reaches roasters.

<sup>158</sup> "En desarrollo de la ley 76 de 1931, el decreto 1461 de 1932 adoptó las clases de café, las únicas exportables: - cafés trillados: el supremo, el extra, el caracol, el excelso, segunda, pasilla, consuma y maragojipe; - cafés sin trillar: primera, segunda, maragojipe primera y maragojipe segunda" (Villegas, 1998, p. 185).

*Nacional del Cafeteros* that qualities were homologated and *Café Excelso* was clearly defined according to its size<sup>159</sup>, defects<sup>160</sup>, moisture content<sup>161</sup>, odor, color and cup taste:

- Screen size 14 with a tolerance for 1.5% on screen 12. At least 50% must be screen 15<sup>162</sup>.
- A 500-gram sample of green coffee can contain up to 72 defects, with a maximum of 12 beans from Group 1.
- Moisture content must not exceed 12%,
- Coffee must have its characteristic odor, a uniform color, and be free from defective flavors.

These tolerances allowed the FNC and other merchants to supply from every region in Colombia without negatively affecting its reputation. So, they were (are) able to spread numerous lots<sup>163</sup> of cheaper small poor-quality beans (due to either natural or cultural causes) in many lots of more expensive large high-quality ones. In the mainstream coffee business, profitability depends on maximizing the use of cheap coffee and minimizing the use of expensive coffee to reach the minimum quality requirements to be able to export.

In fact, the product to be exported is a bag of 70 kilos of coffee that fulfilled the minimum requirements of *Excelso*. So, merchants (including the FNC) bought parchment coffee from intermediaries or directly from farmers through their own purchase points, and then, they mill it to remove the parchment and sort it mechanically<sup>164</sup> to separate the product that can be exported (*Excelso* quality) from sub-products that must be sold to domestic consumption (smaller and defective beans) and the parchment and other impurities (like leaves or pieces of wood).

This logic is the one that drives the minimum prices paid by the FNC in Colombia. Thus, it is the line base for other agents. As in Colombia, on average it is needed 92.7 kilos of parchment coffee to produce 70 kilos of *Excelso*, this ratio is known as the factor. The calculated minimum price (as a result of the purchase guarantee said before) is paid when a sample provided by a producer

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<sup>159</sup> Green coffee is sorted by size using screens: metal sheets with specifically sized, round holes punched into them. The width of the hole is referred in multiples of 1/64<sup>th</sup> of an inch. So, screen size 14 refers to a width of 14/64 of an inch, and so on. The size is relevant because, being all factors equal, the bigger the bean the proper the ripeness and the higher the aromatic potential. In addition, for roasters size homogeneity is extremely important because large beans roast slower than smaller ones. So, if size is not consistent, in the final product some beans are going to be over-roast and others under-roast, diminishing the quality of the final product.

<sup>160</sup> Defects are classed in two groups, the first one that have higher negative impact on the cup than the second one.  
-Group one: Fully or partially black beans; sour or partially sour beans; faded or oldest beans; faded, amber or buttery beans.

-Group two: Wet or under dried beans; moldy beans; crystallized beans; faded or streaked beans; over-dried beans; cut or nipped beans; insect damaged; shrunk beans; immature beans; pressed or crushed beans.

<sup>161</sup> Too much moisture will make it rot, too little will over dry the bean.

<sup>162</sup> They are other categories: Premium in which 95% of coffee had to be over screen size 18, Supremo 95% over screen size 17, Extra 95% over screen size 16, Maragogipe (coffee from this variety) 95% over screen size 17. In all cases, 5% tolerance must be over screen size 14.

<sup>163</sup> The term lot is used to refer to a group of coffee bags to be sold without regards of the size. They must have the same characteristics because a representative sample will be withdrawn by the buyer. So, a farmer can sell a lot of 10 coffee bags, or a merchant a lot of 5 thousand coffee bags.

<sup>164</sup> Depending on client demands, there are some mills that use optical sorting to produce bags with zero defects.

has a *factor*<sup>165</sup> 94 (it is needed 94 kilos to produce 70 kilos of *Excelso*), if the *factor* is higher, each additional point is penalized with a discount, if the *factor* is lower there are not premiums, creating the leeway that allows merchants to benefit and poor-quality coffee to be sold<sup>166</sup>.

#### 4.1.3. Technology transfer

Since the first congress held by the FNC, a portion of the budget was already separated to the “scientific section” (FNC, 1931), and during the following *Congresos Nacionales Cafeteros* the technical department took shape and experimental farms were established in the main coffee regions<sup>167</sup>. This served as a basis for delegates to the *IX Congreso Cafetero* to create *El Centro Nacional de Investigaciones de Café - CENICAFE*<sup>168</sup> “to experiment under the conditions of our country (Colombia) to provide practical solutions to agronomic issues, and to reduce production cost” (G. Cadena, 2016, p. 484).

The physical installation of Cenicafé was built in Chinchina (Caldas on the fifth parallel north), in which the departments of biology, soils, agronomy, and zootechnics started their research. G. Cadena (2016, p. 483) highlighted their work in soils and climates during their first period, but it was afterward, in the fifties in which their work was hierarchically integrated within the FNC structure, when they conducted the experiments that in the seventies were going to provide the most relevant results to increase productivity. A full-sun productive system with *Coffea arabica* variety *Caturra*<sup>169</sup> in high density (planted 1\*1 meters or 10 thousand coffee trees per hectare), implementing a hard prune every five years and using synthetic fertilizers to nourish the soil, resulted in an astonishing increase of coffee production per hectare (G. Cadena, 2016, pp. 487-488).

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<sup>165</sup> To calculate the factor, a sample of 250 grams is milled manually to eliminate the parchment, then the sample is sorted by screens (only those over screen size 14 remain) and then defective beans are separated from the sample. By calculating the weight of the remaining beans over 250 grams, it is known how many kilos of that particular coffee are required to produce 70 kilos of *excelso*. That number is the factor. If it is needed 94 kilos, then the coffee farmer will receive the price published. If, for example, that sample has too many small and defective beans, the proportion of “remaining” beans will be lower and thus, it will be needed more kilos of that coffee to produce 70 kilos of *excelso*.

<sup>166</sup> A merchant pays a lot of X kilos of coffee factor 88 as if it was factor 94, and then he pays a lot of X kilos with discount factor 100. Then he can blend both lots and sell them factor 94, earning in that transaction the amount of the discount (all other factor being equal). As the average is 92.7, more than half of the coffee produced in Colombia has a better factor than 94 but will be paid as factor 94, whereas the rest will be paid with discount.

<sup>167</sup> In 1933 there were five coffee farms in the departments of “Cundinamarca (La Esperanza), Tolima (Libano), Caldas (Chinchiná), Antioquia (Las Mercedes) y Norte de Santander (Blonay)” (CENICAFE, 2013, p. 33). It must be noted that all those farms were either to the north or near the 5<sup>th</sup> parallel north, whereas Nariño is one degree north from the Equatorial line.

<sup>168</sup> *Acuerdo 2º del IX Congreso Cafetero del 9 de noviembre de 1938.*

<sup>169</sup> *Caturra* had its origin in a natural mutation of the variety *Borbon*, in which the distances between the branches were shorter. Then, through selective breeding it was developed by the Instituto Agronomico of Campinas (Brazil). As coffee grows in the branches of the plant, less distance not only allows the tree to expend more energy in beans than in vegetative mass, but also as it is shorter, more coffee trees can be planted in the same hectare. So, a higher yield per hectare is achieved.

Technologies that were transferred initially through written documents like the *la Revista Cafetera de Colombia* created in 1928 to spread the latest information from the FNC; *el Manual del Cafetero Colombiano* since 1932<sup>170</sup>, a book that condensates all agronomic practices recommended by Cenicafe for the coffee culture in Colombia; *la Revista Cenicafé* since 1949, a journal with the latest scientific information<sup>171</sup> (G. Cadena, 2016, p. 484).

In parallel, the *IV Congreso Nacional Cafetero* in 1930 decided that technical assistance was a competence for the *Comités Departamentales de Cafeteros*, the local branch of FNC, which had to nominate (and to pay) agronomists and experts. In those days, *los Comités Departamentales de Cafeteros* paid agronomist that “provide its services for free to coffee farmers, giving them the instructions needed to obtain the best results in their plantations using the fitter productive and processing systems. Coffee farmers can demand assistance directly to their *Comité*” (FNC, 1933, p. 157). In the fifties, the *XXI Congreso Nacional de Cafeteros* in 1959 decided to create the *Servicio de Extensión Rural*, integrating the technical assistance within the hierarchical structure, alongside with Cenicafe, into the Technical Department: centralized but with a presence in all coffee regions.

In fact, the disconnected and immature technology transfer system that characterized the first three decades of the existence of the FNC changed dramatically with a mission in Colombia conducted by the CEPAL in 1959 to study “the technical and economic aspects of coffee production which have the greatest impact on economic development”<sup>172</sup>. It showed how Colombian participation in the world coffee market had decreased from 20% during the forties to 13% at the end of the fifties (Ocampo Gaviria, 1987, p. 278). Two factors were blamed for this deceleration<sup>173</sup>, on the one hand, the increase in political violence since the fifties that hurt coffee regions and the depletion of traditional coffee technology of the small coffee farms<sup>174</sup> that were uncompetitive in a context of global competition<sup>175</sup>. So, they proposed a restructuration of the system in which all the components were oriented towards the same objective: the increase in productivity. Cenicafé had to focus its research on how to produce more coffee per hectare, and the *Servicio de Extensión* had to focus on transfer that particular knowledge to farmers. A third element was put forward with the creation in 1965 of the *Fundación Manual Mejía*, an educational institution to train the *extensionistas* to produce the link between Cenicafé and the *Servicio de Extensión*.

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<sup>170</sup> It has been actualized periodically. The latest version was presented in 2013 and can be downloaded freely by coffee growers federated to the FNC.

<sup>171</sup> All numbers, since the first one in 1949, can be downloaded freely by anyone from the portal [www.cenicafe.org](http://www.cenicafe.org)

<sup>172</sup> *Resolución 63 (V) aprobada en el quinto período de sesiones de la Comisión Económica para América Latina el 25 de abril de 1953 (E/CN.12/350).*

<sup>173</sup> Until 1970 production had increased a timid 26% from 1949 to nearly 8 million bags. (Ocampo Gaviria, 1987, p. 305).

<sup>174</sup> *La producción se hacía todavía predominantemente en unidades pequeñas (63.9% del área correspondía a cafetales de menos de 10 has., una proporción similar o ligeramente superior a la de 1932)”* (Ocampo Gaviria, 1987, p. 307).

<sup>175</sup> *“Tales labores eran muy intensivas en mano de obra e ineficientes; el informe estimó, por ejemplo, que exigían más del doble de mano de obra por una misma cantidad de café que en El Salvador”* (Ocampo Gaviria, 1987, p. 307).

The three pieces formed the “knowledge circuit” (CENICAFE, 2013, p. 48) and were put in practice, since 1965, through the “*programas de desarrollo y diversificación*”<sup>176</sup> (Junguito, 1974): It targeted farms with more than 10 ha, which received a personalized technology transfer to improve productivity using subsidized loans<sup>177</sup>.

Even though smaller farms also were targeted and received technology transfer through group meetings (CENICAFE, 2013, p. 49), for Palacios (2009) these programs appeared more to encourage small farmers to cultivate other crops<sup>178</sup>. In one decade, the smallholding culture that had characterized coffee crop production in Colombia changed radically: In 1932 small coffee farms represented almost 98% of the farms and 75% of production. In 1970 they represented 71% of the coffee farms but only 29% of the production (Palacios, 2009, p. 490).

However, in the end, the objective to increase productivity was achieved. Coffee production increased by half from the roughly eight million of coffee bags produced annually on average in the seventies, to the twelve million in the eighties. In parallel the total cultivated area slightly diminished in the same period from roughly 1.1 million hectares to 1 million (Santiago. Silva Restrepo, 2011, pp. 111-120).

#### 4.2. A free regime that collapsed commercial farming and sparked the peasant coffee farming after 1990.

Since the green revolution, technical advances have transformed the countryside and changed the way in which crops were maintained and produced. For a wide portfolio of agricultural products, modernization either attracted farmers or banished them from their lands through competition. For some observers, this situation is just a logic reallocation of productive factors encouraged in a market-based economy in which the only problem is public intervention.

The liberalization of the global coffee market responded to this understanding of the problem as we can infer from the message about the International Coffee Agreement (ICA) that was finally agreed upon in 1994 by the International Coffee Organization (ICO, 1994) made by the Federal

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<sup>176</sup> Due to the ICA’s quota, the idea was to reduce the total area cultivated in coffee by diversifying agriculture, and fulfill the quota producing more coffee bags per hectare. At the beginning the plan focused on coffee farms under 20 hectares, but results were not satisfactory because of *la mentalidad campesina* (Palacios, 2009, p. 501). Therefore, in the *Plan Quinquenal* launched in 1973 selection of participants was made by a case by case cost-benefit analysis.

<sup>177</sup> “*El aumento de las densidades de siembra, la utilización de semillas mejoradas (de variedad caturra), la siembra de los cafetales en curvas de nivel, la regulación y disminución progresiva del sombrío y la utilización sistemática de abonos químicos eran los elementos básicos de esta “revolución verde”. Adicionalmente, se estableció una zonificación ecológica de las zonas cafeteras, con el propósito de limitar la difusión de la nueva tecnología a las zonas óptimas para el cultivo del grano y orientar las zonas marginales hacia nuevos productos agrícolas, dentro de la campaña de diversificación de las zonas cafeteras que se emprendió simultáneamente*” (Ocampo Gaviria, 1987, p. 307).

<sup>178</sup> “*En 1974 el área cafetera plantada con las técnicas de la caficultura moderna llegaba a 132.000 hectáreas (un 10% del área total en cafetales) y producía aproximadamente el 30% de la cosecha nacional, pero sólo 10.500 estaban dentro de fincas familiares*” (Palacios, 2009, p. 503).

Council to the Federal Assembly of the Swiss Confederation, an influential consumer country<sup>179</sup> within the International Coffee Organization (ICO) since 1964. «*Les dispositions sur les contingents des précédents accords appliquées jusqu'en juillet 1989 ont entraîné d'importantes distorsions de la concurrence sur le marché du café* » (SECO, 1995, p. 267). When comparing the ICA 1994 text with that one of the International Coffee Agreement in 1983, state intervention, especially the whole chapter VII “Regulation of Exports and Imports” (ICO, 1983, pp. 133-140) which regulated the market through the quota system, was completely erased. The new ICA was merely an administrative agreement in which the ICO has to collect and publish market information and make analyses and studies about economic conditions in the coffee sector (SECO, 1995, p. 272).

According to Esguerra and McAllister (2014), producing countries dismantled their national institutions to regulate the coffee industry (with the exception of Colombia) flooding markets with their coffee stocks. Traders accumulated this surplus<sup>180</sup> transferring price control from producing countries to importing countries. Meanwhile, Brazil and Vietnam<sup>181</sup> increased their production to supply more than half of the world coffee production<sup>182</sup> relying on the cheaper, high yield and pest resistant *Coffea Robusta*<sup>183</sup>. Roasters took advantage of it, investing in their brands and technology to increase the use of Robusta in their blends without changing too much the final taste of their coffee<sup>184</sup>. It reduced demand for Arabica<sup>185</sup> which in turn pushed down

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<sup>179</sup> Switzerland has a significant role in the market. “*plus de deux tiers du négoce de café dans le monde se déroule directement ou indirectement en Suisse*” (Procafé, 2013, p. 2). With a participation in almost all echelons of the coffee value chain but production. “*la partie du processus de valorisation qui se déroule en Suisse est essentiellement l'apanage d'acteurs du commerce international de café brut, d'importateurs, de torréfacteurs, de constructeurs de machines à café, du commerce de détail et de la gastronomie... qui correspond presque à un pour cent du produit intérieur brut suisse*” (Procafé, 2013, p. 1). Switzerland imports 2.3% of world coffee imports (Switzerland imported 2.6 million coffee bags of the 114.8 million coffee bags imported worldwide in 2014, data from the ICO) to consume three-fifths of it and re-export the remaining two-fifths as transformed coffee products (Procafé, 2013).

<sup>180</sup> At the end of 1990 inventories in importing countries were around 20 million bags, double what they were in 1988 (Renard, 1999, p. 118).

<sup>181</sup> Vietnam, where war and communism froze coffee production until *Doi Moi* reforms in 1986 and coffee exports were immobilized until US-Vietnam relations were normalized in 1995, became a major player in coffee industry. Vietnam increased production from 1.3 million bags in 1991 to 14.8 million in 2001 and 18.7 million in 2011. (Greenfield, 2012).

<sup>182</sup> Brazil with 49 million bags and Vietnam with 27.5 million bags produced 52% of the 146.8 million bags worldwide in 2014 (ICO, 2014).

<sup>183</sup> *Coffea robusta* is more productive than the *Coffea Arabica* because the coffee tree produces more beans; it is immune to the coffee leaf rust (a major pest for coffee crops) and it thrives in low altitude zones (so it is easier to mechanize because at that altitude plains are much more available than the ones that could be found over the 1.500 m.a.s.l demanded by the arabica specie)

<sup>184</sup> “*(Los torrefactores lograron) optimizar sus costos al cambiar las proporciones de los orígenes en la mezcla sin variar en lo posible la consistencia del producto de manera perceptible al consumidor final en el corto plazo... No es entonces sorprendente que muchas de las marcas de café comercializadas en el mundo describan sus productos como mezclas de diferentes orígenes, evitando así comprometerse con un origen único frente a sus consumidores*” (Lozano et al., 2011, pp. 25-26).

<sup>185</sup> “*Debido a la alta elasticidad de sustitución cruzada entre las distintas calidades de café, la variedad robusta ha ganado terreno en la composición de las mezclas en el mercado mundial. Esto se hace evidente en regiones como*

Arabica prices<sup>186</sup> vanishing profitability of traditional arabica coffee farming due to the more competitive Robusta production in Brazil and Vietnam which has a better performance in the narrow profit margins<sup>187</sup>.

Colombian was an exception, and the FNC was strengthened. Under a new Constitution that provided support for delegating administrative authority to associations<sup>188</sup>, and a new agricultural law that regulates this delegation into rural associations like the FNC<sup>189</sup>, a new contract between the Government and the FNC was agreed in 1997. It was funded by *la Contribución cafetera*<sup>190</sup>, created by the *Ley 9 de enero 17 de 1991*, to sustain the enforcement of the FNC's authority to regulate both coffee qualities<sup>191</sup> and the exporting activity<sup>192</sup>. During the first half of the decade, they intended to maintain their public services provision while playing in the international arena to revive the regulated market<sup>193</sup>.

The FNC, as representative of the Colombian government, tried to push up international prices by founding the Association of Coffee Producing Countries the 24<sup>th</sup> September of 1993 in Brazil, in which 28 coffee producers' countries accounting for 85% of the world coffee harvest decided to behave as a cartel fixing production quotas per country per year in order to produce the monetary services demanded by producers. For its implementation, the FNC purchased and stored the difference between the national production and the quota (the Colombian coffee harvest 94/95 was 13 million coffee bags whereas the quota was 9.3 million. In addition to the

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*América del Norte y Europa Occidental: por ejemplo, en Alemania el uso de robusta en las mezclas creció entre 35% y 40% entre los años 2006 y 2011"* (Esguerra & McAllister, 2014, pp. 21-22).

<sup>186</sup> International prices plunged after the ICA breakdown from USD 1.4 per pound in May 1989 to a record low of USD 0.37 in August 1992

<sup>187</sup> Regions characterized by traditional arabica coffee crops like Latin America (without Brazil) and Africa lost participation: from 60% of the world coffee harvest in 1995, they produced only 30% in 2014 (ICO, 2014).

<sup>188</sup> The *Constitución Política de Colombia 1991* guarantees freedom of association (art. 38 y 39), allows delegation of administrative function in private institutions (art. 210), obliges the creation of parafiscal contribution through Law (art 12) and regulates privates who are in charge of public functions (art. 123).

<sup>189</sup> Rural association were allowed by the General Law of Agricultural Development (Ley 101 del 23 de diciembre de 1993). They were authorized to administer parafiscal contributions under a contract between the rural association and the Government (art. 30) in order to fulfill six different objectives (research and technical assistance; sanitary control; commercialization; promotion; market intervention; social and economic programs (art 31)).

<sup>190</sup> "Artículo 19. **Contribución cafetera.** Establécese una contribución cafetera a cargo de los productores de café, destinado al Fondo Nacional del Café, con el propósito prioritario de mantener el ingreso cafetero de acuerdo con los objetivos previstos que dieron origen al citado Fondo" (E. C. d. C. CC, 1991, p. 5).

<sup>191</sup> "Art. 23 El Comité Nacional de Cafeteros dictará las medidas conducentes a garantizar la calidad de café de exportación... La Federación vigilará el cumplimiento de estas medidas"(E. C. d. C. CC, 1991, p. 8)

<sup>192</sup> Art. 25 Ley 9/91 gave a veto power to the FNC for any export initiative, by requiring its previous concept in the process to obtain the authorization to export. Additionally, they regulated the access to coffee exporters' data through the *Resolución 1 de 2009 del CNC* in which exporters have to provide (among other dispositions) data about quantities of coffee exported and about their clients.

<sup>193</sup> After the breakdown of the quota agreement in 1989, FNC efforts were oriented essentially to reach a new quota agreement. During the nineties, even though it was quite clear there was not going to be a step back towards quota agreement, FNC hope was not completely vanished and Colombian authorities decided to keep going in the same direction while trying to stabilize internal prices using FoNC reserves until money was consumed.

previous retention the FNC had six million coffee bags at the cost of USD 300 million in 1995<sup>194</sup>). Even though from the very beginning, few believed it could work because not all countries were fulfilling their quotas and outsiders like Vietnam and Indonesia started to grasp a greater market share<sup>195</sup>, the international coffee price overtook the USD 1 per pound in May 1994 and it remained stable over this threshold for the rest of the decade. Some believed that thanks to maintaining the coffee institutions (the FNC, the FoNC, etc.) the crisis was not heavier<sup>196</sup>, but it consumed almost the entire savings of the previous generations of coffee farmers. Four-fifths parts of the accumulated assets in the previous five decades<sup>197</sup> were sold<sup>198</sup> to maintain the internal price when the international price started the progressive low trend until there was no financial muscle to support the internal price and the crisis severely hit farmers<sup>199</sup>.

Indeed, the international price started a progressive low trend at the beginning of 1998 when it descended from an acceptable USD 1.5 per pound to a historical minimum of USD 0.37 per pound in October 2001. A global crisis burst, producing worldwide attention<sup>200</sup>. As a result, it brought

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<sup>194</sup> “Los cálculos indican que para diciembre habrá seis millones de sacos de existencias y su bodegaje valdrá 300 millones de dólares”. (ElTiempo, 1995)

<sup>195</sup> “El próximo año el único país que va a disminuir la producción es Colombia: de 13 a 12 millones de sacos. Brasil volverá a subir a 26 millones; Centroamérica no ha bajado producción y surgen nuevos cultivadores fuertes como Vietnam que cosechará nueve millones de sacos e Indonesia 4,5 millones”. (ElTiempo, 1995)

<sup>196</sup> “El gerente (Jorge Cardenas, the CEO of the FNC from 1983 to 2002) defendió la labor de la Federación (...), a pesar de la crisis de la industria. El café sufrió una pérdida muy considerable de ingresos, pero la caficultura colombiana logró superar la crisis. Ese solo balance sería suficiente para justificar la vigencia de las instituciones cafeteras, dijo”. Redacción el tiempo, “Recursos De Cafeteros, Solo Para Cafeteros” El Tiempo. 13th of November 1997.

<sup>197</sup> “Respecto al Fondo Nacional del Café, la crisis de los últimos años se refleja en una reducción del patrimonio del Fondo, que pasó de representar US\$1.600 millones en 1996, a US\$248 millones en 2002”(F. N. d. C. FNC, 2002, p. 5)

<sup>198</sup> They sold their participation in ACES (an airline); la Flota Mercante Grancolombiana (a shipping company); el Banco Cafetero (a bank), among others in this period.

<sup>199</sup> In fact, according to Bernal Vargas (2016, p. 17) during the nineties, the FNC focused all its efforts in maintaining internal prices for supporting farmers. Additionally, they implemented some institutional adjustments to reduce pressure on the FoNC and conducted studies to adapt themselves to the free market environment.

<sup>200</sup> For stakeholders at consumption the coffee crisis was the straw that broke the camel's back. It was depicted by the title of an Oxfam report: “Mugged: Poverty in your coffee cup” (Gresser & Tickell, 2002), showing that not only quality and prices were important for them. Indeed, “Humans, unlike other animals, “eat with the mind as much as the mouth” and are “immersed in the symbolic nuances of food” (Alan Beardsworth and Teresa Keil quoted by Biltekoff (2010, p. 175)). That is why the fear for the unknown health consequences and scars of the production process in the territory weighs in the individual's mind when consuming the product: “they are attracted to try a new product but at the same time are afraid of probable negative consequences due to its consumption (...) They point to the tension that is generated by the fact that food can provide pleasure and gratification, but can also bring displeasure and discomfort”(Biltekoff, 2010, p. 175). From the seventies onwards, different stakeholders in consumption tried to draw the attention about negative perceived effects of coffee production: the risk on peoples' health because of agrochemicals widespread use by the organic movement since the seventies (like the Federation of Organic Agriculture Movement (IFOAM) in 1972); the depletion on natural resources by environmental organizations (Like Rainforest Alliance in 1987); the threat to social cohesion by humanitarian organization (like Max Havelaar in 1988), and so on. It was the accumulation of these negative consequences of coffee production, triggered by the incertitude over food production that caused the consumers anxiety (Acampora & Fonte, 2009, pp. 13-14) that eventually changed the position of authorities in consumers countries

together producers and consumers countries<sup>201</sup> in the International Coffee Council to approve the resolution 393, a new International Coffee Agreement in 2001 (ICO, 2001). It conceptualized the problem from a market perspective, where information failures produced an undesirable surplus of coffee that put ecosystems at risk while farmers were trapped in poverty. Signatory actors agreed on both developing a tridimensional (economic, social, environmental) sustainable coffee economy<sup>202</sup> and, promoting private-public governance mechanisms<sup>203</sup> to motivate farmers improving their quality and promoting their improved coffee in order to stimulate consumers' demand and improve prices<sup>204</sup>.

In Colombia both coffee prices reduction and uncompetitive production costs<sup>205</sup> made collapse the *fincas de economía empresarial* (entrepreneurial farms with more than 10 hectares) while scattered *fincas de economía campesina* (family farms with less than 10 hectares but more than 1.5 hectares)<sup>206</sup> that relied on unpaid family workforce and a low-cost lifestyle<sup>207</sup> but prices in a persistent downtrend dramatically reduced the wellbeing in the coffee household (Dussán López, 2012). The once prosperous coffee lands were presenting an impoverished face one decade after the liberalization when small coffee farmers had similar wellbeing as poor rural inhabitants

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<sup>201</sup> An example could be seen by comparing the message from the Federal Council (Swiss Government) to the Federal Assembly (Swiss Parliament) a propos of the International Coffee Agreement in 1995 to liberalize the coffee market, and in 2009 to enhance the sustainable management of the coffee production.

- 1- «*Les dispositions sur les contingents des précédents accords appliquées jusqu'en juillet 1989 ont entraîné d'importantes distorsions de la concurrence sur le marché du café* » (SECO, 1995, p. 267);
- 2- «*En général, le nouvel accord renforce le principe d'un développement durable du secteur du café en mettant explicitement l'accent sur les trois piliers fondamentaux de la durabilité, à savoir les dimensions économiques, sociales et environnementales. L'accord prévoit également la possibilité de renforcer la coopération avec le secteur privé et les organisations non gouvernementales appropriées. Ces développements répondent aux demandes clés de la délégation suisse*» (SECO, 2009, p. 210).

<sup>202</sup> "Members shall give due consideration to the sustainable management of coffee resources and processing, bearing in mind the principles and objectives on sustainable development contained in Agenda 21 agreed at the United Nations Conference on Environment and Development, held in Rio de Janeiro in 1992." Article 39 of the ICA 2001.

<sup>203</sup> Article 21 of the ICA 2001 created the World Coffee Conference "which shall be composed of exporting and importing Members, private sector representatives, and other interested participants". Article 22 created the Private Sector Consultative Board "which may make recommendations on any consultations made by the Council". Article 34 created the Promotion Committee which "shall promote coffee consumption by appropriate activities, including information campaigns, research and studies related to coffee consumption".

<sup>204</sup> Objectives 7 and 9 of the ICA 2001.

<sup>205</sup> In Colombia, the minimum quality rules obligated the cultivation of Arabica coffee so it has to be cultivated in the mountains in which mechanization has not being yet developed. Additionally its localization in the Intertropical Convergence Zone makes coffee cherries to ripe all year round, so several pickings are needed increasing labor cost (70% of production costs (F. N. d. C. FNC, 2006)) which were affected by urban labor markets due to economic development in the cities (Botello Moncada, 2010) and labor shortages due to migration (Leibovich & Botello, 2008).

<sup>206</sup> Lozano Karanauskas (2007, p. 103) provided evidence of this structural change comparing the Coffee Census since 1970, but it explains this change using an unconvincing econometrical analysis that tries to explain the change because small farmers are more productive than the bigger ones.

<sup>207</sup> "Cerca del 70% de los caficultores en Colombia tienen fincas de 1.5 Has en café o menos, los cuales, según nuestro concepto, serán los últimos en dejar la producción en la zona andina, concepto basado en las características de esta producción que se sustenta en la aportación de su propia mano de obra, en estas explotaciones los egresos en efectivo son muy pocos." (Herrón Ortíz, 2013).

(UNDP, 2004), provoking a massive national and international emigration from the coffee regions<sup>208</sup>.

At the national level, el *Comité Nacional de Cafeteros* funded *La Comisión de Ajuste de la Institucionalidad Cafetera*<sup>209</sup>, which recommended, on the one hand, to use all diplomatic efforts to revive political solutions and to use legal institutions to fight unfair competition and monopolies. And on the other, to protect at all cost the “social coffee network”<sup>210</sup> that was considered a strategic development asset for the country. Not because its support for the national economy as a whole but to guarantee the social cohesion. Therefore, they recommended a strategic change: “*La reconversión del minifundista y del campesino tradicional cafetero en empresario competitivo*” (Ramírez et al., 2002b, p. 19). Indeed, during the quota agreement, public investment in productivity focused on large and medium coffee farms. In the free market period, it was perceived that labor costs would allow only small farms, which benefit from the family workforce and maybe some large farms with the economies of scale needed, to be profitable. Therefore, they proposed that public intervention should focus on helping small coffee growers to be competitive<sup>211</sup> by providing a specific set of public goods<sup>212</sup> following the new tendencies of the markets.

From 2003 the expenses of the FNC started to be higher than the money received by the FoNC and especially from 2009 to 2013 the FoNC hardly covered half of it. Thus, the deficit was covered by the national budget until 2015 in which the FoNC had equilibrated again<sup>213</sup>. Indeed, the Colombian Government agreed on an Action Plan known as the *Acuerdo de Política Cafetera 2002-2007 (APC 2002)* in September 2002. It was backed with COP 700,000 million (USD 320 million) from the National Budget, of which  $\frac{2}{3}$  parts were used to subsidize production paying 10% over the international price (FNC., 2004). Once over, under the new ICA 2007, a new action plan was negotiated with the same National Government and the same administration of the FNC, the new *Acuerdo de Política Cafetera 2008-2011 (APC 2008)* had important changes in terms of financial muscle and prioritization: they doubled financial resources to COP 1.4 billion (USD 820 million) and prioritized the renovation program and technical assistance over price

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<sup>208</sup> Studies from this subject can be read in (Garay, 2005; Leibovich & Botello, 2008; Matijasevic, 2009).

<sup>209</sup> The objective was to “*analizar de manera independiente la difícil situación que atraviesa el sector con el propósito de hacer recomendaciones y propuestas de política que le permitan al cultivador del grano encontrar un camino de esperanza hacia una caficultura económicamente viable, sostenible y mundialmente competitiva*” (Ramírez et al., 2002b, p. 15)

<sup>210</sup> “*El café más que un producto agrícola de exportación es ante todo un tejido social, cultural, institucional y político que ha servido de base para la estabilidad democrática y la integración nacional*” (Ramírez et al., 2002b, p. 16).

<sup>211</sup> Even more, they proposed alternatives for medium size coffee growers to reallocate their resources and to leave their coffee lands to a new “*campesinado empresarial cafetero*” (Ramírez et al., 2002b, p. 19).

<sup>212</sup> It should be restricted to technical assistance, research and marketing. “*La función de proveer bienes públicos... debe materializarse y limitarse a asistencia técnica a los productores, investigación y experimentación científica y mantenimiento y consolidación de la posición del café colombiano en el exterior*” (Ramírez et al., 2002b, p. 22).

<sup>213</sup> *Sala de Prensa de la Presidencia de Colombia, “Gobierno renovó por diez años contrato de administración del Fondo Nacional del Café”, 9 de julio de 2016.*

subsidy <sup>214</sup> . Furthermore, due to the la Niña phenomena <sup>215</sup> that increased cloud cover and precipitation while reducing solar irradiation, Colombian production dropped from 11.5 million coffee bags in 2008 to 7.8 million in 2009. A new Action Plan was signed “*Acuerdo por la prosperidad cafetera 2010-2015 (APC 2010)*” that executed COP 359.000 million (USD 195 million) in the four years when a new National Government took office in August 2010<sup>216</sup>.

The FoNC funded the main instruments mentioned before (purchase guarantee, quality, and technology transfer)<sup>217</sup>. With resources from the national Government, the technology transfer was strengthened and two new instruments were developed: The Specialty Coffee Program and the coffee renovation program<sup>218</sup>.

#### 4.2.1. Specialty Coffee Program

The regulation of coffee prices during the second half of the 20th century led to a standardization of coffee quality that homogenized the sensory profile of the Colombian harvest (a guarantee that became effective when the Colombian coffee that fulfilled the minimum quality requirements were blended to produce the Excelso with its characteristic flavor and aroma) and to some extent the global harvest when national entities in charge of monitoring ICA’s compliance blended their locally produced coffee. In response, a group of roasters and

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<sup>214</sup> It changed from a fixed amount for coffee sold to an insurance to guarantee a minimum price of purchase subsidized by the FoNC.

<sup>215</sup> This phase of the *El Niño-Southern Oscillation* (ENSO) cycle, is featured by a period of below-average sea surface temperature across the east-central Equatorial Pacific (NOAA, 2017).

<sup>216</sup> It is to say that the FNC cunningly used the information collected to interpret, in a completely opposite manner, according to the circumstances, the same information to guarantee access to financing by the national government: in 2008, the results of programs that had been supported in the first administration of the current government were interpreted positively. “*A través de este programa se ha logrado intervenir en los últimos cinco años, 195 mil hectáreas debido a lo cual la edad promedio de los cafetales tecnificados de alta productividad bajó a 4,8 años y la densidad promedio se incrementó a cerca de 6.000 árboles/ha... Debido a los resultados alcanzados por el programa, en noviembre de 2007 se destinaron recursos del Gobierno Nacional por \$40 mil millones para incrementar en 2008 el valor del incentivo por planta a \$240 en fertilizante.*” (FNC, 2008a, p. 26). But in 2014, to justify the intervention of the new Government (Juan Manuel Santos 2010-2014), the same statistic of renewal of coffee plantations was interpreted in a negative way focusing on the entire coffee park and not only that highly productive portion of technology. “*Los precios bajos... sumado a los problemas de inseguridad... trajo consigo el descuido e incluso el abandono de muchos cafetales y lo que era más preocupante, su envejecimiento. En efecto, el parque cafetero se encontraba envejecido, puesto que en 2008 la edad promedio de los cafetales era de 13 años situación que atentaba contra la productividad de las plantaciones*” (FNC., 2014, p. 19).

<sup>217</sup> The annual budget of the FoNC was approximately COP 200.000 million (USD 100 million), and it was used to fund the FNC’s operations (60%) and the technical assistance and research programs (40%) (Lora, Meléndez, & Tommasi, 2014, p. 8)

<sup>218</sup> In the period 2010-2014: COP 124.000 million (USD 67 million) to partially fund the work of 1.500 professionals doing technical assistance to coffee producers and the in research and development in CENICAFE; COP 340.000 million (USD 184 million) were invested in subsidizing loans to coffee renovation which was the first step to participated in the fertilizers subsidy program that invested COP 246.000 (USD 133 million) and; COP 26.000 million (USD 14 million) in sustainable programs (forest protection, sustainable water management, promotion of sustainable coffees) (FNC. (2014)).

consumers who valued the diversity of aromatic profiles gathered around the Specialty Coffee Association of America (SCAA hereafter) in 1982 to produce standards and protocols<sup>219</sup> to encourage diversity and reward through prices the exceptionality of the "specialty coffee"<sup>220</sup>.

In Colombia, the stability produced by the regulated market allowed the FNC to ignore these market trends. However, once the coffee market was liberalized, these trends progressively entered into their radar, inspiring some implementation acts of the FNC: The first one was the commissioned study of Ecotopes by Gómez, Caballero, and Baldión (1991). It was the first national study that recognized the diversity of soils and climates of the Colombian coffee lands to understand their zone-differentiated influenced on the coffee crop. Their main objective was to improve productivity by implementing zone-differentiated agricultural practices. But it left in the air the suspicion, for some officials of the FNC, that the sensory profile was also different depending on the region<sup>221</sup>. It is worth to mention that, according to Fernández, Samper, and Silva (2007), the entire commercial strategy of the FNC had been based since 1960 on the successful positioning of Juan Valdez and the *Café de Colombia* as one single profile. Some actors within the FNC could have considered that talking too much of different regional profiles would falsify the flavor and aroma promise, hence it would break from within the reputation so expensively (in time and money) shaped.

However, this plausible suspicion, added to the fact that the new Colombian legal framework gave the competence and the means to the FNC to create the Office of Coffee Quality, could have influenced its director Salim Hanna to start in 1994 the first protocols to evaluate exceptional coffee profiles. Two years later, the *Comité Nacional de Cafeteros*, through Resolution 3 of 1996, created the "*Programa de Registro y Promoción de Cafés Especiales*" centralized in the Coffee Quality Office and controlled by the commercial team of the FNC with the probable objective of taking advantage of the market opportunity without affecting the reputation of *Café de Colombia* (Moreno Gonzales, 2015, p. 25).

Through this program, the FNC requested samples of the best coffees to all *Comités Departamentales* and Cooperatives in their area of influence. These samples were analyzed during several harvests by the Quality Office to evaluate their sensory consistency. Alongside, socio-economic studies were carried out to evaluate their supply feasibility. Selected samples

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<sup>219</sup> The SCAA has five categories of coffee standards (green coffee standards; cupping standards; roasting standards; water standards, brewing standards and two coffee protocols (green coffee grading protocols and cupping protocols). SCAA, Official webpage.

<sup>220</sup> "So how do we define specialty coffee? Well, in the broadest sense we define it is as coffee that has met all the tests of survival encountered in the long journey from the coffee tree to the coffee cup. More specifically, we measure it against standards and with methods that allow us to identify coffee that has been properly cared for... it is possible to employ the standards developed by SCAA to make a meaningful judgment on the preparation of the coffee through aspect grading and to employ a standard cupping protocol to assess the quality of the cup." (Rhinehart, 2009)

<sup>221</sup> Interview with Jairo Rebolledo. Former executive director of the *Comité Departamental de Cafeteros de Nariño*.

were offered by the FNC commercial division (spread all over the main coffee markets) to their clients or potential clients either bilaterally or at fairs and specialized events<sup>222</sup>.

During the nineties this program was modestly developed because the FNC's priority was to face the coffee crisis, until the results of the *Comisión de Ajuste a la Caficultura Colombiana* were presented<sup>223</sup> *"El Café: capital social estratégico"* (Ramírez et al., 2002a). This expert commission recommended changing the focus from the commercial perspective towards the development of local capabilities to improve quality through the cooperatives and coffee farmers associations<sup>224</sup>.

As a result, the *Comité Nacional Cafetero*, through Resolution 04 of 2002, reformulated the "Specialty Coffee Registration and Promotion Program" to provide a wider portfolio of coffee products divided into three main categories: *Cafés de Origen*<sup>225</sup> because of particularities in their aromatic profile due to the ecotope in which they were grown; *Cafés sostenibles*<sup>226</sup> because particularities in their cultivation that reduce negative impacts in the growers' communities and their environment; and *Cafés de Preparación*<sup>227</sup> the mainstream business model in which coffee is bought, no matter its aromatic profile or negative/positive effects around, because of the physical characteristics like the size of the bean and the number of beans with defects.

Given the depletion of the FoNC, the money needed to implement the recommendations of the commission selected was obtained through the APC 2002. A small portion of US \$ 3.6 million went to finance the "Strategic Specialty Coffee Plan" that began in 2003 (DNP, 2004, p. 17), but then it was strengthened through the APC 2008 through which growers could enjoy a 40% subsidy on the capital<sup>228</sup> in infrastructures needed to be certified in sustainable coffee schemes (F. N. d. C. FNC, 2009).

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<sup>222</sup> Interview with Pedro Felipe Gómez, coordinator of the specialty coffee program at the Comité Departamental de Cafeteros de Caldas.

<sup>223</sup> This was a mission of experts hired by the Colombian Government to give recommendations for coffee policy

<sup>224</sup> *"La Comisión considera urgente complementar el programa de apoyo a la exportación de cafés especiales mediante el ofrecimiento de asistencia técnica para el desarrollo de calidades diferenciadas real y consistentemente, posicionamiento de marcas, financiación y comercialización externa, centrado en torno a la gestión de las cooperativas y asociaciones de productores"* (Ramírez et al., 2002b, p. 9)

<sup>225</sup> *Estos se clasifican a su vez en tres grupos: "Cafés Regionales" dada la asociación de su perfil sensorial con su origen; "Cafés Exóticos" cuya reputación adicional a la proveniencia se enriquece por las condiciones excepcionales del cultivo; o "Café de Finca" cuándo estas particularidades provienen de una sola finca* (Arcila et al., 2007, p. 241).

<sup>226</sup> *Estos se clasifican por los Estándares Voluntarios de Sostenibilidad, entre ellos los "Cafés Orgánicos" por estar certificados en alguna norma de agricultura orgánica; los "Cafés amigables con las aves o de sombra" por cultivarse bajo sombra; los "Cafés de Precio Justo o Social" por ser producido por pequeños productores y mantener un precio mínimo garantizado* (Arcila et al., 2007, p. 241).

<sup>227</sup> *En este grupo se clasifican el café de acuerdo al producto de trilla demandado por el torrefactor: los "Cafés Supremos" es una selección de granos de mayor tamaño (que el café Excelso de exportación); los "Cafés Caracol" es una selección de los granos conocidos como caracol (la cereza del café desarrolla en vez de dos, una sola semilla redonda enroscada como un caracol); los "Cafés Selectos" es una selección de granos de acuerdo a la solicitud del cliente.* (Arcila et al., 2007, p. 241).

<sup>228</sup> *"El Gobierno Nacional creó el Incentivo a la Capitalización Rural – ICR a través del cual se otorga un incentivo consistente en un abono hasta por el 40% del monto del crédito solicitado para realizar inversiones bien sea en mejoramiento o construcción de infraestructura productiva y/o en el establecimiento de nuevos cultivos"* (F. N. d. C.

Through this Plan, the FNC joined the global consensus adopted in the AIC 2001 and reinforced by the AIC 2007, on intervention in the coffee farm through public-private projects to implement the VSS market.

#### 4.2.2. Coffee renovation Program

From the beginning, one of the objectives of the FNC was to participate in the financial business so it could guarantee access to capital for coffee farmers: Since the IV Coffee Congress in 1930, the creation of the Agrarian Credit Fund was proposed to expand access to working capital and reduce dependence on commercial houses. In 1953, given the weight of coffee production, the FNC, using FoNC's capital, founded the *Banco Cafetero* to expand the portfolio of financial services offered to coffee farmers. In 1959, they settled the *Fondo Rotatorio de Crédito* to make this access to capital much more dynamic. In the seventies, thanks to the coffee boom, the whole system was strengthened, and in particular, given the advances made by CENICAFÉ, in 1976, the *Fondo de Crédito Cafetero* was created specifically for renovation and new plantings of coffee plantations (Castro Forero, 1988, p. 56).

Hence, through access to credit at competitive rates, and a business featured by stability in prices, the FNC encouraged the uses proposed by CENICAFÉ without the need to resort to direct subsidies. Indeed, during the times of the quota agreements, discussions on how to use the capital (FoNC surpluses) were more oriented towards soft and strategic incorporation into the economy without affecting negatively macroeconomic variables than the use of the money to influence the behavior of coffee growers through subsidies <sup>229</sup>. However, a decade after liberalization, the fall in prices (and the expectation that they would continue to fall) reduced the attractiveness of coffee production and among several consequences, decreased the engagement of farmers with their coffee crops (and with their debts) which resulted in aged-unfertilized coffee trees that shrunk productivity and indebted-poorer coffee farmers (wealthy ones migrated to other economic activities). In fact, to maximize de income, the farmer should renovate annually between 14% and 20% of its coffee crop (depending on the coffee productive system) according to studies made in CENICAFÉ<sup>230</sup>.

In this context, the FNC implemented the "*Programa de Incentivos a la Renovación*" through which they sought to renovate a third of the entire Colombian coffee crop during the period 1998-2002, so they could reduce the average age from 7,4 years in 1997 to 5 years at the end of the period (DNP, 2004, p. 6). This program provided a subsidy of COP 90 (USD 0.07) per tree

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FNC, 2011, p. 54). "*Entre 2001 y 2010, 224 mil créditos beneficiaron a los pequeños productores*" (F. N. d. C. FNC, 2011, p. 54).

<sup>229</sup> According to Pizano (1987, p. 8), the FNC used the FoNC surpluses in three strategies: The first was to capitalize the FoNC in order to strengthen its stabilizing capacity in the future; the second was to increase the FoNC's assets by buying participation in strategic entities or acquiring debt with the producers; the third was to give loans to the national government and to invests in public services like roads and educations in zones of coffee influence.

<sup>230</sup> "*la edad óptima de renovación del cafetal sería a los 5 años para un lote con 10.000 plantas/ha, a los 6 años para 5.000 plantas/ha y a los 7 años para 2.500 plantas/ha*" (Arcila et al., 2007, p. 149)

renovated either by planting <sup>231</sup> or by pruning <sup>232</sup> that ended at the beginning of the new millennium due to the financial situation of the FoNC.

In 2002 financial support was obtained from the government through the APC - 2002 (that was reinforced with the new APC APC 2008) to fund the same previous subsidies under the new name of "*Programa de Competitividad*" <sup>233</sup>. Progressively, this program was adapted to incentivize practices alongside the renovation: first, a larger subsidy was granted to the renovation by planting to encourage higher densities; then, it was granted only when planting the coffee-leaf-rust-resistant variety *Coffea arabica Castillo*<sup>234</sup>) (due to the Niña phenomena<sup>235</sup> that produced an outbreak of this fungus). It encouraged during the period 2007-2011 an approximate annual renovation of 5% of the Colombian coffee crop<sup>236</sup>.

In parallel, the illiquidity of the FoNC and the financial difficulties of the coffee growers motivated the intervention of the National Government in the FNC's banking business. On the one hand, by means of the *Decreto No.1257 del 22 de junio de 2001 del Ministerio de Agricultura y Desarrollo Rural*, it was created the "*Programa Nacional de Rehabilitación Cafetera*" through which more than 75 thousand coffee growers' loans were refinanced (DNP, 2004, p. 7). On the other, the Government demanded to make effective the recommendations of the expert commission to restructure the FoNC, which ended with the sale of the Banco Cafetero in 2006.

As the FNC went out of the banking business, they needed finding new ways to give farmers access to credits<sup>237</sup>. Thus, the Government and the FNC developed a shared scheme for providing funding known as "*Reconversión Productiva y Social de la Caficultura*" in 2007: the aim was to allow this access to small coffee growers<sup>238</sup> for renovation by replacing (since 2011 with resistant varieties) their aged crops. The *Ministerio de Agricultura* through Finagro<sup>239</sup> subsidized 40% of

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<sup>231</sup> Uprooting the aged coffee tree and planting a new one.

<sup>232</sup> Pruning the aged tree in its main trunk above about 15 centimeters from the ground so that a new stem grows.

<sup>233</sup> "*Para la defensa de la rentabilidad y el bienestar de los caficultores, a finales de 2007, el gremio consiguió que el Ministerio de Agricultura aceptara que \$40 mil millones del AGC se destinaran a fortalecer el Programa de competitividad para la renovación de cafetales tecnificados*" (F. N. d. C. FNC, 2009, p. 4).

<sup>234</sup> In 1998, they paid COP 90 (USD 0.7) for each plant renovated, it did not matter neither variety nor renovation method. In 2011, they paid if farmers planted a pest-resistant variety, dependent on the method, COP 70 (USD 0.4) if they pruned the plant and COP 160 (USD 0.9) if they planted a new coffee tree.

<sup>235</sup> This phase of the *El Niño-Southern Oscillation* (ENSO) cycle, is featured by a period of below-average sea surface temperature across the east-central Equatorial Pacific (NOAA, 2017).

<sup>236</sup> "*En promedio, anualmente (para el lustro 2007-2011) el programa ha ejecutado cerca de \$28.646 millones de pesos, beneficiado a 68.656 caficultores y renovado 46.504 hectáreas de café*" (Santiago Silva Restrepo, 2013, p. 53).

<sup>237</sup> "*Por lo tanto, se hace imperativa la búsqueda de soluciones alternativas al problema de acceso a crédito para los caficultores*" (DNP, 2004, p. 7).

<sup>238</sup> Entre las condiciones para ser beneficiario se incluía no tener un patrimonio entre el caficultor y su cónyuge superior a 145 salarios mínimos mensuales legales vigentes (equivalente a unos US\$ 35 mil de la época); que el 75% de sus activos estuviesen invertidos en el sector agropecuario y que  $\frac{2}{3}$  de sus ingresos proviniesen de actividades agrícolas; y que la renovación se hiciese como mínimo en 0.2 ha y máximo en 5 ha de café (Santiago Silva Restrepo, 2013, p. 54).

<sup>239</sup> *Fondo de Financiamiento del Sector Agropecuario organizado como establecimiento de crédito adscrito al Ministerio de Agricultura.*

the capital, and the FNC with resources from the FoNC covered the current interests during the term of the loan<sup>240</sup>.

This program was funded by the APC 2008 through which it contemplated annual investments of COP 114.000 million (USD 70 million) (FNC, 2008b, p. 27). And then, it was reinforced with a new APC 2010 that executed COP 359.000 million (USD 195 million) in the four years. It leveraged 216 thousand loans to renovate 184 thousand hectares (FNC., 2014), equivalent to another 5% of the coffee park renovated annually.

Both the direct subsidy and the credit subsidy for renovation, in a context of climatic events that showed the importance of stabilizing the income, played an important role to encourage the adoption of the practice of renovation of approximately one-tenth of the crop annually to renovate almost half of the Colombian coffee crop in the period 2010-2014<sup>241</sup>.

### 4.3. Intermediary synthesis

Coffee culture was salient in the history of Colombia for roughly one century (1890-1990) shaping the economic, social and political life through a coffee public policy that encouraged the commercial coffee farming through three main instruments: purchase guarantee, quality control and reputation and, technology transfer in order to support the economic development of the country.

The breakdown of the ICA produced a free global coffee market in which Colombian commercial coffee farms were decimated and peasant coffee farms were impoverished by the much more competitive coffee culture in Brazil and Vietnam. Then, the logic was inverted in which the country encouraged the peasant coffee farming through two main instruments: the specialty coffee program and the coffee renovation program in order to maintain the social, economic and political tissue previously sew.

These five instruments of the coffee public policy were the most important inputs used by actors in both Riosucio and Buesaco to profile their demanded services.

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<sup>240</sup> Consistent with the expected income stream of the plant the credit had a term of seven years with the first two of grace. Indeed, the coffee tree takes two years to produce its first harvest and according to the productive system, between 3 to 5 more years to maximize productivity per unit of land. Additionally, the 100% of the credit was guaranteed with resources from both the *Fondo Agropecuario de Garantías* and the *Fondo del Garantías del Café* (Santiago Silva Restrepo, 2013, p. 54).

<sup>241</sup> “Como resultado, entre 2010 y 2014 se renovaron en promedio anual más de 90 mil hectáreas (de un poco menos de 1 millón de ha), lo que permitió alcanzar un total de 466 mil hectáreas renovadas en el cuatrienio” (FNC., 2014, p. 24)

## Second Part: Riosucio (Caldas)

This second part contains two chapters: chapter five produces the inputs to tests our first hypothesis, and chapter six produces the inputs to tests our second hypothesis.

### Chapter 5. LRAs that enhance sustainable management of Coffee

We divide this chapter into three subchapters to produce the inputs to test our first hypothesis in the conclusive chapter.

The first one tries to disentangle the collective action problem in a five-step process through an analytical tool from the IRR, the Local Regulatory Arrangement (LRA): firstly, it identifies a closed list of services demanded from the Resource by spotting the LRAs presented in the territory during the 2015-2016 coffee harvest. Secondly, it describes how these services are expected to be produced by analyzing how each LRA regulates a particular use of resource constituents. Thirdly, it summarizes observed uses of resource constituents by each LRA. Fourth it puts on evidence the services provided by the Resource because of the observed uses of constituents by each LRA. Fifth it compares and ranks the LRAs by its provision of services.

The second subchapter analyses each LRA from the three conditions. So, it is divided into three subsections (namely extent, coherence, and closure), which in time, are subdivided by LRAs.

We conclude with the input to test our first hypothesis, namely the results of our synchronic analysis, in which we assess the level of service provision depending on the LRA configuration.

#### 5.1. The collective action problem: services demanded from Coffee

Guaranteeing the capacity of the resource to produce the services demanded by the different actors is the solution to the problem of collective action. We assume the challenge of illustrating it using the concept of Local Regulatory Arrangements.

This subchapter begins by presenting our exhaustive categorization of Riosucio coffee and coffee growers in different LRA, which will allow us to identify the totality of the services that were demanded by the actors of the coffee Resource in Riosucio in 2015. The provision of these services is the collective action problem that is to be solved.

We divide this subchapter in the five-step process already describe with the aim to convincingly assess the observable provision of services by each LRA, so in the end, we can compare and rank them in terms of our dependent variable: the level of services provision.

##### 5.1.1. Services demanded from Coffee in Riosucio during the harvest 2015

For the date of the field work (June / July 2016), we collected information on the previous 2015 harvest. As the Cooperative monopolized the purchases, we used their purchases transactions during 2015 to identify that they were seven different profiling institutions activated in that period.

It means that firstly, the farmer had been selected and then, he had implemented the regulated uses by the profiling institution so it was able to sell its coffee through one of these seven different pathways.

As we said before, this purchase transaction acts like a probe that the expected uses were implemented and, so it determines the following uses that are going to be implemented to produce the expected combination of services. On the other hand, the uses that were not implemented before this transaction, makes impossible for the Resource afterward, to produce those uses' dependent services. So, in the end, both the farmer and the coffee bean<sup>242</sup> can be placed in one LRA only if they both fulfill the LRA requirements<sup>243</sup>.

Our criterion for exhaustively classifying the 3,056 coffee farmers (for which we have data on their coffee sales) in different LRAs was that at least 50 percent of their production had been sold through one of the seven profiling institutions present in the municipality (which we will detail later): 3,011 coffee farmers were classified under this criterion. The remaining 45 records were classified under the criterion of the highest proportion sold through a profiling institution. Thus, Table 3 presents our exhaustive categorization of the 3.78 million kilos of coffee sold by 3,056 coffee growers to the Cooperative in Riosucio in 2015 in seven different LRAs.

Table 3 LRAs in Riosucio carried out with quantitative information from the Coop / SICA database, reports from the Cooperative and Asprocafé and interviews with actors such as the employees that buy coffee. Source: the author.

LRA by profiling institution	Coffee farmers	Purchases		Quality			Premium	
		Kilos	Percentage	Broca	Pasilla	Factor	Premium when buying (COP)	Premium after buying (COP)
LRA Organic	147	124,405	3%	broca+pasilla 6.33%		95	560/k	150/k SS + 1300/k SO + 517/k SOP
LRA Nespresso	698	1,364,461	36%	2.5%	2%	91	560/k	75/k SS + 40/k RF

<sup>242</sup> It is necessary to clarify that the quality of coffee in the same plot varies during the year, for example the beans homogeneity and ripeness varies significantly during the harvest: It is low at the beginning/end while it is best at the middle, but of course it depends on climate events that can affect the last development of the bean.

<sup>243</sup> In the particular case of Riosucio, a particular system is used that mixes elements of both the "factor" and the "almendra sana" purchase system developed by the FNC: A sample of coffee is threshed, then moisture (only when too much humidity is suspected, a test would be performed to evaluate a range between 10% and 12.5% moisture), color and smell are evaluated by the *fiel de báscula* using its own skills. Afterwards, the total almond is weighed and divided into three groups: firstly, the defective grains (both the first and the second group) are separated with the help of a mesh (size 13) to form a pasilla group; secondly the brocaded grains is separated manually, thirdly the remaining healthy/well developed beans. All groups are weighted separately and the "quality" depends on both the individual and combined percentage of the first two groups on the sample. The lower this percentage, the higher the quality.

LRA La Vereda	783	677,822	18%	2.5%	2%	91	360/k	NA
LRA Fairtrade	171	300,017	8%	broca+pasilla 6.33%		94	120/k	130/k SS
LRA Regional/Starbucks	239	282,258	7%	2.5%	2%	92	120/k	NA
LRA Standard (base)	363	330,725	9%	broca+pasilla 6.33%		94	0	NA
LRA Standard (discount)	655	708,987	19%	N.A.	N.A.	N.A.	(-) discount	NA

It should be stressed that this transaction has two conditions. First that the coffee grower can be part of the LRA and second that the coffee can be. The first condition is verified at the time of purchase with the identification of the coffee grower and the farm, the second is verified by the quality of the coffee.

- Coffee and farmer inclusion in a particular LRA

The evolution that will be narrated in the next chapter had produced a complex system of farmers' inclusion-exclusion to different LRAs, so it cannot be properly said that one farmer belongs to one LRA, but that a farmer can choose between those LRAs to which he has the right to belong. In this order of ideas, we can use a model of two overlapping layers featured by rivalry, at the same layer, a coffee farmer that belongs to one LRA cannot belong to another one; complementarity, a coffee farmer that belong to an upper layer, also belongs to the lower one, but not on the contrary.

- The base layer covers the entire area of the municipality (the 3.771 coffee farmers<sup>244</sup>). It is composed by the LRA Standard.
- The first layer also covers the whole municipality but it is composed of 1.164 coffee growers<sup>245</sup> who are members of the Cooperative and could sell to the LRA Regional/Starbucks.
- The second layer covers the whole area of the municipality but it is made up of the 832 coffee growers<sup>246</sup> who are partners of Asprocafé and could sell to LRA Fairtrade.
- The third layer divided the coffee area of Riosucio between:
  - Approximately 1500 coffee growers<sup>247</sup> who have registered their farm inside the Resguardo de San Lorenzo and could sell their coffee through the LRA La Vereda.
  - Approximately 700 coffee growers<sup>248</sup> who cultivate coffee over 1.700 m.a.s.l. of the municipality (excluding those of the Resguardo de San Lorenzo) were invited

<sup>244</sup> SICA Database.

<sup>245</sup> *Informe de cafés especiales del Comité Departamental de Cafeteros de Caldas, Versión 4.0, del 16 de octubre de 2015.*

<sup>246</sup> Asprocafé Database.

<sup>247</sup> SICA Database.

<sup>248</sup> In 2015, the cooperative bought coffee as Nespresso coffee for 708 coffee growers.

to join the Nespresso AAA program so they could sell their coffee through the LRA Nespresso.

- 153 coffee growers<sup>249</sup> who are part of Asprocafé's organic group, whose farms are distributed throughout the coffee-growing area of the municipality with certain points of greater concentration, could sell their coffee through the LRA organic.

The inclusion of the coffee farmer to the base layer is derived from the SICA database updated routinely by the technical assistance service provided by the FNC. When saying routinely, we meant that on a daily basis, each time the technical assistant goes to the field and identify a new crop of coffee, he will inquire who the owner is and eventually the coffee farmer will be contacted and would be added to the SICA database. It could be also the way-round in which the new coffee farmer will contact the technical assistant to be included, aiming to benefit from public policies implemented through the FNC.

Inclusion to the first layer depends on the farmers' decision to join the Cooperative because it is an exclusive layer for associates. Any coffee farmer in Riosucio (whatever the area or the coffee production) can pay a fee to be associated and fulfill some statutory duties (like selling a minimum percentage of its coffee to the Cooperative) to maintain this status<sup>250</sup>. The first layer was developed by the Cooperative in 2015 with the aim of selling at better prices the LRA Regional coffee, which could not be sold through the others LRAs of the second and third layers.

The second layer includes the active members of the Association of Small Producers of Coffee Ingruma - Asprocafé Ingruma<sup>251</sup>, whose only entry barrier is that the coffee grower does not own more than 10 hectares cultivated in coffee<sup>252</sup> (In fact, of the 3056 in Riosucio only 6 farms would be excluded, the seventh largest (23ha) is owned by Asprocafé),

In the third layer, there are the last three LRAs that are mutually exclusive, but complementary to the LRAs of lower layers as long as the coffee grower has multiple memberships: they could sell as Fair Trade if they are partners of Asprocafé, and as Regional / Starbucks if they are partners of the Cooperative, in all cases they could sell through the LRAs in the base layer: Members of Asprocafé who refrained from using pesticides and chemical fertilizers are incorporated in the database of the branches of purchase of the Cooperative so that their coffee is bought through the LRA Organic<sup>253</sup>; indigenes that cultivate their coffee within the Resguardo de San Lorenzo are automatically incorporated into the LRA la Vereda; and also in this layer, the LRA Nespresso is built on the federated coffee farmers (it excludes coffee farmers with less than 0.5 ha cultivated in coffee that cannot be federated the FNC) whose farms are located in the altitudinal fringe above 1500 m.a.s.l approximately (excluding the Resguardo of San Lorenzo). This altitudinal

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<sup>249</sup> Asprocafé Database.

<sup>250</sup> *Informe de administración y gestión, Cooperativa de caficultores del Alto Occidente de Caldas, 2015. Pág. 17.*

<sup>251</sup> It was created in 1997 by the Cooperative as a result of an evaluation of the Fairtrade program in Riosucio, precisely to improve the administration of the premium generated by this program.

<sup>252</sup> *Artículo 11, Estatutos de la Asociación de pequeños productores de café Ingrumá – “Asprocafé Ingrumá”. Tercera reforma en la XVI Asamblea General de Delegados del 23 de marzo de 2016.*

<sup>253</sup> Entrevista con la coordinadora del Sistema Interno de Control de Asprocafé Ingruma.

criterion is due to the improbable development of the aromatic profile sought by this LRA on farms at lower altitudes

However, it is not enough for the coffee grower to be included in one or several LRAs, it is necessary that each time he approaches the point of purchase to sell his product, regardless of quantity or seasonality (the farmer can go as many times as he wishes) either to sell a few grams or once after having collected the entire harvest), coffee can be included in the LRA, so the quality of the coffee is the element that defines its inclusion to a specific LRA. As mentioned, the centerpiece of its definition is the *Resolución 5 del 6 de junio de 2002 del Comité Nacional del Cafeteros* that determines the criteria for exporting Colombian coffee, which is materialized in the supply system of the Cooperative.

The maximum tolerance for the different LRAs is presented in Table 3, however, the *fiel de báscula* (the person who buys the coffee from the coffee grower) from the cooperative has a certain margin of maneuver to optimize the provision of highest quality coffee. For this, he compensates the coffee of two producers, one with lower quality with another of higher quality, belonging to the same LRA. Given that the price paid will be the same for all coffee that overtakes the minimum quality (e.g. the same price either if coffee has 0% defects or 2.5% of defects), the *fiel de báscula* has incentives to overcome these barriers individually with the coffee growers as long as the total lot keeps below the maximum tolerance, it is not an obvious balance but the *fiel* refines it with the experience and the coffee reports received by the clients.

This is a clear example of the alignment of interests: The coffee grower feels directly supported by the *fiel de báscula* and indirectly by the management of the Cooperative, increasing their loyalty to this institution and their confidence in the administrative team; customers happily receive more coffee of better quality that improves their margins; for the Cooperative financially it is more profitable to commercialize these types of coffee than standard coffee (whose margins are very low given the competition) and the *fiel de báscula*, who is part of the community, reinforces its links with it.

Table 3 identifies two clusters by quality, one composed by the LRA: Nespresso, La Vereda and Regional whose maximum tolerance is 2.5% of *broca* and 2% of *pasilla*. The other one by the LRAs: Organic, Fairtrade and Standard whose maximum tolerance is 6.33% including both *broca* and *pasilla*. Additionally, a portion of the LRA Standard that does not fulfill the minimum quality is going to be purchased with a discount, that is, a value lower than the standard price proportional to the quality of the coffee. Zero tolerances imply a greater probability that the coffee supplied has its full organoleptic potential according to the soil, climate and cultivation practices, but also a lower probability of finding who supplies it. Thus, more demanding tolerances demonstrate the demand for more unique profiles close to that expression of the territory and, others less demanding, to a profile that is perceived without defects and reflects common characteristics of a much wider territory.

It has to be said, that we do not break apart the LRA Standard in two different LRAs (Standard and Discount as we do in the case of Buesaco) because the coffee bought as discount did not

necessarily stay for the domestic market (as it is the case of Buesaco). Indeed, as the Cooperative buys the 90% of the coffee in Riosucio including a big portion of high-quality coffee, it will be able to blend the high-quality coffee, which was not sold as it, with the low-quality coffee to produce more Excelso bags: from the 53.753 coffee bags sold in 2015, only 142 where not sold as Excelso (so they were sold for the domestic market)<sup>254</sup>.

Additionally, to the inclusion and the quality assessed through the purchase transaction, farmers have to use their constituents accordingly to the profiling institution.

At the base layer, when the farmer fulfills the quality requirement of the *Resolución 5/2002 del CNC*, coffee can be exported as Café de Colombia, according to the profiling institution: *Reglamento de Uso de la Indicación Geográfica Protegida Café de Colombia* (IGP Café de Colombia). So, it could be sold through the LRA Standard as a Colombian Excelso.

In the first layer, farmers are following the profiling institution demanded by the American roaster Starbucks: The C.A.F.E. (Coffee and Farmer Equity) Practices. It does not imply that coffee growers are effectively meeting the criteria of the standard but are in the process of complying with it. Given that it started in 2015, at the end of that year only 9,300 kilos of coffee from 21 coffee farmers that were supplied through the LRA Regional/Starbucks, were sold as coffee C.A.F.E. Practices during 2015.

In the second layer, associates of Asprocafé must comply with the environmental, social, economic and labor requirements of their profiling institution Fairtrade Standard with its local application called *Normas y sanciones que rigen a los asociados de Asprocafé Ingruma* (*Normas Asprocafé* hereafter). Permanence is more of a process than a result. The Fairtrade movement seeks to open the doors to the small coffee grower and accompany him in his improvement process before closing the doors for breaches of requirements. However, the permissiveness of the partners has its limits, as evidenced by the 2015 Asprocafé report, which qualifies the last external audit for the renewal of as very demanding<sup>255</sup>. There is room for maneuver but it is restricted due to the need to maintain the Fair Trade / Fairtrade certification. In 2015, of the 832 Asprocafé coffee farmers, only 171 sold 8% of the harvest through this LRA Fairtrade.

In the third layer, members of Asprocafé who refrained from using pesticides and chemical fertilizers and who additionally fulfill most of the environmental, social, economic and labor requirements of the previous institution would fulfill the profiling institution USDA Organic standard. A group of them could upgrade towards the high-value market activating the profiling institution Q system of the Specialty Coffee Association of America. 147 coffee growers sold 3% of the harvest through this LRA organic in 2015; indigenes who were part of the profiling

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<sup>254</sup> *Informe de administración y gestión, Cooperativa de caficultores del Alto Occidente de Caldas, 2015. Pág. 8*

<sup>255</sup> *“muy exigente (...) aunque el resultado fue regular, con las medidas correctivas y las evidencias objetivas documentales seguimos certificados Fairtrade” Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma. Pág. 14.*

institution *Socios y Amigos del Café Exótico La Vereda* (SACEV hereafter) <sup>256</sup>. The cooperative acquired almost one-fifth of the Riosucio harvest from 783 coffee farmers through the LRA Vereda in 2015. Federated farmers over 1.500 have to fulfill the profiling institution known as the *Nespresso AAA Sustainable Quality™ Coffee Program* (Program AAA hereafter). Which implies selling to the Cooperative a minimum of 375 kilos per year per hectare<sup>257</sup> and the TASQ<sup>258</sup>. That is, the process, rather than the result, is relevant for the permanence of the coffee farmer. In 2015, 36% of the harvest was purchased from 698 coffee farmers through the ARL Nespresso. It is worth noting that more than half of these coffee growers (387) are associates of Asprocafé.

In conclusion, this double belonging of the coffee grower according to its commitment to specific practices and coffee according to the result of its evaluation at the point of purchase, reflect the sensory services and symbolic services demanded by the actors of the coffee produced in Riosucio.

- A closed list of services demanded by actors in Riosucio in 2015

This exhaustive categorization of coffee bought in Riosucio for the harvest 2015/2016, allowed us to identify the institutions concretized by the actors to profile the Resource, namely the *Resolución 5/2002 del CNC*; the IGP Café de Colombia; the CAFE Practices; the Fairtrade Standards including its local application *Normas Asprocafé*; the USDA Organic; the SACEV; the AAA Program and the Q System.

In Annex 3, we analyzed each one of these institutions as were activated in each LRA so we could identify the symbolic, taste related and monetary services. In the end, we produced a closed list of services that were demanded from the Resource in Riosucio during the coffee harvest 2015 that are summarized in table 4.

Table 4 Services demanded by the resource in Riosucio in 2015. Source: the author supported in Annex 3.

Monetary services	Description
Household income	Kilos of coffee produced in one year by price per kilo.
Symbolic services	Description
Energy dose	A ready-like feeling
Typical coffee from Caldas	Positive feelings attached to the coffee coming from the department of Caldas
Reputation of the appellation Café Colombia	Positive feelings attached to the appellation Café de Colombia
Natural coffee	Feeling of confidence when consuming a product free of chemicals potentially harmful to health.

<sup>256</sup> Despite the fact that since 2013 a project for the certification of some farmers in the Rainforest Alliance - RA standard was initiated at the time of the field work, for the *fieles de báscula* it was not a selection criterion.

<sup>257</sup> The average for the 3056 coffee growers of which we have data in Riosucio in 2015 was 1,391 kilos / ha.

<sup>258</sup> “con los procesos de mejoramiento continuo para cumplir con los criterios de calidad, económicos, sociales y ambientales de la TASQ™” *Clúster Expocafé, Sistema de Gestión para el programa de calidad sostenible Nespresso AAA, versión 3.1 septiembre de 2012. Pág. 10.*

Environmentally responsible	A feeling of responsibility for investing in the conservation and protection of natural resources.
Brand Reputation	Positive feelings attached to the private brand
Indigenous coffee	A sense of awe and support for cultural diversity
Fairtrade coffee	Feeling of altruism to be willing to pay more just to improve the quality of life of producers.
Ethically traded	A feeling that coffee is paid as fair markets signaled.
Shared value	A feeling of co-responsibility in the wellbeing of the coffee farmers' community.
<b>Servicios sensorial</b>	<b>Descripción</b>
Clean cup	A coffee flavor free of taints and defects. In Colombia, it implies a mild coffee, with a medium to high acidity and body, and a pronounced and complete aroma
Expresión del terroir	A coffee that represents the aromatic profile developed in a particular region due to its climate and soils.
Winy	Pleasant taste, almost spicy with a retronasal sensation similar to that of the fermented grape.
Citric acid aroma	A flavor produced by sugars in the bean and an intense and pleasant flavor that adds vivacity to the coffee with a retro-olfaction sensation of ripe citrus aromas such as orange or lemon
Exceptional coffee	A rare and highly pleasant aromatic profile.

We propose to understand it as a closed list of 15 symbolic and taste related services in addition to the monetary ones demanded in Riosucio/2015.

5.1.2. Regulated uses

Profiling institutions, namely the the *Resolución 5/2002 del CNC*; the IGP Café de Colombia; the CAFE Practices; the Fairtrade/*Normas Asprocafé*; the USDA Organic; the SACEV; the AAA Program and the Q System, produce a combination of services because they regulate the uses that profiling actors made of the resource constituents, namely *infrastructure, know-how, and know-to-appreciate* in 26 activities detailed in Annex 1.

In Annex 4, we had described how these profiling institutions regulated these uses in order to produce the services demanded in Riosucio in 2015. As profiling institutions are both result and process oriented, in the first case we focused on the uses encouraged by the actors that concretize the institution. As an example, the *Resolución 5/2002 del CNC* is a result oriented, but all the knowledge circuit (from research in CENICAFE to the technical assistance to farmers explained in chapter 4.1.3) encourages uses of resource constituents to achieve that result. In the second case, the profiling institution itself details the expected uses of resource constituents. As an example, Rainforest alliance mandates a certain percentage of the canopy. Results are summarized in Annex 4.4.

The first analysis of these observations is the almost exclusive concentration of rivalries during the planting process. Excluding the activity of nutrition, the remaining activities in the processes of cultivation, post-harvesting, and trading are complementary, hence uses to produce a service

do not exclude provision of another one. Consequently, there are no incentives to promote different uses and on the contrary, different LRA's could converge around a specific use and we expect to observe the uses as described in the white boxes of the expected result column of table 5.

On the other hand, in all the activities of the planting process and one activity (nutrition) in the cultivation process, there is a tradeoff when producing one service at the expense of another one. It can be anticipated that different LRA are (dis)incentivizing different uses of Resource constituents so, we expect that the observed uses are going to be heterogeneous.

Table 5 Rivalries and complementarities analysis. Source: The author using tables in Annex 4.4.

Processes	Uses	Rivalries	Expected result
Planting	Diversification	3 Specialization vs. 5 diversification	Heterogeneous
	Variety	4 pest resistant vs. 2 non-pest resistant	Heterogeneous
	Renovation of Coffee trees	2 younger vs 2 older	Heterogeneous
	Planting density	2 higher density vs 2 lower density	Heterogeneous
	Shade	4 more canopy; 2 regulated canopy; 1 less canopy	Heterogeneous
Cultivation	Soil management	6 integrated plan	Integrated plan for soil management
	Pest and disease management	6 integrated plan	Integrated plan for pest management
	Nutrition	4 chemical vs 2 organic	Heterogeneous
	Hedge rowing	3 hedge rowing	Hedge rowing
	Picking	12 ripe fruits plus timely	Ripe fruit
	Farm management	5 planning	Planning
Post-Harvesting	Hulling	6 immediately vs 1 (if the farmer decides differently)	Immediately
	Fermentation	6 short vs 1 (if the farmer decides a longer one)	Short
	Drying	6 vs 1 ((if the farmer decides differently)	Solar o mechanical while moisture is between 10% - 12%
	Waste management	5 integrated plan	Integrated plan for waste management
	Reselection	0 vs 1 ((if the farmer decides differently)	Reselection is not practiced.
Trading	Purchasing	14 sorted by "bean" quality	Quality sorting by Res 02/05; documentary traceability per lot.
	Threshing and sorting	12 milled in Excelso coffee	Traceability per a lot of Excelso coffee
	Bulking and export	12 performed documentary traceability	Traceability per a lot of Excelso coffee

### 5.1.3. Observed uses

In the previous section, we were interested in regulations to identify how the services demanded from the resource are produced. In this section, we document our observations on how are

profiling actors using resource constituents by each LRA. In other words, we assess the actual behavior over the Resource in Riosucio in 2015 with the regulated behavior needed to produce services, in order to credibly claim service provision.

The observations of the uses for each LRA, which is presented in table 6, were documented based on quantitative and qualitative information collected during the fieldwork in Riosucio in the July-August 2016 period.

The data documented for the process planting was obtained from the Coop / SICA database: As differences among farmers could explain the use of resource constituents, we wanted to compare the most similar farmers so the difference can be convincingly explained by the LRA they belong to. This is the reason we conducted a statistical analysis known as analysis of covariance (ANCOVA)<sup>259</sup>, which allow us to compare the average uses per LRA by controlling for a series of covariances, for example, the number of coffee trees per farm. We will use it as a descriptive statistic a little bit more precise than a regular mean because we are interested in describing how farmers are using their resource constituents on average, in each LRA, so we can assess service provision. Why are they using them in that particular way would be a matter of the next chapter.

In the specific case of Riosucio, we conducted an ANCOVA for each activity in the planting process (independent variable) depending of the LRA to which the farmer was placed (dependent variable) controlling by the figures of the other four activities (number of coffee trees, resistance, age, density and specialization (covariate)). For each activity, there is an indicator and its measurement is showed for each LRA, meaning that on average, farmers belonging to that LRA are using resource constituents in that particular way. The whole statistical support is presented in Annex 5.1.

The data for the other processes were obtained through a triangulation of a survey conducted by the author with 21 coffee growers of different LRA; the database of 832 of coffee farmers associated with Asprocafé who belongs to four LRAs (Fairtrade, la Vereda, Nespresso and Organic); the documentary information from the Cooperative's and Asprocafé's annual reports and the qualitative data gathered by the author in interviews conducted in Riosucio, Manizales, and Bogotá with the profiling actors who were participating in each LRA identified in Riosucio.

Table 6 Observed uses by LRA. Source: The author.

Processes	Uses	LRA Standard	LRA Regional	LRA Fairtrade	LRA La Vereda	LRA Nespresso	LRA Organic
Planting	Diversification (- Coffee area/total area**	70% of the total area is cultivated in coffee.	69% of the total area is cultivated in coffee.	74% of the total area is cultivated in coffee.	76% of the total area is cultivated in coffee.	72% of the total area is cultivated in coffee.	71% of the total area is cultivated in coffee.

<sup>259</sup> We used the SPSS statistical software. For conducting the series of ANCOVAS we relied on Field (2005), specially chapter 9.

	Variety (pest resistant coffee trees planted/total coffee trees planted in the farm)**	76% are pest resistant	73% are pest resistant	74% are pest resistant	65% are pest resistant	69% are pest resistant	68% are pest resistant			
	Renovation (Average age of the coffee crop)**	9.29 years old	9.16 years old	8.91 years old	7.74 years old	7.31 years old	8.92 years old			
	Density (average density of the coffee crop)**	5.155 coffee trees per hectare	5.040 coffee trees per hectare	5.157 coffee trees per hectare	5.255 coffee trees per hectare	4.957 coffee trees per hectare	5.025 coffee trees per hectare			
	Shade (average shade in the coffee crop)**	22% of the crop grows under shade	26% of the crop grows under shade	25.5% of the crop grows under shade	26% of the crop grows under shade	26% of the crop grows under shade	40% of the crop grows under shade			
Cultivation	Weed/soil management*	Cultural practices predominantly: weeding with machete 2/3 times a year depending on the age of the crop					The shade and the fall of leaves reduce the growth of weeds, hence weeds are less frequent and easier to perform than in other cases.			
	Pest and disease management*	Since prices are set based on the percentage of broca, coffee farmers strive to control it. The cultural control lies in not allowing the fall of mature grains, therefore the coffee growers do the picking every 15 or 20 days when there is no harvest.								
	Pest and disease management*	Rarely use of chemicals								
	Nutrition***	A generalized practice of fertilization is observed twice a year but not necessarily with the products that the soil needs or in recommended doses.		Only 13% of coffee growers do not fertilize. The remaining 87% is similar to standard. However, since 79% have compost to make solid fertilizers and 41% make liquid fertilizers, soil nutrition may be higher		Both organic and synthetic fertilization is observed similarly to standard: 92% make solid organic fertilizer and 58% make liquid organic fertilizer (Asprocafé associates).		94% fertilize. They have support in soil analysis and interpretation, and the entrepreneurial administration of the farm produces resources for fertilizers. (Members of Asprocafé: 87% make solid and 38% make liquid organic fertilizer)		100% are organic but it does not mean that the plant's requirements are compensated with organic fertilizers. The extremes of well/bad fertilization are observed. 91% make solid organic fertilizer and 92% make liquid organic fertilizer.
	Hedge rowing *	The use of live barriers is not evident.	The use of live barriers is not evident.	In many farms, the use of live barriers is observed because at some point they were in the organic program.			The use of live barriers is observed.			
	Picking*	During harvest, if the family workforce is not enough (usually more than 5 thousand coffee trees) occasional labor must be hired or exchanged through the <i>manos cambiadas</i> scheme. In the first case, they join the collectors and motivated them to harvest ripe fruits, in occasions offering better conditions such as food or price. In the second, a tit-for-tat is expected so farmers have incentives to pick well ripen fruits (which means better price).								
	Farm management*	The farm and the family are the same economic unit. Hence, its management is joint and is characterized by prioritizing business planning on everyday emergencies.				Also, a family farming. But requirements to keep records and the fact		Also, a family farming. Unlike the others, activities demand less		

					that the farms generate higher income, allow reserve capital to attend to emergencies without neglecting the scheduled activities.	capital so, it does not compete for cash to attend to emergencies.
Post-Harvesting	Hulling*	The coffee growers are the owners of the pulping machine (although there are cases that the same was once distributed the inheritance was in a relative's house, in that case, they hull there without incurring additional costs) and used to hull daily to avoid losses in quality.				
	Fermentation*	The farmers do the fermentation using the equipment they have available immediately after pulping. The fermentation time responds more to the daily routines of the coffee growers than to the needs of the profile (the washing is not done when the mucilage has completely dissipated but after leaving children in the school).				
	Drying*	Coffee farmers dry the grain in the sun, on the floor or using plastic covers to avoid contamination immediately after washing until it reaches the minimum moisture (physically identifiable) to be sold as dry parchment coffee. Once the capacity of the equipment is taken over, the excess of coffee collected has to be sold as wet coffee				
	Waste management *	Not conclusive data	79% treat the pulp (fertilizer) and 60% treat the waters before pouring them or using them as fertilizer.	92% treat the pulp (fertilizer) and 75% treat the water before pouring it or using it as fertilizer. (Asprocafé associates).	87% treat the pulp (fertilizer) and 70% treat the water before pouring it or using it as fertilizer. (Asprocafé associates).	91% treat the pulp (fertilizer) and 95% treat the waters before pouring them or using them as fertilizer.
	Reselection *	Reselection is not implemented in Riosucio because anyone paid more for this activity in 2015.				
Trading	Purchasing*	Classification by quality according to Res 02/05; Documentary traceability by lot.	Classification by quality more demanding than Res 02/05; Documentary traceability by lot.	Classification by quality according to Res 02/05; Documentary traceability by lot.	Classification by quality more demanding than Res 02/05; Documentary traceability by lot.	Classification by quality more demanding than Res 02/05; Documentary traceability by lot.
	Threshing and sorting*	5.2 million kilos in 2015 (68% of total coffee sold in 2015) were sold as standard; 1.8 million kilos were threshed by Trillacoop and were sold as Excelso UGQ and Excelso Supremo (which were obtained by mixing the lower quality coffee (standard) with higher quality coffee (regional, FLO, La Vereda and Nespresso that were not sold under the seal) through Expocafé, 2.1 million were sold without threshing to Almacafé (logistic operator of the FNC) and 1.2 million were sold to other companies also without threshing.	277 thousand kilos in 2015 (4% of total coffee sold in 2015 and 24% of coffee purchased as FLO) were sold as Fairtrade coffee. 177 thousand kilos were threshed by Trillacoop and were sold as Excelso UGQ and Excelso Supremo through Expocafé and 100 thousand were sold	410 thousand kilos in 2015 (5% of the total coffee sold in 2015 and 37% of the coffee purchased as Vereda) were sold as La Vereda coffee. The whole was sold without threshing to Almacafé	791 thousand kilos in 2015 (10% of total coffee sold in 2015 and 37% of coffee purchased as Nespresso) were sold as Nespresso coffee. 789 thousand kilos were threshed by Trillacoop and sold as Nespresso AAA through Expocafé.	112 thousand kilos in 2015 (1% of total coffee sold in 2015 and 66% of coffee purchased as organic) were sold as Organic coffee. The whole was threshed by Trillacoop and sold as Excelso UGQ through Expocafé.

				without threshing to Almacafé			
	Bulking and export*	Expocafé and the FNC (through Almacafé) bulk and export the coffee using documentary traceability.	The Cooperative is an investor of Expocafé, a coffee exporting company, which allows it to have direct relationships with Starbucks	Expocafé and the FNC (through Almacafé) bulk and export the coffee using documentary traceability.	The FNC (through Almacafé) export this coffee directly to Keurig.	The Cooperative is an investor of Expocafé, a coffee exporting company, which allows it to have direct relationships with Nespresso	The Cooperative is an investor of Expocafé, a coffee exporting company, which allows it to have direct relationships with Equal Exchange
Roasting	Blending*	Standard coffee buyers usually mix coffee of different origins looking for a balance in both quality and price.	Starbucks bought 9 thousand kilos to mix them with CAFÉ Practices from other regions and countries.	Blended with other Fairtrade coffee	Timothy's bought 254 thousand kilos that he used to produce his "pure origin Colombia la Vereda" without mixing it with other origins.	Nespresso bought the 789 thousand kilos to mix them with triple AAA Nespresso coffee from other Colombian and foreign origins to produce their capsules.	Equal Exchange bought 112 thousand kilos to either blend it with organic coffee from other parts of the country to produce his packaged Organic Colombian Coffee, or to produce the "Cuernos del Diablo" single origin.
	Roasting *	NA	Starbucks uses S-Curves to guarantee a consistent and replicable flavor.	NA	Keurig uses S-Curves to guarantee a consistent and replicable flavor.	Nespresso uses S-Curves to guarantee a consistent and replicable flavor.	Equal Exchange uses S-Curves to guarantee a consistent and replicable flavor.
	Packaging and retailing*	NA	C.A.F.E. Practices	Fairtrade VSS	N.A.	Nespresso AAA	Organic
Communication	Communication*	NA	Private investment in the Starbucks Brand	Private investment in the collective trademarks Fairtrade and private brand.	Private investment in the private Brand. "Timothy's Colombian La Vereda" de Keurig Green Mountain.	Private investment in the Nespresso Brand.	Private investment in the collective trademarks Organic and the private brand Equal Exchange's "Organic Colombian Coffee".
Brewing	Grinding*	NA	NA	NA	NA	NA	NA
	Brewing*	NA	NA	NA	NA	NA	NA

\* Qualitative information of the field work.

\*\* At a significant value of 1% there are statistically different.

\*\*\* Qualitative information of the field and quantitative work of the database of associates of Asprocafé.

The ANCOVA technique allows us to reject the null hypothesis that uses in the five activities during the first process are equal between the various LRAs presented in Riosucio in 2015. So, it confirms the expected “heterogeneous” use of Resource constituents in the red boxes of table 5, in which rivalries between regulations to produce different services would trigger heterogeneous uses between LRAs that sought for those rival services.

Our qualitative observations enriched with some quantitative data coming from the aleatory survey conducted by the author, the Asprocafé database and the reports of some profiling actors, partially confirm the expected uses in table 5.

Firstly, the data provides evidence to reject the null hypothesis that uses in the nutrition activity is equal among the various LRA presented in Riosucio in 2015: farmers in the LRA organic do not use synthetic fertilizers whereas farmers from Asprocafé who sold through the LRAs Fairtrade, La Vereda, and Nespresso used both synthetic and organic fertilizers. Additionally, the average of coffee farmers who fertilize and who prepare solid and liquid organic fertilizer is different among LRAs.

Secondly, the data provides no evidence to reject the null hypothesis that uses in the following activities: “pest and disease management”; “picking”; “hulling”; “fermentation”; “drying” and; “reselection” are equal among the various LRA presented in Riosucio in 2015. The fact that they all share a similar cost structure featured by the family farming and that there is only one coffee buyer that use the same minimum quality measure for all the LRAs, could explain why these activities are equal no matter the LRA and differences are mainly explained by internal factors of the farms like localization (the lower in altitude, the higher the predominance of broca) or number of coffee trees (very small farms do not obtain the money to acquire or properly maintain their post-harvesting facilities).

Nevertheless, with our data we have evidence to reject the null hypothesis that uses in the following activities “weed/soil management”; “hedge rowing”; “farm management” and; “waste management” are equal among the various LRA presented in Riosucio in 2015. In the field, it is evident that weeds growth stronger when having access to more solar exposition, as organics have more shade on average, weeds are weaker and easier to control. Also as hedge rowing is mandatory for organic farmers to protect the crop from neighbors who are using prohibited chemicals, this activity is carried by all who are certified and a lot of farmers that once were certified as organic and maintain it because the benefit is higher than the cost to eradicate it (all ancient members of Asprocafé were certified organic until the mid of two-thousands as will be explained in the next chapter) but clearly for coffee farmers that never have been certified as organic, it is an additional and useless cost. In the case of farm management, training is needed, so participants in LRAs that provide them with this are using *know-how* in this activity differently from farmers in other LRAs who had not received it; namely participants in the LRA Nespresso, LRA Organic tend to have much more support than participants in the LRA Regional and Standard for example. Similarly, in the case of waste management, there is not only the training but also the delivery of equipment that produce a gap between participant farmers in LRAs that provides them and those which do not do it.

#### 5.1.4. Services provision

Once we have identified how services are produced by the regulated uses and systematized the observed uses on average by LRA, we can now proceed to assess the services provision by each LRA.

We will start with the observed monetary services received on average by farmers who had the most similar characteristic but sold their 2015 coffee production through different LRAs. These observations are based on the database Coop/SICA. Secondly, we will use the results of table 6 to assess symbolic and taste related services depending on the average observed use in each activity by each LRA. If all the regulated uses to produce a service were observed in an LRA, our assumption is that the LRA produced that service.

- **Monetary services**

Using the Coop / SICA database, we calculate the monetary services of the producer in two times: First the money paid at the time of purchase for the 3056 coffee growers. Second, the premium after buying whose value paid per kilo is known because of information in the Cooperative's reports. For this second value, we assume that it was received by the coffee grower.

Firstly: to compare the averages of income for each LRA and to control for these other variables that influence the income, we perform a series of ANCOVAs, for which we selected the most robust and most parsimonious model. With this one, we tested if there was a difference in the average income between groups (LRA's) and we concluded that the null hypothesis (average income is equal) was rejected. This ANCOVA in table 7 shows us that the four covariates (Number of crop plants; Density; Resistance; Age) and the LRA are significant (with a significance level of 0.1). Furthermore, the R squared of 0.58 explain that 58% of the variance in income within our sample is explained by our model. So, we can confidently say that once controlled, the average income a coffee farmer differs by LRA.

Table 7 Coffee sales. ANCOVA Test. Source: the author using SPSS.

#### Tests of Between-Subjects Effects

Dependent Variable: Ventas Pesos

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2362388331000 00000.000 <sup>a</sup>	9	2624875923000 0000.000	483.973	.000	.588
Intercept	1909474642000 000.000	1	1909474642000 000.000	35.207	.000	.011
NPLANTAS	1896291463000 00000.000	1	1896291463000 00000.000	3496.368	.000	.534

NDENSIDAD2	631822890000 00.000	1	631822890000 00.000	11.650	.001	.004
Resistencia	6715083214000 00.000	1	6715083214000 00.000	12.381	.000	.004
Edad	4315364205000 00.000	1	4315364205000 00.000	7.957	.005	.003
ARL	1096511518000 0000.000	5	2193023037000 000.000	40.435	.000	.062
Error	1652029706000 00000.000	3046	5423603761000 0.000			
Total	5652439279000 00000.000	3056				
Corrected Total	4014418036000 00000.000	3055				

a. R Squared = .588 (Adjusted R Squared = .587)

The interpretation is that for coffee farmers that have 4,581 coffee plants (which reflects an area in coffee of 0.89 hectares),  $\frac{3}{4}$  parts of which are pest-resistant, with an average age of 8.4 years and, planted with a density equivalent of 5,120 plants per hectare but they participate in different LRA, the income they received on average, is statistically different<sup>260</sup>. From COP 5.4 million (USD 2.3 thousand) when selling through the LRA Standard to COP 10.6 million (USD 4.5 thousand) when selling through the LRA Nespresso as can be read in table 8.

Table 8 Coffee sales. Estimates. Source: the author using SPSS.

### Estimates

Dependent Variable: Ventas Pesos

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	5484875.782 <sup>a</sup>	232649.213	5028710.441	5941041.123
1	6941484.274 <sup>a</sup>	478131.223	6003991.776	7878976.771
3	8293344.527 <sup>a</sup>	563817.046	7187844.143	9398844.911
4	6856906.943 <sup>a</sup>	266334.853	6334692.716	7379121.169
5	10606457.000 <sup>a</sup>	283751.143	10050093.910	11162820.100
6	6398530.996 <sup>a</sup>	609115.790	5204211.411	7592850.581

<sup>260</sup> The model does not exceed the Levene's Test of Equality of Error Variances which implies that the assumption that the relationship between the dependent variable and the covariate is equal between the groups cannot be validated. For our research objective, it is a secondary need to develop a statistical model that allows us to increase the robustness of the same to have more accurate predictions. But it does not invalidate our results. On the contrary, it confirms that belonging to an LRA not only implies different incomes but also different uses of the Resource constituents.

a. Covariates appearing in the model are evaluated at the following values:  
 NPLANTAS = 4581.14, NDENSIDAD2 = 5120.68, Resistencia = 1.2919, Edad = 8.3903.

Secondly, the LRA encourages particular uses paying premium when buying that are incorporated in the previous model, but also premium after buying when the coffee is effectively sold by the Cooperative to participant farmers in LRAs Fair Trade (COP 130/USD 0.06 per kilo), Nespresso (CO 115/USD 0.05 per kilo) and Organic (COP 1967/USD 0.83 per kilo)<sup>261</sup>.

As this premium is paid by kilo sold to the cooperative, we conducted the same ANCOVA model to calculate the average kilos of coffee sold to the cooperative by farmers belonging to each LRA. Table 9 shows that the four covariates (Number of crop plants; Density; Resistance; Age) and the LRA are significant (with a significance level of 0.05). Furthermore, the R squared of 0.58 explain that 58% of the variance in income within our sample is explained by our model. Table 10 provides with the estimates ranging from 989 kilos of coffee sold by the cooperative by a farmer (with the characteristics previously described) belonging to the LRA Standard, to 1718 kilos sold by a farmer belonging to the LRA Nespresso.

Table 9 Kilos sold. ANCOVA Test. Source: the author using SPSS.

### Tests of Between-Subjects Effects

Dependent Variable: Ventas Kilos

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	6519562003.00 <sup>a</sup>	9	724395778.100	475.611	.000	.584
Intercept	53934432.500	1	53934432.500	35.411	.000	.011
NPLANTAS	5319940170.000	1	5319940170.000	3492.872	.000	.534
NDENSIDAD2	16582793.560	1	16582793.560	10.888	.001	.004
Resistencia	19222616.550	1	19222616.550	12.621	.000	.004
Edad	12863951.370	1	12863951.370	8.446	.004	.003
ARL	234327703.900	5	46865540.770	30.770	.000	.048
Error	4639316559.000	3046	1523084.885			
Total	15855884670.000	3056				
Corrected Total	11158878560.000	3055				

<sup>261</sup> In section 8.1.1 we described this premium after buying and transparently we explained we used a roughly average value of this premium.

a. R Squared = .584 (Adjusted R Squared = .583)

Table 10 Kilos sold. Estimates. Source: the author using SPSS.

### Estimates

Dependent Variable: Ventas Kilos

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	989.174 <sup>a</sup>	38.987	912.731	1065.618
1	1192.590 <sup>a</sup>	80.124	1035.487	1349.694
3	1450.321 <sup>a</sup>	94.484	1265.063	1635.579
4	1142.359 <sup>a</sup>	44.632	1054.847	1229.871
5	1718.541 <sup>a</sup>	47.551	1625.306	1811.775
6	1052.053 <sup>a</sup>	102.075	851.910	1252.195

a. Covariates appearing in the model are evaluated at the following values: NPLANTAS = 4581.14, NDENSIDAD2 = 5120.68, Resistencia = 1.2919, Edad = 8.3903.

By adding this purchasing after buying for each kilo of coffee sold to the cooperative, in table 11 we consolidated the total monetary services received by coffee farmers (with the previous characteristics) by each LRA. We divide the amount in legal monthly minimum wages to provide some sort of a contrast for the reader. In any case, we are interested in the comparison rather than the absolute value.

Table 11 Total monetary services by LRA. Calculations made by the author.

LRA	Sales (COP)	Sales (Kilos)	Premium after buying	Total sales	Divided between l.m.m.w.*	Difference with respect to the LRA Standard
0	5,427,236	989	0	5,427,236	8	0%
1	6,842,748	1,193	0	6,842,748	11	26%
3	8,334,672	1,450	150	8,552,172	13	58%
4	6,847,468	1,142	0	6,847,468	11	26%
5	10,562,929	1,719	115	10,760,561	17	98%
6	6,356,746	1,052	1,967	8,426,134	13	55%

\*For 2015 the Legal Monthly Minimum Wage was COP 644.355 (USD 273)

Coffee farmers that possessed 4,581 coffee trees, ¾ parts of which were pest-resistant, with an average age of 8.4 years and, planted with a density equivalent of 5,120 plants per hectare, obtained on average, on the harvest 2015 the following monetary services.

- COP 5.427.236 (USD 2.300<sup>262</sup>), equivalent to 8 legal monthly minimum wages (l.m.m.w)<sup>263</sup> if they are selling their coffee through the LRA Standard.
  - COP 6.842.748 (USD 2.899), equivalent to 11 l.m.m.w., if they are selling their coffee through the LRA Regional/Starbucks (26% higher than LRA Standard).
  - COP 8.552.172 (USD 3.624), equivalent to 13 l.m.m.w., if they are selling their coffee through the LRA Fairtrade (58% higher than LRA Standard).
  - COP 6.847.468 (USD 2.901), equivalent to 11 l.m.m.w., if they are selling their coffee through the LRA La Vereda (26% higher than LRA Standard).
  - COP 10.760.561 (USD 4.560), equivalent to 17 l.m.m.w., if they are selling their coffee through the LRA Nespresso (98% higher than LRA Standard).
  - COP 8.426.134 (USD 3.570), equivalent to 13 l.m.m.w., if they are selling their coffee through the LRA Organic (55% higher than LRA Standard).
- Symbolic services

To assess the provision of symbolic services, we conducted a test in which a service was produced if all uses observed in table 6 were conducted as they were regulated in Annex 4.4 to produce that particular service.

As a result, we bring about Table 12 which shows all services produced by each LRA after evaluating observed uses against regulated uses. It presents in the columns each one of the LRAs and in the rows, each one of the services demanded from the Resource.

Table 12 Services provision by LRA. Source: The author.

	LRA Standard	LRA Regional	LRA Fairtrade	LRA La Vereda	LRA Nespresso	LRA Organic
Energy dose	X	X	X	X	X	X
Appellation Café de Colombia	X	X	X	X	X	X
Typical coffee		X		X	X	
Brand reputation		X		X	X	X
Environmentally responsible	X	X	X	X	X	X
Ethically traded		X	X	X	X	X
Shared value			X		X	X
Natural Coffee						X
Fairtrade coffee			X			X
Indigenous coffee						X
Clean cup	X	X	X	X	X	X
Terroir expression		X		X	X	

<sup>262</sup> The exchange rate on average in 2016 was USD 1 = COP\$ 3.050

<sup>263</sup> In Colombia in 2015, the *Salario Mínimo Mensual Legal Vigente* was COP 644.355.

Citric acid aroma				X		
Winy					X	
Exceptional coffee						X

Even though there are differences among LRAs in the five activities during the first process, rivalries had decreased in intensity and converged toward a more or less stabilized use of Resource constituents that allows a provision of various services, when defined less strictly.

For example, is diversification and shade: a few years ago, coffee growers recalled the strong rivalry between the actors that privileged monetary services and motivate them to crop the whole land in coffee eliminating the shade, and the ones who wanted to cultivate food in an agroecological productive system. Eventually, as it will be shown in the next chapter, these rival forces shaped the coffee crop in Riosucio no matter the LRA. Today, farms in Riosucio cultivate between  $\frac{2}{3}$  and  $\frac{3}{4}$  parts in coffee and the rest in other types of crops such as orchards, herbal/medicine gardens, fruits, cane, tomato, pastures, pigsty, and chicken shed that guarantee the food and/or supplement the income. Along the coffee tree, there are plantain trees that produce food (both for people and for the soil) and when it is growing, the coffee plant interspersed with temporary crops of corn and beans. It is also common to find other species of plants within the crop that also provide shade and food such as fruit trees, avocados, *guamos*, cassava, papaya, etc.

Consequently, the percentage of the cultivated area under shade (between 22% - 40%) is far superior to the average of 12% of the other municipalities of Caldas<sup>264</sup>. Thus, although there are differences between LRA, the way in which these activities are performed, can trigger both a “fair trade”<sup>265</sup> and “environmentally friendly”<sup>266</sup> symbolic services no matter the LRA.

In Riosucio, it can be seen that the various LRAs produced a set of symbolic and taste related services higher than the set initially expected. The LRA Organic do not only produce the “natural coffee” symbolic service but also other ten services demanded by different actors. The LRA Nespresso follows closely providing 10 of the 15 services demanded from the Resource in Riosucio. On the other hand, the LRA Standard is producing a set of four services.

### 5.1.5. In short, which are the LRAs that optimize the provision of the services demanded from the Resource in Riosucio in 2015?

<sup>264</sup> Author's calculations using data from the *Comité Departamental de Cafeteros / SICA, Datos Generales de la Caficultura de Caldas al año 2016, enero 2016*.

<sup>265</sup> “aprovechar al máximo la finca y en lo posible cultiva especies tradicionales para garantizar la seguridad alimentaria humana y animal”. Numeral 2.14 sobre las condiciones ambientales de las “Normas y sanciones que rigen a los asociados de Asprocafé Ingruma” desarrollado por la primera acción de mejoramiento del tercer tema del cuadro resumen de los criterios de mercado justo FLO del mismo texto.

<sup>266</sup> A minimum of 15% of the crop is required under canopy. Criterio crítico 2.9 del *Sustainable Agriculture Network Standard* de Julio 2017.

To conclude this first subchapter, we present the services produced by each one of the LRAs in Riosucio in 2015. Monetary services are presented in COP and its equivalent in legal monthly minimum wages of 2015, and symbolic and taste related services are presented in the number of this kind of services produced from the total of fifteen identified.

- LRA Standard: COP 5.427.236 (8 l.m.m.w.) and 4/15 symbolic and taste related services.
- LRA Regional/Starbucks: COP 6.842.748 (11 l.m.m.w.) and 8/15 symbolic and taste related services.
- LRA Fairtrade: COP 8.552.172 (13 l.m.m.w.) and 7/15 symbolic and taste related services.
- LRA La Vereda: COP 6.847.468 (11 l.m.m.w.) and 9/15 symbolic and taste related services.
- LRA Nespresso: COP 10.760.561 (17 l.m.m.w.) and 10/15 symbolic and taste related services.
- LRA Organic: COP 8.426.134 (13 l.m.m.w.) and 11/15 symbolic and taste related services.

## 5.2. What does explain the solution to the collective action problem?

We ended the first subchapter with a screenshot of the results of the collective action in terms of the services provided by the Resource from the ensemble of services demanded. And we showed that services provision was different in each one of the LRAs that were identified in Riosucio in 2015.

In this second subchapter, we pretend to analyze each one of the LRA in terms of the three conditions: the extent or the amount of observable uses regulated by the LRA; the coherence or the governance mechanism to both coordinate actors by the LRA and coordinate the LRA by the actor; and the closure or the market power to profile the Resource.

### 5.2.1. Extent

The previous subchapter developed extensively this condition by describing for each LRA both regulated and observed uses. So, we are not going to describe it again. Nevertheless, it focused on the services provision no matter the actual intention of the LRA. Here the focus is the combination of services sought by the LRA, so we compare observed uses against the regulated uses to produce those services intentionally looking for.

As it is the same information previously presented but rearranged in terms of the combination of services by LRA, we explain transparently the procedure as it was conducted so we avoid a redundant presentation of new tables. Thus, we evaluated the extent by conducting an additional exercise in which firstly, we used the combination of services sought for by each LRA presented in Annex 3, and then, comparing with our data on observed uses, we evaluated among three possible options: the observed use was conducted as it was regulated; it was conducted differently, or it was not regulated that is presented in Annex 7.1.

In Riosucio we can distinguish a kind of *in crescendo* provision of services by LRAs that are built on previous ones. That is why we utilized the same “overlapping layers” logic that we used for the inclusion of the coffee grower to a particular LRA: We started with the regulated and observed uses of the LRA Standard that influence the whole population of coffee farmers. Then, we move upwards with regulated and observed uses in the additional layers that influence coffee growers according to their belonging to a particular LRA.

The base layer is composed of the set of observed/regulated uses derived from the "reputation of the appellation" symbolic service for the whole set of LRA in Riosucio. One activity during the planting (variety), three activities during the cultivation (pest/broca management and picking), three activities during the post-harvesting (pulping, fermentation and drying), and three activities during the trading (purchasing, threshing, export). The LRA Standard-Discount can be understood as a "non-application" of the rules of the base layer, while the LRA Regional/Starbucks, can be understood as a more than acceptable application of these rules which bring about better results in terms of quality.

A first layer is composed of the set of observed/regulated uses derived from the “ethically traded” symbolic service, specifically during the three activities of the trading process. And then, a second layer composed of those that produce the “Fairtrade” symbolic service for all LRAs whose members are also members of Asprocafé. First, it reduces vulnerability to price volatility by diversifying income and guaranteeing food security and by formalizing the commercial relationship (through producer organizations) and guaranteeing a minimum purchase price and a premium fair Trade. Secondly, it reduces the impact on the ecosystem when the productive system manages to protect and feeds itself using vegetal cover, prioritizes the cultural practices and takes advantage of farm waste to fertilize soils. Hence two additional activities during planting (diversification and shade), two activities during cultivation (soil management, nutrition), one during the post-harvesting (waste management) and all during trading.

In a third layer, both the LRA Nespresso and the LRA la Vereda try to optimize a symbolic service (“environmental responsible”), without jeopardizing the production of a taste related services (“winy” in the first case, “citric acidity” in the second) to produce the "reputation of the brand" symbolic service. It was done from a completely opposite direction: within both LRAs some actors motivated a young, resistant and densely cultivated coffee trees while others preferred to maintain the older, traditional and disperse cultivated coffee plants. It generated a stable mid-way practice in two additional activities (renovation, density) and all the trading activities (cupping is added). Additionally, new observed/regulated uses in all the roasting activities, the communication strategy and the brewing in both cases.

In this same third layer, the LRA Organic sought to guarantee the production of the "natural coffee" symbolic service maximizing the production of the "exceptional coffee" taste related service. It demands an autonomous productive system, free of toxic agents to control pests and synthetic fertilizers to nourish the crop. Hence, the needs for the canopy, cultural practices, and organic nutrition (from waste) are stricter than all the previous ones. Consequently, in addition to higher exigence, another observed/regulated use is included in one activity during cultivation

(hedge rowing). Additionally, in all trading activities (in addition to traceability it is necessary to use equipment that does not contaminate organic products), in one activity during the roasting (packaging of products sold as "organic") and all activities during the communication strategy process.

As a result, Table 13 shows that both the LRA Standard and the LRA Regional/Starbucks do not meet the two conditions because less than half of the activities observed are conducted as it was regulated. In the case of Standard coffee, regulated uses to produce the “appellation Café de Colombia” symbolic service, are not observed during both the roasting and communication strategy process. In the case of the LRA Starbucks, as it has been recently implemented, regulated uses to produce the “environmentally responsible” symbolic service are not observed.

On the other hand, the two conditions were fulfilled by the other four LRAs (Fairtrade; La Vereda; Nespresso; Organic). In these cases, more than two-thirds of the total number of uses were observed as they were regulated by the LRA. In the case of Nespresso, 95% of the regulated uses were observed. In addition, all were below 48% of the concentration in the first three processes (it means that more than half of the observed/regulated uses occurred in the last half of process) so, they can be considered evenly distributed among all profiling actors.

Table 13 Extent assessment by each LRA. Source: The author.

	LRA Standard	LRA Regional/Starbucks	LRA Fairtrade	LRA La Vereda	LRA Nespresso	LRA Organic
Average of observed/regulated uses (weighted by process)	37%	37%	74%	93%	95%	83%
Concentration in the first three processes.	62%	62%	48%	38%	40%	48%
Extent assessment	Low	Low	High	High	High	High

### 5.2.2. Coherence

As mentioned in the conceptual component, coherence refers to the governance mechanisms that incentive profiling actors to behave as expected in order to match regulated uses with the observed ones.

Unlike the extension attribute that is synthetically presented because data was presented in Annex 4 and 5, this section evaluates the presence (or absence) of coherence depending on the capacity of the LRA to align actors around a commonly agreed profile. Capacity that is systematized in the five elements previously described: Services; actors; institutions; governance and output.

- Base layer: LRA Standard

The LRA Standard has developed since the beginning of the twentieth century by coffee producers organized around the FNC to increase farmers' monetary services. Essentially this service is sought through both productivity improvement to increase quantities (because "productivity is not everything... it is almost everything"<sup>267</sup>) and reputed quality to reach better prices. In this line, the Resource is profiled to produce the "clean cup" taste related service, on which it is built the "reputation of the appellation" symbolic service.

This profile requires two alignments of all profiling actors: farmers, traders and rosters and, all profilers and consumers: In the first case, roasters are aligned because the "clean cup" taste related service is an ingredient for the profile they offer to their clients. Indeed, Colombian coffee is highly appreciated by the big roasters because they can rely on the consistency of the "clean cup" taste related service. This preference is evident when comparing differentials from Colombian Coffee in the period 1990-2016: It has been USD 0.32 higher than the ICO composite indicator price (31% more)<sup>268</sup>, and USD 0.72 higher (6% more) than its closest competitors "other milds" (Annex 6). In the second case, this profile reaches the final customer: 172 companies utilized in their final product 100% of Colombian Coffee and attach to their brand the legend "Café de Colombia" (F. N. d. C. FNC, 2015, p. 34).

The central piece of the LRA Standard is the application of the *Resolución 5/2002 del CNC*. Firstly, coffee that does not fulfill the requirements cannot be exported as Café de Colombia. Secondly, the whole coffee public policy (chapter 4) is oriented to encourage coffee farmers to fulfill this profiling institution.

This institutional framework results in governance mechanism lead by coffee producers in which other profilers have limited, or any chance to influence this LRA<sup>269</sup>. Firstly, the main decisions over the instruments to influence profiling actors is completely monopolized by producers: both the members of the *Congreso Nacional Cafetero* that takes the decisions and the *Comités Departamentales y Municipales de Cafeteros*, which implement them, are elected by federated farmers. The latter escalates demands from the farmers and provide legitimacy and support for the implementation process at the municipal level (see chapter 4.1). Secondly, they monopolize the funding: On the one hand, producers pay the parafiscal contribution, known as *contribución cafetera*, of USD 0.6 for each pound of coffee exported that was equivalent to COP 227.000

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<sup>267</sup> "la productividad no lo es todo... es casi todo". Final message of the Technical Manager of the FNC, quoting partially Paul Krugman (he changed Krugman's "but in the long run" for the suspension point), in his public speech during the ninth version of Expoespeciales (the most important coffee fair in Colombia) held on the 6<sup>th</sup> October 2016 in Bogotá.

<sup>268</sup> "The ICO composite indicator price, a historical series which can be extended back to 1947, provides an overall benchmark for the price of green coffee of all major origins and type, considered to be the best available measure of levels of green coffee transactions on a global basis". Source: International Coffee Organization official webpage.

<sup>269</sup> If traders for example, whose alignment is mandatory, want to influence this LRA, they cannot do it through its governance mechanism. They have to try at the National Congress of Colombia or through the Ministry of Agriculture. Interview with Carlos Ignacio Rojas, *presidente de la Asociación Colombiana de Exportadores de Café*.

million (USD 83 million) in 2015 (F. N. d. C. FNC, 2015, p. 68). On the other, through the *Comité Nacional de Cafeteros* composed of five ministers of the National Government, they increase the chances benefit directly from the national budget<sup>270</sup>. Both channels strengthen the FoNC and the FNC capacity for providing public services (in behalf of the Government through a contract signed between the President of Colombia and the CEO of the FNC coordinated by the *Comité Nacional Cafetero*).

Indeed, producers use the FNC's apparatus<sup>271</sup>, which consumes 35% of the total annual expenses of the FoNC<sup>272</sup>, and FNC's political support to strengthen its capacity, to motivate a change in behavior of profiling actors through the *Plan Estratégico de la FNC*, a strategic plan that is approved in the *Congreso Nacional Cafetero*, through two parallel and complementary efforts.

The first one is the "knowledge circuit" explained in detail in chapter 4.1.3. Roughly 6% of the FoNC expenses were oriented towards the phyto-technology research to increase efficiencies in the coffee productive system in Colombia carried on by CENICAFE<sup>273</sup>. Then 20% was invested in the transfer of these results. Firstly, to extension agents through the vocational institute *Fundación Manuel Mejía*. Then, to the coffee growers as practical knowledge by extension agents. This knowledge circuit tries to identify the most efficient uses of *infrastructures* and *know-how* in the coffee farm to produce the profile sought by this LRA.

In the specific case of Riosucio, the extension service coordinator divides the three thousand coffee farmers into six districts, each one in charge of one agronomist who is in charge of delivering technical assistance. In order to prioritize the type of technology transfer, the Committee had developed the "coffee quality program in Caldas", through which random coffee samples from different farms are taken to be analyzed in the Comité's Lab in order to identify the most frequent cup defects that are derived from correctable practices<sup>274</sup>. Then, some practices

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<sup>270</sup> From 2003 to 2015, the FoNC deficit was covered by the national budget until an equilibrium was reached thanks to a financial restructuring and the increase in coffee exports. From roughly eight million coffee bags a year in the period 2009-2012 to 14 million in 2015. (F. N. d. C. FNC, 2014)

<sup>271</sup> Including 2.800 employees (source: FNC official webpage) that is more than the Colombian Ministry of Commerce for example.

<sup>272</sup> We use data from Lora et al. (2014, p. 8) to assess the FoNC's expenses.

<sup>273</sup> As showed in chapter 4.1.3, the fact that the research is oriented towards productivity was a political decision since the *IX Congreso Nacional Cafetero*.

<sup>274</sup> In 2015, the *Comité Departamental de Caldas* analyzed 1897 samples. "*El Laboratorio de Análisis de Calidad de Café, del Comité de Cafeteros de Caldas recibió la auditoría externa que le permitió continuar con la Acreditación otorgada en 2011 por el Organismo Nacional de Acreditación de Colombia (ONAC), bajo los requisitos de la NTC ISO/IEC 17025:2005 para la realización de análisis físico de café pergamino seco y análisis sensorial cualitativo y cuantitativo de café*". *Informe de Gestión 2015. Comité Departamental de Cafeteros de Caldas*.

are prioritized to be transferred through the extension service of the FNC in Riosucio<sup>275</sup>, so farmers can increase their chances to get the minimum quality and obtain the base price<sup>276</sup>.

Additionally, some uses prioritized by the *Plan Estratégico* are incentivized through the agricultural public policy. The uses of *infrastructures* and *know-how* by coffee farmers in four activities in the planting process (planting pest-resistant varieties, with high density, shorter renovation cycles and controlling shade) were incentivized through two instruments of the coffee public policy funded mainly by the Ministry of Agriculture but implemented by the FNC described in chapter 4.2.2: direct subsidies and subsidized loans for coffee renovation.

The second effort is the marketing strategy. The FNC invest almost 5% of the FoNC to influence the use of *know-to-appreciate* by consumers so they can align roasters. This strategy built on the Juan Valdez icon<sup>277</sup> intends to associate the “Café de Colombia” with the “best coffee in the world” because of the hard and careful effort made by committed Colombians farmers to guarantee quality. FNC’s management of the brand portfolio has guaranteed a consistent message by coordinating the different communication strategies and protecting the reputation under the norms of intellectual property<sup>278</sup>.

Nevertheless, the instruments produced by the governance mechanism are powerless to effectively influence the uses of constituents by roasters. As “reputation of the appellation” is a symbolic service demanded by producers to capture more value within the value chain through differentiation in the green coffee market, if roasters were fully aligned, when selling it in the roasted coffee market there would not be any difference between their final products. Indeed, roasters buy Colombian coffee to profile a different combination of taste-related and symbolic services because struggling to increase their profit margins, they desperately need to be differentiated from their competition in consumers’ minds.

To conclude, even though this LRA has quite sophisticated governance mechanisms, they work in benefit of one profiling actor (producers) at the expense of the others (traders and roasters).

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<sup>275</sup> Through a combination of massive activities (radio/tv shows, press releases, conferences, etc.); group activities (periodically meetings with coffee farmers at the vereda level with the extension agent; less frequently “field journeys” and “method demonstration” in which a much wider (like all coffee farmers in one district) or selected (a portion of coffee farmers in a municipality who are struggling with some plant disease) audience are invited to dig much deeply with the whole extension team of the Comité Municipal de Cafeteros and in some cases, with external advisors; and individual activities carried on in almost a daily basis by the extension agent, who visits the farm to talk directly with the owner.

<sup>276</sup> Interview with Alfonso Ángel Uribe, the Executive Director of the *Comité de Cafeteros de Caldas*,

<sup>277</sup> In 1959 the FNC created Juan Valdez: a symbol for differentiating Colombian coffee in the global coffee market. After half a century of investment in marketing (for further details see Fernández et al. (2007)), in 2005, consumers in United States elected it as their favorite advertiser icon according to Adweek magazine. In addition, 83% of them knew about Colombia Coffee and more than 50% believed that Café de Colombia was the best in the world (Fernández et al., 2007, p. 15).

<sup>278</sup> In 2015 the FNC’s “Intellectual Property team was recognized as the Latin America Team of the Year for its efforts in the defense of the trademarks of Colombian coffee growers and for the reputation that these assets have gained in the international market” by the World Trademark Review Magazine. Official webpage <https://www.wtrindustryawards.com/winners/2015/>. Last visited 02-05-2018.

Institutions activated by producers have little influence on the uses that should be made by traders and roasters, thus reducing LRA's capability to maintain to the very end its own profile. Therefore, both the non-inclusive governance mechanism and the powerlessness to maintain aligned all profiling actors around the same profile are characteristic of a **low coherent** LRA.

- First layer: LRA Regional/Starbucks

This first layer is the portion of the coffee supplied in the base layer which, having minor defects, expresses the aromatic potential of the territory providing the "terroir expression" taste related service. A portion of which is meant to produce, in addition, both the "environmentally responsible" and the "ethical traded" symbolic service to provide the "reputation of the brand" symbolic service<sup>279</sup>.

The LRA Regional/Starbucks arrived in Riosucio in 2015<sup>280</sup> because the LRA Nespresso was producing more coffee than was bought by Nespresso, so when looking for commercial alternatives they identify Starbucks as a potential customer<sup>281</sup>. Although Starbucks does not offer premiums it pays the market price for high-quality coffee (in order to produce the "ethical coffee" symbolic service) and, given the potential for purchases (when buying 700 thousand bags a year, it is one of the largest individual coffee buyers in Colombia <sup>282</sup> ), it was attractive for the Cooperative (and its allies) to open this market opportunity to sale the highest quality coffee that is not sold through the other LRAs.

Hence, the Cooperative and its commercial allies: associated coffee growers, Trillacoop (a mill), Expocafe (an exporter) and Cafexport, (an operator), aligned themselves through commercial agreements in order to profile the Resource as demanded by Starbucks around the profiling institution "Coffee and Farmer Equity Practices" (CAFE Practices hereafter)<sup>283</sup>: more than two hundred compartments regulated that should be followed by farmers to improve quality while protecting the environment, and by traders to enhance economic accountability and social responsibility. This profiling institution acts as an ideal type, and its implementation could be seen as a continuous improvement: at the beginning of the process, all the registered farms are part of the CAFE Practices program, even though only a few among them complied with the norm.

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<sup>279</sup> Since 2004 Starbucks was looking for a profile featured by high quality coffee while enhancing economic accountability, social responsibility and environmental protection (CI, 2011, p. 4).

<sup>280</sup> This section, in addition to the sources cited, is based on the interview with Alfredo Nuño, *Director del Centro de Apoyo al Caficultor de Starbucks en Manizales*.

<sup>281</sup> "Para el año 2015 nos hemos propuesto avanzar en la búsqueda de alternativas comerciales y nuevos proyectos de cafés especiales para nuestros asociados (...) identificar un grupo de caficultores asociados, interesados y comprometidos para ingresar al programa C.A.F.E. Practices de Starbucks" *Informe de Administración y Gestión a la trigésima séptima Asamblea General Ordinaria de la Cooperativa de Caficultores del Alto Occidente de Caldas, 2014. Pág. 11.*

<sup>282</sup> Interview with an employee of the FNC that did not want to reveal its name.

<sup>283</sup> Starbucks Coffee Company & SCS Global Services, *C.A.F.E. Practices Smallholder Scorecard*. Its 3.4 version January 2016 can be consulted in <https://www.scsglobalservices.com/starbucks-cafe-practices>. Last visited 01-27-2017.

Governance mechanisms control the fulfillment of three requirements of the commercial agreement 1- Quality; 2- Economic accountability; 3- External audit.

Quality means that coffee is going to be able to produce the taste related services demanded by Starbucks. Controls and traceability were established throughout the value chain: purchasing from farmers with a minimum factor (Cooperative); threshing Excelso quality and sorting by cupping profiles (Trillacoop); aleatory cupping tests before exporting (Expocafé), and finally cupping tests in Starbucks facilities before roasting.

Accountability means that all purchasing records must go alongside coffee bags in order to produce the symbolic services “ethically traded” and through it to enhance “brand reputation”. Thus, the Cooperative must provide a receipt in which it can be read at least three pieces of information: the amount, the price and the provider; Expocafé has to aggregate this information to deliver alongside coffee lots, which in turn will be escalated until it reaches its final destiny in Starbucks roasting facilities.

The external audit means that the CAFE practices profiling institution is being implemented in order to produce both the “environmentally responsible” symbolic service alongside monetary services (in terms of productivity) for farmers aiming to enhance the “brand reputation” symbolic service. To control this provision Starbucks demanded from suppliers and independent audit, which will produce data on non-compliance in the coffee zone the supplier procure from.

In Riosucio the process consisted of presenting the census of all potentially beneficiary farms (equivalent to the 1,326 cooperative members of the Cooperative in their area of influence<sup>284</sup>), then they carried out the sensitization process, documentation and certification of 981 coffee growers (602 in Riosucio<sup>285</sup>) through an audit of 15 of them<sup>286</sup>. This unrepresentative audit shows that it is more important the process (the Cooperative working alongside coffee farmers to fulfill the CAFE Practices) than the result itself. Nonetheless, although audits are not necessarily representative (which makes it difficult to know with certainty the production of the services intended by the norm) they show percentages of noncompliance with the norm that is used as a useful tool to the Farmer Support Center in Manizales, which identify improvement gaps to focalize efforts through improvement plans that are going to be implemented by the commercial allies

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<sup>284</sup> Of the 11,537 coffee growers present in the four municipalities (Riosucio, Supia, Marmato and Quinchía) where the Cooperative is supplied, only 2,241 coffee growers were partners in 2015. It is necessary to clarify that both partners and non-members can sell their coffee to the Cooperative, but the first ones have to make a contribution and can receive other benefits. *Informe de cafés especiales del Comité Departamental de Cafeteros de Caldas, Versión 4.0, del 16 de octubre de 2015.*

<sup>285</sup> *Informe de cafés especiales del Comité Departamental de Cafeteros de Caldas, Versión 4.0, del 16 de octubre de 2015.*

<sup>286</sup> *Informe del Comité de Educación a la XXXVIII Asamblea General de Delegados de la Cooperativa del Alto Occidente de Caldas de las operaciones del año 2015.*

Regarding the flow of information in the other direction, the producers participating in this LRA are the same members of the Cooperative, which allow them to use their deliberative institutions such as *Asamblea General Ordinaria* to escalate their demands and eventually through the relationship with Expocafé and Cafexport, it is plausible to consider that they can influence the LRA.

The alignment of all the profilers, and the possibility that two-way communication bridges exist allow us to qualify this LRA as a **high coherent**.

- Second layer: LRA Fairtrade

In the second layer, coffee that produces the "clean cup" taste related services is meant to produce the monetary services for farmers so they could cover at least production costs and obtain a small merge of benefit, so it could produce the "Fairtrade" symbolic service. This LRA that arrived in Riosucio at the beginning of the nineties through the Max Havelaar Foundation, aligned the indigenous coffee farmers, Asprocafé, the Cooperative, the Comité-FNC, Trillacoop, Expocafé, Max Havelaar, international buyers/roasters (48 in 1999)<sup>287</sup> and consumers.

They were aligned by activating an institution of the private regulatory system: the "*Convenio Programa Max Havelaar/Transfair/Fairtrade – Riosucio del 19 de septiembre de 1997*", whose purpose is the purchase of coffee at a minimum price (when the international market price is lower) plus a Fairtrade premium: A minimum price of USD 1.40 plus an after-buying premium of USD 0.2 per pound. This minimum purchase price intent to reduce the small producer <sup>288</sup> vulnerability to international prices by guaranteeing monetary services that cover coffee production, including producers' margin <sup>289</sup> . The Fairtrade Premium funds the producers' organization (Asprocafe), so it can deliver services to their members in order to fulfill the profiling institution (Fairtrade Standards).

The governance mechanisms of the Fairtrade Standard were developed so the interested parties could influence the profiling institution as well as it can influence the interested parties.

Regarding the first relation, at the global level, the entire Fairtrade system is distributed equally between the network of national producer organizations and the network of national Fairtrade organizations (which incorporates the actors that sell/consume Fairtrade products). The General Assembly, for example, is divided 50% -50% and the Board of Directors includes four members of

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<sup>287</sup> "Lista de importadores/compradores operando en el marco de FLO-Internacional del 19 de agosto de 1999" (incluyendo importadores y tostadores. Anexo 3, Convenio del programa MH en Riosucio, 1997.

<sup>288</sup> "Productor con menos de 10 hectáreas cultivadas en café". Artículo 11 de los Estatutos de la Asociación de pequeños productores de café Ingrumá – "Asprocafé Ingrumá". Tercera reforma en la XVI Asamblea General de Delegados del 23 de marzo de 2016.

<sup>289</sup> Fairtrade Internacional, "Guideline for Estimating Costs of Production (COSP)", 21 de November de 2011.

the producer network <sup>290</sup> , four members of the Fairtrade network and three independent members (FLO, 2018). Consequently, the Fairtrade International's Standards & Pricing team (including the price unit and standards unit) develops the profiling institution in a participatory manner through detailed and transparent processes<sup>291</sup> which are approved by the standards committee composed of representatives of producers; traders and experts<sup>292</sup>.

At the local level, the Fairtrade Standard for Small Producer Organizations has an entire section devoted to the democratical procedures to govern this LRA. Hence, Fairtrade standards are shaped at the local level as “*Normas y sanciones que rigen a los asociados de Asprocafé Ingruma, 2011*”. A locally agreed profiling institution which details the whole set of uses of the *infrastructures* and *know-how* that are mandatory for Asprocafé associates in various activities during the first four processes that are synthesized in Annex 4.2.

Regarding the second relation, the “*Normas Asprocafé 2011*” created its *Sistema interno de control de Asprocafé Ingruma*. It intends to support the implementation and monitoring/auditing the compliance of their associates<sup>293</sup>. Indeed, this internal system is the first step to guarantee compliance of Asprocafé with the Fairtrade system, which is proved through an independent audit carried on by Flocert or its local allies.

An implementation that is funded through the Fairtrade premium (in addition to other resources coming from the management and/or commercial activity of Asprocafé). The annual *Asamblea General de Delegados de Asprocafé*<sup>294</sup> decides how to invest it: in 2015, the Fairtrade premium (resulting from coffee sales during the previous year) executed COP 380 million (USD 161 thousand): One third was used for Asprocafé’s operating costs <sup>295</sup> including the technology

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<sup>290</sup> Rocio Motato, technical secretary of Asprocafé, is the Coordinator in Colombia of the “*Coordinadora Latinoamericana y del Caribe de Pequeños Productores y Trabajadores de Comercio Justo*”(CLAC, 2017), the network that represents the producers of the continent in the Fairtrade system.

<sup>291</sup> Demand for the standard by stakeholders; identification of the need by the Fairtrade International Board; formulation of the project by the Fairtrade system; iterative process: research - standard draft - consultation by stakeholders and the standards committee until a final draft is presented and approved by the Standards & Pricing Director and the Standards Committee. *Fairtrade International, “standard operating procedure for the development of fairtrade standards”*, Version. 24, June, 2016.

<sup>292</sup> The seven members of the Fairtrade International Standards Committee for January 2017 included three representatives of the producers (one for Africa, one for Asia and one for Latin America); a representatives of the merchants; three representatives of the fair trade system (two at the national level and one at the international level) (FLO, 2017).

<sup>293</sup> “*Dinamizar las actividades de cada una de las familias asociadas, mediante las visitas a la finca y las inspecciones internas y externas para asegurar el cumplimiento de las normas de certificación*”. *Numeral 1 Objetivos, Sistema Interno de Control de Asprocafé, Normas y sanciones que rigen a los asociados de Asprocafé Ingruma, 2011*.

<sup>294</sup> The Asprocafé’s associates elect their delegates to the Asamblea in an electoral day organized by Asprocafé, the quorum is satisfied with half of the delegates summoned and the decisions are taken by an absolute majority with the exception of some norms (such as reform of statutes, transformation, merger, dissolution, etc.) that require two thirds of votes. *Artículos 20 a 35 de los Estatutos de la Asociación de pequeños productores de café Ingrumá – “Asprocafé Ingrumá”. Tercera reforma en la XVI Asamblea General de Delegados del 23 de marzo de 2016*.

<sup>295</sup> Asprocafé has a Director (*Secretaria técnica*), a coordinator of the Internal Control System and four extension agents (*promotores e inspectores*).

transfer to associated farmers through group activities (field days and workshops <sup>296</sup> ), and individual activities (audit visits<sup>297</sup>). Another third was used for incentivizing through subsidies the change in the behavior of associates: half of this portion was given in fertilizer to encourage the renovation of coffee trees and, the other half, in water treatment equipment, school packages for the associates' children, and the payment of the Fairtrade certification. The last third was paid back to farmers as a premium after buying: COP 130 (USD 0.06) per kilo sold during 2014 for exclusively Asprocafé associates and, COP 75 (USD 0.03) per kilo for Asprocafé associates that sold through the LRA Nespresso.

Traders and roasters are influenced by the “Fairtrade Standard for traders”: they must pay the minimum price and the Fairtrade premium, and also, they must implement some uses in their commercial activity (including contractual clauses in favor of their commercial counterparts detailed in Annex 4.2). Hardly a behavior that could be maintained in the absence of this Fairtrade Standard given that maintaining minimum prices and premiums would only lead to losing market share (if prices increase) or sacrificing the profit margin.

This democratic multi-level governance model influences consumers' *know-to-appreciate* in an exponential manner given that each member individually has incentives to promote the virtues of the Fairtrade system (for example, an entrepreneur who wishes to associate his brand with a sense of social responsibility or an organization of producers that wants a greater market for their products). The accumulated investment of all the actors of the system has a collective impact superior to the sum of the individual efforts.

However, given the emphasis on the certification of the coffee bean, the effort to trace coffee origin is even more complex than the LRA Standard in which beans of all regions of Colombia are mixed. In the LRA Fairtrade, certified beans are blended from Africa, Asia, and Latin America. Unlike the Colombian coffee that has minimum quality rules to export, the absence of these rules in the other countries implies a heterogeneous, in terms of physical and sensory quality, Fairtrade certified coffee. Thus, the transparent alignment that allows identifying all the profiling actors that participate in the production of the Resource, contrasts with the opacity in the alignment of the Resource itself that significantly decreases its capacity to produce taste related services. It is for this last characteristic that this is a **low coherent** LRA.

In the third layer, there are the three remaining LRAs: Organic, Nespresso and La Vereda.

- [Third layer: LRA Organic](#)

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<sup>296</sup> Nine field days about water, soil and nutrition management (“*recurso hídrico en Colombia*”; “*Suelo sano, cultivo sano*” and “*fertilización de cafetales*”) and 50 training workshops on the results of the Fairtrade auditing, including issues of chemical handling and child labor. *Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma*. Pág. 10.

<sup>297</sup> 603 audited coffee growers from the 1433 coffee growers associated to Asprocafé in the three municipalities (832 in Riosucio). *Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma*. Pág. 10.

The LRA Organic is sustained above all the institutional scaffolding of the LRA Fairtrade including the provision of the “clean cup” taste related service and the “Fairtrade” symbolic service; the alignment of the same profiling actors (the indigenous (coffee farmers), Asprocafé, the Cooperative, the Comité-FNC, Trillacoop, Expocafé, Max Havelaar, international buyers and consumers; the same multi-level governance structure that shapes the profiling institutions (the Fairtrade standards) and its implementation through the local organization Asprocafé and, the same funding through the Fairtrade premium.

However, this LRA additionally profiles “natural coffee” symbolic service demanded by some Fairtrade buyers. Thus, it created an extra layer of uses of constituents that implied another alignment with Equal Exchange<sup>298</sup> since 1996. As one of the Fairtrade international buyers started supplying from Riosucio. The following years the public debate in the USA about the organic farming amplified the message of the threat to human health posed by conventional farming<sup>299</sup>. Equal in alliance with Max Havelaar decided to align, initially all profiling actors belonging to the LRA Fairtrade towards the LRA Organic, eventually (in a process that would be described in the next chapter) a portion of them (namely a group of Asprocafé members from all over Riosucio, Asprocafé, the Cooperative, the Comité-FNC, Trillacoop, Expocafé, Max Havelaar, Equal Exchange and consumers) were aligned in 2015 to profile the additional “natural coffee” symbolic service to the combination of services provided by the LRA Fairtrade.

They are aligned by activating a profiling institution from the United States Agricultural Public Policy, USDA Organic, which have just an additional regulated use than the ones regulated by the profiling institution (*Normas Asprocafé 2011*) of the LRA Fairtrade: the complete interdiction of both synthetic fertilizers and prohibited agrochemicals.

Also, from the governance mechanism described in the LRA Fairtrade, there is an additional one that guaranteeing the dialogue between the producers and the roaster: the annual visit of Equal Exchange that includes meetings with the staff of the Cooperative and Asprocafé (and if necessary with Trillacoop and Expocafé), and coffee farmers themselves. This annual visit allows that profiling actors can express themselves if they perceive a risk (in quality or quantity) in the provisioning of the services that they are interested in. Thus, as members of the LRA, they can collectively search for a solution. The best example of this was the triple circumstance<sup>300</sup> that hit harsh coffee culture in Colombia in the second half of 2012 (and that would eventually produce an unprecedented crisis in February 2013<sup>301</sup>) but was effectively anticipated by the actors of the

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<sup>298</sup>The north American roaster Equal Exchange is a worker-owned cooperative (with sales of USD 70 million in 2016) characterized by equity and democracy: the 100 employees regardless of their position have an equal share of the shares and receive an equal portion of profit or loss; Additionally each employee has the right to vote, to be elected as a member of the board of directors, to information and to freedom of expression. (Exchange, 2017)

<sup>299</sup> Especially after USDA proposal for organic labelling in 1997 (Ellsworth, 2001, p. 10)

<sup>300</sup> The drop of production to record lows due to the prolonged winter produced by the phenomenon of the girl, the fall in coffee prices in parallel to that of other commodities due to the financial crisis of 2011, and a revaluation in Colombia due to the increase in the export of oil.

<sup>301</sup> The coffee strike between February 25 and March 8, 2013. According to Hernández (2013) it was "the most critical moment in the history of Colombian coffee".

LRA organic. In November 2012, during the annual visit they agreed that to counterbalance the low international prices for organic coffee, they should move upwards to the organic specialty market, so they established an agreement known as the Organic Plus<sup>302</sup> to identify, supply and export organic coffee depending on its cupping score under the Q system<sup>303</sup> in order to produce the “exceptional coffee” taste related services that could increase the value for the consumer and thus the monetary services for the producer.

These agreements are then implemented through the mechanism provided by the LRA Fairtrade, mainly the Asprocafé team but also the Cooperative one. In fact, the organic group of Asprocafé is the most benefited by Asprocafé services provision because of the challenge of organic production, which can be more productive than conventional production but with significantly more demands in terms of time, knowledge and physical effort: feeding the soil without the use of synthetic fertilizers involves fertilizing each tree in a year with several kilos of organic matter<sup>304</sup> prepared in such a way by the farmer that compensates for the nutrients consumed by the previous harvest (which requires time for the decomposition of farm waste) and knowledge to know how, what and in what quantity organic ingredients must be mixed. A conventional coffee grower in Riosucio would have a good yield by fertilizing with 250 grams per year / coffee tree using the bulk of fertilizer recommended by the agronomist of the Committee with the proportions of macroelements (mainly nitrogen, phosphorus and potassium) that most closely match the needs of their crop, according to a study of soil<sup>305</sup>. That is why the extension service known as “*promotores e inspectores*” of Asprocafé made 3 visits to each organic producer in 2015 (two accompanying plus one audit), while making 0.5 visits to each Fairtrade producer during the same period<sup>306</sup>; there were some field days with international experts for organic producers<sup>307</sup>; and the cupping test according to the SCAA is conducted exclusively by the Cooperative (using its quality lab and its personnel) to the group of organic farmers<sup>308</sup>.

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<sup>302</sup> “Informe Sistema de Control de Asprocafé Ingruma 2014-2015”, Asprocafé, 31 de agosto de 2015.

<sup>303</sup> “Se firmó un convenio para un programa piloto para comprar el café orgánico según el puntaje en taza, participan los productores cuyo puntaje sea igual o mayor a 83 puntos, el café que califique en este rango fue comprado y empacado en bolsas grainpo facilitadas por el comprador, debe ser trillado aparte, empacado y enviado separado del café orgánico común y tendrá un precio mayor.” Informe X Asamblea General de Delegados Asprocafé Ingruma 2012”, Asprocafé, 27 de marzo de 2013, pág. 13.

<sup>304</sup> Research by CENICAFE shows that to compensate chemical fertilization, 12 kilos of decomposed pulp per tree per hectare are required (Khalajabadi, 2008, p. 34). In interviews with organic coffee farmers in Riosucio, 2 or 3 kilos are enough per tree, but it is not just pulp; a “cocktail” of organic matter is required. According to the Coop / SICA database, these coffee farmers have productions that are much higher than the average of conventional coffee growers.

<sup>305</sup> Interview with Nicolás Bañol, coordinator of the extension service in Riosucio.

<sup>306</sup> Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café Ingrumá. Págs. 10 y 15.

<sup>307</sup> In July 2015, 3 field days were held with the expert Anna Caspersen on sensory quality; Equal Carlz Kadlec Green Coffee Procurement Manager on Commercial Issues; and the Honduran organic producer Fredy Pérez about microbiological broths and forest microorganisms. Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café Ingrumá. Págs. 15.

<sup>308</sup> Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café Ingrumá. Págs. 15.

Unlike the LRA Fairtrade, in the case of the LRA organic, both actors and the Resource are aligned so Equal Exchange can, according to the market, offer Riosucio coffee either in their blends of organic coffee or as a single origin like the seasonal coffee January-March 2015 "Los Cuernos del Diablo" mentioned above. This alignment of both actors and the Resource allow us to categorize this LRA as a **high coherent**.

- Third layer: LRA Nespresso

The LRA Nespresso was developed at the beginning of two thousand by the initiative of the Swiss roaster Nespresso. It wanted to align other profiling actors around a profile it needed to fulfill its value proposition for consumers, a combination of services, impossible to reach through markets alone<sup>309</sup>, featured by the "winy" taste related service; the "shared value", "environmentally responsible" and "brand reputation" symbolic services and the monetary services in the form of productivity.

Therefore, leading by the Roaster Nespresso, producers, traders and consumers are aligned: all farmers in Riosucio with more than 0.5ha cultivated in coffee and located over the 1.500 m.a.s.l (excluding the Resguardo de San Lorenzo); *La Cooperativa de Caficultores del Alto Occidente*; Cafexport in partnership with the *Comité Departamental de Cafeteros de Caldas*; Trillacoop (threshing company of the cooperatives); Expocafé (exporter of the cooperatives) which exports the coffee bags from Colombia to Nespresso facilities in Switzerland; Nespresso which roasts, packages in capsules, and delivers into customers' hands; and ten million consumers around the globe who are members of the Nespresso Club. In addition, stakeholders in both production and consumption are aligned: *Fundanatura* an NGO in Colombia and Rainforest Alliance an international NGO, both associates to the international group the Sustainable Agriculture Network.

The central institutional piece is the "Tool for the Assessment of Sustainable Quality", that is composed of both, the Generic Tasq™ Tool and the Tasq™- Colombian module. The first includes 296 conducts that must be followed by profiling actors (including farmers and traders) around the globe to trigger the monetary and symbolic services, the second focus on local particularities to enhance the taste relates services, through an additional set of 34 conducts that must be carried on mostly by producers (Nespresso, 2013).

The governance mechanism to translate these regulated uses into observed uses is the "Nespresso AAA Sustainable Quality™ Coffee Program" that started initially through informal agreements with neither reporting mechanisms nor formal means of communication Alvarez et

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<sup>309</sup> "Of the 10 per cent that is considered high-quality coffee, only about 10 per cent complies with the flavour and quality profile that we need in our coffee. Securing long-term availability of this precious raw material is very important for us". Nespresso's quality manager quoted by (Alvarez, Pilbeam, & Wilding, 2010, p. 173)

al. (2010, p. 176). As the program evolved<sup>310</sup> the Colombian coffee supply area was divided into four “clusters”<sup>311</sup>. One is the cluster Expocafé that governs six sub-clusters in 17 municipalities of two departments (6,742 coffee farms (Cafexport, 2015b, pp. 2-3)). It is divided into five subclusters, one of which is led by the *Cooperativa de Caficultores del Alto Occidente de Caldas* to profile the Resource in Riosucio.

The main governance mechanism is the *Encuentro bianual del Clúster Expocafé*<sup>312</sup> in which representatives of all profiling actors meet: representatives of coffee farmers; the Comité; the Cooperatives; Trillacoop; Expocafé; Cafexport as cluster coordinator and Nespresso<sup>313</sup>. The negotiation on quantities and prices goes after the negotiation on how to influence the use of constituents. Once the profile is agreed, the cluster responds with an intervention proposal (on both producers and traders). Some interventions are prioritized and financed through either the contribution of the members of the cluster or via the formulation of projects to be funded by third parties. Also, the monitoring and evaluation are agreed using goals and indicators for both the cluster team (e.g. agronomists paid by the cluster who provide the technical assistance) and for the allies (e.g. kilos provided by the Cooperatives or projects managed by the Comité). The questions that guide these meetings is: what are the uses required by the profile that are not being implemented? How can this undesirable behavior be modified?

The answer is written down in an Annual Plan coordinated by Cafexport<sup>314</sup>. In Riosucio, the Comité leads the interventions in relation to the coffee crop<sup>315</sup>, and the Cooperative leads the intervention in relation to the farmer<sup>316</sup>. This central piece of the implementation is funded by

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<sup>310</sup> The AAA program was reorganized on four pillars in 2006: 1- structuring the program through geographical areas named clusters; 2- Refining the Tasq™; 3- Setting up key performance indicators; 4- Establishing formal contracts with partners (Alvarez et al., 2010, p. 176).

<sup>311</sup> Each cluster is composed of a group of actors lead by one coffee exporter: Two big international traders: Volcafé that operates the cluster in Cundinamarca and Neumann Group that operates in Huila. Two big local traders: the FNC that operates in Cauca and Nariño and Expocafé that operates in Caldas and Antioquia.

<sup>312</sup> All information in this paragraph comes from the Interview with Oscar Daniel Sánchez, the technical director of the cluster Expocafé in Riosucio.

<sup>313</sup> Five *Encuentros bianuales* have taken place in 2008, 2010, 2012, 2014 and 2016.

<sup>314</sup> That implies from the lifting of the baseline of beneficiaries and the design and implementation of action plans per farm to advance the TASQ™ tool, to the administration of the information system that supports documentarily the knowledge of the resource.

<sup>315</sup> The Comité’s intervention seeks to innovatively activate the technology transfer from the coffee public policy. Indeed, Cenicafe’s practical results to maximize production and minimize environmental impact are complemented by the TASQ™ criteria, which not only seek to improve productivity by reducing environmental impact but also improve quality to produce the aromatic profile demanded by Nespresso. Thus, technologies are transferred to the coffee growers through a more intense accompaniment in quantity and quality: in addition to the six-agronomist-plus-a-coordinator team in Riosucio, the Comité funds two additional agronomists for working exclusively with the Nespresso coffee growers in group activities that emphasize quality issues (fermentation, drying and coffee varieties) and individual activities that emphasize compliance with the TASQ™ (Cafexport, 2015a, p. 3). This LRA manages to provide three visits per farmer per year (two extension visits and one audit visit) as well as a higher number of group activities.

<sup>316</sup> The Cooperative’s intervention seeks to activate the private agreement with Nespresso in order to make coffee farmer feels proud to belong to this LRA. Hence, farmers would adopt technology more easily, would be honest when implementing the practice and the loyalty would be enhanced so the farmer would prefer the Cooperative for

Cafexport, the Comité and the Cooperative through a public-private project known as *implementación AAA*<sup>317</sup> roughly USD 0.9 million of the USD 6 million budgeted by the Cluster in its area of influence, including Riosucio, between 2005 and 2012 (Cafexport, 2012b, p. 20).

After 2012, four other public-private projects were funded mainly by Nespresso (USD 2.3 million) the FNC (USD 0.5 million) and other partners like USAID or the local environmental agency (USD 2.3 million) were budgeted to incentivize a particular use of the *infrastructures* during the planting process<sup>318</sup>, and the *know-how* in two activities during the cultivation process (nutrition<sup>319</sup> and farm administration) and all the activities of the post-harvesting process<sup>320</sup>.

Additionally, another intervention of the cluster funded by the Sustainable Coffee Program<sup>321</sup> sought to influence the use of *know-how* by traders in all the activities of the trading process through three intervention: 1- the provision of equipment for a quality lab in the Cooperative, and the certification as SCAA cuppers of the cooperative personnel; 2 - the training in the warehouse practices required to maintain the profile; 3- the cupping profile of coffee in the 293 *veredas* and the analysis of the information to identify the practices that have the highest incidence in this cupping profile, hence which have to be reinforced by the technology transfer.

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selling his coffee. According to Robledo (2012), this intervention has three components: 1- Cooperativism, through workshops provided by the Cooperative's Education Committee; the active participation in decision-making scenarios such as the *Asamblea General de Delegados de la Cooperativa* and, the access to benefits from the cooperative effort; 2- Communication, so they can position the Nespresso brand in the minds of coffee growers and associate it with positive feelings; 3- Traceability, it originates with a membership-card but it is materialized in the information system of Cafexport updated with every farm visit.

<sup>317</sup> It was the only project conducted before 2011 in Caldas by this LRA, which focused on a five step process: 1- a diagnosis for each farm according to the TASQ; 2- A formulation of an action plan for each farm; 3- The training of the farmers; 4- Support and monitoring; 5- Audit in the TASQ. (Cafexport, 2012a, p. 4)

<sup>318</sup> "*Proyecto Arbol de Vida*" to increase the area cultivated in *arabica coffea variety Castillo* through which *chapolas* (coffee tree between 2 and 6 months) and mycorrhiza (fungus that symbiosis with coffee roots and increases the absorption of nutrients) were delivered to coffee farmers. Once the planting was verified, COP 300 (USD 0.13) for each new tree planted to cover the labor costs was delivered to the farmer. Three months later, another COP 300 per tree planted was granted to cover the costs of fertilization (Cafexport, 2012a, p. 6)

<sup>319</sup> "*El proyecto de fertilización*" acted as a matching grant. If the farmer bought 450 kg of fertilizer/ha/year the project would give him the same quantity aiming to be closer to the optimum of 1200 kg of fertilizer/ha/year. (on Farms averaged between 4500-5500 plant/ha, hence an equivalent of 250 grams fertilizer/year per coffee tree (Cafexport, 2012a, p. 7)

<sup>320</sup> "*El proyecto de certificación*" involved providing the coffee farmer with septic systems for basic sanitation, warehouses for agrochemical storage and water treatment systems and composters to reuse waste; also hulling machines, fermentation tanks and other tools to reduce the likelihood of cup defects; and the delivery of first aid kits, signage and record books to improve the administration of the farm with the objective of certifying them in the Rainforest Alliance standard (Cafexport, 2012a, p. 5). "*El proyecto de Central de Beneficio*" intended to build a communal post-harvesting facilities in order to concentrate in one place the most pollutant activity to tackle down with proper water treatment system. It was built in another municipality so Riosucio farmers were not benefited.

<sup>321</sup> Today it is called, the *Global Coffee Platform*). Initially, the SCP was financed by the Cooperation for Development public policy of the Government of the Netherlands, Denmark and Switzerland. Expocafe cluster was benefited from the annual call for "*field level projects*" in 2015 (SCP, 2016).

Also, this LRA goes upstream to influence the very end of the value chain, the consumers. Firstly, it identifies opportunities in the single-dose coffee market <sup>322</sup> and then, they create a communication strategy to influence consumers' *know-to-appreciate*. This LRA targets the *aspirational consumers*<sup>323</sup> for whom the company's credible effort to make a better world is crucial. Aspirational represent the biggest portion of consumers<sup>324</sup> and their preferred brands (categorized as "meaningful brands") are the winners in the global economy<sup>325</sup>. Henceforth, to attract this group of consumers the operation must be sustainable under the lenses of credible institutions<sup>326</sup>. Nespresso strategically invited the Sustainable Agriculture Network to advise the design and implementation of the AAA program, internalizing within the LRA the credibility of Rainforest Alliance a well-known stakeholder in consumer countries and credible stakeholders in producing countries<sup>327</sup>.

To conclude, the LRA Nespresso in Riosucio has an alignment with a node (Nespresso) and two directions (from the roaster to the producer and, from the roaster to the consumer) that coordinates all the actors around the profile that produces the monetary services presented, the "winy" taste related service and the "environmental responsible" and "shared value" symbolic services to enhance the "reputation of the brand" (mainly its vectors of quality and exclusivity) symbolic service. Hence, we qualify this as a **high coherent** LRA.

- [Third layer: LRA La Vereda](#)

Finally, in this same layer, the portion of the Resource that grows within the borders of the Resguardo de San Lorenzo is meant to increase the monetary services received by producers, by profiling the "environmentally responsible" and "indigenous coffee" symbolic service, and the "citric acid" taste related services. An alliance led by the FNC in which participate: indigenous coffee farmers of the Resguardo de San Lorenzo; the Comité; the Cooperative, the FNC (a trader) and the American Roaster Keurig Green Mountain<sup>328</sup>.

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<sup>322</sup> Consumer acquire a brewing machine to prepare in his place a cup of coffee that was packed in personal doses.

<sup>323</sup> "they are materialistically oriented while at the same time aspiring to be sustainable in their purchases and beliefs." (Bemporad, Hebard, & Bressler, 2012, p. 29).

<sup>324</sup> In the study "Re: thinking, consumers and the future of sustainability" in which an online survey was conducted in 2012 to 6,224 people in three developed markets and three in development, the segment categorized as aspirational, with 37%, represented the highest percentage (Bemporad et al., 2012).

<sup>325</sup> "Meaningful Brands have outperformed the stock market by a staggering 206% over a ten-year period between 2006 and 2016". Meaningful brands, official webpage.

<sup>326</sup> "Consumers across all six markets look to certification seals or labels on product packaging (40%) as the most trusted source of information about whether a product is environmentally and socially responsible (...) Barely one in ten consumers rely on company advertisements or website content, reinforcing the perception that the most reliable claims often come from sources largely beyond a company's control" (Bemporad et al., 2012, p. 16).

<sup>327</sup> In 2006, for the Expocafé cluster in Colombia, the NGO Technoserve was integrated; in 2007, for the clusters of Mexico, Guatemala and Costa Rica, the International Financial Corporation was integrated; for 2008 the FNC was integrated for the clusters of Colombia (mainly operating the Cauca and Nariño cluster) and the business school INCAE of Costa Rica to evaluate the impact of the program (Nespresso, 2014).

<sup>328</sup> The information in this section comes from interviews with: 1- a leading SACEV coffee farmer who requested the reservation of his name. 2- Diego (Cooperative's employee): 3- Pedro Felipe Gómez, coordinator of the Specialty

It begins when the FNC's commercial division managed to reactivate the LRA La Vereda selling 4,125 coffee La Vereda bags (290 thousand kilos) in 2012 to Keurig, after 4 years without a client (next chapter). As Keurig is the main competitor of Nespresso in the single-dose coffee market in the US, both compete for the same segment of aspirationalists for whom real-perceived environmental sustainability is a major issue when buying. That is why, since 2012 with the arrival of a new CEO, Keurig formulated their sustainability strategy in three pillars to meet by 2020<sup>329</sup> funded with USD 38.2 million in 2015 (Keurig, 2015, p. 12): 1- Incorporating the necessary technology so that their capsules could be recycled; 2- Investing in protecting the basins to compensate for the total amount of water consumed when preparing coffee; 3- Partnering with third parties to improve the quality of life of coffee farmers and provisioning according to their own "Responsible Sourcing Supplier Guidelines" declared "fully acceptable" with the Rainforest Alliance Standards (Keurig, 2015, pp. 72-75).

As a result, Keurig employees visit Riosucio in 2012 and committed to buy Café la Vereda with a premium and a direct investment in the communities<sup>330</sup> using the same SACEV governance structure: The "*Socios y Amigos del Café Exótico La Vereda (SACEV)*" was developed in the year 2000 with roasters which agreed to pay a minimum price of USD 1.60 per pound and an additional premium of USD 0.15 per pound to be invested in the producer's community (Ángel, 2008, p. 24). The premium was collected by the Cooperative to finance the provision of services (like hulling machines, fermentation tanks, and water treatment tanks) agreed with the *Comité Asesor Café la Vereda* and executed under the leadership of the Comité. In order to guarantee the consistency of the Resource's profile, the *Comité Asesor Café la Vereda* used its foundational basis to hold each leader of the coffee growers in their village responsible for making coffee farmers behave as expected<sup>331</sup>. This leader had to accompany those who committed themselves<sup>332</sup> and escalate to the *Comité Asesor Café la Vereda* meritorious infractions. The "*grupo veredal*" (a group of farmers in one Vereda) with its leader emerged as the intervention unit. By focusing the intervention on the *grupo veredal* rather than on the coffee grower, both the person in charge of the Cooperative that delivered the equipment and the extension agent of the Comité who

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Coffee Program in the *Comité Departamental de Cafeteros*. Additionally, reports from both the cooperative and the FNC (CDCC & CCAOC, 2016; FNC, 2013).

<sup>329</sup> "1- Sustainable products; 2- Clean water for everyone; 3- Strong Supply Chain. 2020 Targets: 1- Engage 1 million people in our supply chains to significantly improve their livelihoods, including water security and climate resilience. 2- Source 100% of primary agricultural and manufactured products according to established Keurig Green Mountain responsible sourcing guidelines. 3- 100% of K-Cup® pods will be recyclable. 4- Reduce life-cycle greenhouse gas (GHG) emissions of brewed beverages by 25% vs. 2012 baseline. 5- Achieve zero waste-to-landfill at our owned and operated manufacturing and distribution facilities. 6- Engage 100% of employees to understand our vision and values and present opportunities that allow them to contribute to our targets. 7-Balance 100% of the water used in our 2020 brewed beverage volume in all our beverages, ounce" Source: (Keurig, 2015, p. 13)

<sup>330</sup> *Informes de Administración y Gestión presentados ante la Asamblea General Ordinaria de la Cooperativa del Alto Occidente en los años 2011 y 2012.*

<sup>331</sup> "*cada vereda tenía un líder (...) y era él que tenía que hacer la concientización de cada cafetero*". Interview with the leading coffee grower of SACEV.

<sup>332</sup> Only after a personal commitment, the coffee farmer had an identification card, with which, he could sell his coffee as Café la Vereda, meaning best prices and benefits offered by the SACEV.

trained them in how to use the equipment, in a few-dozen visit they can cover the whole population.

The renewed alliance with Keurig implied the provision of the “environmentally responsible” symbolic service, in addition to the two previously provided by the LRA La Vereda (the “indigenous coffee” symbolic service and the “citric acid” taste related services). So, actors agreed to implement the Keurig’s “Responsible Sourcing Supplier Guidelines” profiling institution by concretizing both the agricultural and the cooperation for development public policies. Initially, through a project financed by the program of *Allianzas Productivas*<sup>333</sup> of the Ministry of Agriculture managed by the Comité to influence the use of *know-how* in one activity of the cultivation process (administration of the farm)<sup>334</sup> and in three activities of the post-harvesting process (hulling, fermentation and drying)<sup>335</sup>. Subsequently, another project financed in ¾ parts by Socodevi<sup>336</sup> and ¼ part by Keurig to influence the use of *know-how* in one activity of the cultivation process (farm management)<sup>337</sup> and one activity in the post-harvesting process (waste management)<sup>338</sup>. In this regard, Keurig decided to maintain the brand Timothy’s and its communication strategy to influence the *know-to-appreciate* by incorporating the legend “this coffee is Rainforest Alliance Certified”<sup>TM</sup><sup>339</sup>.

However, the new SACEV among indigenes of San Lorenzo, the Comité, the Cooperative, FNC (as marketer), Keurig and consumers, is incoherent because the investment in the *infrastructures* and *know-how* profiles a different combination of services (monetary services and citric acid taste related service) than the ones encourages through the investment in the *know-to-appreciate* (indigenous coffee and environmental responsible symbolic services). It is so because, on the one hand, there is a tradeoff between the provision of the “indigenous coffee” symbolic service and the monetary services. On the other, the communication strategy in April 2017 states that Café la Vereda is certificated Rainforest whereas up to the first quarter of 2017 the Cooperative had not supplied the first kilo of Café la Vereda certified in Rainforest Alliance (Clearly it is a time issue because is highly plausible that they will be certified). Thus, we qualify this as a **low coherent** LRA.

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<sup>333</sup> A program whose purpose is to support the small producer so that he can reach the standards required by a commercial ally. The requirement is that the project be presented and co-financed by both actors at least.

<sup>334</sup> 162 agrochemical warehouses, 318 medicine cabinets, 1200 warning signs (CDCC & CCAOC, 2016, p. 18)

<sup>335</sup> 9 depulping machines, 30 tank-tubs and plastic were delivered to cover the canopies of 160 beneficiaries (CDCC & CCAOC, 2016, p. 17.19 y 20.)

<sup>336</sup> *Société société de coopération pour le développement international*, is a network of cooperative companies based in Canada that seeks to share their technical expertise with partners in developing countries to create, protect and distribute wealth. Socodevi, oficial webpage.

<sup>337</sup> Identification of nine training centers (25 neighboring coffee growers) to provide 14 training courses (four training courses on equality between women and men, three socio-business training courses and seven technical trainings). *Cláusula 3.1.1 numeral I y II. Contrato de servicios entre Socodevi y la Cooperativa del 11 de junio de 2015.*

<sup>338</sup> Delivery of 229 SMTA 70 Wastewater Treatment Systems to 229 producers. *Cláusula 3.1.1 numeral III. Contrato de servicios entre Socodevi y la Cooperativa del 11 de junio de 2015.*

<sup>339</sup> Keurig, website to order the capsules of la Vereda coffee.

### 5.2.3. Closure

As mentioned in the conceptual component, closure refers to the market position of actors that allow them to profile the Resource in their advantage.

This section evaluates the presence (or absence) of closure in each LRA, by analyzing throughout the coffee value chain the barriers of entry established by profiling actors. Namely: economies of scale; product differentiation; capital requirements; cost disadvantages independent of scale; access to distribution channels; government policy.

- LRA Standard

The evaluation of this condition is shared by both LRAs Standard in Riosucio and Buesaco. Therefore, its development can be read in its section in chapter 7.2. It concludes that this LRA has **low closure** because of the lack of barriers within national frontiers.

- LRA Regional/Starbucks

The evaluation of this condition is shared by both LRAs Starbucks in Riosucio and Buesaco. Therefore, its development can be read in its section in chapter 7.2. It concludes that this LRA has **low closure** because, in the end, both farmers and traders are easily interchangeable by Starbucks.

- LRA Fairtrade

This LRA lead by Asprocafé tries to generate the “product differentiation” barrier of entry by activating certification mark legislation<sup>340</sup> that implies obtaining a license for using the Fairtrade distinctive sign. Once Asprocafé has been audited and certified by Flocert, they can take advantage of Fairtrade’s local and global reputation to increase their monetary services.

Indeed, the Fairtrade System leverages individual effort of the whole set of profilers and stakeholders to collectively contribute to the global positioning of the Fairtrade distinctive sign<sup>341</sup>. The collective effort has produced a significant positioning for a collective mark<sup>342</sup> This

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<sup>340</sup> “The countries of the Union undertake to accept for filing and to protect collective marks belonging to associations”. Art. 7b on collective trademarks of the Paris Convention for the Protection of Industrial Property 1967. Some national legislations distinguish the collective mark that can only be used by members of a specific group of users; and the certification mark that can be used by anyone while complying with the standards defined by the owner of the same.

<sup>341</sup> E.g. Swiss Fair Trade (an umbrella organization for the Swiss actors engaged with the Fairtrade movement including Max Havelaar) carried out since 2014 the campaign “Fair Trade Town” that manages to engage the political actors at the municipal level to raise awareness and to take an active position in favor of fair trade.

<sup>342</sup> “D’après une étude réalisée auprès des consommateurs suisses par GlobeScan en 2015, 88 % des personnes interrogées connaissent Fairtrade Max Havelaar, 84 % lui font confiance, ce qui se traduit par 82 % d’acheteurs fidèles” (Havelaar, 2014, p. 13).

“product differentiation” allows goods and services distinguished by the Fairtrade brand to increase the consumer's willingness to pay a higher price<sup>343</sup>. However, it faces ferocious critics that could undermine its attractiveness<sup>344</sup>.

It could be considered that among the profiling actors, roasters are the main affected by Fairtrade standard because they have to pay a minimum price while their competition is provisioned at lower market prices. However, they usually produce various types of packaged coffee with their own trademarks to different market segments, one of which is the Fairtrade one. Roasters purchase a portion of Fairtrade certified coffee to sell it with their brand alongside the Fairtrade collective mark to Fairtrade consumers, while another portion of conventional coffee is purchased to be sold with their owned brands. So, more than a product differentiator it provides a piece of information for consumers similar to the food labeling legislation.

Likewise, it could be considered that barriers are surmountable for small producers but not for bigger farms. In the case of Riosucio, there are three requirements: being associated with Asprocafé; being committed with the “*normas Asprocafé*”, and selling Excelso quality coffee. The first condition implies a maximum size of the crop of 10 hectares (excluding 6 of the more than 3 thousand farms in the municipality). However, when we were doing the fieldwork in 2016, the Cooperative had already started its process to certify itself as Fairtrade through the Fairtrade USA<sup>345</sup> that has no requirements in terms of land ownership. So, eventually, there would not be any barrier of entry for producers. This low barrier of entry for producers generates that a significant proportion of this certified coffee is not purchased as Fairtrade coffee. According to Panhuysen and Pierrot (2014, pp. 14-15), only one-third of Fairtrade certified coffee was acquired as Fairtrade in 2013. In Riosucio it was even lower, only 24% of the total Fairtrade produced coffee was sold as Fairtrade by the Cooperative in 2015<sup>346</sup>.

To conclude, the Fairtrade trademark is well protected and is very well positioned. However, more than a product differentiation at the roasters level it provides information for consumers, and barriers of entry at the production segment are easily overtaken. Hence, we qualify this as a **low closure LRA**.

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<sup>343</sup> Tallontire, Rentsendorj, and Blowfield (2001) in a review of the literature at the beginning of the millennium demonstrate the complexity of ethical consumption and the relevance of methodologies that correctly capture the desire to pay without guiding the response. Later studies with methodologies that faced these challenges, have found positive evidence that the Fairtrade brand increases the willingness to pay by consumers (Didier & Lucie, 2008; Loureiro & Lotade, 2005).

<sup>344</sup> Critics comes from its failure to account for basic economic laws (Wydick, 2014) that do not improve wellbeing of the poorest ones (De Pelsmacker, Driesen, & Rayp, 2005).

<sup>345</sup> “The unexpected exit (from Fairtrade International) allowed Fairtrade USA to pursue its controversial strategy ‘Fair Trade for All’ to certify large, private coffee plantations, aligning itself more closely with mainstream sourcing requirements” (Levy et al., 2015, p. 388).

<sup>346</sup> Author's calculations using data from the *Informe de Administración y Gestión a la trigésima octava asamblea general ordinaria de la Cooperativa en 2015*.

- LRA Organic

This LRA co-directed between the North American Roaster Equal Exchange and Asprocafé used the “government policy” barrier of entry to generate the “product differentiation” barrier of entry.

The main barrier of this LRA is a result of the concretization of the public policy of agriculture of the United States of America: The Organic Food Protection Act of 1990<sup>347</sup> that mandated the United States Department of Agriculture to develop the standard of organic food labeling. Since its introduction in 2000 as the National Organic Program<sup>348</sup>, it has increased both consumers’ willingness to pay<sup>349</sup> and sales<sup>350</sup>, even though the high costs of organic production have been transferred to consumers (Foxnews, 2012). Although it works in practice as a certification mark that allows users to use it if it meets the specifications, "it's food labeling law rather than trademark law that governs its use"(Atkins, 2009).

Similar to the case of the Fairtrade, the whole set of actors invest individually to jointly leverage the positioning of the USDA Organic standard in order to influence the *know-to-appreciate* of consumers. However, unlike Fairtrade, the genesis of the organic standard, by legitimate mandate of the US Congress and its consensual development, immunizes it from the efforts of actors who would earn a market position by discrediting it.

Another difference between the previous LRA is that there is a real effort in the production segment to fulfill the profiling institution that creates a significant technical barrier. Coffee farmers have to change their behavior assuming practices that could be considered disadvantageous compared with the ones assumed by their competition. In the case of Riosucio, it started in 2001 when 83 farmers were certified from a group of 109 farmers that started a few years before. In 2005, this LRA reached its maximum when 388 producers were certified<sup>351</sup>. Afterward a slow but continual decline left only 153 farmers certified organic from more than three thousand farmers in 2015. This illustrates the technical barriers that imply an effort to be certified organic, and then, an effort to maintain the certification.

On the other hand, the barrier is very low for other profiling actors whose main defy is guaranteeing the documentary traceability. In the end, there are more roasters demanding

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<sup>347</sup> “In 1990, Congress passed the Organic Food Protection Act (OFPA) to serve three stated goals: (1) to establish national standards governing the marketing of... organically produced products;" (2) to assure consumers that organically produced products meet a consistent standard;" and (3) to facilitate interstate commerce in fresh and processed food that is organically produced." (Ellsworth, 2001, p. 7).

<sup>348</sup> It allows the use of the following labels: "100 percent organic" when it only contains ingredients produced under the criteria indicated; "Organic" when it contains up to 95%; "Made with organic ingredients" when this proportion is less than 70%.

<sup>349</sup> In a survey of 30 thousand consumers in the United States, 80% reported having paid more for healthy labels on their products (Nath, 2015).

<sup>350</sup> Sales of organic products have grown from US \$ 3.6 billion in 1997 to US \$ 27 billion in 2011 (Nath, 2015).

<sup>351</sup> Asprocafé, “Proyecto Café Orgánico, Evolución”, diciembre de 2005, Riosucio, Caldas.

certified organic coffee, than producers selling<sup>352</sup>. In the case of Riosucio, the whole organic harvest that fulfilled the minimum quality rules to be exported is sold to Equal Exchange, the remaining portion is sold to the domestic market as roasted coffee<sup>353</sup>.

In this LRA, Equal Exchange seeks to influence the *know-to-appreciate* of its consumers by exploiting to the maximum the principles of the Fairtrade and organic movement. According to their Fairtrade principle, they invest in the reputation of its suppliers like Asprocafé. Equal developed a piece of marketing presented in the summer 2013 (Exchange, 2013) and another one in the spring 2015 "Los Cuernos del Diablo" (Exchange, 2015), in which they detailed the collaboration with the organic coffee farmers of Asprocafé and described the process by which the Cooperative Q grader selected the best lots of Riosucio coffee for that packaged product. The reputation that increases the differentiation of Riosucio organic coffee, constituting an insurmountable barrier for producers in other municipalities and regions.

This double combination of the LRA organic that had generated a "government policy" barrier of entry at the production segment and through the marketing campaigns had produced the "product differentiation" at the municipality level, allow us to typify this as a **high closure** LRA.

- [LRA Nespresso](#)

The evaluation of this condition is shared by both LRAs Starbucks in Riosucio and Buesaco. Therefore, its development can be read in its section in chapter 7.2. It concludes that this LRA has **low closure** because, in the end, 53 thousand participant farmers are in "pure competition" among them, and with potential substitutes, i.e. neighbors that could produce similar taste related services but are not integrated, still.

- [LRA La Vereda](#)

This LRA lead by the FNC firstly used the "government policy" barrier of entry to create the "product differentiation"

The activation of the Specialty coffee program of the FNC delimited the geographical area where the production of the profile was likely to be produced, the Resguardo de San Lorenzo. It generated an insurmountable barrier for the producers whose farms were outside this area. Likewise, this program allowed the FNC to use its commercial division and its distribution channels (commercial offices) in different consumer countries to build the reputation of Café La Vereda.

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<sup>352</sup> In an interview with the Director of Banexport, a coffee exporter by rate test in Colombia, he said that he had more orders of certified organic coffee than possibility of offering. Also for Rocio Motato, the demand for organic coffee is far superior that their offer, but the issue is that each time less farmers want to engage in the very demanding organic farming.

<sup>353</sup> Coffee that Asprocafé roast in their facilities to sell as packaged roasted coffee with its registered trademark *Aprocafé Ingramá Orgánico* to the local market.

The FNC sought to protect this reputation by successfully registering the trademark "la Vereda" before the United States Patent and Trademark Office since 2000<sup>354</sup>. This barrier allowed the FNC to have some control on the roasted coffee market: by offering "La Vereda" green coffee to several roasters, the competition among them would increase the prices of supply while reducing, at the same time, the possibility that roasters could generate barriers of entry. In parallel, by controlling the delimited area at the production segment (increasing or reducing it depending on the demand) the FNC reduced the possibility to lose both the access to the supply of "La Vereda" coffee and their control on the "product differentiation" that could eventually be appropriated by farmers.

In effect, the commercial team achieved to generate the "product differentiation" barrier of entry of the Café la Vereda in the green coffee market and got clients willing to pay a higher value to acquire it<sup>355</sup>. This doubled the demand<sup>356</sup>, so the FNC extended the supply zone of the Café la Vereda. Firstly to farms closer to the previously altitudinal fringe in the Resguardo de San Lorenzo, and then, to the neighboring two veredas in the municipality of Supía (FNC, 2013, p. 21).

However, in addition to this border management, the FNC encouraged new methods of cultivation that changed the aromatic profile producing coffee rejections by buyers<sup>357</sup>, thus affecting the "product differentiation" barrier of entry. In a market with fierce competition, eventually this product differentiation was not such a barrier: firstly, with the cancellation of purchase orders from Bucks County and subsequently the loss of premiums with the sale of Timothy's<sup>358</sup>.

The reactivation of the program in 2012 with Keurig, a subsidiary of the JAB Holding Company, the second largest buyer of coffee after (but very close to) Nestlé, rearranged the balance of power in favor of the roaster in a similar way to the LRA Nespresso. Through both the protection of their patents<sup>359</sup> and a recognized marketing campaign<sup>360</sup>, Keurig has been positioned as the leader of the single-doses coffee market in the United States<sup>361</sup>.

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<sup>354</sup> *Registration Number: 4602172* (TESS, 2018).

<sup>355</sup> Two North American companies Timothy's and Bucks County that after the SCAA Fair in Philadelphia in 1999 agreed to pay a premium and guarantee a minimum purchase price

<sup>356</sup> 142 thousand kilos of La Vereda coffee supplied by the Cooperative in 1999 to 372 thousand kilos in the 2000 (Ángel, 2008, p. 32)

<sup>357</sup> *"A ellos (Café la Vereda) les rechazaron café por pérdida de perfil hasta que se perdió la comercialización"* Interview with Oscar Daniel Sánchez. *"Las características se perdían por temporadas. No llegaba por el perfil y había rechazos. Pero eventualmente el perfil regresaba"* Interview with Diego.

<sup>358</sup> The provision of Café Vereda, however, remained. Given the quality of this coffee, the FNC used it to fulfill their most demanding orders, which recognize better prices not for being Café La Vereda but for having superior quality. Expectedly, as being sold as high quality standard coffee, Café la Vereda did not produce premiums for participant farmers, so any barrier that had existed disappeared.

<sup>359</sup> Keurig has patents on the filtration system and its capsules, called K-Cup® Packs. To see the full list of their patents (Keurig, 2017b)

<sup>360</sup> They have received the Harris Poll EquiTrend® "Brand of the Year" award since 2012, meaning it has been the strongest brand in the single-doses coffee market for several years (HarrisPoll, 2018).

<sup>361</sup> US \$ 4.2 billion in sales and an operating profit of US \$ 962 million (Keurig, 2017a).

Among a portfolio of approximately 530 coffee and other beverages brands, Keurig had relaunched "Timothy's La Vereda", the brand associated with Café la Vereda in Canada. This single-sourced packaged coffee produced the "product differentiation" barrier of entry in favor of both the roaster and the producer: For the former in the single-dose coffee market, for the latter in the green coffee market. Indeed, producers and traders aligned by this LRA deliver the quantities (with the qualities) of Café la Vereda demanded by Keurig, in exchange for a premium, which includes investment in development projects.

To conclude, as in the case of LRA Nespresso, in this one there are barriers in the roasters segment. However, unlike that LRA, in this case, there are also barriers in the production segment that impede the participation of a coffee farmer from the areas not included in the perimeter of Café La Vereda supply. Therefore, we consider this as a **high closure** LRA.

### 5.3. Intermediary synthesis: Inputs to test our first hypothesis

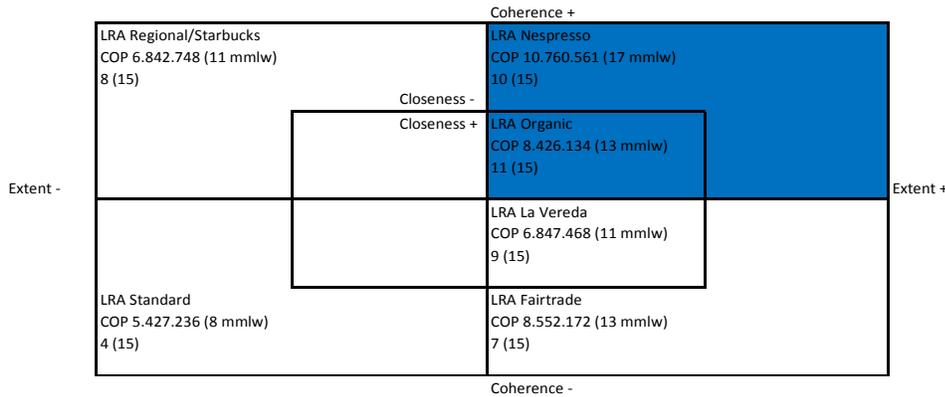
After analyzing each one of the LRAs in the light of the three conditions proposed in an independent manner, we can take a step forward to assemble together the combined variation of these dimensions by each LRA. Thus, we cluster them in six configurations.

- 1- "Invisible hand": In the LRA Standard, uses of Resource constituents are poorly regulated and coordination to enhance the provision of demanded services by all profiling actors is mainly absent, the strong competition incentivized profiling actors to prioritize monetary services maximization through boosting production while reducing costs.
- 2- "Cunning entrepreneur": In the case of the LRA Regional/Starbucks, the roaster (Starbucks) has the power to decide the few main uses they are interested in, and they produce the mechanism to control them strictly. It prioritizes a simple profile that hardly provides enough services demanded by actors in Riosucio.
- 3- "Ambitious": For the LRA Fairtrade, on the other corner, the Asprocafé regulations for profilers are well above the FLO regulation for traders and rosters. Thus, potential services profiled by producers vanish when scaling up the coffee value chain, especially taste related services.
- 4- "Naïve": The LRA La Vereda regulates uses to profile a complex combination of services sought by a coalition of producers and stakeholders in production (FNC) without taking into account other profiling actors (roasters and consumers). Without the power needed to influence the latter, the whole combination of services demanded by the former is not going to be produced.
- 5- "Responsible entrepreneur": In the case of the LRA Nespresso led by the roaster (Nespresso), traders, producers, and stakeholders in production and consumption reach an agreement on the uses to profile a complex resource that is well coordinated. A profile that provides services as long as they are compatible with Nespresso's demands.
- 6- "Visible hand": In the LRA Organic, both the producers (Asprocafé) and the roaster (Equal Exchange) led a coalition which includes traders and stakeholders in both production and consumption to agree on the uses to profile a complex combination of services well-

coordinated. A profile that provides services as long as they are compatible with both producers' and roaster's demands.

Furthermore, we merged this LRA categorization with results from chapter 5.1 in figure 10.

Figure 10 Services provision by LRA according to the combined variation of the three conditions. Source: the author



The “invisible hand” LRA Standard profile the lowest combination of monetary, symbolic and taste related services. Whereas both the “cunning entrepreneur” LRA Starbucks and “ambitious” LRA Fairtrade with just one attribute high, provides a higher level of service provision, very similar to the level provision of the two-high-conditions “naïve” LRA Vereda. At the top, both the two-high-conditions “responsible entrepreneur” LRA Nespresso and three-high-conditions “Visible hand” LRA Organic profile the highest combination of monetary, symbolic and taste related services.

## Chapter 6. Actors' games

The variation of the *extent*, *coherence* and *closure* in each of the six LRAs that were identified in Riosucio, was a result of the activation of different institutions steaming from both the coffee public policy (described in chapter 4) and the regulatory system (described in Annex 2.1) in a complex process that could be traced to the Spanish arrival (described in Annex 2.2). In this chapter, we would explain the strategies to activate institutions followed by the actors in Riosucio, from the breakdown of the coffee quota agreement in 1989 to 2015.

Having say the above, we divide this chapter in four consecutive actor's games (1989-1996; 1997-2003; 2004-2011; 2012-2015) composed of three actions (actors' coalition; mobilization of *resources of action* and institutional creativity) that explain the change of the LRA's conditions both within the incumbent LRAs and the newborn LRAs.

### 6.1. Incumbent LRA Standard; newborn LRA MH (1989-1996)

#### 6.1.1. Actors' coalitions: Threat to the cultural diversity for both Stakeholders in production and consumption

The International Coffee Agreement and its local application by the FNC in Riosucio, shaped the Resource at the national level through the LRA Standard producing one combination of services for the whole Resource in Colombia that was perceived (in)sufficient by different actors: Sufficient for a coalition of producers, stakeholders in production, traders and consumers (entrepreneur farmers; the FNC and the national Government; mainstream traders; price-oriented consumers) who wanted to maximize monetary services (described in chapter 4.1). Insufficient for some producers, stakeholders in production and consumption and, consumers who saw the provision of two symbolic services seriously threatened: In the first place, family producers, Asproinca<sup>362</sup>, and the indigenous movement<sup>363</sup> perceived the threat to the cultural diversity produced by the coffee culture, which we conceptualize as the "indigenous coffee" symbolic service. Likewise, Max Havelaar Foundation and ethical consumers feel anxious because they perceived the disappearance of an equitable distribution of money within the coffee value

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<sup>362</sup> Asproinca has its roots in the social doctrine of the Catholic Church in Latin America, known as Liberation Theology, through which the church fostered associative work among (indigenous) farmers to improve their quality of life. In Riosucio, the church fostered this type of pastoral activity supporting seven groups of (indigenous) farmers that at the end of the 80's achieved the financial support of Swissaid to both hiring two agronomists and creating a rotary fund that would allow associative groups to improve their agricultural activity (cassava, maize, red beans, bananas, livestock, minor species). The seven groups merged in the *Asociación de Productores Indígenas y Campesinos* –Asproinca in 1991. Interview with Angela María Gómez, currently advisor and former director of Asproinca in the nineties and early two thousand.

<sup>363</sup> We use the term "movement" according to (Scharpf, 1997) in which, in a consensual matter, the individual resources are jointly mobilized to fulfill a collective purpose. It is strongly advised to read the evolution of the indigenous issue in Riosucio from the national perspective in annex 2.1 and the local one in annex 2.2

chain at the expense of small coffee producers, which we conceptualize as a “Fairtrade coffee” symbolic service<sup>364</sup>.

Two external phenomena modified the Institutional Regime to allow the joint action needed to consolidate one coalition<sup>365</sup>: On the one hand, the enactment of the 1991 Constitution that, by recognizing ethnic diversity and its protection, endowed the indigenous movement with both a legitimate basis for their definition of the real situation that put at risk the provision of the “indigenous coffee” symbolic service and, the administrative authority over the population in their area of influence. So, the indigenous movement that was composed of a few corporate actors *los Cabildos de los Resguardos indígenas* and one association (el *Consejo Regional Indígena de Caldas* – CRIDEC) but too few individuals in the municipality, mobilized the pro-indigenous institution<sup>366</sup> to motivate the inhabitants "reluctant to re-identify themselves as indigenous" (CRIDEC, 2012, p. 48) to be counted indigenous<sup>367</sup> and eventually, to share their definition of the “real situation”.

On the other, the break out of the negotiations for a new International Coffee Agreement in 1989 collapsed the legal basis that supported the intervention of the FNC as the regulating authority of the coffee market. Although the FNC retained its legal competences in the Colombian legal framework, its purpose (for guarantee an acceptable purchase price for coffee growers) was seriously threatened by free access for all other market players, including civil society organizations, among them, the Max Havelaar Foundation (MH onwards). Being part of a movement that champion a “fair” trade in which value throughout the value chain was fairly distributed, MH started to bring together coffee buyers in consumer markets with coffee farmers in vulnerable communities, aiming to improve the wellbeing of the latter by a compromise of the former to pay both a minimum purchase price (when the market price is lower) and a social premium.

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<sup>364</sup> Inspired by Douwes 1860’s novel “Max Havelaar: Or the Coffee Auctions of the Dutch Trading Company” in which the cultivation system mandated by the Dutch colonial government of Indonesia produce widespread poverty and starvation. The Max Havelaar Foundation was founded by the Swiss aid organizations: Brot für alle, Caritas, Fastenopfer, HEKS, Helvetasand and Swissaid in February 1992 aiming to “ensure that products from producers / workers in disadvantaged regions of the south get access to our market at fair trade conditions” (Fairtrade, 2010).

<sup>365</sup> We are using the categories used by Scharpf (1997)

<sup>366</sup> Institutions mentioned at the end of annex 2.2.2. Its importance was evident in the interviews. Interviewees descendants of mestizos or whites (i.e non-indigenous), said they accepted to be counted as indigenous and gave their property title over the land to the Resguardo to receive in exchange a right of use known as “*Adjudicación del Resguardo*” on the same land with the only objective of avoiding paying the tax on property; others to avoid the inheritance transaction costs when distributing the land among the heirs; others to prevent their children from military service; others because they saw that it was the only option for their children to go to the Public University (where the indigenous people have reserved quotas); others because they felt indigenous and proudly gave their titles for commitment to the Indigenous Movement.

<sup>367</sup> So, they would belong to one *Resguardo* (territorial entity) under the authority of one *Cabildo* (local cabinet) that was led by one *Gobernador* (leader of the administrative cabinet).

MH approached the FNC through their director for Europe in the Brussels, Emilio Echeverri<sup>368</sup>, and proposed a partnership with an impoverished but organized coffee community, hopefully indigenous, that could be beneficiary of a premium paid by their buyers to be invested in their public goods prioritized by their organization <sup>369</sup> . The better price offered by the MH demonstrated to the FNC that higher monetary prices could be also achieved through other than the intensification of coffee farming, namely the coffee produced by an organized indigenous community that led towards Riosucio<sup>370</sup> because of the recognition of the indigenous movement in this municipality.

Once the MH's "Fairtrade" service agreed with the FNC's "monetary" service, it was easy to merge with the CRIDEC "indigenous coffee" service. A coalition was formed among these three main actors who shared the definition of the problem in terms of the threat to cultural diversity due to the forces of the free market. So, with their individual purposes and *resources*, they agreed on joint action.

### 6.1.2. Cooperative mobilization of stakeholders in consumption to empower stakeholders in production

In 1992, MH successfully linked coffee producers with Fairtrade buyers in Switzerland<sup>371</sup>, and in the following years, they enriched this network with buyers from different consumers' countries producing the *AR organization*<sup>372</sup> . As the FNC had lost the *AR Law* provided by the ICA to guarantee price control, the MH's *organization* was attractive to the FNC that required compensating with commercial management the monetary services they sought for. Hence, the FNC disclosed the information of one of its suppliers: the *Cooperativa de Caficultores del Alto Occidente de Caldas* (The Cooperative onwards). The cooperative had acquired since the sixties

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<sup>368</sup> Interview with Emilio Echeverri, International delegate for Colombia to the International Coffee Organization (OIC) between 1982 and 1990, former director of the FNC's office in Brussels from 1990-1996, and former General Manager of the FNC 1996-2002.

<sup>369</sup> "Me plantearon el problema, mire necesitamos una colonia con un café que cumpla estas características de una comunidad pobre, nos gustaría indígena (...) que produzca café, le damos un precio extra, y ese precio en parte (...) se lo entregamos a la cooperativa (...) o a la comunidad organizada, para que invierta ese excedente en la satisfacción de necesidades comunes". Interview with Emilio Echeverry. FNC, *ibíd.*

<sup>370</sup> "Con la caída del pacto, iniciaron los movimientos de café justo (...) es un movimiento que tiene algo de político, algo de sincera cristiandad posiblemente, no lo veo mucho pero posiblemente y de mejores prácticas. Con ese cuento crear ciertos estímulos para diferenciar el café y pagarlo mejor. (...) buscan crearle un beneficio al productor a cambio de estas prácticas que se supone benefician a la humanidad, si (los caficultores) la cumplen (...) Eso empezó cuando acabó el pacto porque empezó la libre competencia y bueno, los precios pa' bajo y entonces ahí es donde nació esas oportunidades de mercado (...) Era realmente un margen interesante, entonces yo hice contacto con el Comité aquí de Caldas. Ellos me hicieron el contacto allá, con la gente de Riosucio". Interview with Emilio Echeverry, who was also director of the Comité Departamental de Cafeteros de Caldas between 1975 and 1983.

<sup>371</sup> "Max Havelaar labelled coffee was successfully introduced in 1992" (Fairtrade, 2010, p. 1)

<sup>372</sup> Including importers and roasters by country, as follows: 4 in the Netherlands, 7 in Belgium, 4 in France, 4 in Switzerland, 5 in the Netherlands, 3 in the United Kingdom, 8 in Germany, 2 in Italy, 3 in Japan, 6 in Sweden, 3 in Norway and 3 in Finland. "lista de importadores/compradores operando en el marco de FLO-Internacional del 19 de agosto de 1999" Anexo 3 del Convenio del programa MH en Riosucio.

four purchase points in the municipality of Riosucio<sup>373</sup> where they bought the coffee beans (either wet or dry parchment coffee) from the (in process of becoming) indigenous coffee growers. This *AR property* of the Cooperative was not limited to the assets needed to the purchase of the coffee but also to its commercialization: as a shareholder of Trillacoop (a milling company) it had access to the infrastructures necessary to produce the Excelso coffee bags<sup>374</sup>; as a shareholder of Expocafé (an export company) they had access to the necessary infrastructures to export and; as an owner of the offices and meeting places in Riosucio, they provided the space for the decision making. This *property* played a predominant role in influencing the behavior of the coffee grower since it is in the purchase point where usually the purchase transaction between the farmers and the trader is made: exchanging a price for a coffee bean that reflected an expected behavior, in this way, the individual and concrete legal act is consumed. As the coalition was formed around the threat to the indigenous culture, consequently the indigenous movement was empowered with the *AR consensus*.

Using this initial endowment, the FNC **strategically** mobilized their *AR law* to make the MH definition compatible with their definition of the problematic in terms of the low provision of monetary services; the MH **strategically** mobilized their *AR organization* to define the problematic in terms of the low provision of the “Fairtrade coffee” symbolic service; the indigenous movement **strategically** mobilized their *AR consensus* to frame the previous two services as needed conditions of a higher goal oriented to protect their indigenous way of life; and the Cooperative **strategically** mobilized their *AR infrastructure* to expand the target group to include coffee produced by all coffee farmers in their area of influence (as long as they own farms up to 2ha) although it was supposed to be exclusively directed towards the indigenous population.

Indeed, the FNC, endowed with the *AR Law* as the authority of the coffee public policy, promoted with its acquiescence this different-from-the-standard market that specifically in the case of Riosucio we conceptualize as the LRA Fairtrade, as long as the coffee quality fulfilled the minimum requirements for the standard coffee<sup>375</sup>; The MH exchanged their *organization* through which the coffee from the Resguardos in Riosucio would obtain a better price because it would be sold at higher prices in Europe because of MH commercial effort in that continent<sup>376</sup>; CRIDEC exchanged their *consensus* it administers on behalf of the indigenous community of Riosucio through which coffee can produce the “Fairtrade coffee” symbolic services; they were responsible for providing legitimacy of both symbolic services through a list of indigenous

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<sup>373</sup> (two in the relatively central urban area, one in the northwestern border in San Lorenzo and another in the southeastern one in Bonafont)

<sup>374</sup> Excelso in terms of the minimum quality required to export coffee (chapter 4.1.2).

<sup>375</sup> “convertir el café que compre en los Resguardos, en tipo excelso y entrégalo a Expocafé”. Numeral c, de la cláusula cuarta “obligaciones de la Cooperativa” del “Convenio para Compra de Café en Resguardos Indígenas” del 14 de febrero de 1992 en Riosucio.

<sup>376</sup> “tiene por objeto desarrollar operaciones mercantiles, relacionadas con compra de café por parte de la Cooperativa, con el patrocinio de la fundación Max Havelaar, a los Resguardos Indígenas (...) para ser vendido este café en mercados europeos, a un precio superior al del mercado internacional esto por gestiones que adelante en aquel continente la Fundación”. Cláusula primera “objeto” del “Convenio para Compra de Café en Resguardos Indígenas” del 14 de febrero de 1992 en Riosucio.

beneficiaries<sup>377</sup> that cultivate less than one hectare of coffee<sup>378</sup>; and the Cooperative exchanged their *property* through which the transaction can effectively be made to concretize at an individual and concrete level one institution from the regulatory system: Art, 1495 of the Colombian civil code<sup>379</sup> to be enforced through the signing of the “*Convenio para Compra de Café en Resguardos Indígenas el 14 de febrero de 1992*” (A coffee purchase agreement that we will refer as Convenio MH/year onwards) in Riosucio valid for one year.

This transaction of *action resources* sought to generate the *AR money* to increase the endowment in *action resources* of the indigenous movement, and in this way, improving the well-being of the indigenous community<sup>380</sup>. The first intention is explicit when saying that the plus-value generated by the Convenio MH/1992 would go to the Resguardos<sup>381</sup>, and the second intention when saying that the profits would be distributed in two stages: initially the creation of a rotatory fund for the indigenous people, and then, provision of public goods for the indigenous community<sup>382</sup>.

Consequently, it resulted in a logic of intervention where the (indigenous) coffee community in Riosucio was the target group because by selling their coffee through the LRA standard in Riosucio they put at risk the indigenous culture (the low provision of “indigenous coffee” symbolic service as a consequence of the low provision of both the “Fairtrade” symbolic service

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<sup>377</sup> “enviar a la Cooperativa una relación de los indígenas beneficiarios del programa”. Numeral a, de la cláusula tercera “obligaciones del CRIDEC”, *ibíd.*

<sup>378</sup> “deben ser productores de café que cumplan con una de las siguientes condiciones: producción máxima de 375 kilos por año o poseer menos de 1 hectárea en café”. Numeral c, de la cláusula tercera “obligaciones del CRIDEC”, *ibíd.*

<sup>379</sup> “Contrato o convención es un acto por el cual una parte se obliga para con otra a dar, hacer o no hacer alguna cosa. Cada parte puede ser de una o de muchas personas”.

<sup>380</sup> “La idea es que esa plata la tenía que administrar el CRIDEC. Y como todo el mundo estábamos sin una... imagínese que uno iba allá por colaborar, hacer adjudicaciones, hacer todo, pero no... pues, porque quería la causa, y todo el mundo era así, y reuniones y reuniones y uno llevaba el almuerzo. O por ejemplo yo que vivía acá me llevaba unos a almorzar a mi casa. Y así, sin ... nada ... sin... esas son las cosas que verdaderamente valen la pena”. Interview with Rocio Motato, Secretary of the Convenio MH (In its different phases) since June 1993. She had participated in the indigenous movement since the murder José Gilberto Motato in 1986 (*mártir de la causa indígena y la recuperación de la tierra* in her own words). As Secretary of the *Cabildo del Resguardo Nuestra Señora de la Montaña* (since 1989) she was part of the *Junta de Administración del Convenio* during the first year, and then, she was proposed to take over the *Secretaria del Convenio* in June 1993 (put by the CRIDEC against the will of Cooperative at that time). Today she is the technical secretary of Asprocafé and the Colombia coordinator of the “Latin American and Caribbean Coordinator of Small Producers and Workers of Fair Trade” (network that represents the producers of the continent in the Fairtrade system).

<sup>381</sup> “revertir en los Resguardos Indígenas, materia de este convenio, las utilidades, o mejor, la diferencia de la venta del café colocado en Europa, los costos de compra, comercialización, beneficio y exportación”. Numeral d, de la cláusula cuarta “obligaciones de la cooperativa”, *ibíd.*

<sup>382</sup> “las utilidades que resulten del ejercicio de este convenio se distribuirán en dos etapas, así: Primera etapa: La creación de un fondo rotatorio de crédito, para: a- mejoramiento de la calidad y productividad del café, en los minifundios de las comunidades indígenas. b- Mejoramiento de la calidad de vida de los habitantes de las comunidades indígenas. Segunda etapa: a- mejoramiento de la infraestructura en: acueducto, alcantarillado, energía y de la vivienda de los resguardos. b- Apoyo a los programas de diversificación de cultivos y mejoramiento del ecosistema. c- Programas de capacitación”. Cláusula sexta “inversión de utilidades”, *ibíd.*

and the monetary services), increasing the anxiety of consumers (beneficiary group), which could be traduced in less sales for traders and roasters (as third-party beneficiaries).

The Convenio MH/1992 is an intermediate act of implementation that sought to influence the use of the Resource constituents to profile that combination of services over the LRA Standard with the explicit objective to increase the endowment of the indigenous movement in the AR money, so they could invest in the material wellbeing of its community and its organization as a whole. Indeed, in a new intermediate output: the "*Convenio Programa Max Havelaar Riosucio*" del 21 de abril de 1994 (with annual validity but automatically renewed), the indigenous movement used the AR money<sup>383</sup> produced by the agreement as an instrument to obtain the AR political support<sup>384</sup>. As evidence, they influenced the final outputs of the Convenio MH/1994: Priority is given to the housing solution "Agrovillas" to build an indigenous-modern village for which it was necessary to freeze the rotatory Fund<sup>385</sup>, the premiums, the infrastructure works and to eliminate the team of promoters<sup>386</sup>. This sacrifice is plausibly explained because the indigenous movement needed to harvest the AR political support. Additionally, they managed to obtain a monthly disbursement for each one of the Resguardos<sup>387</sup>.

This ultimate goal allows us to qualify the whole set of mobilization as a **cooperative** mobilization of *action resources* that innovatively activated the public coffee policy to allow the development of the fairtrade market that was created by concretizing the private law in the Convenio MH (a coffee purchase agreement) to profile the merged "indigenous coffee" and "Fairtrade coffee" symbolic services and monetary services. Institutional creativity: Joint provision of the "Fairtrade" and "Indigenous Coffee" symbolic services and, the monetary services demanded by profilers

Being the object of the Agreement to strengthen the indigenous movement, the institutional creativity is evidenced when the "monetary" services and the "Fairtrade coffee" service are merged under the "indigenous coffee" symbolic service, which in its origins is materialized in

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<sup>383</sup> The year 1993 and the beginning of 1994 were particularly good given that the Cooperative was the only provider of Fairtrade coffee in Colombia to MH. "*había tanta plata que cuándo venían a firmar esos convenios los recordatorios eran granos de café de oro*". Interview with Rocio Motato, Asprocafé, ibíd. In mid-94 other groups entered throughout the country, increasing the offer and therefore slightly reducing the money to the Convenio MH/1994.

<sup>384</sup> "*Las comunidades indígenas ya participando en política entonces había candidatos al Consejo del Resguardo de San Lorenzo (...) y todo el mundo pa' allá, pida pa allá (indígenas solicitando dinero del Convenio para sus necesidades particulares) pero hubo cosas buenas, se apoyaron muchachos que estaban estudiando en la Universidad, se les daba una cuota mensual para sostenimiento de ellos. Y todo el mundo pedía pa' allá*". Interview with Rocio Motato.

<sup>385</sup> In the Acta 47 June/94, that decision is taken because the resources demanded by Agrovillas amounted to COP 220 million, increasing the budgetary commitments to COP 500 million pesos when there was only cash available for COP 383 million.

<sup>386</sup> Acta 52 September/94. Previously the Convenio MH/1994, in its ninth clause "promotoría", had added to the two previous promoters, four additional promoters, one for each Resguardo.

<sup>387</sup> "*se entregará mensualmente \$500.000 al gobernador y al tesorero de cada uno de los territorios indígenas*".

*Parágrafo tercero de la Cláusula décima “inversión de los recursos”, ibíd.*

supporting the consolidation of the Resguardos in a territory in which people identified themselves mostly as peasants<sup>388</sup>.

Although the Convenio MH/1992 did not create any formal institution to govern it, the established process (through which the CRIDEC coordinates farmers to sell their coffee exclusively to the Cooperative<sup>389</sup>; the Cooperative who sells through Expocafé<sup>390</sup> and then, Expocafé reverts the profits to the Resguardos<sup>391</sup> that could (but not necessarily) mean to deliver the money to the CRIDEC) indirectly mandated a kind of an informal coordination mechanism. This was translated into monthly meetings between the CRIDEC and the Cooperative (and others local stakeholders by invitation) that are documented as *Actas de la Junta Administradora* (minutes of the administrative board) since March 1992 (hereinafter referred to as Acta # month/year)<sup>392</sup>. This Junta worked as a deliberative scenario where the demands for services of the actors that participate in the profiling of the Resource, translates into a local-shaping of the implementation acts (outputs) steaming from the regulatory system or the public policy. In other words, the Junta tried to make the output compatible with the demanded services of the actors involved, when defining the regulations (extent) and governance mechanism (coherence) that would influence the use of the Resource constituents of participant profilers.

Hence, the Junta shaped the final output of the regulatory system (concretized through the Convenio MH/1992) to encourage some uses of the constituents to profile the “indigenous coffee” symbolic service. This one was not limited to a material improvement of the isolated coffee grower but the improvement of the indigenous-coffee community that was associated with the strengthening of the Resguardos (which were so weak that at the beginning they were unable to fulfill their own commitments<sup>393</sup>) so they could effectively exercise their constitutional rights to cultural diversity.

Indeed, for producing the *know-to-appreciate* in consumers, some final outputs of the Convenio MH/1992 encouraged uses of *infrastructures* and *know-how* to strengthen the Resguardos more than to change the actual use of the land. So, they gave farmers access to credit if they work associatively under the acquiescence of the Cabildo and the supervision of an expert in agriculture<sup>394</sup>. Because of this veto power of the Cabildo, in practice, farmers would obtain credit

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<sup>388</sup> “Mientras que en el censo de 1993, el 41% de los 43.511 habitantes de Riosucio se identificó como indígena, en 2005 el porcentaje aumentó al 75.4% de una población total de 54.537 personas” (Lopera-Mesa, 2010, p. 71)

<sup>389</sup> Cláusula tercera “obligaciones del CRIDEC”, *ibíd.*

<sup>390</sup> Numeral c, de la cláusula cuarta “obligaciones de la cooperativa”, *ibíd.*

<sup>391</sup> Numeral d, de la cláusula cuarta “obligaciones de la cooperativa”, *ibíd.*

<sup>392</sup> The author had access to the *Actas mensuales de la Junta Administradora* from 1992 to 2000, which are kept in Asprocafé’s file, but the access to the *Actas* after the 2000 that are in the Cooperative’s was not granted.

<sup>393</sup> Acta 3 June/1992 shows an indigenous Resguardos so weak that they could not deliver the list of beneficiaries of the agreement and it was the Cooperative with the Comité who made a provisional list that the Resguardos would improve later on.

<sup>394</sup> Acta 3 June/92 establishes that 80% of the money should be allocated in credits for the associative groups; Acta 5 August/1992 states that the Technical Assistance that accompanies the credits must be provided by an entity in charge of agricultural development; and Acta 6 September/92 gives veto power to the Cabildo when establishing a mandatory prior visit to grant the credit.

and technical assistance for any agricultural activity (including but not limited to coffee) if they supported the indigenous movement. A predictable result was the increase of the *AR political support* that the leaders of the indigenous movement could leverage through this output funded by the Fairtrade premium. It was not a surprise that the indigenous movement wanted to receive the money directly avoiding the Cooperative<sup>395</sup>.

On the other side of the coin, the few approved credits excluded the coffee cultivation<sup>396</sup>. The Cooperative and its long-term ally, the *Comité de Cafeteros de Riosucio* (the Comité hereafter, the local branch of the FNC) began to perceive a threat to the provision of the “monetary” services they demanded from the Resource: lower production of Excelso coffee implied lower exports and therefore lower premiums. In fact, the Convenio MH/1992 indicated that the quantities (quality Excelso) supplied by the beneficiaries (coffee farmers with less than one hectare or producing less than 375 kilos) would be insufficient to satisfy the demand, for what it gave the Cooperative one year to fulfill the orders using coffee from non-beneficiary coffee growers<sup>397</sup>. However, by the end of the first year of the Convenio MH/1992, the Cooperative put forward their worry in the Junta, diplomatically claiming that the Resguardos should focus on encouraging the coffee culture<sup>398</sup>.

Through this deliberative scenario, actors who had a more or less equitable distribution of *action resources* succeeded in producing a new intermediary output to profile the Resource and produce the services required by the participants through the second agreement signed as “*Convenio Programa Max Havelaar Riosucio*” el 24 de marzo de 1993 in Riosucio (valid for one year).

The deliberative environment is institutionalized by formalizing the *Junta Administradora* which would be composed of 7 members<sup>399</sup>: The Governor for each of the 3 Resguardos or their delegates; the President of the CRIDEC or his delegate; two representatives of the Cooperative

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<sup>395</sup> Acta 10 October/92 put on evidence the communication of the CRIDEC to MH, in which they demand to receive the money directly so they could autonomously invest.

<sup>396</sup> Acta 13 February/93 presented the report of activities during the first year of the Convenio/1992. It was stated that of the COP 177 million (USD 240 thousand) of assets, only COP 21 million (USD 28 thousand) had been disbursed in credits for raising pigs, calves and food crops (not coffee) to 19 associative groups.

<sup>397</sup> “*En un comienzo y mientras se lleva a cabo el proceso de control y manejo de calidad de los productores, para cumplir las normas de calidad exigidas por Cooperativa, en forma especial se suministrarán al programa otros cafés de la zona, que permitan mediante los mayores recursos provenientes del mismo, desarrollar los sistemas necesarios para que los productores adscritos al convenio cumplan con las normas de calidad exigidas por la Cooperativa. Esta cláusula se podrá utilizar el primer año*”. Numeral b, de la cláusula tercera “*obligaciones del CRIDEC*”, del “*Convenio para Compra de Café en Resguardos Indígenas*” el 14 de febrero de 1992 en Riosucio.

<sup>398</sup> The Manager of the Cooperative said “*se ha hecho muy poco por el mejoramiento de la calidad del café*” and he added conciliatively “*no debemos trazar una línea divisoria entre la cooperativa y los resguardos indígenas porque los beneficiarios son en su mayoría asociados a la cooperativa*”. Acta 13 February/93

<sup>399</sup> Cláusula quinta “*La Junta Administradora*” del “*Convenio Programa Max Havelaar Riosucio*” del 24 de marzo de 1993

and one Representative of Asproinca<sup>400</sup>. This Junta was competent for the planning<sup>401</sup>, the execution<sup>402</sup>, and the accountability before both beneficiaries<sup>403</sup> and other profiling actors<sup>404</sup>.

Then, the deliberation among these local actors with more or less the same power was translated into that no position of an actor could be imposed against the will of another one. On the contrary, there was a negotiation among positions for reaching a kind of a balance between the Cooperative and the indigenous movement to produce the services that both actors demand that could be perceived through three observations.

First, to influence the *know-how*, it was decided to appoint two promoters whose requirements were developed in consensus within the Junta and, the Cooperative would select them from a proposal made by the Cabildos<sup>405</sup>. This procedure maximized the possibility that the selected ones would provide technical assistance to the coffee grower, which would promote practices that guarantee the provision of services for both parties.

Second, there is a take-and-give strategy by both actors: The Cooperative manages to maximize monetary services with two decisions: to encourage the coffee grower with a premium<sup>406</sup> and, to sell all the coffee that could be demanded by MH (because they managed to include in the Convenio MH/1993 the production of coffee farmers in the four municipalities of the Cooperative's influence although there were not Resguardos in three of them<sup>407</sup>. In any case, despite coffee came from the four municipalities, indigenous (coffee) farmers in Riosucio remained as the target group<sup>408</sup>). The CRIDEC was able to invest directly in the indigenous movement by allowing funding to self-governed community projects<sup>409</sup>. In this sense, they

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<sup>400</sup> Before 1993 Asproinca had already been in Riosucio for several years implementing the Rotary Fund (Through SwissAid International Cooperation) to improve agricultural activity (including coffee) through associative groups. This AR information derived from their experience and the fact that they were originally crop-neutral (they supported both food and coffee) could explain the acquiescence of the actors to include them as a decision-making part of the new Agreement.

<sup>401</sup> "Decidir sobre la utilización de los recursos con sujeción al plan de inversión adoptado previamente por ella". Numeral 1, Cláusula sexta "Funciones de La Junta Administradora", *ibíd.*

<sup>402</sup> Numerales 2,3,5, 8, 9, 10, 11 y 12 de la Cláusula sexta "Funciones de La Junta Administradora", *ibíd.*

<sup>403</sup> "Revisar periódicamente con los usuarios del convenio para evaluar con estos la marcha del mismo y la inversión de recursos y obras ejecutadas o en ejecución". Numeral 4, Cláusula sexta "Funciones de La Junta Administradora", *ibíd.*

<sup>404</sup> "Presentar a la Fundación, Expocafé, Cooperativa y CRIDEC un informe semestral sobre la ejecución del Convenio y evaluación del mismo". Numeral 6, Cláusula sexta "Funciones de La Junta Administradora", *ibíd.*

<sup>405</sup> Cláusula novena "Promotoría", *ibíd.*

<sup>406</sup> "Conceder al pequeño productor que venda café con destino a la exportación materia del Convenio un sobreprecio en proporción a la cantidad vendida". Numeral 1 de la Cláusula décima "Inversión de los recursos", *ibíd.*

<sup>407</sup> "las partes convienen en precisar que el ámbito de operaciones (...) se extienda a el radio de acción de la Cooperativa de Caficultores del Alto Occidente de Caldas, los beneficiarios serán productores de café poseedores de predios no mayores a dos (2) hectáreas de extensión o quince (15) cargas al año (equivalente a 1875 kilos)" Otrosí, *ibíd.*

<sup>408</sup> Obligación del CRIDEC "enviar a la Cooperativa una relación de los indígenas beneficiarios del programa con el fin de ser carnetizados". Numeral a2 de la Cláusula cuarta "Obligaciones de las partes", *ibíd.*

<sup>409</sup> "apoyar obras comunitarias (...) que conlleve procesos de autogestión". Numeral 9 de la Cláusula décima "Inversión de los recursos", *ibíd.*

appropriated COP 10 million (USD 14 thousand) in each of the three Resguardos to empower them with the *AR property*<sup>410</sup>.

Finally, they reached an agreement to fund both productive systems: one that maximizes the “monetary” services according to the Cooperative by promoting integral coffee cultivation<sup>411</sup>, and the other one, that optimizes the “indigenous coffee” symbolic service. The latter began to be re-defined not only as a vector of political support but as an indigenous way of cultivating coffee focusing on diversification<sup>412</sup>. Six months after the signature, this agreement that considered compatible the two types of farming had shaped the final outputs: on the one hand, it influenced the use of *infrastructures* in one activity (diversification) in the planting process: credits for animal husbandry or food crops. On the other, it influenced the use of *know-how* in one activity (nutrition) in the cultivation process by giving credits to acquire synthetic fertilizers to increase coffee production and increase monetary services. 60% of the credits went to the former, 40% to the latter<sup>413</sup>. Additionally, thanks to the work of the promoters who accompanied the associative groups to structure the credits in their two modalities (fertilizer and diversification), the disbursements tripled between December/1993 and March/1994 totaling COP 237 million (USD 295 thousand)<sup>414</sup> distributed in 292 associative groups<sup>415</sup>.

### 6.13. Outcome

The LRA Standard that prioritized the provision of “monetary” services was maintained until the nineties thanks the *AR law* and the *AR political support* derived from the International Coffee Agreement possessed by a coalition of entrepreneur farmers, the FNC and the Government. A few years after it broke down, in Riosucio, a new coalition emerged among MH the FNC and the indigenous movement in which they shared the definition of the problem in terms of the threat to cultural diversity due to the unequal distribution of value that reduced the share of monetary services received by producers.

Their logic of intervention implied that indigenous (coffee farmers) traders and roasters had to modify their behavior through an innovative activation of the coffee public policy to create the

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<sup>410</sup> For two Resguardos (la Montaña y Cañamomo-Lomapieta) the fairtrade premium was used to complete the administrative offices of the Cabildo and for the Resguardo de San Lorenzo, two lots were acquired to develop a housing project known as “Agrovillas” and to install a coffee drying silo. *Informe de la gerencia del Convenio. Agosto 19 de 1993.*

<sup>411</sup> “promover el manejo integral del cultivo del café con miras a mejorar la calidad y el uso racional del suelo, se podrá pagar un subsidio especial al productor”. Numeral 3 de la Cláusula décima “Inversión de los recursos”, *ibid.*

<sup>412</sup> “impulsar y desarrollar una estrategia de producción alternativa que tenga en cuenta manejo de suelos, diversificación y protección del medio ambiente”. Numeral 6 de la Cláusula décima “Inversión de los recursos”, *ibid.*

<sup>413</sup> De los \$84 millones en créditos colocados en diciembre de 1993, el 40% se destinaba a créditos para fertilizantes y el 60% a créditos para cría de animales o cultivos de alimentos. Acta 44 March/94.

<sup>414</sup> To give an idea to the reader of the foreign exchange during the last decades, one could say that during the nineties the ratio (annual average) progressively went from US 1 = COP 507 in 1990, to COP 1.140 in 1998, with a strong increase to a maximum of COP 2.876 in 2003 with an early correction around COP 2000 in 2005 and almost all the subsequent decade. At the end of 2014 he found a new balance around \$ 3000 pesos for US \$ 1.

<sup>415</sup> Acta 44 March/94.

Fairtrade market that produced financial surplus to strengthen the indigenous movement (and its capacity to exercise their constitutional right to cultural diversity), and the concretization of the regulatory system through a coffee purchase agreement between CRIDEC, MH and the Cooperative,

The Junta as a deliberative scenario allowed to incorporate the demands of the various actors who demanded services from the Resource in Riosucio in that period. The cooperative mobilization of *action resources* empowered the indigenous movement so they could be heard. And using the institutional creativity actors reached an agreement on uses of the Resource constituent that was not perceived incompatible at the time: diversification to reduce the indigenes' vulnerability to coffee monoculture, and synthetic fertilization to increase the productivity of the coffee plantation. Initially, final outputs exclusively incentivized these uses in a very small population: the indigenous smallholding (possession less than one hectare) in Riosucio. But it was expanded to include a wider population of indigenous (coffee farmers) owners of up to two hectares in the area of influence of the cooperative (three additional municipalities).

An additional profile was shaped over the profile sought by the LRA Standard. It provided the "Fairtrade" symbolic services demanded by consumers and stakeholders in consumption by producing the "indigenous coffee" symbolic service demanded by stakeholders in production. Additionally, it maximized the monetary services demanded by all profilers.

It could be considered that over the LRA Standard which regulated uses of Resource constituents in the three activities of the trading process (purchasing; threshing, exporting) and one activity in the planting (variety), equivalent to 17% of regulated uses<sup>416</sup> evenly distributed<sup>417</sup> (Annex 7), through the FNC's governance mechanism described in chapter 4 (like municipal and departmental Comités and its extension service), the newborn LRA MH was laid down which regulates new uses of Resource constituents in three activities (Diversification; nutrition; and communication strategy) increasing the extent (36% of evenly-distributed regulated uses, Annex 7). It aligned new actors (MH; CRIDEC; FNC), which developed new governance mechanism (Convenio MH; Junta Administradora; Promoters; Associative groups) that produce new outputs (Loans and technical assistance for associative groups), which improved coordination among the actors to incentivize the change in behavior of farmers increasing the coherence. It also created the "product differentiation" barrier of entry at the producers' level which excluded owners of more than two hectares in the zone and all other farmers from other regions (increasing the closure).

## 6.2. Incumbent LRA MH, Newborn LRA Natural (1997-2003):

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<sup>416</sup> It refers to the first condition of the Extent (chapter 2.2.2): the regulated uses (weighted by process) by the LRA from the 26 uses identified in Annex 1.

<sup>417</sup> It refers to the second condition of the Extent (chapter 2.2.2): regulations are evenly distributed between the seven processes, in operational terms, regulations are not concentrated in the first three processes.

## 6.2.1. Actors' coalition: toxicity in the coffee crop for stakeholders in consumption

The perceived risk on health derived from the use of toxic products (in the cultivating process) and, on the environment by the destruction of habitats (in the planting process) and the waste pollution (in the post-harvesting process) replaced the previously perceived risk to cultural diversity. Threats that negatively affected the consumer when drinking a coffee perceived toxic to their body and harmful to both the environment and the coffee communities.

Indeed, the mandate of the American Congress to the North American Department of Agriculture to define the regulation on organic production in 1990<sup>418</sup>, and the entry into force of the European regulation 2092/91 on organic farming in Europe in 1991<sup>419</sup>, gave prominence to organic agriculture at the heart of the Max Havelaar movement. They began to develop the demand for the “natural coffee” symbolic service when they request for samples of organic coffee during the presentation of the Convenio MH/1993<sup>420</sup>. And then, when they actively sought it, stating that chemical fertilizers cause alarm in Europe and that in three years only orders of organic coffee will be demanded<sup>421</sup>.

In parallel, some indigenous leaders perceived that the credit program was redirecting the money from the Convenio MH to fertilizers<sup>422</sup>. Given that the sum of the credits did not reach half of the almost COP 500 million (USD 678 thousand) accumulated by the Convenio/1992<sup>423</sup>, more than the redirection, it is plausible that this opposition had a deeper ground in the indigenous discourse that rejects “the foreign” (as the synthetic fertilizer produced outside the Resguardo) just for being antagonist of “the local”. In this order of ideas, the discussions could be conceptualized as a redefinition of the “indigenous coffee” symbolic service that could be put at risk in case of making use of *know-how* in the nutrition activity with synthetic fertilization.

The interests of the Comité were compatible with those of the LRA Fairtrade in a context in which the strategy of the FNC promoted the farming intensification usually in the big farms<sup>424</sup> while encouraging the diversification in the less promising such as the small coffee farming in

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<sup>418</sup> Organic Foods Production Act of 1990 (Public Law 101-624).

<sup>419</sup> *Reglamento Comunitario R(CEE) No 2092/91, del consejo de 24 de junio de 1991, sobre la producción agrícola ecológica y su indicación en los productos agrarios y alimenticios.*

<sup>420</sup> Acta 19 May/93.

<sup>421</sup> Communication from MH to the Junta Administradora on February 6, 1995.

<sup>422</sup> Concerns in this regard can be observed in: Acta 42 January/93, Acta 43 February/93 and, Acta 44 March/93.

<sup>423</sup> Acta 43 February/93. Given the non-existent traceability, the Cooperative sent all the coffee that was demanded by the clients of MH, whether or not it had been supplied with the beneficiaries of the agreement. Interview with Rocio Motato, Asprocafé, *Ibíd.*

<sup>424</sup> As mentioned (section 4.1.3), the FNC's extension service focused on personalized attention on farms larger than 10 ha and group attention for small coffee farmers. In our interviews, it was highlighted that the incorporation of the practices that emphasize the productivity proposed by the FNC in the small coffee farms occurred indirectly. The FNC focused its attention on the large coffee plantations where the peasants of Riosucio were day laborers. As day laborers, they learned these practices and imported them to their farms.

Riosucio<sup>425</sup>. Either through the fertilizer or the diversification programs, its double strategy of intensification or diversification was strengthened at the local level. However, la *Resolución 3 de 1996 del Comité Nacional de Cafeteros sobre el “Programa de Registro y Promoción de Cafés Especiales* (chapter 4.2.1) put forward the Comité’s demand for taste-related services in Riosucio and modified their previously passive role in the actors’ game over the services from the coffee Resource in Riosucio. Activating its traditional alliance with the Cooperative, both actors claimed their demand for the “citric acid” taste related service produced by the Resource, which after a series of samplings, identified it in the highlands of the Resguardo de San Lorenzo (CDCC & CCAOC, 2016).

Unlike the profile produced by the LRA Fairtrade that did not oppose the monetary services sought by the Cooperative, the “natural coffee” symbolic service threatened them: the productivity could be reduced by limiting the use of fertilizers and pesticides. Nevertheless, in September 2000, the International Coffee Agreement 2001 was signed in London<sup>426</sup>, through which the “environmentally responsible” symbolic service entered the global coffee agenda. Thereafter it was incorporated into the national coffee agenda through the FNC’s *División de Estrategia y Proyectos Especiales de Comercialización* by merging it with the “natural coffee” symbolic service, meaning that a conservation strategy should be developed around the organic projects already in implementation by the FNC<sup>427</sup> (one of which, if not the most important, was in Riosucio). It emphasized the investment in the *know-to-appreciate* so the Resource profile to provide the “natural coffee” symbolic service would be perceived by other profilers and shareholders in consumption at the international level, as a biodiversity protector in order to develop the “environmentally responsible” symbolic service<sup>428</sup>.

Therefore, a coalition was formed: the MH, the Indigenous Movement, the FNC/Comité and the Cooperative agreed to joint action to pursue a common profile featured by the merged “natural coffee and environmental responsible” symbolic service that leveraged their individual ones: the “Fairtrade” and the “indigenous coffee” symbolic service for MH and the indigenous movement; and the “citric acid” taste related service and monetary services for the FNC/Comité and the Cooperative.

## 6.2.2. Selfishly-cooperative mobilization of stakeholders in consumption

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<sup>425</sup> “Programa de sustitución de áreas y diversificación de cultivos que buscaba eliminar los cultivos brocados y de baja productividad y, producir café en asocio con otros cultivos rentables y ecológicamente sostenibles” (Bernal Vargas, 2016, p. 51)

<sup>426</sup> *Mediante la Resolución Número 393, de 28 de septiembre de 2000 del Consejo Internacional del Café.*

<sup>427</sup> “se propone un modelo que se apoya en los proyectos existentes (de caficultura orgánica) y que busca desarrollar una estrategia de conservación alrededor de ella” (Esguerra Gutierrez, 2001, p. 43)

<sup>428</sup> “Se espera que dicho planteamiento ilustre a la comunidad internacional y al mercado sobre la seriedad y responsabilidad con que Colombia trabaja el tema y sobre el papel que jugará el café orgánico colombiano como el elemento fundamental de protección de algunas áreas estratégicas desde el punto de vista de la conservación de la biodiversidad” Esguerra Gutierrez (2001, p. 43).

The *action resources* were mobilized at four different times to influence different intermediate or final outputs.

The first occurred once the indigenous movement **strategically** failed to mobilize their AR *consensus*: The Convenio MH/1994 had already prioritized the “natural coffee” services sought by the MH and the CRIDEC at the expense of the monetary services sought by the Cooperative: the scope of operations was reduced exclusively to the territory of the four <sup>429</sup> *Resguardos Indígenas de Riosucio*<sup>430</sup>; farmers benefited with synthetic fertilizer loans to gradually convert to organic fertilization<sup>431</sup>; premiums were going only to organic coffee farmers<sup>432</sup> and solar dryers (a guadua-bamboo structure covered in plastic) were granted to coffee farmers that become organic<sup>433</sup>. Furthermore, if the written statement was not clear enough, the MH had obtained the arbitration power to ultimately resolve any dispute about the application and interpretation of the Convenio MH<sup>434</sup>. These outputs, at least on paper produced the idea that the “natural coffee” had been profiled<sup>435</sup> so MH put farmers in contact with the North American roaster Equal Exchange<sup>436</sup> in early 1996 who was interested in the “natural coffee” symbolic service.

But soon after the same year, a representative of MH unexpectedly arrived in Riosucio and made a surprise visit in one aleatory community<sup>437</sup>. He discovered that there were issues with the credits: some of the Governors of the Resguardos used them for personal purposes and having the power in the Junta, they did not pay back. Also, some associative groups that were dissolved had unpaid loans impossible to recover because promoters were eliminated<sup>438</sup>. In addition, the COP 195 million (USD 197 thousand) in loans were distributed 70% in fertilizers and 30% in

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<sup>429</sup> Additionally to the already mentioned *Resguardo de la Montaña; Resguardo de San Lorenzo, Resguardo de Cañamomo y Lomapieta*; there was a fourth one, the *Resguardo de Escopetera Pirza* which began its recognition process prior to this Convenio MH/1994.

<sup>430</sup> *Cláusula segunda “Ámbito” del “Convenio Programa Max Havelaar Riosucio” del 21 de abril de 1994*

<sup>431</sup> *“es obligación del beneficiario del crédito asociativo para fertilizante químico, comprometerse a sustituir gradualmente el abono químico por abono orgánico, de acuerdo a términos fijados por la Junta Administradora. Para cumplir lo anterior la Junta Administradora destinará recursos dirigidos a impulsar dicho programa” Parágrafo de la Cláusula tercera “beneficiarios”, ibíd.*

<sup>432</sup> Since organic certification standards were not known, organic coffee farmers were defined as those who had *“como mínimo una cama de lombrices”* Acta 62 July / 95. This “worm bed” implies that they at least produce organic fertilizer using the pulp and other waste from the farm.

<sup>433</sup> Acta 65 September/95

<sup>434</sup> *“en casos extremos servir de árbitro en las diferencias surgidas entre las otras partes firmantes del Convenio, en razón a la aplicación e interpretación del Convenio cuyo fallo es de obligatorio cumplimiento”. Numeral 5, Apartado C “de la fundación”, Cláusula cuarta “obligaciones de las partes”, ibíd.*

<sup>435</sup> It was not necessarily the case. The outcomes that were informed to MH had passed through a long chain of controls that were bound to misreport. *“Y la indiecita no podía hacer informes porque no sabía (se refiere a ella), entonces todo eso lo hacía la trabajadora social, tenía que ser aprobado por la otra trabajadora social que era la jefa de ella en Centracafi, luego el Gerente de Centracafi, luego se lo pasaban a la Cooperativa”*. Interview with Rocio Motato, Asprocafé, ibid.

<sup>436</sup> Acta 70 February/96

<sup>437</sup> *“Una vez vino Max (Max Leuzinger delegado de MH) casi sin avisar, incluso aquí no había nadie y estaba yo sola en la oficina, entonces él me dijo, vámonos pa’ una comunidad, entonces lo lleve a la esperanza pa’ donde mi mamá”*. Interview with Rocio Motato, Asprocafé, ibid.

<sup>438</sup> Acta 66 October/95

diversification<sup>439</sup>, when two years ago it was signed the gradual conversion to organic farming. So, as a representative of MH called for an evaluation<sup>440</sup> and the Junta approved a Tripartite Evaluating Committee composed of one member selected by the Cooperativa/Expocafé, another by the CRIDEC/Resguardos, and the third one by MH. This Evaluating Committee presented their final report two months afterward claiming that the Junta Administradora had not fulfilled their task<sup>441</sup>. The indigenous movement lost its *consensus* both among the indigenous leaders<sup>442</sup> themselves and between them and MH.

The second movement is the **selfish** mobilization of MH's *organization* to produce the "natural coffee" service demanded by this actor no matter the services demanded by the other actors. The indigenous movement lost: having squandered their *consensus*, the provision of the "indigenous coffee" symbolic service (to strengthen the indigenous movement<sup>443</sup>) went to the background and, the *political support* was seriously affected. The Cooperative, on the other hand, produced the perception of an impeccable use of their *property*, meaning faultless in the supply of coffee and the money management<sup>444</sup>. But MH's *organization* was powerful enough so the Cooperative reluctantly accepted the production of the "Natural coffee" symbolic service at the expense of their monetary services<sup>445</sup>. Nevertheless, they improve their relationship with the MH and increased their influence with the bases of the indigenous movement. Hence the poor management of the *consensus* by the CRIDEC in parallel with a superb management of the *property* by the Cooperative, activated again the regulatory system and resulted in a new intermediary output the "*Convenio Programa Max Havelaar/Transfair/Fairtrade – Riosucio*" signed in *Riosucio el 19 de septiembre de 1997* (with indefinite duration), in which the "Fairtrade

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<sup>439</sup> COP 135 million in synthetic fertilizers loans owed by 187 associative groups and COP 60 million in diversification loans owed by 44 associative groups. Acta 70 February/96

<sup>440</sup> "La cosa no es así" said Max Leuzinger. Interview with Rocío Motato, Asprocafé, *ibid.*

<sup>441</sup> "La Junta Administradora como máximo organismo del Convenio no ha cumplido con sus tareas y responsabilidades por falta de una política y de objetivos claros; por falta de una visión empresarial; por el cambio frecuente de sus miembros; por falta de tiempo que sus miembros dedican al Convenio; adicionalmente la Junta no está apoyada en una base que le dé legitimidad, control transparencia y participación democrática". Recomendaciones de 1996. "no dejaron títere con cabeza." Interview with Rocío Motato, Asprocafé, *ibid.*

<sup>442</sup> "Por los celos entre líderes no se lograron muchas cosas. Habían unos líderes de los otros resguardos que por hacer quedar mal a los otros no los apoyaban. Entonces en el CRIDEC se hablaban unas cosas - vamos a apoyar tal propuesta, pero resulta que uno de los líderes entonces ya se venían y hablaba con el Gerente y le decía - mire van a traer esto. Y cuándo venían aquí, como el otro ya sabía, entonces a la hora de votar ellos tampoco apoyaban". Interview with Rocío Motato, Asprocafé, *ibid.*

<sup>443</sup> "Que la plata no era para los Resguardos, era para los verdaderos productores de café. Eso creó mucha ampolla sobretudo en la organización indígena". Interview with Rocío Motato, Asprocafé, *ibid.*

<sup>444</sup> "La Cooperativa las cuentas las tuvo muy claras siempre. Y todo lo manejaba en la cuenta ingresos recibidos para terceros y el contador, Fernando era demasiado, muy honesto. La administración de esos recursos por parte de la Cooperativa impecable. Yo me atrevo a decir que si esos recursos los coge el CRIDEC se habrían matado por esos recursos y no habría nada. Porque uno conoce la misión que tenían unos, por como le decía, porque fue mucho tiempo que se trabajó sin nada, llega un recurso entonces ya, bueno yo ya me siento con derecho a esto, a eso, por eso esto se habría acabado porque la Cooperativa no les habría seguido el juego, no habría seguido vendiendo café y esto se habría acabado hace mucho tiempo". Interview with Rocío Motato, Asprocafé, *ibid.*

<sup>445</sup> Speaking of the prohibition of the synthetic fertilizers credits. "Eso a Don Saudiel (El Gerente de la Cooperativa) no le gustó mucho porque él quería productividad y pues se suspendían esos créditos y ya la gente estaba acostumbrada". Interview with Rocío Motato, Asprocafé, *ibid.*

coffee” symbolic service was separated from the “indigenous coffee”. In this regard, it differentiated three actors that were completely alienated: 1- the indigenous movement; 2- the indigenous coffee growers and 3- the non-indigenous coffee growers.

It started changing radically the object: instead of purchasing coffee from the Resguardos<sup>446</sup>, they would buy coffee from the small coffee growers that participated in the program<sup>447</sup> within the radius of action of the Cooperative<sup>448</sup> according to the recommendations of the evaluation<sup>449</sup>. Unlike these recommendations, it defined the beneficiaries, not as smallholders with less than 375 kilos (usually with less than half a hectare in coffee) but as coffee producers owners of at maximum five hectares of land <sup>450</sup>. This seemingly subtle change significantly strips the *RA consensus* from the indigenous movement. The “Fairtrade coffee” symbolic service would be produced by the small coffee growers among whom there are indigenous ones. Thus, the Resguardos represent a portion of them, and the “indigenous coffee” symbolic service is a desirable derivative of the “Fairtrade coffee” symbolic service.

A first effect was the representation of the indigenous and non-indigenous coffee growers. The former were no longer considered to be represented by the Governor of the Resguardo, so the Evaluating Committee proposed an electoral contest, within each Resguardo, among the small indigenous coffee growers<sup>451</sup> for choosing delegates to the Asamblea (a recommended new institution invested with the highest authority within the Convenio MH). The latter, on the other hand, were considered by this Evaluating Committee to be represented by the Cooperative, which can be inferred from the Cooperative’s function to nominate the two small non-indigenous coffee farmers to the Junta Administradora<sup>452</sup>.

A second effect was the creation of a new actor: the small (non) indigenous coffee farmers. They had been ignored during the first years of the agreement and his representation was assumed by

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<sup>446</sup> “desarrollar las operaciones mercantiles, relacionadas con compra de café (...) a los resguardos indígenas” Cláusula primera “objeto” del “Convenio para Compra de Café en Resguardos Indígenas” del 14 de febrero de 1992 en Riosucio.

<sup>447</sup> “el café será comprado a los pequeños caficultores, registrados beneficiarios del programa” Cláusula primera “Objeto” del “Convenio Programa Max Havelaar/Transfair/Fairtrade Riosucio” del 19 de septiembre de 1997.

<sup>448</sup> Cláusula segunda “Ámbito”, *ibid.*

<sup>449</sup> “En cuanto a la población meta se perfila, además de la población indígena de los 4 territorios nombrados por el Convenio, este sector de pequeños caficultores mestizos quienes por su situación de minifundistas extremos (ventas anuales de café menores de 3 cargas = 375 kilos) ni califican para ser socios de la Cooperativa y por tanto no se benefician de los servicios sociales de la Cooperativa”. El numeral 2do del punto III “el apoyo en capacitación y acompañamiento que se ha dado al programa”, Recomendaciones. Acta 80 October/96.

<sup>450</sup> “los beneficiarios deberán ser pequeños productores de café poseedores de predios no mayores de cinco hectáreas de extensión y deberán vender el 90% de su producción a la cooperativa” Cláusula tercera “Beneficiarios”, Convenio MH/97, *ibid.*

<sup>451</sup> “jornadas electorales en cada uno de los resguardos con los pequeños caficultores indígenas”. El numeral 1 del punto I “La organización del Convenio y su Funcionamiento”, Recomendaciones/96, *ibid.*

<sup>452</sup> “2 representantes de los pequeños caficultores no-indígenas (delegados por la cooperativa)” El numeral 4 del punto I “La organización del Convenio y su Funcionamiento”, Recomendaciones/96, *ibid.*

the Resguardos and the Cooperative<sup>453</sup>. Nonetheless, once the electoral contest to the Asamblea was approved through the new Convenio MH/1997, with potentially 20 from 30 seats<sup>454</sup>, this actor takes prominence. Especially as the Asamblea was responsible for electing the seven members of the Junta Administradora<sup>455</sup>: one representative of each Resguardo, two of the Cooperative (that represent coffee growers outside the Resguardo) and one from the CRIDEC<sup>456</sup>. That is to say, the overwhelming majority the CRIDEC and the Resguardos had before to take the decisions, was diluted among a population that more than their sympathy for the indigenous movement was bound together by the coffee crop.

A third effect was the prominence of the Cooperative at the expense of the CRIDEC: from the seven functions the CRIDEC had including the overall management of the Convenio MH<sup>457</sup> in 1992, it went down to merely three functions as a simple articulator in 1997<sup>458</sup>. Part of their previous functions that were not assumed by the Asamblea and the Junta Administradora passed to new bodies such as the Junta de Vigilancia<sup>459</sup> and the Secretaría Ejecutiva<sup>460</sup> that are directed by people selected by the Asamblea in the first case, and the Junta Administradora in the second. The Cooperative, on the other hand, won control over the proposals. Indeed, the Junta Administradora could only decide on proposals prepared by the Secretaría Ejecutiva<sup>461</sup>, which was controlled by the Cooperative through both their power of veto over the nomination of the Secretaria Ejecutiva and the role as adviser of it<sup>462</sup>.

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<sup>453</sup> The indigenous movement had a much broader agenda than just coffee; the Cooperative statutorily excluded coffee farmers who sold less than 375 kilos per year.

<sup>454</sup> *"La Asamblea es el órgano máximo del Convenio". Numeral 1 "La Asamblea", Cláusula quinta "Órganos", Convenio/97, ibíd.* It was composed by maximum five delegates from each Resguardo (according to their population) five delegates from the CRIDEC and five delegates from the Cooperative.

<sup>455</sup> *Sección b, "Atribuciones y Responsabilidades", numeral 1 "La Asamblea", Cláusula quinta "Órganos", Convenio/97, ibíd.*

<sup>456</sup> *Numeral 2 "La Junta Administradora", Cláusula quinta "Órganos", Convenio/97, ibíd.*

<sup>457</sup> *"planear, organizar y controlar el cumplimiento del presente convenio" Numeral d, Cláusula tercera "Obligaciones del CRIDEC", Convenio/92, ibíd.*

<sup>458</sup> *"1- Servir de eslabón entre las comunidades indígenas beneficiarias del programa y el Convenio; 2- Apoyar el trabajo de promoción y ejecución del Convenio entre las comunidades y sus autoridades; 3- Promover cada 2 años jornadas electorales entre los resguardos para elegir los miembros de la Asamblea estipulada en este Convenio." Numeral a, Cláusula cuarta "Obligaciones de las partes", Convenio/97, ibíd.*

<sup>459</sup> *"tienen la función de ejercer el control social y de participación al interior del convenio. Vigilará especialmente sobre el cumplimiento de la Junta Administradora con su mandato y sus obligaciones". Numeral 3 "La Junta de Vigilancia", Cláusula quinta "Órganos", Convenio/97, ibíd.*

<sup>460</sup> *"Tendrá todas las funciones ejecutivas, especialmente la de preparar las reuniones y decisiones de la Junta Administradora y de ejecutar las decisiones tomadas por ella". Numeral 5 "La Secretaría ejecutiva, Cláusula quinta "Órganos", Convenio/97, ibíd.*

<sup>461</sup> *"propuestas concretas avaladas por el secretario ejecutivo y el promotor del convenio quién asesora el proyecto respectivo" El numeral 1 del punto I "La organización del Convenio y su Funcionamiento", Recomendaciones/96, Ibíd, y Numeral 1, Cláusula Séptima "Recursos", Convenio/97, ibíd.*

<sup>462</sup> *"El secretario o la secretaria ejecutiva será seleccionado por la Junta Administradora con la aceptación de la cooperativa. Desempeñará sus funciones bajo las instrucciones de la Junta Administradora con la asesoría de la Cooperativa". Numeral 5 "La Secretaría ejecutiva", Cláusula quinta "Órganos", Convenio/97, ibíd.*

Finally, the MH offered two years' advice from international experts belonging to their network to guide the new actor (the small (non) indigenous coffee farmers) in developing the collective capacities to encourage the organic farming: The Swiss Konrad Matter to advise the executive bodies of the Convenio MH/1997 with the objective to enhance legitimacy to produce a positive impact on small (non) indigenous coffee growers and, the Belgian Bart Powels to advise the organic coffee program and develop the training program to transfer this technology and incentivize the changes on uses of Resource Constituents by farmers to produce the "natural coffee" symbolic service. As a result, the whole population of potential beneficiaries of the Convenio MH/1997 (coffee farmers with less than 5 hectares cultivated in coffee, without regard its ethnical origin or if they produce less than 375 kilos/year) were aggregated into a collective actor: the *Asociación de Pequeños Productores de Café Ingrumá* (Asprocafé hereafter) featured by joint action; collective purpose and resources; and a voting system. This endowed the new actor with the *AR personal*<sup>463</sup>, needed to autonomously operate and execute the final outputs.

The third movement is the **strategic** mobilization of the Cooperative's *property* and the FNC/Comité's *personal* to concretize the "specialty coffee registration program" of the coffee public policy to trigger monetary services by opening new commercial channels.

In 1996, the Cooperative used their *property*<sup>464</sup>, the FNC and the Comité used their *personal* (FNC's quality team; Comité's extension service and FNC's commercial division)<sup>465</sup> to identify a coffee cultivated in the higher elevations of the Resguardo de San Lorenzo that could be offer as a more expensive specialty coffee known as *Café la Vereda*<sup>466</sup>, successfully exported in 1997<sup>467</sup>. After this commercial validation, the Cooperative, through the deliberative mechanism of the Convenio MH/1997, put forward their demand for this taste related service as an opportunity for the whole community in this Resguardo<sup>468</sup>, which implies the support of the Governor of San Lorenzo to make coffee farmers change their uses of the Resource constituents in the process of cultivation and post-harvesting to enhance the quality (as defined by the FNC) of coffee<sup>469</sup>. At the beginning of 1999, the *Café la Vereda* was awarded the best coffee of the 11th Specialty Coffee Fair of the SCAA in Philadelphia<sup>470</sup>. The commercial vitrine served to connect with two profilers at the end of the value chain: the Canadian roaster Timothy's and the American roaster Bucks County, with whom the FNC/Comité and the Cooperative developed the *Socios y Amigos del Café*

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<sup>463</sup> The team of Asprocafé started with the Secretaria Técnica, one coordinator and 4 promoters (one for each Resguardo). Interview with Rocio Motato, Asprocafé, *ibid*.

<sup>464</sup> The Cooperative's purchase points provided the coffee samples collected with the data of their localization.

<sup>465</sup> Comité's extension service carried out socio-economic studies to evaluate their supply feasibility; these were analyzed during several harvests by the FNC's Quality Office to evaluate their sensory consistency; selected samples were offered by the FNC's commercial division. Interview with Pedro Felipe Gómez, coordinator of the specialty coffee program at the *Comité Departamental de Cafeteros de Caldas*.

<sup>466</sup> Trademark registered in August 2000 on behalf of the FNC in the United States (section 8.3.3.)

<sup>467</sup> In December 1997, the first export of La Vereda coffee was made, and during 1998 and 1999 an effort was made to position this coffee in international markets (CDCC & CCAOC, 2016, p. 6).

<sup>468</sup> "oportunidad de café especial en San Lorenzo" Acta 98 January/98

<sup>469</sup> "hay que enfatizar con el Gobernador del Resguardo en calidad del café" Acta 98 January/98

<sup>470</sup> Recognition that gave the honor to the FNC to serve *Café la Vereda* at the closing ceremony of the fair (CDCC & CCAOC, 2016)

*Especial la Vereda* (the SACEV agreement hereafter). The latter increased its negotiating position in the eyes of the (non) indigenous coffee growers.

A fourth movement is Asproinca's **cooperative** mobilization of their *AR information* to transfer it to the indigenous movement and redefined the "indigenous coffee" symbolic service. Likewise, Asprocafé **cooperatively** mobilized their *AR information* to transfer it to the Comité-FNC.

The production of the "natural coffee" symbolic service, as defined by Asproinca, was an opportunity for recovering ancient memory and with it, the indigenous identity lost by a long period of miscegenation: the first meeting of traditional knowledge in organic fertilizers was developed in the Ingrumá Indigenous Center in which the eldest indigenes related how they used to plant coffee before the synthetic fertilizers arrived, highlighting the use of organic matter in farms featured by the diversity of both plants and animal species<sup>471</sup>. This facilitated the reorientation of the agreement towards the (non) indigenous small coffee farmers, so the indigenous movement accepted not being at the center<sup>472</sup>.

Asprocafé, mobilizing this *AR information* enriched their intervention proposal through an agroecological approach<sup>473</sup> whose center of intervention was the family and its land (not the associative group as it had been done before). They considered that the learning process needed an additional horizontal element (from producer to producer) in addition to the vertical one (from the technician to the producer)<sup>474</sup>.

Likewise, the organic production of coffee that was despised by a generation of agronomists trained under the green revolution mantra of yield/ha, which comprised the bulk of the technical team of the FNC, was gradually accepted by the Comité and the extension agents in Riosucio: At the beginning of the nineties, the only evidence available was Cenicafé's publication by Henao and A Salazar Arias (1981), which stated that 12 kilos of pulp/year/plant were required to replace synthetic fertilizers. It was physically unfeasible in the Colombian mountains when multiplying that amount by the more than three thousand coffee trees/ha<sup>475</sup>. However, Asprocafé mobilized

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<sup>471</sup> Acta 103 May/98

<sup>472</sup> This did not mean that they did not continue receiving subsidies. In the evaluation of the year 98, of the COP 130 million (USD 101 thousand) in income, COP 20 million (USD 15 thousand) were allocated to the support of the indigenous movement. Acta 113 January/1999

<sup>473</sup> Agro-ecological training involves making agricultural uses that recover the ecological cycle. That is, the nutrients that leave the system when selling coffee beans are re-entered into the system, not through synthetic fertilizers but through fertilizers. These are made on the farm when recycling organic waste from both the agricultural processes and the breeding of livestock and minor species. Also, it promotes biodiversity inside the farm for crops protection. To this end, Asprocafé made a training in the manufacture of solid and liquid fertilizers and in biological preparations for the control of pests. Acta 117 Mayo/99

<sup>474</sup> Interview with Ángela Gómez, Asproinca, *ibid*.

<sup>475</sup> Even this experiment is still cited to talk about the impracticality of organic agriculture, see for example Khalajabadi (2008).

its *AR information*<sup>476</sup> to demonstrate that these studies were inadequate because in the organic farming they supported there was a combination of solid and liquid fertilizers derived from other agricultural activities in an agroecological productive system with low, medium and high coverage<sup>477</sup>. Asprocafé transferred this *AR information* to the FNC's extension service through workshops in organic coffee farming in 1997<sup>478</sup>.

Once the “environmentally responsible” symbolic service was triggered by the ICA 2001, the FNC started to seek it in zones with coffee crops featured by the old covered traditional varieties with low productivity<sup>479</sup>. They launched a study to evaluate the potential for the production and certification of organic coffee in farms of three municipalities of Caldas whose conclusion was that 75% of farmers have potential to produce organic coffee (Salazar & O Farfán Valencia, 2003). In Riosucio the Comité had acquired the *RA information* that was mobilized to validate their organic project within the FNC<sup>480</sup>.

### 6.2.3. Institutional creativity: produce the “natural coffee” and merge it with the “indigenous coffee”, “Fairtrade coffee”, “environmentally responsible” symbolic services and the “clean cup” and “citric acid” taste related services

The concretization of the “Specialty coffee registration and promotion program” of the coffee public policy produced the demand for a new service that vested as an actor the FNC/Comité and sparked a decision of the Junta to informally establish a coordination mechanism that led to a deliberative scenario known as the Inter-Institutional Committee<sup>481</sup>. It was constituted informally through which the field days and the training of the various institutions were coordinated (partly derived from the recommendations<sup>482</sup>) in periodic feedback meetings<sup>483</sup>. It had two

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<sup>476</sup> In addition to the knowledge transferred by Bart Powels, it was also reinforced through horizontal learning with farmers in other Departments and countries. Supported by the Convenio, Asprocafé participate in a workshop in the Department of Cauca and in the *Asamblea de Pequeños Productores* in Costa Rica). Acta 103 May/1998

<sup>477</sup> Clearly if they had promoted only the reuse of the pulp and prohibiting the synthetic fertilizer in a conventional monoculture production system, they would have only produced low yield affecting the wellbeing of the coffee household. Interview with Oscar Daniel Sánchez, coordinator of the extension service at Asprocafé from 1992 to 2008 when he moved into Cafexport, in which he is currently the technical coordinator for the Nespresso's Expocafé Clúster.

<sup>478</sup> “En 1997 (...) En Riosucio se realizó un primer taller de caficultura orgánica para los técnicos del Comité Departamental, conducido por Eugenio Cifuentes y el apoyo de la Facultad de Agronomía Orgánica de la Universidad Santa Rosa de Cabal” (Esguerra Gutierrez, 2001, p. 15)

<sup>479</sup> “la Federación concentrará sus esfuerzos en proyectos que se organicen en zonas con cultivos de *typica* o de *caturra* con sombrero, con cafetales envejecidos y con productividades muy bajas, entre 2 a 3 cargas por hectárea (menos de 375 kilos/ha)” (Esguerra Gutierrez, 2001, p. 34)

<sup>480</sup> “(El Comité Departamental de Caldas) ha adelantado un trabajo de identificación de zonas potenciales para la producción de café orgánico” (Esguerra Gutierrez, 2001, p. 15).

<sup>481</sup> Interview with Oscar Daniel Sánchez, Asprocafé, *ibid.*

<sup>482</sup> “tomando en consideración la presencia de varias instituciones quienes desarrollan un trabajo de promoción y asistencia en la misma zona (Cooperativa, Comité, Sena, UMATAS, Asproinca), el convenio debe definir cuál es el papel específico en cuanto áreas de intervención y en cuanto a población meta de sus promotores”. El numeral 2 del punto III “El apoyo en capacitación y acompañamiento que se ha dado al programa”, *Recomendaciones/96, Ibid.*

<sup>483</sup> Interview with Rocio Motato, Asprocafé, *Ibid.*

consequences: on the one hand, they were progressively finding common places around the production of both the “natural coffee” symbolic service and the “citric acid” taste related services (in fact, it was considered that only the organic coffee culture could produce the citric acid aromatic profile<sup>484</sup>). On the other, it pushed away actors who radically privileged other services from the Resource: at one extreme those demanding the “indigenous coffee” symbolic service, at the other extreme, those demanding the “monetary” services.

In fact, the Comité (in particular their extension agent Adriana Vinasco<sup>485</sup>) decided to develop the SACEV agreement supporting the organic production system. Then, la Junta decided to articulate the Convenio MH with the SACEV agreement through an extension agent shared among the Convenio-Comité-Cooperative<sup>486</sup>.

As a result, there was a miscegenation of the practices implemented by the SACEV through the *Comité Asesor Café la Vereda en el Resguardo de San Lorenzo* (lead by the Comité and composed by leaders of the indigenous coffee farmers which were also beneficiaries of the Convenio MH): for example, in the planting process: the practices of having a seedbed on the farm and planting in the field the coffee plantlets seven months old to maximize monetary services, evolved towards a communal seedbeds (own by the indigenous movement using seeds prioritized by the Comité) and the sowings were carried out through the regime of “*manos cambiadas*”<sup>487</sup> privileging the cycles of the moon (a practice recommended by the indigenous movement) as long as it was during the rainy season (a practice recommended by the Comité)<sup>488</sup>.

Miscegenation that was also integrated into the rural educational policy: Given the importance of coffee cultivation in Caldas, the FNC through the Comité implemented the rural education policy by a delegation of the Ministry of Education. The latter, through formal agreements, transferred the money to the former to fund the *Escuela Nueva* rural education model<sup>489</sup>, which included a mandatory component called *Escuela y café*<sup>490</sup>. Through the Inter-Institutional Committee, actors activated the rural education policy<sup>491</sup> in an innovative way by using the

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<sup>484</sup> “A futuro el Mercado solo será por taza (...) los químicos pueden tener efectos en la tasa (...) el futuro es de los cafés especiales y orgánicos”. Acta 109 October/98

<sup>485</sup> “El Comité nunca creyó en el programa orgánico y si se desarrolló, fue porque la extensionista sabía que era la única manera de poder trabajar en esta zona indígena”. Interview with Rocio Motato, Asprocafé, Ibíd.

<sup>486</sup> “el Comité va a empezar a trabajar el programa de café orgánico en Riosucio, y se tiene que enlazar con el Convenio a través de un promotor que sea del Convenio – Comité – Cooperativa”. Acta 124 Diciembre/99

<sup>487</sup> It implies a shared work derived from the indigenous *mingas*. The group of coffee farmers sows the farm of one member, then the other, and so on until all scheduled sowings are made.

<sup>488</sup> Interview with Diego, the leader of the Café la Vereda project between 1997 and 2008 in the Cooperative.

<sup>489</sup> Model developed in Colombia in the 70s to improve coverage and quality in education, especially in multi-grade rural schools: A teacher attends several student cohorts thanks to each grade has its own self-taught guides.

<sup>490</sup> The students had two hours a week to see the coffee lecture: history, varieties, planting, nutrition, diseases, phytosanitary management, picking times, weeding, trading. In addition, they were given materials and field training to work in their parents' farm a plot cultivated in coffee. Interview with Janeth Motato, former rector of the *Instituto Educativo la Esperanza*, the first *Escuela Nueva* to develop the *Escuela y Café* component supporting organic farming.

<sup>491</sup> Acta 113 January/99

*Escuela Nueva* and its *Escuela y café* component to encourage organic coffee farming<sup>492</sup>. In spite of having been denied permission initially by the FNC-Comité, the deliberative scenario created by the Inter-institutional committee allowed to overtake this obstacle thanks to the convergence mentioned around the “natural coffee” symbolic service, and it was so successful that eventually they won the prize for the best *Escuela y café* in Colombia in 1998<sup>493</sup>.

In this way, the process to influence the *know-to-appreciate* in order to produce the “natural coffee” symbolic service could advance with some fluidity. At the end of 1998, the discussion about the certification of organic coffee began<sup>494</sup> and at the beginning of 1999, the plan for being certificated was already in place starting with a baseline of practices implemented by selected farmers<sup>495</sup>. Taking advantage of this baseline, the Junta Administradora decided to start with 109 coffee growers (out of 181 associates) cultivating coffee in 204 ha (out of 3,700 has in Riosucio in 1999<sup>496</sup>). This baseline also highlighted the deficiencies in the use of the *know-how* during the post-harvesting process to produce both the “clean cup”<sup>497</sup> and the “citric acid” taste related services. Hence the Convenio MH decided to subsidized loans for acquiring the equipment needed for all the activities in the post-harvesting (pulping machine, fermentation tanks and coffee washing, plastic-covered drying installations and water treatment)<sup>498</sup>, as well as the implementation of cupping test for 109 selected coffee growers<sup>499</sup>. A couple of years later, once the Internal Control System came into operation with its four components (*Coordinador de Certificación; Inspectores Internos; Comité de Certificación y Normas Orgánicas*), they hired Ecocert, who after inspecting 45% of the coffee growers certify the organic production under the European legislation<sup>500</sup> in June 2001. They made the first export of 45 bags of organic certified coffee in January 2002 (Sánchez Arenas, 2005).

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<sup>492</sup> For example, the seed must be sow in full moon but only once the seed was dry after being immunized in the sage juice for 5 minutes; alongside citronella and lemongrass must be crop to control pests and forage peanut to control weeds because their “spiritual power”. Interview with Janeth Motato, Instituto Educativo La Esperanza, *ibid*.

<sup>493</sup> Interview with Janeth Motato, Instituto Educativo La Esperanza, *ibid*.

<sup>494</sup> In the Acta 110 Nov/98 it is mentioned the need to select some coffee farmers who wanted to be certified organic, so Asprocafé could be certified and the inspection started. It is decided to start with those who have never used synthetic fertilizers. It is approved that the credits are going to prioritize organic coffee farmers who decides to certificate.

<sup>495</sup> The cooperative accepts to adapt its facilities for the purchase, storage and threshing, so they could be certified. The associated coffee farmers were classified according to the last time they had applied synthetic fertilizers. According to this classification a group is selected, the letters of commitment are drawn, the records of practices started (soil analysis, nutrition, pest control, soil conservation and post-harvesting) and the management of other crops. Subsequently, the internal control system would be implemented and the certification would be requested. Acta 117 May/99

<sup>496</sup> On average, they owned 1.8ha cultivated with 2,107 coffee trees/ha with an annual production of 327 kilos/ha. Acta 117 May/99. In the 1997 *Encuesta Nacional Cafetera*, Riosucio had 3.664 hectares grown in coffee. Fuente: SICA/FNC.

<sup>497</sup> Through the *Resolución 5 del Comité Nacional de Cafeteros DE 2002* quality criteria was unified, in practical terms it meant that only coffee that was timely hulled, shortly fermented and properly dried could be exported. Chapter 4.1.2

<sup>498</sup> Acta 121 September/1999.

<sup>499</sup> Acta 124 December/1999.

<sup>500</sup> *Reglamento Comunitario R(CEE) No 2092/91 del Consejo del 24 de junio de 1991, sobre producción agrícola ecológica y su indicación en los productos agrarios y alimenticios.*

Through the Asamblea General de Asprocafé as a deliberative mechanism, this new demand for services was incorporated through the intermediate output “*Plan de Desarrollo Asprocafé Ingrumá*” that was presented in 2003 with two programs: a first one oriented to influence uses of *know-how* during the planting, cultivating and post-harvesting process to produce the “natural coffee” symbolic service. It encouraged the consolidation of an integral and self-sufficient farm that would produce food (and organic matter<sup>501</sup>) for both family consumption and sale to the local market<sup>502</sup> while privileging young coffee plantations to maximize productivity and, training in the correct post-harvesting practices to reduce defective beans and capture the largest possible price<sup>503</sup>. A second program sought to influence uses *know-how* during the post-harvesting process to produce the “natural coffee” symbolic service in order to minimize the negative effects of coffee activity on the environment<sup>504</sup> and protect natural resources, especially water, soil, and biodiversity<sup>505</sup>. Complementary, the SACEV agreement financed the technology transfer and the equipment needed to profile both the “natural coffee” and “indigenous coffee” symbolic service (through the mentioned mestizo practices), the “citric acid” taste related services (through the delivery of hulling machines, fermentation tanks, and plastic covered drying facilities) and the “environmentally responsible” symbolic service (through the delivery of the water treatment tanks and the materials for the construction of composters and vermiculture equipment<sup>506</sup>).

The inter-institutional committee also agreed on the distribution of social premiums among beneficiaries. So, the US \$ 0.15 per pound exported as the social premium of the SACEV agreement exclusively in the Resguardo de San Lorenzo, while the premiums received by the MH agreement were invested in the other areas of its influence excluding this Resguardo (despite they were also MH’s beneficiaries).

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<sup>501</sup> “Proyecto 2: Diversificación Pecuaria y aprovechamiento subproductos en la finca (establos, Áreas pastoreo, bancos forrajes, sistemas abonamiento líquido, áreas para producción abonos orgánicos, planta abonos orgánicos)”, Primer Programa “programa técnico para el mejoramiento de la productividad de las fincas cafeteras”, Plan de Desarrollo Asprocafé Ingrumá 2003.

<sup>502</sup> “Proyecto 4: Comercialización Otros Productos Agropecuarios Certificados (Identificar otras líneas productivas, fortalecer manejo, postcosecha, cadenas de mercadeo)”, Primer Programa “programa técnico para el mejoramiento de la productividad de las fincas cafeteras”, Plan de Desarrollo Asprocafé Ingrumá 2003

<sup>503</sup> “Proyecto 1: Aumento de la Productividad y aseguramiento de la calidad café. (Renovación, Capacitación calidad café, Perfil Taza café orgánico)”, Primer Programa “programa técnico para el mejoramiento de la productividad de las fincas cafeteras”, Plan de Desarrollo Asprocafé Ingrumá 2003.

<sup>504</sup> “Proyecto 1: Mejoramiento condiciones ambientales. (Filtros para la descontaminación de aguas servidas, construcción beneficiaderos de café, Capacitación en Reciclaje y optimización recursos naturales, energía Limpia – Biodigestores)”, Segundo Programa “programa Ambiental para la Disminución de la Contaminación Ambiental de las fincas cafeteras”, Plan de Desarrollo Asprocafé Ingrumá 2003.

<sup>505</sup> “Proyecto 2: Establecimiento de Sombrío y Reforestación. (Reforestar cuencas, nacimientos y corrientes de agua; Aportar árboles para sombra, protección, maderables, frutales, forrajeras)”, Segundo Programa “programa Ambiental para la Disminución de la Contaminación Ambiental de las fincas cafeteras”, Plan de Desarrollo Asprocafé Ingrumá 2003.

<sup>506</sup> Interview with Diego, Cooperative, Ibid.

The final outputs<sup>507</sup> that were executed with the annual premiums in some prioritized farms show the effort for profiling the combination of the “monetary” services; the “clean cup” taste related service<sup>508</sup>; the “natural coffee” and “environmentally responsible” symbolic services. In 2005 one-fifth of the 560 hectares cultivated in coffee of the now 525 members<sup>509</sup> had been progressively renovated (since 2001, a little less than 10% of the program area per year). The technology transfer through both group training and individual accompaniment almost doubled the annual productivity from the 327 kilos/ha in 1999 to 608 kilos/ha in 2005. As monetary services are higher when the coffee sold overtake the minimum quality requirements they provided field days with topics like “picking, post-harvesting, and defects of coffee” and encourage the effort with quality contest called “*apuéstele a la taza limpia de Asprocafé Ingrumá*” while improving the 20% of all post-harvesting equipment of associates. Likewise, training in the management of silvopastoral productive systems included the delivery of both plantlets of coffee trees and materials for stables to twenty associates in 2004; as well as training in nutrition including the delivery of materials for the construction of biodigesters<sup>510</sup> for 35 associates in 2004, encouraged 309 Producers (to transform) 780 tons of biodegradable by-products from their farms into 309 tons of organic fertilizer. The 551 farms registered in the organic program did not apply agro-toxics. A diagnosis of the environmental problems was made for a quarter of the participating families: 10 filters were installed to protect the most affected creeks and 20 micro-watersheds were reforested and 1565 trees delivered for their protection. Additionally, the farms produced 83 tons of food (bananas, banana-plantain, oranges, tangerines and panela (dehydrated juice from sugarcane) that were commercialized by the Asprocafé.

#### 6.2.4. Outcome

Both the international organic-labeling legislation and the ICA 2001 gathered together a coalition (between producers, the Indigenous Movement, the FNC/Comité, the Cooperative, roasters and MH), around a definition of the problem in terms of the low provision of “natural coffee” symbolic service that threatened consumers’ health and, producers’ environment and community.

Unlike the previous LRA MH that targeted the indigenous community, whether or not they were coffee farmers, in this LRA Natural the logic of intervention targeted the coffee farmers, whether indigenous or not. Thus, the (non) indigenous coffee farmer should transit towards an organic productive system through the concretization of both the “Specialty coffee registration and

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<sup>507</sup> All the information in this paragraph comes from the December 2005 report on the organic coffee program of Sánchez Arenas (2005)

<sup>508</sup> Through the *Resolución 5 del Comité Nacional de Cafeteros DE 2002* quality criteria was unified, in practical terms it meant that only coffee that was timely hulled, shortly fermented and properly dried could be exported. Chapter 4.1.2

<sup>509</sup> 357 ha of 346 certified organic producers, and 204 ha of 182 coffee farmers in the conversion process (3 years that must elapse between the last application of chemical products and the start of the certification process as organic) Sánchez Arenas (2005)

<sup>510</sup> The used waters, product of the both the coffee and stables washing, are directed towards this container, which through anaerobic fermentation, produces methane gas for the household needs and a by-product that is used as liquid fertilizer.

promotion program” of the coffee public policy which reoriented the previously created market of fair trade, towards an organic market, and the regulatory system through two coffee purchase agreements: the Convenio MH and the SACEV agreement.

The intermediate outputs were produced individually (through both the Convenio MH and the SACEV agreement) but the final output was shaped by the actors through the Inter-Institutional Committee that allowed them to exchange knowledge and experiences: Including ancestral practices of indigenous communities, peasant customs of small coffee farmers, the scientific recommendations developed by Cenicafé and the healthy practices championed by the MH.

This deliberative scenario allowed the demands for services to be merged in all uses of constituents compatible with the “natural coffee” symbolic service. As a result, the Fairtrade profile present in Riosucio evolved towards a more complex organic profile which produced alongside the “natural coffee” symbolic service, the “Fairtrade coffee”, “environmentally responsible” and “indigenous coffee” symbolic services demanded by consumers, stakeholders in both consumption and production. Additionally, it produced the “clean cup” and “citric acid” taste related services which maximized the monetary services demanded by profilers such as the cooperative and trading unit of the FNC.

Hence, on the base-line LRA Standard, the LRA MH evolved towards the much more complex LRA Natural: in addition to the previous, it sparked new regulated uses to trigger agroecology practices in the planting and cultivation (renovation; shade; soil management, hedgerows, and picking); quality-oriented practices in the post-harvesting process (four activities hulling, fermentation, drying and waste management); and recognition of the organic label in the roasting process (blending and packaging) increasing the extent (69% of evenly-distributed regulated uses, Annex 7). At the same time, it spread to align new actors like the FNC/Comité and some roasters like Timothies and Equal; new governance mechanisms were integrated like Asprocafé with its Internal Control System, and the SACEV agreement with its Comité Asesor composed of indigenous leaders, and new outputs like the premium to incentivize practices and the *Escuela y Café* increase the coherence by coordinating the efforts among the various actors with influence over the farmers (including educative institutions) to multiply the effect on the change in farmers’ behavior. Also, closure was increased by erecting the “government policy” barrier of entry when the obtained the organic certification. So, to the “product differentiation” barrier of entry at the producers’ level linked to the origin (which was reinforced with the Café la Vereda project specifically in the Resguardo de San Lorenzo), a new differentiation was made by linking it to the organic farming.

Nonetheless, two groups of actors felt their services left behind. A minority group in the indigenous movement that defined the “indigenous coffee” symbolic service in opposition to the coffee culture; a minority group in the FNC (including farmers) who believe the “monetary” services could be at risk due to some practices demanded to produce the “natural coffee” symbolic service.

### 6.3. Incumbent LRA Natural; newborn LRA Fairtrade; LRA Organic; LRA La Vereda and LRA Nespresso (2004-2011)

The profile of the LRA Natural left behind the services demanded by two groups of individuals: On the one hand, some indigenous started to redefine the “indigenous coffee” symbolic service as a counterfactual of the coffee expansion encouraged by the coffee public policy. For them, almost all of the indigenous production system, that implied more than 60 different species of plants within the farm, were lost because people were encouraged to the coffee monoculture<sup>511</sup>. On the other, some coffee producers perceived a threat to the “monetary” services they demand because the uses of the Resource constituents, shaped by the indigenous cosmovision, to produce the “natural coffee” symbolic service, were made of superstitious beliefs that would project a chaotic image of Colombian organic coffee farming<sup>512</sup> and could put at risk the “Appellation Café de Colombia” symbolic service<sup>513</sup>.

These actors were individuals or groups of individuals who represented a minority in their respective groups (the collective actor): A minority portion of the indigenous movement that rejected coffee as a foreign non-nutritive crop responsible of the dispossession, and a minority of coffee growers belonging to the Cooperative and the Comité preferred to resume synthetic fertilization practices than to continue with the MH process.

The LRA Organic as an agreement among collective actors, allowed each actor to maintain the internal cohesion on the shared definition of the problem even if they were some unsatisfied individuals. But during the second half of the first decade of the two-thousands, this agreement collapsed and with it the internal cohesion. The unsatisfied individuals managed to spread their definition of the problem within the collective actor until a point in which an agreement was not reachable because the actors’ constellations become one of pure conflict. As a result, rivalries were insurmountable and the actors’ games produced three new LRAs.

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<sup>511</sup> “aquí se transformaron y se perdieron los sistemas de producción indígenas en un 80%, porque la gente se fue a sembrar café (...) para el 98-99 que nosotros empezamos a hacer reconversión ya había mucha caficultura tradicional, monocultivos! Ya había problemas de agua, ya había pérdidas de semillas (antes de esta intervención según los relatos de los mayores) la gente tenía su café tradicional (...) encontrabas hasta 60 variedades dentro del cafetal entre las coberturas bajitas, medias, altas y eso se perdió” Interview with Ángela Gómez, Asproinca, ibíd.

<sup>512</sup> “Hay que evitar que el mercado perciba una gran diversidad de proyectos con mensajes y criterios diferentes. Colombia parecería como un país que aborda el tema de los cafés orgánicos de una forma caótica y que, por lo tanto, no se encuentra listo para obtener recursos de cooperación y apoyo internacional, ni para trabajar en la implantación de este tipo de proyectos” (Esguerra Gutierrez, 2001, p. 43)

<sup>513</sup> “Se tiene la creencia de que los productos orgánicos pueden tener mejor sabor que los convencionales, lo cual es una afirmación no comprobada y peligrosa para un país que tiene un gran negocio en la caficultura convencional que debe protegerse y que no es conveniente ni desprestigiarla, ni debilitarla. Esta creencia puede llevar a generar la falsa impresión de que, en todos los casos, es conveniente cambiar la caficultura convencional por la orgánica.” (Esguerra Gutierrez, 2001, p. 5)

### 6.3.1. Newborn LRA Fairtrade and LRA Organic

- Actors' coalitions: low provision of the "Fairtrade coffee" symbolic service for stakeholders in consumption

The global Fairtrade movement considered that the provision of the "Fairtrade" symbolic service was still too low because it had not reached the critical mass needed to cause a big impact. So, they decided to join efforts in the use of *know-to-appreciate* of consumers by investing collectively in the positioning of a brand that transmits the feeling of altruism and responsibility that would materialize the "Fairtrade coffee" symbolic service.

In 1997 different organizations of the Fairtrade movement were associated around the Fairtrade Labeling Organizations International (FLO hereafter) with the aim of agreeing on common standards and harmonizing the message they wanted to transmit to consumers. In practice, enriching the network in quantity and quality, given that before, the provision of the "Fairtrade coffee" symbolic service could be produced only through MH's commercial network composed of several (but a relatively small group of) specialized roasters. However, a group of actors within FLO considered this network approach as a limitation to the Fairtrade growth. They demanded the establishment of a certification mark that would allow them to irrupt into the standard coffee market so they could make a significant transformation<sup>514</sup>. The objective was to increase the demand by selling outside this network and capture the attention of the large roasters.

The International Coffee Agreement of 2001, especially its consensus around the market mechanisms to align consumer socio-environmental preferences that, through better prices, would encourage the adoption of socio-environmental practices by the profilers, gave momentum to this idea and in 2002 the Fairtrade certification mark was launched, which materialized in the different legislations the article 7bis on collective trademarks of the Paris Convention for the Protection of Industrial Property to register and protect this collective trademark.

MH, a member of the FLO, unilaterally introduced this certification mark into the LRA Natural at the expense of both internal cohesion, in which some members resigned<sup>515</sup> and an external one, in which some partners moved partially away like some producers, the indigenous movement and the FNC/Comité. So, a coalition composed mainly of Asprocafé and its associated farmers; the Cooperative and MH agreed on joint action to be certified on the Fairtrade mark in order to provide the "fair trade coffee" symbolic service.

- Selfishly mobilization of stakeholders in consumption

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<sup>514</sup> "If it is only in the specialized world shops, you will never sell a lot. . . If you really want to make a big impact, we have to work with the commercial market" Said a participant in the Fairtrade certification mark process, quoted by Levy et al. (2015, p. 380)

<sup>515</sup> "By 1997, none of the major firms – Kraft, Nestle, Proctor & Gamble, and Sara Lee – had adopted a standard nor publicly acknowledged any responsibility for coffee farmers or growing conditions" (Levy et al., 2015, p. 380).

The registration of the trademark annulled the MH's *RA organization* since its in-depth knowledge of producers and roasters that allowed it to link them for mutual benefit, became unnecessary when the certification united them impersonally<sup>516</sup>. As a result, the logic of cooperative transfer of *action resources* to produce the "Fairtrade coffee" symbolic service was inverted, to a logic where FLO **selfishly** mobilized their *RA property* on the Fairtrade label over other actors, who had to pay for the access through a certification process, to produce the "fairtrade coffee" symbolic service.

This imposition became evident when Asprocafé concretized the regulatory system by obtaining the right to use the certification mark: They firstly comply with the standard and then paid for the audit (which took place in 2003) in order to be FLO certified (they were certified in 2004) and access to the Fairtrade market that they previously freely accessed. Through this, they obtained the social premium with which they could incentivize, via better prices and access to services (equipment, technical assistance, training, etc.), the change in the behavior of small (non) indigenous coffee farmers.

Two measures required by the audit report in order to obtain the FLO certification changed the allocation of *action resources*: The formalization and democratic organization of Asprocafé and, the traceability of the coffee of its members.

The first measure demanded that all members would be democratically elected. Hence the indigenous movement completely lost their representativeness<sup>517</sup> and without it, the subsidies, that they had been received since the program began, vanished<sup>518</sup>. That is to say, the *AR consensus* possessed by the indigenous movement was completely erased and with it, they lost the access to the transfer of the *money resource* to improve their *action resources* endowment. The CRIDEC perceived this change as a deception of Asprocafé to deprive them access to the Convenio<sup>519</sup>, destroying the previous trust between them<sup>520</sup>.

The second measure demanded that only the associates' coffee is traded: previously the MH's *organization* allow the Cooperative to sell as Fairtrade coffee the production of their associates regardless whether they were associates of Asprocafé (even though the social premium was invested only in associated farmers committed to the organic program). This measure implied

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<sup>516</sup> Max Leuzinger, who had accompanied the process in Riosucio from the beginning and knew by name the coffee growers and roasters, resigned in 2004 for considering the new scheme contrary to his convictions. Interview with Rocio Motato, Asprocafé, *ibíd.*

<sup>517</sup> Since the Convenio MH/1997, the CRIDEC delegated 5 representatives (of the 30 participants) to the Asamblea General, and one of the seven participants of the Junta Administradora

<sup>518</sup> "Hasta que empezaron la disminución de los recursos, les dijimos ya no hay (subsídios para los Resguardos)". Interview with Rocio Motato, Asprocafé, *ibíd.* Without representation in the decision-making bodies, the CRIDEC could not oppose.

<sup>519</sup> "Débiles nosotros que nos lo dejamos arrebatarse" Interview with José David Bueno, representative of the CRIDEC during this period.

<sup>520</sup> "Lo que más daño les ha hecho son los intermediarios como Asprocafé. Como productores no les llegan los beneficios" Interview with Abel David Jaramillo. *Gobernador del Resguardo de San Lorenzo 2005-2011 y alcalde de Riosucio 2012-2015.*

that only Asprocafé's members could be beneficiaries of the Convenio MH/1997, excluding farmers non-associated to former but associated to the latter, in other words, excluding a portion of owners of the Cooperative's *property*.

- Absence of Institutional Creativity to shape the LRA Fairtrade

The Fairtrade standard demanded a non-negotiable profile. So, either profiling actors used (or at least try to use) the Resource constituents as it was written down, or they were unauthorized to profile the combination of services sought by the LRA Fairtrade<sup>521</sup>. If the profile was not negotiable, the deliberative scenario among actors with different demands from the Resource was unnecessary and the Fairtrade coalition prioritized their efforts in fulfilling the Fairtrade standard.

One first effect was that it was put into question the decision to benefit with the social premium only the organic coffee farmers: if the sales to the Convenio MH/1997 were mainly conventional coffee, it did not make much sense to exclude from the benefits the conventional coffee farmers who did not envision the organic farming<sup>522</sup>. In addition, since only partners could sell, it was imperative to increase the number of partners so it was counterproductive to limit the benefits to the smaller group of farmers committed with organic farming. Thus, the "natural coffee" symbolic service came off the "Fairtrade coffee" symbolic service: it was no longer mandatory to refrain from the use of synthetic fertilizers during the cultivation process (nutrition activity) to produce both services. A small coffee grower could make use of them and produce the "Fairtrade coffee" symbolic service while another that abstained would produce the "natural coffee" symbolic service. The former would sell its coffee Fairtrade certificated, the latter as Organic certified. It was considered that by allowing synthetic fertilization small conventional farmers who had not joined by the insistence on organic coffee would join but it also encouraged the migration of some organic farmers towards the conventional coffee farming<sup>523</sup>.

- Presence of Institutional Creativity to create the newborn LRA Organic

Hence, even though there was not a deliberative scenario not to profile sought by the LRA Fairtrade, which was completely imposed, there was a scenario to profile other compatible services alongside the Fairtrade profile, in which only coffee producers participated. Namely the

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<sup>521</sup> "Ya los grupos tienen que pagar para poder estar en el movimiento. Antes nos compraban bastante café, muchos recursos y la asesoría no la pagaban (...) A nosotros nos aplicaron la auditoría FLO, es un cambio muy brusco porque Max venía cada año, revisaba, ya ahorita, que cumpla estándares." Interview with Rocio Motato. Asprocafé, *ibid*.

<sup>522</sup> Speaking of the arguments of the Manager of the Cooperative: "Sí son los convencionales los que están produciendo el recurso, ¿por qué no es para los convencionales? Entonces ya, a no, hay que entregarle a los convencionales también (...) que recibieran convencionales y que también recibieran beneficios" Interview with Rocio Motato, Asprocafé, *ibid*.

<sup>523</sup> For 2007, Asprocafé had 1,682 members, almost three times more than the 550 registered in 2005. However, all the partners in 2005 were organic coffee farmers and by 2007 it had been reduced to 398 and 255 in 2011. *Informe de administración, presentado en la Asamblea General de delegados de la asociación de pequeños productores de café Ingrumá "Asprocafé Ingruma" 2007 y 2011*.

Asprocafé's governance mechanisms (chapter 5.2.2). Indeed, Asprocafé had a major stake profiling firstly services demanded by the LRA Fairtrade but then, it could profile other compatible services like the "Natural coffee" symbolic service. Thus, they shaped the final outputs to impact differently participant farmers in both groups: organic and conventional<sup>524</sup>. For the LRA Fairtrade the final output was shaped to increase the monetary services: improve the quality by subsidizing post-harvest equipment<sup>525</sup>; increase the quantity through a subsidy for renovation<sup>526</sup> and both through a subsidized loans program in which farmers could choose either organic or conventional coffee farming funded in the Fairtrade social premium.

But then, with the reduced group of actors that shared the previous definition of the problem in term on the risk on health caused by the conventional coffee farming, a coalition was consolidated to maintaining the provision of the "Natural coffee" symbolic service: Asprocafé's group of organic farmers; Asprocafé; the Cooperative (which made money by volume through the conventional farming and by add value through the organic farming) and the North American Roaster Equal Exchange<sup>527</sup>.

The latter **strategically** mobilized their *AR organization* to concretize an institution of the private regulation "the Small Farmer Fund" of the Lutheran World Relief, and produce as a final output the project to support productivity improvement in the organic farms of Asprocafé. With an investment of USD 66 thousand they supported both the soil analysis for all participants and the elements to compensate deficiencies; including the equipment needed to produce solid and liquid organic fertilizers<sup>528</sup>; it offered loans to women and young people to acquire pigs or cows for manure to use as a fertilizer and additional support for the adaptation of stables and pigsties; and exchange programs with organic farmers in Nicaragua (T. Caspersen, 2008, p. 2). They developed a new governance mechanism between Asprocafé and Equal for monitoring the development of the project that eventually would be informally known as the annual visit of Equal (chapter 5.2.2) that trigger the evolution of the LRA Natural into the LRA Organic

- Outcome

The Fairtrade certification mark was registered by the FLO to make a significant transformation of the global coffee market but its non-negotiable profile broke apart the previous "natural

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<sup>524</sup>Of the 1,682 associated families, 398 families produced 160 tons of organic coffee and 1,284 families produced 2,070 tons of conventional coffee. *Informe de Asprocafé 2007, ibid. Pag. 2 y 3.*

<sup>525</sup>In 2007 the adaptation of 53 post-harvesting facilities, 73 plastic-covered drying facilities and the maintenance of 296 hulling machines. *Informe de Asprocafé 2007, ibid.*

<sup>526</sup>COP 50 million (USD 27 thousand) were invested in the renovation incentive for 230 conventional coffee growers. *Informe Asprocafé 2007. Ibid.*

<sup>527</sup>USD 60 million in sales in 2014. It has 117 "workers-owners" of the 145 employees, this North American roaster is one of the main purchasers of organic coffee in the USA, self-proclaims "*one of the largest worker co-operatives in the United States, and the world's largest worker-owned coffee roaster*". Equal Exchange. <http://equalexchange.coop/fast-facts>. Última visita 04-20-2017.

<sup>528</sup>"*análisis de suelo completos para todos los productores orgánicos, entregas de enmiendas de suelo como cal dolomita y fosforita, entrega de techos para construcciones de aboneras y canecas para abonos líquidos*". *Informe de Asprocafé 2007, ibid. Pág. 3.*

coffee” coalition in Riosucio and created a smaller one around a problematic defined in terms of the low provision of the “Fairtrade coffee” symbolic service understood as Fairtrade certified coffee. The **selfishly** mobilization of the MH’s *AR property* resulted in the concretization of the specialty coffee program that allowed the VSS market which would incentivize, via better prices and access to services (equipment, technical assistance, training, etc.), the change in the behavior of small (non) indigenous coffee farmers as demanded by the Fairtrade standard.

Hence, from the incumbent LRA Natural, the newborn LRA Fairtrade maintain the previous regulated uses but discarded the regulations on organic practices during the planting and cultivation (deregulating four activities diversification, shade, soil management, and nutrition). In this sense, it reduced the extent (57% of almost concentrated regulated uses, Annex 7). In the same line, the “Fairtrade symbolic service” produced through the certification mark disbanded the previous alignment, only Asprocafé, the Cooperative, and MH (as an abstract identity) remained. They used Asprocafé governance mechanism to fulfill the certification trademark, losing coordination among actors given that, although traceability for farmers improved and outputs funded in the social premium remained, coffee traceability was lost vanishing control over the taste related services and the two-way relationships were diluted between producers and roasters (reducing the coherence). In parallel, by standardizing FLO certified coffee the certification trademarks allowed millions of farms around the world to join the Fairtrade market hence the “product differentiation” barrier of entry went down (reducing closure).

In the case of the LRA Organic, regulated uses did not change maintaining the same extent a (67% of evenly-distributed regulated uses, Annex 7). The “Natural coffee” symbolic service aligned Asprocafé, the Cooperative and the Roaster Equal Exchange which created a new governance mechanism (the annual visits of Equal Exchange) that, equally concretizing the specialty coffee program, resulted in a new output (the project fund by the Small Farmers Fund) that improved farmers’ incentives to implement the recommended practices, increasing coherence. And there were not strategies to erect new barriers at any level, maintaining the closure.

### 63.2. LRA Café la Vereda

- Actors’ coalitions: low provision of the “indigenous coffee” symbolic service for stakeholders in production.

Once the trust was destroyed between the indigenous movement and the previous allies in the LRA organic, the “indigenous coffee” symbolic services was completely detached from the “natural coffee” symbolic service. It took its most radical form advocated by the minority group: the cultivation of coffee was a necessary evil that threatened the indigenous culture<sup>529</sup>.

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<sup>529</sup> “(Asproinca) no trabajaba nada que tuviera que ver con café, ósea se complementaba la finca, pero con otras propuestas: con las propuestas de producción de alimentos; de recuperación de semillas; del manejo de las microcuencas (...) pero nunca le decíamos que lo tumbaran (...) porque también sabíamos que esa era su única opción de ingreso”. Interview with Ángela Gómez. Asproinca, ibid.

Some indigenous leaders who had positioned themselves in the minority group when all the actors had converged around the “natural coffee” symbolic service, could have won political advantage of their exclusion from the Convenio MH/1997 by spreading their definition of the problem in terms of the low provision of the “indigenous coffee” symbolic services (re-defined as the threat to the indigenous culture by the cultivation of coffee) that should be confronted not with a coalition of actors, but with taking control of a resourceful collective actor: the local government of Riosucio.

- Selfishly mobilization of stakeholders in production

The indigenous movement **strategically** mobilized the *AR consensus*<sup>530</sup> against the coffee crop and the “imposition” of the certification practices contrary to their culture<sup>531</sup> to obtain the *AR political support* when they won the electoral contest for the Alcaldía de Riosucio for the period 2004-2007. Darío Edgardo Tapasco Bueno (who had previously been Gobernador Indígena del Resguardo de San Lorenzo) won with a proposal<sup>532</sup> that omitted the word coffee and pointed the “Agrarian Question” by privileging the access to land<sup>533</sup> in order to produce organic<sup>534</sup> food<sup>535</sup> to the domestic market<sup>536</sup> and to trade<sup>537</sup> finished products<sup>538</sup>.

The indigenous movement **selfishly** mobilized their *political support* and the *law* to circumvent the coffee public policy (namely to oppose the concretization of the coffee public policy by the FNC in the Resguardo de San Lorenzo) by innovatively activating both the education and the cultural public policies.

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<sup>530</sup> They united a population that was not yet fully convinced of their condition as indigenes by blaming the FNC and its promotion of the monoculture that endangered both the indigenous culture (by losing their ancestral practices hence their spiritual relation with the pachamama) and the indigenes themselves (by cropping commercial food they were prone to starvation when selling prices were inferior to production cost) that gained momentum with the progressive deterioration of coffee prices. In addition, a common enemy make them reinforce their community ties for survival: the escalation of violence triggered by drug trafficking. Their lands were seen by guerrillas, paramilitaries, and others as strategic corridors on the Western Cordillera to communicate the Pacific Ocean with their military and commercial operations in the Central Cordillera. “These actions had a clear goal: to exterminate the Resguardo, destroy the organization of the Cabildo, and appropriate the better parts of its lands” (Appelbaum, 2003, p. 201).

<sup>531</sup> The narrative of the indigenous movement against VSS and certifications is to assimilate them to a kind of second “Reconquista”. Interview with José David Bueno, CRIDEC, *ibid*.

<sup>532</sup> *Programa de Gobierno 2004-2007 del candidato Darío Edgardo Tapasco Bueno, en Representación del Movimiento Unidad Indígena Popular por Caldas. Municipio de Riosucio. Agosto 2003.*

<sup>533</sup> “Tramitar ante los entes competentes la adquisición de tierra para la población necesitada”. Numeral f del punto G sobre “Cuestión Agraria”, *Programa de Gobierno 2004-2007. Ibid.*

<sup>534</sup> “Establecimiento de programas de erradicación de productos agroquímicos y apoyo al desarrollo de la agricultura orgánica”. Numeral a. *Programa de Gobierno 2004-2007. Ibid.*

<sup>535</sup> “Fomentar la seguridad alimentaria a través del apoyo a los cultivos de pan coger y diversificación de cultivos”. Numeral b. *Programa de Gobierno 2004-2007. Ibid.*

<sup>536</sup> “Reactivación de la producción agropecuaria con el fin de reabastecer el consumo local y comercialización de excedentes”. Numeral e. *Programa de Gobierno 2004-2007. Ibid.*

<sup>537</sup> “Planificación de la producción y el mercadeo”. Numeral c. *Programa de Gobierno 2004-2007. Ibid.*

<sup>538</sup> “Promover procesos tecnológicos eficientes para la transformación de materias primas en productos acabados”. Numeral d. *Programa de Gobierno 2004-2007. Ibid.*

In the first case, the new municipal administration activated the constitutional right to ethnic and cultural diversity (Art. 7, 8, 10, 68, 70 and 72 of the Political Constitution of Colombia) and its recognition in the *Ley General de Educación*<sup>539</sup>. They supported their educational institutions to develop a self-education model known by the Ministry of Agriculture as *proyectos educativos comunitarios*<sup>540</sup>, so they could teach children according to their indigenous cosmovision<sup>541</sup>. On this legal basis Janeth Motato as Rector of Institución Educativa La Esperanza, sent a letter removing the 11 rural schools under their charge of the *Escuela Nueva* program in 2004 to turn towards the Self-Education<sup>542</sup>.

In the process, they firstly identified with the community the more traditional varieties of beans, corn, and vegetables; its form of cultivation, preparation and consumption<sup>543</sup>. Secondly, the curriculum of both primary and secondary schools was built throughout the academic curriculum around the seeds<sup>544</sup>. Finally, four projects were developed that simultaneously develop their vision of Self-Education: The Seed custody project through which children save, sow and reproduce traditional seeds placed under their protection<sup>545</sup>; the literary project to write down the narratives of the community; the spiritual project to connect them with mother nature<sup>546</sup> and the tissue project to transmit ancient craftsmanship.

In the second case, the activated the same constitutional protection of ethnic and cultural diversity, the local authority implemented various projects with the objective of strengthening

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<sup>539</sup> *El artículo 7 de la Constitución Política del 91 que reconoce la diversidad étnica y cultural, y la Ley 115 de febrero 8 de 1994 "Por la cual se expide la Ley General de Educación".*

<sup>540</sup> *"Es la concepción integral de vida y gestión de saberes propios de los pueblos indígenas, comunidades afrocolombianas, raizales y rom, que les permite recrear diferentes manifestaciones culturales y opciones de vida mediante la reafirmación de una identidad orientada a definir un perfil de sociedad autónoma, creativa, recreativa, reflexiva y comunitaria cimentada en sus raíces e historia de origen en permanente interacción con el mundo global".* (Mineducación, 2018)

<sup>541</sup> *"apoyo a los procesos de educación propia a partir de los PEC (Proyectos Educativos Comunitarios) y los planes de vida de los resguardos indígenas" Proyecto 2; programa "promoción evaluación y mantenimiento de la calidad educativa"; sector "educación", plan de acción 2005 del Plan de Desarrollo "Compromiso Social para Todos 2004-2007".* Alcaldía de Riosucio. 26 de junio de 2004.

<sup>542</sup> In 2015, of the 14 rural institutions (each institution consists of about ten schools) in Riosucio, there are three self-education Schools (in the Resguardos de la Montaña and San Lorenzo), two *Escuela Nueva* and the remaining nine are traditional schools (that is, there is no differentiated methodology).

<sup>543</sup> *"Para que haya diversidad cultural es condición que haya diversidad biológica. Entonces se aniquilan las comunidades indígenas (...) al aniquilar la diversidad biológica".* Palabras de Oscar Salazar del Movimiento de Comunidades del Macizo Colombiano en el "Gran Trueque" de Semillas promovida por Asproinca en 2012.

<sup>544</sup> In math, the accounts are made with the seeds; in literature, seed narratives become texts; in arts, the ritual of the seed through which the preparation of the land for sowing is transformed into a traditional dance; etc. Interview with Janeth Motato, Instituto Educativo La Esperanza, *ibid*.

<sup>545</sup> *"Porque conservar una semilla es conservar la vida".* Interview with Janeth Motato, Instituto Educativo La Esperanza, *ibid*.

<sup>546</sup> *"armonía con la naturaleza que implica pedir permiso a las plantas para utilizarlas".* Interview with Janeth Motato, Instituto Educativo La Esperanza, *ibid*.

the ethnocultural dimension<sup>547</sup>. For some, it was an importation of cultural manifestations of other indigenous peoples (in particular of the Cauca in Colombian) given that the local ones vanished long ago so they did not know which ones to support<sup>548</sup>. The result was that recreated “local” cultural manifestations brought to Riosucio the message of resistance of the Colombian indigenous people in the south Colombia with messages about the protection of seeds and the environment<sup>549</sup>.

- Absence of institutional creativity

The profile sought was no negotiable so the deliberative scenario with other actors was pointless. Coffee should be restricted to a minimum in which it could produce cash once the households’ food demands would be satisfied. If the previous incentives were not sufficient to profile the Resource, the Resguardos through their governance mechanisms: the Cabildo as an administrative body prohibited to plant coffee on lands belonging to the Resguardo but worked by the indigenous people<sup>550</sup>. Law enforcement by the autonomous indigenous justice included as a penalization the uprooting of the coffee trees<sup>551</sup>.

It generated a strong rivalry within the process of Café la Vereda because of its localization inside the Resguardo de San Lorenzo, among the coffee growers’ leaders of the SACEV Agreement and the indigenous leaders. The former considered coffee as an instrument to improve the material life of indigenous coffee growers and communities via the investments produced by the SACEV Agreement<sup>552</sup>, while the latter saw it as a threat to the consolidation of their political project of

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<sup>547</sup> “afianzar la riqueza étnica y cultural”. Los proyectos 6,7 y 8; programa “Reconocimiento de la multiculturalidad riosuceña”; sector “cultura”, plan de acción 2005 del Plan de Desarrollo “Compromiso Social para Todos 2004-2007”. Alcaldía de Riosucio. 26 de junio de 2004.

<sup>548</sup> Interview with Alba Nancy Santos Tabora, Coordinadora de Cultura y Turismo de la Alcaldía de Riosucio 2016-2019,

<sup>549</sup> The Saquezipa group originated in the schools of ethnocultural training of the secretary of culture of Riosucio. This group strongly influenced by the Andean indigenous music (in an environment characterized by the predominance of mestizo music such as the *pasillo* or the *bambuco*) mixed lyrics from the anthem of the Colombian indigenous guard like “forward, comrades willing to resist, defend our rights so we have to die” (“*pa’ adelante compañeros dispuestos a resistir, defender nuestros derechos así nos toque morir*”). The author heard them at the Cuesta Theater in Riosucio in June 2015.

<sup>550</sup> “ellos hicieron una adjudicación de resguardo (tierra cuyo propietario es el Resguardo, pero se cede el derecho de uso para que una familia indígena la trabaje) en Yarumal (una vereda en el Resguardo de San Lorenzo), pero prohibieron oralmente sembrar café”. Interview with Juan Pablo Pineda, extension agent of the Comité in the Resguardo de San Lorenzo.

<sup>551</sup> “El cabildo si ha hecho eso (prohibir oralmente la siembra de café), el Fiscal (autoridad judicial al interior del Resguardo) decía que había que arrancarlo porque esa no era la idea (sembrar sólo café)”. Interview with Abel David Jaramillo, Indigenous Movement, Ibíd.

<sup>552</sup> As described in section 8.2.2, both the coffee farmers received a Premium and the community receive public services like health posts, schools and office buildings for the Resguardo.

self-determination and self-sufficiency of the indigenous people of San Lorenzo <sup>553</sup>, even producing victims<sup>554</sup> in a context of the escalation of the national conflict.

Hence, the SACEV Agreement as a governance model (chapter 5.2.2) began to falter. Not only the consensus on the message to be delivered towards farmers vanished, which probably slowed the coordination to produce the “citric acid” symbolic service consistently<sup>555</sup>, but also at the international level the interest for that combination of services was lost. In the case of Bucks County Co., they stopped buying because the demand was no longer sufficient<sup>556</sup>. In the case of Timothy's a new administration <sup>557</sup> continued the purchases without paying premiums or additional investment, so there was no need of meetings<sup>558</sup> and the governance built around the SACEV agreement dissolved.

- Outcome

Once the “natural coffee” coalition was dismembered, the leaders that perceived coffee farming as a necessary evil that threatened the survival of the indigenous culture succeeded in spreading this narrative within the indigenous movement. They **selfishly** mobilized their AR *consensus* and the AR *political support* to circumvent the coffee public policy by innovatively activating both the education and the cultural public policies to influence the behavior of the indigenous farmers and discourage the over-cultivation of coffee.

The effects intended at the municipall level were much intense at the level of the Resguardo de San Lorenzo. Here the previous LRA Natural was locally transformed into the newborn LRA la Vereda, which did not change regulation on uses in the first four processes but without neither the organic/Fairtrade certification nor the commercial alliance with any roaster, the regulations on the roasting and communication strategy disappeared, reducing the extent (43% of highly-

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<sup>553</sup> “Este es un resguardo que más ha odiado el café (...) Se nos fue más encima esta gente (se refiere a integrantes del movimiento indígena), fue cuando llegó lo del café la Vereda, a nosotros ya nos vieron fue como unos enemigos de aquí del mismo Resguardo (...) porque nos dijeron (...) por culpa de ustedes, los líderes cafeteros, San Lorenzo se está llenando de foráneos, de gente de otras partes y aquí no queremos eso. Aquí no necesitamos eso porque San Lorenzo es de Indígenas y el café a nosotros no nos interesa (...) Y eso fue en las mismas oficinas de acá (del cabildo) a nosotros nos tildaron de gente no grata al Resguardo”. Interview with a leading coffee grower of SACEV

<sup>554</sup> “Por motivo de este contrato que se hizo con ellos vendiendo ese café (El Acuerdo SACEV), nos mataron a Angel María Motato, el líder cafetero que hubo de café la vereda, y nos mataron a otro muchacho del mismo Comité Asesor Café la Vereda que se llamaba Rubén Tapasco (...) Razones, no las sé. En esa época esto aquí era zona roja, y eso aquí cualquiera le decía vea, mate a ese que ese no me gusta, y ahí mismo tenga, le iban dando”. Interview with a leading coffee grower of SACEV

<sup>555</sup> “A ellos (Café la Vereda) les rechazaron café por pérdida de perfil hasta que se perdió la comercialización” Interview with Oscar Daniel Sánchez. “Las características se perdían por temporadas. No llegaba por el perfil y había rechazos. Pero eventualmente el perfil regresaba”. Interview with Diego from la Cooperative.

<sup>556</sup> “We had not had that coffee in some time as the demand was not in place to hold the product in house”. Email from Michael Weinberg, (Bucks County Coffee Co Account Executive) April 17, 2017.

<sup>557</sup> In 2008 Sun Capital Partners bought Timothy's and in 2009, Keurig Green Mountain absorbed Sun Capital Partners.

<sup>558</sup> “ya para que se iban a volver a reunir”. Interview with Pedro Felipe González. Coordinator of the specialty coffees program at the Comité.

concentrated regulated uses, Annex 7). But more relevant, without aligned actors around any agreed services, it reduced its chances to motivate farmers' change in behavior due to both the dismemberment of the actor' alignment that fractured the main governance mechanism, the SACEV agreement and, the clashes with the indigenous movement and their outputs like the self-education and the "local" cultural manifestation. So, coherence was severely reduced. Finally, without customers, the "product differentiation" barrier of entry simply disappeared reducing closure.

### 63.3. LRA Nespresso

- Actors' coalitions: low provision of "monetary" services because of the low provision of "environmentally responsible" symbolic service for producers and stakeholders in consumption.

The second measure demanded by the FLO audit (which excluded members of the Cooperative non-associated to Asprocafé) left behind a significant portion of coffee farmers which were excluded from both the LRA Fairtrade and LRA organic because either they owned more than 5 hectares or they did not want to join Asprocafé. It opened a window of opportunity to the minority group that privileged the "monetary" services within the Cooperative but had accepted the convergence around the "natural coffee" symbolic services because of the internal coherence produced by the strength of the MH coalition. Once this coalition cracked, they gain momentum to spread their definition of the problem in terms of the low provision of "monetary" services because of both the unmanageable low coffee prices and the manageable low productivity.

The Convenio MH had empowered the Cooperative<sup>559</sup> and gave them the tools to enhance their governance mechanisms to influence their associates' behavior with final outputs funded in the social premium. It makes them an ideal partner, especially when the production of sustainable coffee was integrated into the agenda after the International Coffee Agreement in 2001 and the Voluntary Sustainable Standards it proposed. In fact, inspired by the ICA 2001, the Swiss Roaster Nespresso<sup>560</sup> was looking since 2003 a reliable partner to profile simultaneously the "environmentally responsible" symbolic service and the "monetary" services in an ecotope that could produce the "winy" taste related service.

Thus, a coalition composed of the Cooperative, the FNC/Comité and Nespresso agreed on joint action to be verified on the Nespresso AAA program in order to improve the quality (defined in terms of achieving the winy taste related service); maximize the productivity (increase the

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<sup>559</sup> In fact, they took advantage by guaranteeing other services than the provided by the standard coffee to eliminate all competition in the coffee purchases in Riosucio. Today there are two purchasing agencies (one in the urban area and the other in San Lorenzo) that acquire a minimum portion of the coffee (usually of low quality) that the coffee growers do not sell in the cooperative mainly because of the waiting time to sale the coffee. The concentration of coffee and coffee growers at harvest time makes those who carry low quantities of low quality prefer the low prices of the agencies

<sup>560</sup> USD 4 billion in sales in 2014 (Nespresso., INCAE, & CIMS, 2017, p. 4), Nespresso belonging to the Nestle group, is the leader in the coffee segment in personal doses in Europe.

monetary services) while reducing at maximum the negative impacts in the environment (produce the “environmental responsible” symbolic service).

- Strategic mobilization of profilers and stakeholders in production.

The Cooperative **strategically** mobilized its *AR property* as a shareholder of Expocafé<sup>561</sup>, when, through Cafexport, they knew that the Swiss Roaster Nespresso demanded to Expocafé for a terroir that produced a winy aromatic profile<sup>562</sup>. The Comité **strategically** mobilized their *AR personal* to concretize a first step of the specialty coffee public policy in Caldas since 2002 “*proyecto de extensión y gestión para la producción y comercialización de cafés especiales en el Departamento de Caldas*”: in 2004 they conducted an aromatic profile identification tests and identified this “winy” taste related in a higher altitudinal fringe of the neighboring municipality of Supía and, later in the similar fringe in the Resguardo de la Montaña in the municipality of Riosucio, both zones bordering at each size the Resguardo de San Lorenzo<sup>563</sup>.

Then the Cooperative **strategically** mobilized their *AR property* by using its purchase points to enroll coffee farmers through a self-assessment booklet that only required to have the crop in the selected zones, without additional requirements of ownership nor agronomic practices<sup>564</sup>; the Comité **strategically** mobilized their *AR personal* to promote among coffee farmers their enrollment; and Nespresso **strategically** mobilized their *AR money*<sup>565</sup> to innovatively activated the specialty coffee public policy in Caldas in 2006 through a public-private alliance between the Cooperative; FNC/Comité; Technoserve and *Fundanatura* (NGOs), Cafexport, Expocafé and Nespresso so farmers would implement the TASQ<sup>®566</sup> and therefore, would improve their quality and productivity thus their monetary services.

- Presence of institutional creativity:

The TASQ<sup>®</sup> produced a partially non-negotiable profile but contrary to FLO certification trademark, the Nespresso AAA program built through a two-year project supported by the international NGO, Technoserve until 2008, evolved beyond the specific quality demands through objective setting sessions, structured annual review meeting and field visits (Alvarez et al., 2010, pp. 177-178) that produced the Expocafé cluster coordinated by the local operator Cafexport. This cluster provided a deliberative scenario through the *Encuentro bianual del Clúster Expocafé*, in which participant profilers including stakeholders in production and consumption, could profile other compatible services.

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<sup>561</sup> The coffee export company of the Cooperativas de Caficultores, in which La Cooperativa had 7% of shares in 2002. World Basc Organization, 2002.

<sup>562</sup> Interview with Juan Carlos Ardila, founder and CEO of Cafexport.

<sup>563</sup> *Informe de Administración y Gestión. Asamblea de delegados de la Cooperativa de Caficultores del Alto Occidente de Caldas 2005.*

<sup>564</sup> Interview with Oscar Daniel Sanchez. Cafexport, *ibid.*

<sup>565</sup> This alliance was funded with CHF 847 thousand for three years (CHF 472 thousand funded by Technoserve and Nespresso (Wendelspiess, 2010, p. 130)).

<sup>566</sup> *Tool for the Assessment of Sustainable Quality* (Section 8.2.2).

It started through a first baseline survey identified significant challenges to effectively implement the TASQ® and guarantee the preservation of the “winy” taste related service<sup>567</sup>. Then, through this governance mechanism, they implemented the project “*implementación AAA*” to influence the use of *know-how* so integrated farm management that enhances productivity and quality while reducing pollution during the cultivation and post-harvesting (Cafexport, 2012a, p. 4). In this sense, the objectives sought by the TASQ® were operationalized through the practices identified by Cenicafé and transferred through the Comité extension service to the participant farmers, and in terms of management and quality, technologies in IT services for improving the traceability were transferred to the Cooperative<sup>568</sup>. As a result, almost 20% of the Cooperative's supply was purchased in 2005 as Nespresso coffee (more than twice the coffee purchased as Café la Vereda and almost eight times coffee purchased as organic)<sup>569</sup>.

- Outcome

Once the “natural coffee” coalition broke down, leaders that privileged “monetary services” found in Nespresso an ally that shared the problematic moved forward by the ICA 2001: coffee culture threats coffee communities’ wellbeing and their environment causing consumers anxiety. So, they redefined the problem in terms of the low provision of “monetary services” due to the low provision of both the “environmentally responsible” symbolic services and the “winy” taste related service. This coalition (Cooperative, Comité-FNC and Nespresso) **strategically** mobilized their *AR property, personal* and *money* to concretize the “specialty coffee program” that allowed the VSS market which by aligning the preferences for a sustainable coffee, the higher prices paid by consumers would incentivize the change in the behavior of (non) indigenous coffee farmers no matter the size of the ownership as long as was higher than 0.5 ha, as agreed within the Clúster.

As a result, the Nespresso LRA developed in crescendo attracting coffee growers from the LRA Standard, Fairtrade and Organic. Similar to the LRA Fairtrade, it maintained the previous regulated uses but discarded the regulations on organic practices during the planting and cultivation (deregulating four activities diversification, shade, soil management, and nutrition) but including a new use during the cultivation (farm management). Due to the partnership with Nespresso, other uses in the last process were added: one in the roasting (roasting) and two during brewing (grinding, brewing). It increased the extent (78% of evenly-distributed regulated uses, Annex 7). To profile higher monetary service through provision of both environmental responsible symbolic service and winy taste related service, producers, the Cooperative, the FNC/Comité and Nespresso aligned and developed a public-private governance mechanism (the two-way Clúster Expocafé) to implement the TASQ® tool through the output “*implementación*

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<sup>567</sup> Interview with Oscar Daniel Sanchez. Cafexport, *ibid*.

<sup>568</sup> IT improvements increased both the “timely” deliveries (from 59% to 69% between 2010 and 2011) and reduced rejections from 4% in 2006 and 2007 to 1% in 2010 and 2011 (Cafexport, 2012b, pp. 8-10)

<sup>569</sup> In thousand kilos of coffee: 807 Nespresso; 301 Vereda; 112 Orgánico. *Informe de Administración y Gestión. Asamblea de delegados de la Cooperativa de Caficultores del Alto Occidente de Caldas 2005.*

AAA” project, strengthening its influence over farmers’ behavior, increasing the coherence. Nevertheless, the “product differentiation” at the local level disappeared because the coffee from Riosucio joined the Nespresso AAA coffee from all others Nespresso clusters around the world, reducing its uniqueness while transferring barriers of entry from the local level to the roaster level reducing the closure.

#### 6.4. A newborn LRA Standard Climate-Smart shared by all the incumbent LRAs and a newborn LRA Starbucks (2012-2016)

Two Niña phenomena (2008-2009 and 2011-2012) in which rain was on average 40% above the historical averages in Caldas, decreasing the solar brightness by almost 20% and the temperature by 0.8 degrees Celsius, reduced production in the area of influence of the cooperative by 40% between 2007 and 2011<sup>570</sup>. Afterward, two El Niño phenomena (2013/2014 and 2015/2016) affected quality increasing the percentage of coffee that could not be exported<sup>571</sup>.

##### 6.4.1. Actors’ coalitions: high vulnerability to climate change for stakeholders in production and profilers

The Niña phenomenon showed up the disadvantages of the different production systems championed by the different coalitions and brought to light some changes to improve them: For the indigenous movement, the need for cash crops to improve the material well-being was highlighted; for the Fairtrade-Organic coalition it became clear the need to maximize productivity to maintain an acceptable income to the coffee grower; for the FNC-Nespresso coalition the need to protect the coffee farmer and his land, diversifying the sources of income and food, and conserving the natural resources got evident. Thus, they all gather together a new system, which we could describe as diversified coffee cultivation adapted to climate change, from which they could profile their demanded services.

The LRA Organic suffered a double negative impact: not only in production like all the other LRAs but also in their own ideology. It was assumed that the uses of the Resource constituents encouraged to produce a “natural coffee” sought to reproduce an autonomous system that protected itself from external factors such as climate change or pests, but the truth is that although the plants could have been protected and probably landslide losses were prevented, the coffee grower's need for coffee cherries was clearly insufficient: At the end of the first Niña the average production of organic coffee farmer was 379 kilos in 2009, 38% lower than the 610

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<sup>570</sup> The greater cloudiness that increases the rainfall, weakened the plants because of both the lack of energy due to lower solar radiation and the filtration of nutrients deep enough that the tree cannot reach them (the coffee plant concentrates 96% of the absorbent roots in the first 50 centimeters from the soil surface) (Arcila et al., 2007, p. 26). As a result, the Cooperative purchased 6.2 million kilos of coffee in 2007, 3.75 million in 2009 and 3.3 million in 2011 in its entire area of influence. *Informes de administración y gestión de la Cooperativa en 2007 y 2009*.

<sup>571</sup> Its effect in Riosucio is the lower cloudiness that decreases rainfall and increases the evapotranspiration of the soil, depriving the tree of the water necessary to fill the fruits of coffee and, in the extreme, for its own survival. As a result, proportion of low quality coffee purchases by the Cooperative almost double from the 6.25% in 2014 to 11.11% in 2015. *Informes de administración y gestión de la Cooperativa en 2014 y 2015*.

kilos produced by in 2007. The second Niña pushed further to 297 kilos per organic coffee grower in 2011. It is not surprising that by 2012 there were only 231 organic coffee growers, 42% less than in 2007<sup>572</sup>

In the case of the LRA La Vereda, La Niña had two effects: First, this phenomenon could have produced a redefinition of the “indigenous coffee” symbolic service for the indigenous movement. In fact, they recognized the importance of coffee in the indigenous household to provide with the cash needed to meet material needs <sup>573</sup> . Secondly, it demonstrated the vulnerability of coffee-dependent farmers with high planting densities and poor coverage, which not only put the “monetary” services at risk by decreasing both the following harvest and the future ones, due to landslides but also it highlighted the risk of malnutrition. In fact, the Comité activated an emergency Food Security program during this period (delivering chickens, hens, tilapia and mojarras fingerlings and, corn and bean seeds) to counteract the foreseeable nutritional decrease as a result of the lower income of coffee growers<sup>574</sup>.

The indigenous movement and its allies (stakeholders in production such as Asproinca) redefined again their “indigenous coffee” symbolic service: neither in terms of the support for the indigenous movement, nor in terms of the organic production, nor in the counterfactual of coffee production as previously but in terms of the *Buen Vivir*. That is, coffee must serve a dual purpose to generate income and to protect the indigenous cultural identity whose main element is the land<sup>575</sup>.

In the case of the LRA Nespresso, the coalition Cooperative-FNC-Nespresso had to rethink the “monetary” services in terms of what was called “*Caficultura climáticamente inteligente*” in the *LXXVI Congreso Nacional de Cafeteros del 2011* (FNC, 2011) but adapted to the particularities of Riosucio. That is, at the national level the agenda focused on cultivation practices to adapt to the climate variability that emphasized the planting of resistant varieties <sup>576</sup> with a spatial arrangement that adequately provided both shade and coverings. The idea was to reach an equilibrium among plant species in which the protection to climate variability compensated the

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<sup>572</sup> Resulting figures when dividing: the 242 thousand kilos of organic coffee bought by the Cooperative in 2007 (*Informe de Administración y Gestión Cooperativa 2007*) among the 398 organic coffee farmers in 2007 (*Informe de Administración y Gestión Asprocafé 2007*); the 128 thousand kilos of organic coffee bought by the Cooperative in 2009 (*Informe de Administración y Gestión Cooperativa 2009*) among the 340 organic coffee farmers in 2009 (*Informe de Administración y Gestión Asprocafé 2009*); the 75 thousand kilos of organic coffee bought by the Cooperative in 2011 (*Informe de Administración y Gestión Cooperativa 2011*) among the 255 organic coffee farmers in 2011 (*Informe de Administración y Gestión Asprocafé 2011*).

<sup>573</sup> “Llegó un momento en que también, esa fue la única opción económica (...) la gente necesitaba pesos (...) Asproinca se demoró mucho en entender que vivían de eso (...) es que no podían ir en contra de la corriente”. Interview with Ángela Gómez, Asproinca, *ibid*.

<sup>574</sup> Interview with Nicolas Bañol, coordinator of the extension service in Riosucio since 2012.

<sup>575</sup> “(El Cabildo promueve una) concepción de la tierra y el territorio, la tierra también se desgasta, la tierra también hay que dejarla descansar, que no se le puede poner sólo un cultivo como monopolio”. Interview with Abel David Jaramillo Largo, Indigenous movement, *ibid*.

<sup>576</sup> Given that coffee trees weakened by rainfall are particularly vulnerable to the fungus *Hemileia vastatrix* that causes rust in the leaves of the coffee, defoliating the coffee tree and depriving it of the necessary plant material to carry out the photosynthesis and produce the coffee cherries

competition for sunlight and nutrients. At the local level, this coalition had to redefine the monetary services in terms of the household stable and long-term wellbeing. It implied crop diversification that provided food, shade, and coverage in order to improve resilience for both the coffee crop and the family.

#### 6.4.2. Cooperative mobilization of action resources among stakeholders in production

This actors' game began with two cooperative mobilizations: firstly, the Indigenous movement strategically mobilized their AR *political support* (they won the municipal government) to concretize the citizen participation public policy through their intermediary output "*governabilidad pluricultural*" program in its municipal development plan. It empowered the Comité with the AR *consensus* by allowing them to present their intervention plans for a climate-smart coffee farming; Secondly, the FNC strategically mobilized their AR *organization* to concretize the cultural public policy producing as an intermediary output the dossier for inscribing in the world heritage list the coffee cultural landscape of Colombia (CCLC onward). Unlooked-for, this mobilization transferred the AR *information* to the indigenous movement by highlighting their contribution to the exceptionality of the CCLC.

A division between the leaders of the traditional political parties (mestizos) allowed the victory of Abel David Jaramillo from the indigenous movement for the Alcaldía de Riosucio 2012-2015. Plausibly as Gobernador del Resguardo de San Lorenzo in the period 2005-2011, he experienced the rather negative consequences of the use of power to impose the indigenous movement vision that made them become isolated once out of office<sup>577</sup>: the *political support* of the indigenous movement that was diluted when trying to impose their agenda on the other political actors of Riosucio. Therefore, when campaigning he proposed a plan whose pillar was citizen participation in the decision-making process<sup>578</sup>. A notable element was its proposal to transfer the AR *information* in a timely manner to integrate the demands of citizens into public intervention<sup>579</sup>.

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<sup>577</sup> The indigenous movement were defeated in the 2007 elections, and the new government isolated the Resguardos by eliminating the figure of the "indigenous link" in an administrative restructuring. "*En anteriores administraciones municipales se tenía creado el cargo de enlace indígena, con el fin de que fuese esa oficina o funcionario el encargado de la articulación entre la administración municipal y los resguardos indígenas, sin embargo, durante la reestructuración administrativa adelantada por la anterior administración municipal fue suprimido este cargo, el cual quedo en manos de la Secretaría de Gobierno.*" Documento Diagnostico Plan de Desarrollo Municipio de Riosucio Caldas 2012-2015.

<sup>578</sup> "*concertar previamente la toma de decisiones y establecer consensos comunitarios y transparentes*". Apartado sobre Marco Ideológico del Programa de Gobierno para el Municipio de Riosucio Caldas 2012-2015, Candidato Abel David Jaramillo Largo. Movimiento Unidad Indígena y Popular por Caldas.

<sup>579</sup> "*Fortaleceremos la participación ciudadana y comunitaria en el sentido de integrar la ciudadanía en el proceso de adopción de decisiones comunitarias y de gobierno, en pro de mejorar servicios y oportunidades (...) Nuestro interés es lograr que toda la población riosuceña aporte puntos de vista, inquietudes y soluciones, para lo cual es necesario entregarle la información necesaria y oportuna en cada uno de los campos donde se quiere propiciar la participación*". Apartado sobre Participación Ciudadana del Programa de Gobierno para el Municipio de Riosucio Caldas 2012-2015, *Ibíd.*

Unlike the previous municipal administration 2008-2011, whose final Plan de Desarrollo <sup>580</sup> promoted the mestizo demands despite having proposed a conciliatory one with the indigenous cosmovision<sup>581</sup>, the new municipal administration's Plan was consistent with its conciliatory proposal<sup>582</sup>. Priority was given to the creation of deliberative scenarios known as "*mesas de concertación*" between mestizos, Afro-descendant and indigenous population <sup>583</sup> and the implementation of a system of citizen participation<sup>584</sup> that empowered different groups<sup>585</sup> so their demands could be integrated through popular assemblies to define the allocation of public resources<sup>586</sup>. This coherence was also reflected in the conciliatory tone of the agricultural<sup>587</sup>, educational<sup>588</sup> and cultural<sup>589</sup> policy.

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<sup>580</sup> *Plan de Desarrollo Municipal 2008-2011 "Riosucio con todos y para todos", Alcaldía de Riosucio.*

<sup>581</sup> Three examples: only 12% of money allocated for Agriculture went to a subprogram to support agroecological farming while 87% went to two subprograms for farming intensification; only one of the 6 programs in the education sector refers to the indigenous component but just as one of the elements of multiculturalism; only one of the four programs of the culture sector is related to the indigenous question. And in this program, only one of the five subprograms, with a participation of 16% on the budget, was in partnership with the Resguardos. Plan de Desarrollo 2008-2011, *ibíd.*

<sup>582</sup> The Plan with a Budget of COP 80 thousand million (USD 45 million) was divided into six axes (1- Pluricultural Governance, 2- Populations with Special Protection, 3- *Riosucio Equitativo y Solidario* (which consumes 85% of resources by concentrating the health, education, culture and sports sectors) 4- Collective rights 5- Riosucio with Sustainable Economic Development, 6- Public Management).

<sup>583</sup> "*Escenarios de concertación entre población mestiza, afrodescendiente e indígena: Un consenso sobre los fundamental*". Único subprograma del Programa nueve "*Riosucio pluricultural –hacia un consenso sobre lo fundamental para el desarrollo humano local*" del primer eje "*Gobernabilidad Pluricultural*" (nueve programas presupuestados en \$ 802 millones de pesos para "*Generar condiciones de seguridad, justicia y convivencia ciudadana en un marco de respeto por los derechos humanos y el derecho internacional humanitario*"), Plan de Desarrollo de Riosucio Caldas, 2012-2015.

<sup>584</sup> "*sistema municipal de participación ciudadana comunitaria*". Programa "*desarrollo comunitario y participación*" en el tercer eje "*Riosucio Equitativo y Solidario*" del Plan de Desarrollo de Riosucio Caldas, 2012-2015.

<sup>585</sup> Subprograma 1.2 "*fortalecer las juntas de acción comunal (...)*"; subprograma 1.3 "*acompañar a las comunidades indígenas en su proceso de fortalecimiento (...)*"; subprograma 1.4 "*realizar intercambios entre comunidades rurales y urbanas (...)*"; subprograma 1.5 "*apoyar a grupos asociativos (...)*"; subprograma 1.8 "*garantizar la participación de los niños, niñas y adolescentes (...)*".

<sup>586</sup> "*realizar 4 asambleas ciudadanas y comunitarias para la definición en la asignación de los recursos*". Indicador de resultado del subprograma 1.6 "*presupuestos participativos*" del programa "*desarrollo comunitario y participación*", *ibíd.*

<sup>587</sup> El primer programa orientado a la seguridad alimentaria "*derecho a la alimentación sana y saludable*" del servicio café indígena, se complementa con los otros dos programas "*asociatividad para potenciar la producción*" y "*emprendimiento y productividad*" que buscan fortalecer las asociaciones de productores y sus encadenamientos productivos (el café es una de las 6 alianzas productivas priorizadas) para mejorar los servicios monetarios. Junto con los otros cuatro programas que componen el Eje 2 "*Riosucio con Desarrollo Económico Sustentable*" presupuestado en \$ 927 millones de pesos.

<sup>588</sup> Por un lado crea escenarios de deliberación para que los ciudadanos planteen sus demandas sobre la educación en Riosucio (Subprograma 3.1 "*construcción colectiva del diagnóstico para el Plan Municipal de Educación con énfasis en la interculturalidad*" y subprograma 4.1 "*espacio de construcción y ejecución colectiva de políticas educativas*"), por el otro refuerza tanto los procesos de calidad en términos nacionales como indígenas (subprograma 1.2 "*calidad educativa*" (evaluado a través de las pruebas SABER del Mineducación) y subprograma 3.2 "*apoyo a los procesos de educación propia*").

<sup>589</sup> El primer programa "*reconociendo la pluralidad y diversidad cultural*" con su objetivo "*Respetar, fortalecer y reconocer las diferentes creaciones, manifestaciones, tradiciones y enfoques en los contextos de diversidad*

Derived from this conciliatory spirit, the indigenous movement led by Jaramillo did not use their *AR political support* to impose their anti-coffee vision but, on the contrary, to create deliberative scenarios that allowed the Comité to transmit their message to the Cabildos<sup>590</sup>: a *mesa de concertación* was provided to motivate discussions on coffee culture among the interested parties, in which the Comité was invited to expose all their projects before the Alcalde and all the *Gobernadores de los Resguardos Indígenas*<sup>591</sup>. As a result, the doors were opened again to initiate a joint collaboration.

In parallel, the FNC alongside the Ministry of Culture, mobilized the *AR information* to inscribe the Colombian Coffee Cultural Landscape (CCCL) in the list of World Heritage<sup>592</sup>: Contrary to omitting the indígenas in the history of coffee growing in the region<sup>593</sup> or to victimize the indigenous because of coffee<sup>594</sup>, the document presented to the UNESCO highlighted the contribution of indígenas to the exceptionality of CCCL that makes it worthy to be a World Heritage<sup>595</sup>.

This vector of identity for local communities, in a slow but widespread process among a large number of institutions in the area of influence of the CCCL<sup>596</sup>, built a new problematic in terms

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*etnocultural y multicultural” define la promesa conciliatoria que se concretiza al realizar el inventario cultural (programa 2) y proponer la construcción participativa del Plan Decenal de Cultura (programa 3).*

<sup>590</sup> “y como él había sido gobernador del resguardo de San Lorenzo, entonces él sirvió de enlace entre la Federación y todos los cabildos”. Interview with Nicolas Bañol, Comité, *ibid*.

<sup>591</sup> “(No se les había presentado porque) antes existían esos choquesitos, que ustedes sí, que ustedes no, que es que ustedes dicen esto, que ustedes dicen lo otro, y los acercamientos empezaron con este Gobierno de Abel David Jaramillo”. Interview with Nicolas Bañol, Comité, *ibid*.

<sup>592</sup> Decisión 35 COM 8B.43 del 25 de junio de 2011 en la 35va sesión del Comité de Patrimonio Mundial de la UNESCO en Paris.

<sup>593</sup> The mainstream narrative in Colombia that consider that Antioqueños white men conquered the mountain to crop coffee and produce wealth for the nation, as it can be seen the picture “*Horizontes*” in the Museo de Antioquia, painted by Francisco Antonio Cano in 1913.

<sup>594</sup> The narrative of the dispossession claimed by some in the indigenous movement as it was presented in section 6.2.

<sup>595</sup> “The presence of an indigenous population with its own traditions is reflected in the presence of reservations in Riosucio and Quinchía, not just in the tradition of the cultivation of bamboo, indigenous cultural traits adopted in the constructive techniques in many towns and rural dwellings of the Coffee-Growing Cultural Landscape. Without doubt, this was a dynamic and intense colonization process whose integration with the landscape and use of ancestral knowledge generated a new productive landscape in an exceptionally short period of time” (Mincultura & FNC, 2010, p. 154).

<sup>596</sup> “En el proceso de conformación de la CAPCE que hoy presentamos se ha contado con la participación del Ministerio de Agricultura y Desarrollo Rural, de funcionarios de Comités de Cafeteros, de voceros de asociaciones de productores de cafés especiales, de directivos de cooperativas de caficultores, de empresarios de trilladoras de café, tostadores, baristas, catadores, empresarios de tiendas de cafés especiales, exportadores, empresarios de turismo rural. Adicionalmente hemos contado con instituciones de investigación, con las Corporaciones Autónomas Regionales, con el ICA y con la academia regional representada en varias universidades y en el SENA. También han intervenido Incubar Eje Cafetero, las Secretarías de Agricultura, Proexport, la Asociación de Cámaras de Comercio del Eje Cafetero, el Departamento para la Prosperidad Social, las Secretarías de Turismo y de Competitividad, y el PNUD.” Arango Gaviria, Oscar (Secretario Técnico de la Cadena Productiva de Cafés Especiales del PCCC) *Intervención en el acto*

of the low monetary services for the poor reputation of the origin because it was disconnected from the exceptional cultural identity in the Department of Caldas. Actors, including the FNC-Comité-Cooperative and the Alcaldía de Riosucio among others, considered that they could generate income through the cultural value of coffee<sup>597</sup>. They concretized in an innovative way an instrument of the agricultural public policy: “*el acuerdo de Competitividad para la Cadena Productiva de Cafés Especiales del Paisaje Cultural Cafetero*” signed among several actors including the Ministerio de Agricultura in 2014<sup>598</sup>, in order to gain legitimacy and being incorporated into the government's agenda and its budgets<sup>599</sup>.

Jaramillo as leader of both the indigenous movement and the local administration identified himself with a CCCL built on the contribution of the indigenous to the coffee landscape. He used this vector of identity to counteract the dispossession narrative, in order to appease the radical wing against coffee within the indigenous movement. In practice, endowing the Comité-FNC with the *RA consensus*.

In a **strategic** mobilization, the *AR political support* of the indigenous movement (which allowed them to win again the Alcaldía de Riosucio), was interchanged for the *AR consensus* of the Comité-FNC (which allowed them to lead an economic development with cultural identity agenda backed by the entities of the public, academic sector, and business) so a trust-recovery process could start. Then, given that services demanded from the Resource between the Comité-FNC and the indigenous movement remained antagonistic (“monetary” services against “indigenous coffee” symbolic services), the actors made a second **strategic** mobilization of action resources: the *AR personal* of the Comité and the *AR money* of the Alcaldía, to jointly carry out infrastructure projects (recovery and maintenance of roads<sup>600</sup>, housing<sup>601</sup>, electrical grid<sup>602</sup>, etc., affected by the

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*público de firma del Acuerdo de Competitividad para la cadena productiva de Cafés Especiales del Paisaje Cultural Cafetero. Mayo 14 de 2014, Manizales.*

<sup>597</sup> “desde 2012 se viene realizando un proceso de concertación interinstitucional entre diferentes actores públicos, privados y académicos alrededor del desarrollo del sector de los cafés especiales “. Numeral o. de las consideraciones del Acuerdo de voluntades para la construcción del acuerdo de competitividad y la organización de cadena productiva de Cafés Especiales. Firmado por un centenar de participantes en la reunión de septiembre 25 de 2013 en Armenia.

<sup>598</sup> Art. 1 de la Ley 811 del 26 de junio de 2003 que incorpora a la Ley 101 de 1993 (Ley General de Desarrollo Agropecuario y Pesquero) un nuevo capítulo XIV de las organizaciones de cadena en el sector agropecuario, forestal, acuícola y pesquero.

<sup>599</sup> “Artículo 106. Refrendación de los acuerdos de competitividad. Los acuerdos de competitividad refrendados por el Gobierno, se incorporarán a las políticas y presupuestos gubernamentales, con el fin de adelantar las acciones acordadas como compromiso del sector público. De la misma manera, el Gobierno dará prioridad en el acceso a los incentivos establecidos a los miembros de las organizaciones de cadena inscritas.” Ley 811 del 26 de junio de 2003,

<sup>600</sup> Proyecto “vías para el desarrollo y calidad de vida rural” por \$500 millones de pesos para el mantenimiento de 180 km de vías departamentales y municipales en Riosucio en conjunto entre la Gobernación de Caldas, la Alcaldía de Riosucio, los Resguardos Indígenas y el Comité Departamental de Cafeteros de Caldas. Informe de Gestión, segunda Rendición de Cuentas de la Alcaldía Municipal de Riosucio, diciembre de 2012. Pág. 53

<sup>601</sup> Proyecto “mejoramiento de vivienda para afectados por la ola invernal” con la Gobernación de Caldas, la Alcaldía de Riosucio, el Comité Departamental de Cafeteros de Caldas y el Programa Presidencial “Colombia Humanitaria”. Informe de gestión, *ibíd.* Pág. 52

<sup>602</sup> Proyecto “servicios públicos domiciliarios” por \$100 millones de pesos para la electrificación de 100 viviendas rurales en conjunto entre la Gobernación de Caldas, la Alcaldía de Riosucio, los Resguardos Indígenas, el Comité Departamental de Cafeteros de Caldas y la CHEC (Central Hidroeléctrica de Caldas). Informe de gestión, *ibíd.* Pág. 52

harsh Niña) that influenced the daily life of the coffee grower but without influencing a particular profile of the Resource.

These *mesas de concertación* allowed the two previously opposite actors (Comité-FNC and the indigenous movement) agreed on an intervention in the coffee grower but neutral on the profile of the Resource that demonstrated the mobilization of the *AR time* that was not been previously used. The objective was not to influence some uses in the present that would satisfy all the actors but was rather to create trust<sup>603</sup> in order to reach some agreed uses in the future. That is to say, given the pure conflict constellation between the services sought by both actors, if they had produce one specific profile it would have necessarily meant ceasing to produce the profile demanded by one actor. They **strategically** mobilized they *AR time* not to try to solve the rivalry, simply to improve the relationship to prepare the ground for a future negotiation which higher chances of succeed.

6.4.3. Inclusive institutional creativity: produce a profile that guarantees a minimum provision of “monetary services”; “environmentally responsible” and “indigenous coffee” symbolic services and; “clean cup” taste related service.

The *mesas de concertación* developed by the Alcaldía allowed to initiate the discussions on the impact of the climatic change in the coffee cultures: In a process of "take and give" actors found common places around the use of the Resource Constituents to better adapt to climate change. The Resguardos accepted the proposal to maintain young and healthy trees with the greatest possible density to maximize production during the period of climatic stress; and the Comité-FNC agreed to maintain a regulated shade, coverage, and protection of watersheds<sup>604</sup> to reduce vulnerability to climate change<sup>605</sup> and, leaving enough land to guarantee food security of the coffee household<sup>606</sup>.

As a result, two instruments of the public coffee policy were concretized in an innovative way in all the LRAs: the renovation programs (chapter 4.2.2) and the diversification program. The PSF Program was concretized in order to access credit with the aim of uprooting aged trees and planting new resistant varieties, at higher density but maintaining shady areas and food security,

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<sup>603</sup> “Me toco a mi acabar de moldear eso. Hacerme mucho más amigo de los cabildos, acompañarlos en todo, y hacerlo sentir más seguro, que la Federación (FNC) no era una institución de afuera, sino que era una institución de acá. Y que los que estábamos aquí eramos riosuceños y que el interés era sacar adelante nuestras comunidades rurales”. Interview with Nicolás Bañol, Comité, *ibid*.

<sup>604</sup> Not only to avoid contamination of the creeks but also to encourage natural barriers with native trees between bodies of water and coffee crops. Interview with Ángela Gómez, Asproinca, *ibid*.

<sup>605</sup> “Según CENICAFÉ la zona de nosotros no es de sombrío, es de cultivo a libre exposición solar (...) Estamos otra vez volviendo a mantener un sombrío regulado en los cafetales, pero debido a la presión del cambio climático” Interview with Nicolas Bañol, Comité, *ibid*.

<sup>606</sup> “Se ha cambiado la política del Comité. Hay que volver a sembrar comida. Recuerde que nuestros cafetales no sólo dan café, también pueden dar comida (...) nosotros como extensionistas les recomendamos eso, asegure la alimentación de su familia, asegure su comida”. Interview with Nicolas Bañol, Comité, *ibid*.

the latter that was encouraged through the “*Programa Café y Maíz*” (PCM onwards)<sup>607</sup> to plant the temporary crops of corn and beans in the first two years of the coffee tree to ensure food and additional income to the coffee home with native seeds purchased from the Riosucio Resguardos<sup>608</sup>.

The agreement reached in these *mesas de concertación* did not seek to standardize a profile that would satisfy all stakeholders, such as the convergence towards the “Natural coffee” symbolic service at the end of the nineties, but rather on a baseline profile that would guarantee the provision of services in spite of climate change. Over this profile, each LRA would shape their particular combination of services.

- Outcome LRA Standard CS newborn LRA Regional/Starbucks

Las *mesas de concertación*, as a deliberative scenario between the FNC/Comité and the Alcaldía de Riosucio, allowed both actors to agree on a common profile adapted to climate change in order to sum efforts (the public coffee policy lead by the FNC and the agricultural public policy headed by the municipal authority) to influence the whole population of coffee farmers in Riosucio, meaning both coffee farmers that sold through the baseline LRA Standard or through any other LRA present in Riosucio.

This intervention for the whole harvest in Riosucio opened a window of opportunity for the Cooperative. Indeed, as farmers in Riosucio were in the process of implementing practices to improve the shade and protect the natural ecosystems, it was possible to create a commercial alliance with Starbucks. The Cooperative considered that the explicitly uses of Resource constituents demanded by the CAFE Practices were in the process of being implemented in Riosucio<sup>609</sup>. So, in 2014 they **strategically** mobilized their AR *personal* to concretize the specialty coffee program of the coffee public policy by opening a new VSS market channel and started the process to verify farmers associated to the Cooperative in this profiling institution<sup>610</sup>. In 2015 the Cooperative created the newborn LRA Regional/Starbucks when selling coffee that fulfilled the three commercial conditions: quality; economic audit and external audit<sup>611</sup>. So, coffee bought through the LRA Standard that had better quality (factor 92 or lower and maximum of 2.5% of *broca* and 2% *pasilla* that guarantee the terroir’s full aromatic profile) would be fully trace (documentary traceability of both coffee and coffee farmer that transparently show the money effectively paid to the producer) and would be included in the external audit.

It is a young LRA that had not yet produced any output to change farmers’ behavior, but the fact that the whole population of farmers associated to the Cooperative can sell through this LRA

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<sup>607</sup> With the support of FENALCE (*La Federación Nacional de Cultivadores de Cereales*) corn and bean seeds were distributed free of charge to coffee growers who renovated.

<sup>608</sup> Interview with Nicolas Bañol, Comité, *ibid*.

<sup>609</sup> Uses described in chapter 5.1.2

<sup>610</sup> They certified 981 farms in the CAFE practices profiling institution in 2015 in chapter 5.2.2.

<sup>611</sup> See chapter 5.2.2

plausibly means that the *Asamblea General Ordinaria* could escalate their demands to the meetings with representatives of the Starbucks's Farmer Support Center in Manizales aiming to shape the final output "improvement plans".

As a result, through both the PSF and the PCM the LRA Standard Climate-Smart regulated new uses of Resource constituents in the five activities of the planting process (diversification, variety, renovation, density, shade) increasing the extent (37% of concentrated regulated uses, Annex 7) while increasing coordination by aligning more actors (Alcaldía and the FNC-Comité) to produce the PSF and PCM outputs increasing the coherence. On the other hand, barriers of entry at the local level did not change (equal closure)<sup>612</sup>.

Additionally, the LRA regional/Starbucks was developed as an extension of the LRA Standard CS (Standard coffee with higher quality). Hence, there was no additional regulation of uses of the constituents maintaining the extent (37% of concentrated regulated uses, Annex 7). But it was a significant increase in coordination given the new alignment among profilers (the Cooperative, Expocafé, Starbucks) to produce the "ethical traded" and "environmentally responsible" symbolic services, and the "terroir expression" taste related service through the commercial conditions to fulfill the CAFÉ Practices profiling institutions through the output "improvement plans" to change farmers behavior, increasing the coherence while producing barriers of entry at the roasters level, decreasing closure.

- Outcome LRA Standard CS (within the LRA La Vereda)

The dissolution of the SACEV agreement left only the local profilers and stakeholders in production (the Cooperative and the Comité/FNC) interested on the profile sought by the LRA La Vereda because they knew it had an extraordinary aromatic profile that could be paid better. Indeed, the FNC never gave up on their intention to attract new customers<sup>613</sup>, and in 2011 they managed to sell coffee La Vereda to the American roaster Keurig<sup>614</sup> (the new owner of Timothy's) in 2011.

The *mesas de concertación* allowed the Alcaldía de Riosucio and the Resguardo de San Lorenzo to partner again with the Cooperative and the Comité/FNC around the climate-smart coffee production when they concretized the final outputs of the Coffee Renovation Program in this Resguardo<sup>615</sup>. Subsequently, they could include a profiler at the end of the coffee value chain in

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<sup>612</sup> For the whole set of LRAs the evaluation of the three conditions are extensively developed in the chapter 5.2

<sup>613</sup> In October 2009, Torino Express, a personal blog, described the "Colombian la Vereda Cupped at Stockfleths. Roasted by Solberg & Hansen" in Norway (Eirik, 2009)

<sup>614</sup> USD 4.5 billion in sales in 2015 (Keurig, 2015, p. 8), Keurig Green Mountain Inc. belongs to the JAB Holding Company, it is the leader in the segment of coffee in personal doses in the USA.

<sup>615</sup> Systematically since Nicolas Bañol is Coordinator of the Committee, the extension agent who has worked in the Resguardo de San Lorenzo, has outperformed his colleagues in the other districts of the municipality of Riosucio, in compliance with the goals of renovated hectares. Interview with Nicolas Bañol, Comité, ibid.

the LRA La Vereda when they reactivated a kind of SACEV agreement with Keurig in 2013<sup>616</sup>, when they concretized the *Proyecto de Alianzas Productivas*<sup>617</sup> from the agricultural public policy for the implementation of the Sustainable Agriculture according to the Rainforest Alliance Standard (FNC, 2013, pp. 224-235). Its main objective was to increase the shade and protect the watersheds while developing integrated (weed, pests, soil, nutrition) management plans for increasing production. Furthermore, in 2015, Stakeholders in consumption (in Canada<sup>618</sup>) got involved when the actors concretized the International Cooperation fund of the Canadian non-profit Socodevi (*société de coopération pour le développement international*) to produce an intermediary output known as “the Procompite Project”. It was approved to strengthen the *Proyecto de Alianzas productivas* in order to fully implement the Rainforest Alliance standard through both training and the equipment delivery.

As a consequence, in 2015 the LRA CS improved the three conditions of the incumbent LRA La Vereda. Through both the PSF and the PCM it regulated new uses of Resource constituents in the five activities of the planting process (diversification, variety, renovation, density, shade), and through both *Alianza Productiva* and Procompite four activities in the cultivation process (soil management; coffee borer beetle management; pest and disease management and farm management) and four activities during the post-harvesting (hulling, fermentation, drying and waste management). Due to the partnership with Keurig, the whole set of activities in the roasting, communication strategy and brewing were also regulated increasing considerably the extent (93% of evenly-distributed regulated uses, Annex 7). Indigenous farmers, the FNC/Comité, the Cooperative, Keurig, and Socodevi were aligned to increase the monetary services by providing the “indigenous coffee” and “environmentally responsible” symbolic services and, the “citric acid” taste related service. Guided by RSSSG/Rainforest Alliance Standard profiling institution<sup>619</sup>, they created a renovated version of the SACEV agreement that produced different outputs (PSF, PCM, *Alianza Productiva*, Procompite) which increased influence on farmers’ behavior but at the expense of the “indigenous coffee” symbolic service, reducing its coherence. Also, it recovered the “product differentiation” at both the origin and the indigenous production, at the producer level that had been lost, increasing its closure.

- Outcome LRA Standard CS (within the LRA Fairtrade)

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<sup>616</sup> In which they were involved stakeholders in pro *Alcaldía de Riosucio y Alcaldía de Supía como autoridades locales; la Secretaría de Agricultura de la Gobernación de Caldas como autoridad departamental; el Ministerio de Agricultura y el Instituto Colombiano Agropecuario como autoridades nacionales; Corpocaldas como autoridad ambiental y la Fundación Ecológica Cafetera como Stakeholder en la producción; y el Comité, la Cooperativa y Keurig.* (FNC, 2013, p. 235)

<sup>617</sup> Its objective was to strengthen a commercial alliance between small farmers and their private buyers, by improving the small farmers’ weaknesses identified by the alliance (Minagricultura, 2012, p. 3).

<sup>618</sup> Despite having been acquired by the US Company Keurig, Timothy’s continued to sell Café la Vereda to its customers in Canada.

<sup>619</sup> Keurig’s “responsible Sourcing Supplier Guidelines” that was declared “fully acceptable” with the Rainforest Alliance standards (Keurig, 2015, pp. 72-75).

The LRA Fairtrade developed the “*Normas y sanciones que rigen a los asociados de Asprocafé Ingruma, 2011*”. It looks it was inspired in the climate-smart coffee culture when it merged the agroecology philosophy to enhance resilience with the use of synthetic inputs to trigger productivity. Indeed, the Asamblea General de Delegados de Asprocafé prioritized one-third of the Fairtrade premium in the technical assistance that focused in supporting integrated (weed, pests, soil, nutrition) management and another third in the investment of a couple of components of climate-smart coffee farming: the renovation <sup>620</sup> and the protection of watersheds<sup>621</sup>.

As a consequence, in 2015 the LRA CS improved one condition of the incumbent LRA Fairtrade. Through both the PSF and the PCM it regulated new uses of Resource constituents in the five activities of the planting process (diversification, variety, renovation, density, shade) and four in the cultivation process (soil management; coffee borer beetle management; pest and disease management and farm management) increasing the extent (74% of evenly-distributed regulated uses, Annex 7). But it, neither affected coherence (same alignment between Asprocafé, the Cooperativa and FLO with the same governance mechanism and outputs) nor the closure (barriers of entry remained at the retailing level).

- Outcome LRA Standard CS (within the LRA Organic)

The LRA Organic through its deliberative scenario, the annual visit of Equal Exchange in 2008, identified the vulnerability of coffee to La Niña<sup>622</sup> and problematized as the lack of adequate organic fertilization. Consequently, the final outputs emphasized encouraging organic nutrition in both quality and quantity to obtain good productions<sup>623</sup>. However, the 75 thousand kilos of

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<sup>620</sup> For renovations by sowing (new plantation) or zoca (cutting the tree to 15 centimeters of soil) of up to 3 thousand coffee trees per associated, an incentive of COP 200 pesos was given, half in fertilizer, half in cash (In 2011 it increased to COP 250 per tree and the percentage in cash increased to 60% benefiting almost a third of the members that year). The relevance of this particular instrument is evident in its prioritization: In 2011, it consumed more than one third of the premium, and in 2012 forty percent. Informes de Administración y Gestión Asprocafé (2009-2015)

<sup>621</sup> Construction of wastewater treatment through the FAFA system for twenty coffee growers on an annual average (equivalent to 10% of the premium value). Informes de Administración y Gestión Asprocafé (2009-2015)

<sup>622</sup> Annual Equal Exchange visit in December 2008. “The 2008 harvest began with the flowering of the coffee trees in February which would have provided a bountiful harvest eight months later but then the rain started and has not stopped since (...) This has resulted in extremely low harvest and lots of damage to the coffee farms” (T. Caspersen, 2008, p. 1).

<sup>623</sup> In 2009 “*Equal Exchange había apoyado con parte del recurso para el montaje de una planta procesadora de abonos orgánicos*” (Informe de Administración y Gestión Asprocafé 2009, pág. 10.); In 2010 “*El comprador Equal Exchange está apoyando con 26.000 dólares, programa de abonamiento a un grupo piloto de productores orgánicos con el fin de costear el valor del abonamiento*” (Informe de Administración y Gestión Asprocafé 2010, pág. 11); In 2011 “*Se identificó un grupo de 30 productores con los cuales se desarrolló un programa de asistencia técnica y abonamiento en cantidad y calidad requerida para que la producción orgánica llegue a ser óptima, llevando costos de producción. Este programa fue financiado por la ONG MIGROSS por recomendación del comprador de café Equal Exchange*” (Informe de Administración y Gestión Asprocafé 2011, pág. 9).

organic coffee produced in 2011 (less than one-third of the 240 thousand kilos in 2007) led to questioning of the long-term provision of this service during the 2012 annual visit<sup>624</sup>.

As a consequence, through this deliberative scenario they joined the local consensus on adaptation to climate change: additionally, to the changes mentioned in the LRA Fairtrade, they agreed on the use of *infrastructures* and *know-how* to increase the number of young trees per unit area. For this, in 2013 a first output financed directly by Equal Exchange, incentivized 35 organic coffee farmers to renovate 39,422 coffee trees by planting<sup>625</sup>. In 2014 la Asamblea de Delegados de Asprocafé joined the effort to approve an incentive of COP 150 (USD 0.07) per renovated tree (up to two thousand plants) over which Equal Exchange added to reach COP 250 (USD 0.125) per renovated tree (up to three thousand plants) for organic coffee growers<sup>626</sup>.

Secondly, given the climate vulnerability, during the annual visit, participant actors decided to profile the “exceptional coffee” taste related service through a final output the “Cooperation in the Quality project”. Equal would offer this coffee by its cupping score according to the Q system, so it could reach a higher price that would be translated into higher monetary services for farmers<sup>627</sup>. As a result, an agreement was signed among participants in the LRA organic to trade coffee depending on the cupping score<sup>628</sup>. To this end, some uses of *infrastructures* and *know-how* were implemented in the trading process so the Cooperative could conduct a cupping test for each participant farmer’s lot of organic coffee<sup>629</sup>. Similarly, the uses of the *know-to-appreciate* of consumers were influenced through the promotional piece “*Los Cuernos del Diablo*”, a Riosucio single-origin organic coffee, for summer 2013 (Exchange, 2013) and spring 2015 (Exchange, 2015). This communication strategy reinforced the production of the “Fairtrade coffee” symbolic services when valuing the coffee brewing proposed by the locals producers and the exceptional coffee taste related service when saying: “Angelica from Asprocafé Ingruma in Colombia: chose the Chemex to bring out the lush grapefruit notes” (B. A. Caspersen, 2013). In 2013, once the program was implemented, coffee growers who obtained cups above 83 points

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<sup>624</sup> “se recibió visita del comprador Equal Exchange quien se encuentra inquieto sobre la continuidad del programa de producción orgánica en Riosucio” (Informe de Administración y Gestión Asprocafé 2012, pág. 13).

<sup>625</sup> Informe de Administración y Gestión Asprocafé 2013, pág. 15.

<sup>626</sup> Informe de Administración y Gestión Asprocafé 2014, pág. 16.

<sup>627</sup> Equal Exchange invited Angelica Arroyave (taster at the Cooperative) with six other tasters from the Cooperatives of Peru and Uganda, so that with the baristas of local stores in Massachusetts they could identify the best methods to filter the coffee of their regions and offer it to the public free of charge in the streets of Plymouth. “On a very chilly and rainy morning, together we set up tents, hooked up water boilers, and gave away cups of manually brewed coffee. All of the cuppers got to engage the visitors to the tent, prepare their coffee and make the connection firsthand” (B. A. Caspersen, 2013).

<sup>628</sup> “se firmó un convenio para un programa piloto para comprar el café orgánico según el puntaje en taza, participan los productores cuyo puntaje sea igual o mayor a 83 puntos”. Informe de Administración y Gestión Asprocafé 2012, pág. 13

<sup>629</sup> “el café que califique en este rango fue comprado y empaçado en bolsas grainpo facilitadas por el comprador, debe ser trillado aparte, empaçado y enviado separado del café orgánico común y tendrá un precio mayor”. Informe de Administración y Gestión Asprocafé 2012, pág. 13

received a premium-after-buying between COP 400 and COP 1000 (USD 0.21 - 0.54)<sup>630</sup>. In 2015 premiums ranged between COP 800 and COP 1500<sup>631</sup> (USD 0.29-0.55) for the 46% that scored higher than 83 points of the total organic coffee harvested this year<sup>632</sup>.

As a consequence, in 2015 the LRA CS improved the whole set of conditions of the incumbent LRA Organic. It regulated a new use of Resource constituents in one activity of the planting process (density); and through the investment of the Fairtrade premium, in three activities in the cultivation process (coffee borer beetle management; pest and disease management and farm management). Thanks to the Cooperation in the Quality project, one new activity was regulated in the roasting process (roasting) increasing the extent (83% of evenly-distributed regulated uses, Annex 7). Some incumbent regulations changed qualitatively for profiling a more complex combination of services to increase the monetary services, namely the “natural” and the “exceptional coffee” taste related service. This qualitative change allowed a higher premium that, without changing actors’ alignment or any governance mechanism, produce the output “cooperation in quality project” that increased the influence of this LRA over farmers’ behavior, increasing the coherence. And clearly, by adding both the origin and the exceptional aromatic profile to the incumbent organic production, produced a significant “product differentiation” barrier of entry at the producers’ level, increasing closure.

- Outcome LRA Standard CS (within the LRA La Nespresso)

Built over a public-private partnership with the FNC, the LRA CS was incorporated softly within the LRA Nespresso through its deliberative scenario the *Encuentro bianual del Clúster Expocafé in 2011*. They agreed on the coffee farming vulnerability to the extreme water events so decided to implemented climate-smart coffee production projects to enhance resilience.

In addition to the mentioned PSF and PCM, the cluster activated the Specialty Coffee public policy instruments to fund four projects: the “*árbol de vida*” project to influence the use of *infrastructures* to enhance productivity through young, dense, pest-resistant coffee trees during the planting process. With the same goal of enhancing productivity, the “*fertilización*” project to influence the use of *know-how* during nutrition. The “*Rainforest Alliance certificación*” project to influence the use of *know-how* so integrated farm management to enhance conservation during the cultivation and post-harvesting. It involved delivery of equipment to improve the quality of coffee (its “winy” taste related service) and to reduce pollution of the watersheds<sup>633</sup>. Also, the

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<sup>630</sup>“bonificaciones de \$400 (pesos adicionales por kilo de café orgánico vendido) para puntajes de 83 a 83,9; \$600 por puntajes de 84 a 84,9 y \$1.000 para puntajes superior a 85”. Informe de Administración y Gestión Asprocafé 2013, pág. 16.

<sup>631</sup>“el premio por calidad de taza osciló entre \$ 800 y \$ 1500 (pesos) por kilo (de café orgánico)” Informe de Administración y Gestión Asprocafé 2015, pág. 15.

<sup>632</sup> Of the 168 thousand kilos purchased as organic coffee in 2015, 77 thousand kilos achieved a score higher than 83 points. Informe de Administración y Gestión Asprocafé 2015, pág. 16.

<sup>633</sup> “sistemas sépticos, tanques tina, despulpadoras, fosas para pulpas, bodegas, paseras para secado del café, equipos de protección”. Informe de administración y gestión, Cooperativa de caficultores del Alto Occidente de Caldas, 2011. Pág. 10.

training activities emphasized on the integrated farm management, shade regulation, maintenance of coverages and protected areas around the creeks (its “environmentally responsible” symbolic service). And, to trigger quality the SCP field level project in order to influence the use of *know-how* during the trading process to enhance capabilities of the Cooperative to assess the aromatic profile of coffee sold by participant farmers.

As a consequence, in 2015 the LRA CS improved one condition of the incumbent LRA Nespresso. It regulated new uses of Resource constituents in three activities of planting (Diversification; density and shade); in four activities during the cultivation (soil management; coffee borer beetle management; pest and disease management and nutrition). It increased the extent (95% of evenly-distributed regulated uses, Annex 7). Additionally, maintaining the same alignment and governance mechanism for profiling the same services, they produced additional outputs (*árbol de vida, fertilización, and certificación* projects) to trigger the change in farmers’ behavior and the SPC field project to change the Cooperative’s. In the end, increasing the coordination to guarantee provision of the demanded services increasing the coherence. And barriers of entry remain exactly the same (equal closure).

#### 6.4.4. Outcome LRA Standard CS

The Niña phenomenon showed the limits of individual action to guarantee the demanded services of the Resource and allowed a shared definition of the problem in terms of diversified and productive coffee cultivation to increase the resilience of both the coffee crop and the household to climate change.

The *mesas de concertación*, originally conceived as an instrument of citizen participation, produced the deliberative scenario among actors demanding services from the Resource. At the beginning, it was illusory to try to reach a common profile due to the two completely antagonistic positions. Actors privileged a series of **cooperative** mobilizations that firstly avoided an agreement on uses of Resource constituents (therefore a common profile) and prioritized a joint effort to benefit the rural population (with roads, housing, and electricity) which would improve the material wellbeing of the coffee household. An agreement of the kind "working together on what unites us and avoiding what separates us" with a result relevant to the collective action on the Coffee Resource of Riosucio: trust. In fact, the bonds of trust built between the actors explain the actor constellation change from a pure conflict (featured by the sum-zero game) to one featured by the collective action problem with a possible win-win scenario.

In this sense, afterward actors reached an agreement of the kind "working together that which separates us", so they could initiate an implicit agreement on the uses of the Resource constituents that would produce a satisfactory profile for the actors. An extensive coalition (coffee farmers; Asprocafé; Asproinca; Indigenous Movement; Local authority; Cooperative, FNC/Comité; Roasters (Equal, Nespresso, Keurig, Starbucks); Socodevi) agreed on a set of minimum uses of Resource constituents on the entire Resource to produce a profile resilient to climate change, thus they innovatively activated the two instruments of the coffee public policy: the renovation and the diversification programs (already mentioned in the previous subsections),

over which other compatible uses could be exclusively encouraged within each LRA to profile other services (service provision that is detailed in chapter 5.1).

As a result, the whole set of LRAs in Riosucio converged in a profile featured by a combination of “monetary” services; the “environmentally responsible” and the “indigenous coffee” symbolic services; and the “clean cup” taste related service: a coffee crop that coexists with the production of food (occupying two thirds of the farm area<sup>634</sup>), the maintenance of coverage (averages close to 30% of shade<sup>635</sup>) and the protection of the watersheds (43% of coffee farmers treat the waters before pouring them <sup>636</sup> ). At the same time, with increasing densities, decreasing age and increasing the production of coffee cherries per hectare<sup>637</sup> and the income for more than two-thirds of coffee growers in Riosucio<sup>638</sup>. Additionally, it retains enough flexibility for actors who want to produce a more complex profile by combining other symbolic and taste related services.

### 6.5. Intermediary synthesis: Inputs to test our second hypothesis

Throughout the four actors’ games in which we divided this chapter, and whose systematization is presented in annex 8.1. We identified nine different LRAs since the breakdown of the International Coffee Agreement that are presented in table 14 and whose detailed development is presented in Annex 9.1.

Our diachronic analysis implies that we observed the change caused by the actor’s games, by comparing the final configuration of the LRA(s) against the initial configuration of the incumbent LRA. In some cases, actor’s games affected one, two or the three conditions of the incumbent LRA, in other cases, actor’s game produced newborn LRAs.

The extent is measured in terms of the change in the percentage of regulated activities from the 26 activities (in percentage points); the coherence in terms of a failed/successful coordination among profilers to provide the services sought by the LRA; and the closure in terms of the placement of the barriers of entry. This exercise is presented in Annex 7.1.

*Table 14 Variation of the LRA’s conditions explained by the three analytical dimensions in Riosucio: Source: The author.*

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
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<sup>634</sup> Table 6 of observed uses in Riosucio, chapter 5.1.3

<sup>635</sup> Table 6 of observed uses in Riosucio, chapter 5.1.3

<sup>636</sup> Applying the averages presented in Table 6 of observed uses in chapter 5.1.3, with the number of coffee farmers distributed by LRA of table 1 in chapter 3.1.3.

<sup>637</sup> Comparing the general results for coffee growing in Riosucio with data from the Committee in 2005 presented by Sánchez Arenas (2005): 4,273 trees / ha; 17 years of average age; production of 890 kilos of coffee / ha. With data from coffee farming in Riosucio from the Committee in 2015: 5,133 trees / ha, average 7.7 years of age and 1,391 kilos of coffee / ha (Using the Coop / SICA database, this is the result of dividing the 3,789 thousand kilos of coffee bought by the Cooperative in 2015, among the 2723 ha of coffee in Riosucio).

<sup>638</sup> 72% of the 3056 coffee growers who participate in an LRA different from the LRA Standard, increased their monetary services by at least 26% with respect to the latter (Section 8.1.5)

LRA Standard	NA	NA	NA	Baseline: 17 pp evenly distributed	Baseline: Failed: two-way coordination among producers	Baseline: Barriers at the traders' level
LRA MH	PT+SHP+SHC	Cooperative	Presence	Plus 19 pp evenly distributed (over the incumbent LRA Standard)	Successful two-way coordination among all profilers	Product differentiation (origin)
LRA Natural	PF+PT+PR+SHP+SHC	Selfishly / Cooperative	Presence	Plus 33 pp evenly distributed (over the incumbent LRA MH)	Successful two-way coordination among all profilers	Product differentiation (origin and organic)
LRA Fairtrade	PF+PT+SHC	Selfishly	Absence	Less 12 pp evenly distributed (over the incumbent LRA Natural)	Failed one-way coordination among all profilers	Barriers at the traders' level
LRA Organic	PF+PT+PR+SHC	Strategically	Presence	Plus 12 pp evenly distributed (over the incumbent LRA Natural)	Successful two-way coordination among all profilers	Product differentiation (origin and organic)
LRA La Vereda	SHP	Selfishly	Absence	Less 26 pp concentrated (over the incumbent LRA Natural)	Failed, any coordination.	Any barrier
LRA Nespresso	PT+PR+SHP+SHC	Strategically	Presence	Plus 37 pp evenly distributed (over the incumbent LRA Natural)	Successful two-way coordination among all profilers	Barriers at the roaster level
LRA CS Standard <sup>639</sup>	PF+PT+PR+SHP+SHC	Cooperative	Presence	Plus 20 pp concentrated (over the incumbent LRA Standard for the whole set of LRAs)	Successful two-way coordination among all profilers	Barriers at the traders' level
LRA Reg/Starbucks	PT+PR	Strategically	Presence	Plus 20 pp concentrated (over the incumbent LRA Standard)	Successful two-way coordination among all profilers	Barriers at the roaster level

\*SHP = Stakeholders in production; SHC = Stakeholders in consumption; PF = Profilers farmers; PT = Profilers traders; PR = Profilers roasters

<sup>639</sup> It has to be said, that we take into account only the LRA CS Standard as the basic profile and not the whole set of the LRAS built over it (LRA CS Fairtrade, CS Organic, CS Vereda, CS Nespresso) to maintain a parsimonious analysis because it captures the whole add value of the diachronic analysis.

## Third Part: Buesaco (Nariño)

This third part contains two chapters: chapter seven produces the inputs to tests our first hypothesis, and chapter eight produces the inputs to tests our second hypothesis.

### Chapter 7. LRAs that enhance the sustainable management of Coffee.

We divide this chapter into three subchapters to produce the inputs to test our first hypothesis in the conclusive chapter.

The first one tries to disentangle the collective action problem in a five-step process through an analytical tool from the IRR, the Local Regulatory Arrangement (LRA): firstly, it identifies a closed list of services demanded from the Resource by spotting the LRAs presented in the territory during the 2015-2016 coffee harvest. Secondly, it describes how these services are expected to be produced by analyzing how each LRA regulates a particular use of resource constituents. Thirdly, it summarizes observed uses of resource constituents by each LRA. Fourth it puts on evidence the services provided by the Resource because of the observed uses of constituents by each LRA. Fifth it compares and ranks the LRAs by its provision of services.

The second subchapter analyses each LRA from the three conditions. So, it is divided into three subsections (namely extent, coherence, and closure), which in time, are subdivided by LRAs.

We conclude with the input to test our first hypothesis, namely the results of our synchronic analysis, in which we assess the level of service provision depending on the LRA configuration.

#### 7.1. Coffee, a collective action problem

Coffee can be understood as a resource because humans use it to produce different kinds of symbolic, taste related and monetary services. The objective of the collective action is to guarantee the provision of this panoply of services. In this subchapter, we use the LRA as an analytical tool to light that panoply of services demanded by the Resource in the first place, and then, the services actually provided by the Resource.

We start this section by categorizing exhaustively coffee and coffee farmers from the *vereda* Veracruz (a rural subdivision of the municipality of Buesaco) in different LRAs. Once the LRAs are shown, from an operational point of view, we elaborate a closed list of services demanded from the Resource.

In the following section, we identify the main institutions that were mobilized within each LRA to regulate uses by profilers. We divide the section into the three categories of services (monetary, symbolic and taste related) and then, we describe the uses that are regulated (by the institutions mobilized) to produce each one of the services previously identified.

Finally, we assess the services provision by comparing the uses regulated to produce them with the uses observed on average by each LRA in the first four processes<sup>640</sup>. So, if coffee farmers in a particular LRA used, on average, resource constituent in a different way it was regulated, services demanded by this LRA are not provided.

### 7.1.1. Services demanded by actors

Our criteria to classify exhaustively the 70 coffee farmers in different LRAs, from whom we have data on coffee sales in Veracruz, is that a minimum of 50% their production was sold through a particular trader using a particular institution to produce a particular combination of services.

It can be seen as a closed portfolio of different options that a coffee farmer had for selling their coffee (and obtain different monetary services) that will be explained next. For now, it is to know that the farmer can choose a particular trader depending on their belonging to a particular LRA, but then, the farmer has to implement some regulated uses by a particular institution in order that the Resource can actually produce that particular combination of services. So, in the end, both the farmer and the coffee bean can be placed in one LRA only if they both fulfill the LRA requirements.

For the coffee harvest 2015-2016 in Veracruz, both the 70 coffee farmers and their 89 thousand kilos of coffee, was distributed in six different LRA presented in table 15, with an average of 11 farmers (a range from 7-18) per LRA.

Table 15 Farmers classification by LRA in Buesaco. Source: the author.

LRA by institution	Coffee farmers	Purchases		Quality	Premium	
		Kilos	Percentage	Factor	Premium when buying	Premium after buying
LRA Nespresso	12	31,000	35%	94	\$ 420/k	\$ 80/k RF
LRA CNilson	7	15,000	17%	94	\$ 200/k	Between \$ 2000/k - \$ 7500/k
LRA CAltura	18	17,810	20%	94	\$ 100/k	Between \$ 500/k - \$ 1600/k
LRA CCEspeciales / Starbucks	14	20,000	22%	94	0	Between \$ 500/k - \$ 1000/k
LRA Standard	9	2,870	3%	94	0	NA
LRA Discount	10	2,660	3%	More than 94	(-) discount	NA
Total	70	89,340	100%			

<sup>640</sup> The full potential of a coffee bean to produce services is reached just before it is blended and roasted. From here onwards, there is an inevitable tradeoff between taste related services (As an example, roasting curves can highlight body at the expense of acidity, or on the contrary. It can also produce a balance between both in which neither is predominant)

As a test, this purchasing transaction is a probe that the expected uses were implemented and, it is a threshold that determines the following uses that are going to be implemented to produce the expected combination of services. From a negative point of view, the uses that were not implemented before this transaction makes impossible for the resource afterward, to produce those uses' dependent services.

Uses that can only be assessed through a double check on both the farmer and the coffee bean: By clearly distinguishing the farmer, the uses to produce symbolic services can be controlled through various forms like routinely visits of surprising audits. And by assessing the quality of the bean (that clearly depends on the measuring instrument that was planned in advance), the uses to produce taste related services can be controlled.

- [Coffee and farmer inclusion in a particular LRA](#)

The evolution that will be narrated in the next chapter had produced a complex system of farmers' inclusion-exclusion to different LRAs, so it cannot be properly said that one farmer belongs to one LRA, but that a farmer can choose between those LRAs to which he has the right to belong. In this order of ideas, we can use a model of two overlapping layers<sup>641</sup> featured by rivalry, at the same layer, a coffee farmer that belongs to one LRA cannot belong to another one; complementarity, a coffee farmer that belong to an upper layer, also belongs to the lower one, but not on the contrary.

- The first layer covers the whole area of the municipality (2.950 farmers) including Veracruz and its 70 coffee farmers. It is composed by the LRA Discount and the LRA Standard
- The second layer also covers the whole municipality but it is distributed between:
  - The LRA Nespresso covers all coffee farmers in the municipality that are included in the SICA (the 2.950 farmers in Buesaco and 12 in Veracruz).
  - The LRA CCEsp/Starbucks covers all coffee farmers included in *EdN*baseline survey, more than 2 thousand in the municipality, from which 14 coffee farmers in Veracruz.
  - The LRA CALtura with one thousand members in the municipality and 18 in Veracruz.
  - The LRA CNilson has 160 affiliates in the municipality and 7 in Veracruz.

The inclusion of the coffee farmer to the first layer is derived from the SICA database updated routinely by the technical assistance service provided by the FNC. When saying routinely, we meant that on a daily basis, each time the technical assistant goes to the field and identify a new crop of coffee, he will inquire who the owner is and eventually the coffee farmer will be contacted and would be added to the SICA database. It could be also the way-round in which the new coffee

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<sup>641</sup> We used it in our first context of study in Riosucio.

farmer will contact the technical assistant to be included, aiming to benefit from public policies implemented through the FNC.

On the second layer, the LRA Nespresso is built on the SICA database but it includes only federated coffee farmers (it excludes coffee farmers with less than 0.5 ha cultivated in coffee) with its farms located in the altitudinal fringe in which the aromatic profile (Nespresso is looking for) can be obtained. In Buesaco it goes from 1700 to 2.100.

The LRA CCEsp/Starbucks use the EdN's database, it was a one-time baseline survey conducted by EdN as a component of the implementation of the C.A.F.E. Practices program (that will be explained throughout this chapter), in which forty interviewers and three people to digitalize the information were contracted in the whole department<sup>642</sup> after 2004. It was partially updated by a dozen of technical assistants that were contracted through two different projects in the period 2004-2010.

The LRA CAItura is built on their own base-line survey that had increased progressively since 2013 in which Grupo Empresarial started its work in Buesaco with their technical assistance team. And the LRA CNilson, which created his own database by picking the farmers he thought were able to produce high cupping score coffee, based on his previous knowledge as Cooperativa de Occidente's coffee buyer for one decade.

The first layer is divided between the LRA discount and all the others according to the *Resolución 5 del 6 de junio de 2002 del Comité Nacional del Caféteros* (see chapter 4.1.2). If coffee did not meet the minimum quality to be classified as Excelso, no matter in which LRA the coffee farmer belongs to, automatically the coffee goes to the LRA Discount.

Coffee growers know in advance that their coffee does not fulfill the minimum requirements to be categorized as *Excelso*<sup>643</sup>, so they go directly to sell their coffee with discount, usually to Jairo Romero because, as he is specialized in this market, he pays the best prices for low quality coffee in Buesaco, that in any case is lower than the price paid for *Excelso* quality coffee. Other reasons like the need for money or the lack of equipment to process coffee cherries, among others make farmers sold their production with a discount<sup>644</sup>. It has to be said that all coffee farmers had a portion of their coffee, usually at the very beginning and at the very end of the harvest, in which quality is low in terms of the norm <sup>645</sup>. Nevertheless, in Veracruz, only for 10 farmers this proportion was more than half of the total harvest. They sold 2.6 thousand kilos of coffee, or 3% of the total Veracruz coffee harvests 2015/2016. Small quantity because it happened to be that

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<sup>642</sup> Interview with Gerardo Sarasti, technical coordinator of EdN.

<sup>643</sup> Even if the normative looks very technical and difficult to grasp, experience allows farmers to easily distinguish between coffee that can be exported (*excelso* quality) or not (domestic consumption).

<sup>644</sup> In occasion farmers are selling their coffee "*en el árbol*" (coffee cherries still on the tree). The buyer has to assume the cost of picking, processing and transporting to the purchasing point.

<sup>645</sup> The farmer has to pick up all coffee cherries to avoid the coffee borer beetle, which prospers inside overripe fruits that had felt down. If measures are not taken, the population grows and affects the well develop beans. Fathers usually motivate their children to pick up all this low-quality coffee and keep the money once sold.

they were also the smallest ones: on average the ten farmers classified in this LRA have 0.43 ha cultivated in coffee (1.3 ha the total size of the farm), whereas the average in Veracruz is 1.30 ha cultivated in coffee (3 ha the total size of the farm).

In Buesaco, a coffee sample that reaches a factor lower than 94<sup>646</sup> is considered to fulfill the quality requirement of the *Resolución 5/2002 del CNC*, so it can be exported as Café de Colombia, according to the *Reglamento de Uso de la Indicación Geográfica Protegida Café de Colombia* (IGP Café de Colombia) and sold through the LRA Standard. Even though different traders could acquire it, it will be sold as Colombian Excelso after being blended with coffee from other regions. In the case of Veracruz, two traders participated in this LRA: Coffee that was purchased by both cooperatives (which used funds from the FoNC so they have to sell their coffee to Almacafé, the logistics operator of the FNC) from coffee farmers that are not included in Nespresso's list. It included six farmers of the ten in Veracruz, three of them that are outside the altitudinal fringe and three which insufficient area (0.1ha, 0.3ha, and 0.4ha) to sell through LRA Nespresso<sup>647</sup>. The other three farmers sold to Rodrigo Viveros, which in turn sold all his standard coffee, through the CCEspeciales, to the fifth main exporter of Colombia Coffee, the trader *La Meseta*.

In the second layer, all coffee had already overtaken the factor 94, but depending on the trader coffee will follow at least four different LRA.

- 1- In the LRA Nespresso, farmers sold to both cooperatives because they participate in the “Nespresso AAA Sustainable Quality™ Coffee Program” (AAA Program hereafter). This program tries to enhance farmers' capability to produce the profile demanded by the Swiss roasters Nespresso. Thus, they work only with those farmers who want (they must prove their willingness and must assist to the group meetings) and potentially can produce it because of both, they are in the proper ecotope and, looking for efficiency in the technology transfer of the proper agronomic practices, they have more than 0.5 ha. In Veracruz 13 farmers with 1.81ha cultivated in coffee (in farms with 4.18ha in total size) on average, on an altitudinal fringe ranging from 1.932 to 2.086 m.a.s.l., sold through this LRA 31 thousand kilos of coffee.
- 2- In the LRA CCEsp/Starbucks, the relation between farmers and the CCEspeciales is a heritage of the projects to implement the “Coffee and Farm Equity Practices” – (CAFE Practices hereafter) conducted by EdN to produce alongside coffee farmers in Buesaco the profile demanded by the American Roaster Starbucks, which in turn sells a portion of the coffee bought in Nariño following the *Reglamento de Uso de la Denominación de Origen Protegida Café de Nariño* (DO Café de Colombia). So, the trader can sell their coffee just as factor 93; or coffee labeled as CAFE Practices-Café de Nariño to add value, or they can as a Specialty Coffee. Indeed, when they became independent from EdN in

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<sup>646</sup> In section 4.1.3 it was explained that factor is the number of kilos that, depending on the sample, it would be needed to produce a 70 kilos bag of Excelso coffee to export, 94 is considered the threshold in which coffee will be paid with a discount.

<sup>647</sup> Almost all the Excelso bought by Almacafé in Nariño goes through the LRA Nespresso.

2012, they were able to create a strategic partnership with Caravela, in which the latter equipped the former with a lab and a Q graded cupper to classify coffee depending on the “SCAA cupping protocol”. In Veracruz, 14 farmers with 1.61ha cultivated in coffee (in farms with 4.52ha in total size) on average, sold through this LRA 20 thousand kilos of coffee, from which, four farmers sold 3.080 kilos classified and sold as specialty coffee.

- 3- In the LRA CAItura, the whole relationship between the trader Café de Altura and the coffee farmers is built around the Q system, for each farmer that delivers a coffee factor 93 and, if he is included in their database, a sample will be taken to be cupped through the SCAA cupping protocol. Higher scores will be offered in the specialty coffee market, low scores would be analyzed to identify the agronomic practices that should be improved by the farmer in order to improve coffee score. In the first case, coffee will be sold as specialty, in the second, if it goes through CCEspeciales (as it was the case for the harvest 2015-2016) it can be sold as Excelso, or as CAFE Practices. In Veracruz, 18 coffee farmers with 1.14ha cultivated in coffee (in farms 2.3ha in total size) sold slightly less than 18 thousand kilos through this LRA but only two of them were able to sell a portion of their coffee, 510 kilos in total, as specialty coffee.
- 4- In the LRA CNilson, the relationship between Café de Nilsón and the 160 farmers in Buesaco is built over the *Resolución 5/2002 del CNC* because the payment is made on the factor basis. As they paid COP\$ 200 (USD\$ 0.07) per kilo additional to the price offered by the cooperatives, this relation is also built on the confidence that a good proportion of coffee is going to score high through the SCAA cupping protocol. In addition, coffee that both scores high and reaches a roaster that pays more, will produce an after-sale price reassessment and the producer will receive an additional premium. In Veracruz, 7 farmers with 1.74ha cultivated in coffee (in farms 4.47ha) on average, sold 15 thousand kilos. Two of them sold 2.5 thousand kilos as specialty coffee.

- [A closed list of services demanded by actors in Veracruz/Buesaco in 2015/2016](#)

This exhaustive categorization of coffee bought in la vereda Veracruz for the harvest 2015/2016, allowed us to identify the institutions concretized by the actors to profile the Resource, namely the *Resolución 5/2002 del CNC*; the IGP Café de Colombia; DO Café de Nariño; the AAA Program; the CAFE Practices and the Q System.

In Annex 4, we analyzed each one of these institutions as were activated in each LRA so we could identify the symbolic, taste related and monetary services. In the end, we produced a closed list of services that were demanded from the Resource in Veracruz in the harvest 2015/2016 summarized in table 16

Table 16 Services demanded from the Resource in Veracruz in the harvest 2015-2016. Source: the author.

Monetary services	Description
Household income	Kilos of coffee produced in one year by price per kilo.

Symbolic services	Description
Energy dose	A ready-like feeling
Reputation of the appellation Café Colombia	Positive feelings attached to the appellation Café de Colombia
Reputation of the appellation Café Nariño	Positive feelings attached to the appellation Café de Nariño
Brand reputation	Positive feelings attached to the private brand
Environmentally responsible	A feeling of responsibility for investing in the conservation and protection of natural resources.
Transparent coffee	A confident feeling on the path followed by the coffee.
Ethically traded	A feeling that coffee is paid as fair markets signaled.
Shared value	A feeling of co-responsibility in the wellbeing of the coffee farmers' community.
Poverty reduction	A feeling of solidarity towards poor coffee farmers.
Taste-related services	Description
Baked coffee	An uninteresting coffee with tinny body, flat and grain-like flavor.
Clean cup	A coffee flavor free of taints and defects. In Colombia, it implies a mild coffee, with a medium to high acidity and body, and a pronounced and complete aroma
Terroir expression	A coffee that represents the aromatic profile developed in a particular region due to its climate and soils. In Nariño, it implies a coffee with high acidity, medium bodied, sweet notes, and a clean, mild cup with a very pronounced aroma
Sweet flavor and citric acid aroma	A flavor produced by sugars in the bean and an intense and pleasant flavor that adds vivacity to the coffee with a retro-olfaction sensation of ripe citrus aromas such as orange or lemon
Exceptional coffee	A rare and highly pleasant aromatic profile.

We propose to understand it as the closed list of 14 symbolic and taste related services in addition to the monetary ones demanded in Veracruz in 2015/2016. Regarding the monetary services, it has to be said that in Veracruz that these are not dependent on the productivity but rather on the production of the exceptional coffee taste related service. So, we will distinguish between two groups of monetary services. The first one refers exclusively to uses oriented to increase productivity, the second one refers to uses to trigger the “exceptional coffee taste related service”. In any case, when we measure the “monetary services” at the end of this section, we refer to the income of the coffee farmer that are the result of all uses including those oriented towards the productivity and/or those oriented towards the production of the “exceptional coffee” service.

### 7.1.2. Regulated uses to produce the demanded services

Profiling institutions, namely the *Resolución 5/2002 del CNC*; the IGP Café de Colombia; DO Café de Nariño; the AAA Program; the CAFE Practices and the Q System, produce a combination of services because they regulate the uses that profiling actors made of the resource constituents, namely *infrastructure*, *know-how*, and *know-to-appreciate* in 26 activities detailed in Annex 1.

In Annex 4, we had described how these profiling institutions regulated these uses in order to produce the services demanded in Veracruz in 2015/2016. Results are summarized in Annex 4.4.

The first analysis of these observations is that there are more complementarities than rivalries between profiling institutions in almost all activities during the first three processes. Uses in fourteen (from sixteen) activities are regulated in such a complementary way that they would produce the fifteen services demanded in Veracruz in 2015/2016, so it could be expected that all coffee farmers are using their resources constituents as it is roughly described in the white boxes of table 17. Nevertheless, in two activities (during the planting process: diversification and variety), regulated uses by profiling institutions produce a service at the expense of another, creating a rivalry (signaled in red) that make us expect observable uses that are heterogeneous.

Nevertheless, a rivalry is put forward in all the three activities of the trading process (purchasing, threshing and exporting) that places in opposed corners some profiling actors (traders) claiming for a different coffee profile dependent on the profiling institutions: namely the physical assessment using the *Resolución 02/2002* or the cupping test demanded by the Q System. It can be anticipated that the opposed LRA are (dis)incentivizing different uses of Resource constituents in this process so we can expect that the observed uses are going to be heterogeneous.

Table 17 Rivalries and complementarities analysis. Source: The author using tables in Annex 4.4.

Processes	Uses	Rivalries	Expected result
Planting	Diversification	3 Specialization vs. 3 diversification	Heterogeneous
	Variety	4 pest resistant vs. 3 non-pest resistant	Heterogeneous
	Renovation of Coffee trees	1 younger	Younger coffee trees
	Planting density	1 higher density	Higher density
	Shade	5 canopy vs. 1 less canopy	Canopy
Cultivation	Soil management	3 integrated plan	Integrated plan for soil management
	Pest and disease management	3 integrated plan	Integrated plan for pest management
	Nutrition	3 compensation	Synthetic nutrition
	Hedge rowing	2 hedge rowing	Hedge rowing
	Picking	11 ripe fruits plus timely	Ripe fruit
	Farm management	8 planning	Planning
Post-Harvesting	Hulling	8 immediately	Immediately
	Fermentation	5 only short plus 3 including short	Short
	Drying	4 any method vs 4 controlled sundry	Any method preferring sundry
	Waste management	2 integrated plan	Integrated plan for waste management
	Reselection	3 reselection	Reselection
Trading	Purchasing	9 sorted by "bean" quality vs 3 sorted by cupping.	Heterogeneous
	Threshing and sorting	8 milled in Excelso coffee vs 3 milled in specialty coffee.	Heterogeneous
	Bulking and export	8 documentary traceability vs 3 physical traceability	Heterogeneous

### 7.1.3. Observed uses to provide the demanded services by each LRA

In the previous section, we were interested in regulations to identify how the services demanded from the resource are produced. In this section, we document our observations on how are profiling actors using resource constituents by each LRA. In other words, we assess the actual behavior over the Resource in Veracruz in 2015/2016 with the regulated behavior needed to produce services, in order to credibly claim service provision.

The observations of the uses for each LRA, which is presented in table 18, were documented based on quantitative data collected by Viviana Ramos with all coffee farmers in Veracruz (described previously). We evaluated how farmers were using resource constituents in each one of the sixteen activities during the first three processes by comparing the average uses depending on the LRA. As differences among farmers could explain the use of resource constituents, we wanted to compare the most similar farmers so the difference can be convincingly explained by the LRA they belong to. This is the reason we conducted a statistical analysis known as analysis of covariance (ANCOVA)<sup>648</sup>, which allow us to compare the average uses per LRA by controlling for a series of covariances, for example, the number of coffee trees per farm. We will use it as a descriptive statistic more precise than a regular mean because we are interested in describing how farmers are using their resource constituents on average, in each LRA, so we can assess service provision. Why are they using them in that particular way would be a matter of the next chapter.

In the specific case of Veracruz, our census has information on how farmers performed each one of the sixteen activities of the first three processes. So, we conducted an ANCOVA for each activity (independent variable) depending on the LRA to which the farmer was placed (dependent variable) controlling by the number of coffee trees (covariate that resulted in the most robust in our model). For each activity, there is an indicator (in a few cases there are two or three) and its measurement is shown for each LRA, meaning that on average, farmers belonging to that LRA are using resource constituents in that particular way. The whole statistical support is presented in Annex 5.2.

The data for the other processes were obtained through qualitative information gathered by the author in interviews conducted in Buesaco, Pasto, and Bogotá with the profiling actors who were participating in each LRA identified in Veracruz.

Table 18 Observed uses by LRA. Source: The author.

Processes	Uses	LRA Discount	LRA Standard	LRA CCEsp/Starbucks	LRA Cultura	LRA CNilson	LRA Nespresso
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<sup>648</sup> We used the SPSS statistical software. For conducting the series of Ancovas, we relied on Field (2005), specially chapter 9.

Planting	Diversification (- Coffee area/total area** - Percentage of the household income derived from coffee*)	46% of the total area is cultivated in coffee.  49% of income comes from coffee	47% of the total area is cultivated in coffee.  54% of income comes from coffee	73% of the total area is cultivated in coffee.  48% of income comes from coffee	69% of the total area is cultivated in coffee.  38% of income comes from coffee	56% of the total area is cultivated in coffee.  60% of income comes from coffee	70% of the total area is cultivated in coffee.  52% of income comes from coffee
	Variety (pest resistant coffee trees planted/total coffee trees planted in the farm)*	84% are pest resistant	96% are pest resistant	80% are pest resistant	80% are pest resistant	64% are pest resistant	74% are pest resistant
	Cycles of renovation of Coffee trees (Average age of the coffee crop)*	4.29 years old	4.71 years old	5.53 years old	3.81 years old	3.86 years old	4.85 years old
	Density (average density of the coffee crop)**	6.009 coffee trees per hectare	7.109 coffee trees per hectare	6.103 coffee trees per hectare	6.432 coffee trees per hectare	5.769 coffee trees per hectare	6.335 coffee trees per hectare
	Shade (average shade in the coffee crop)*	85% of the crop grows under the shade	74% of the crop grows under the shade	86% of the crop grows under the shade	75% of the crop grows under the shade	68% of the crop grows under the shade	79% of the crop grows under the shade
Cultivation	Weed/soil management (percentage of respondents who are using integrated soil management)*	31% are using integrated soil management.	35% are using integrated soil management.	35% are using integrated soil management.	33% are using integrated soil management.	85% are using integrated soil management.	24% are using integrated soil management.
	Pest and disease management (Percentage of respondents who are implementing the RERE, a cultural practice to control the coffee borer beetle)*	20% are using RERE.	0% are using RERE	0% are using RERE	6% are using RERE.	14% are using RERE.	0% are using RERE
	Pest and disease management (1- the percentage of respondents who are using the integrated pest management ** 2- the percentage of respondents who are using pesticides*)	0% used integrated pest management.  17% used pesticides.	0% used integrated pest management.  0% used any pesticide.	0% used integrated pest management.  38% used pesticide	0% used the integrated pest management.  28% used pesticide	0% used the integrated pest management.  58% used pesticide	0% used the integrated pest management.  43% used pesticide
	Nutrition* (1- doses of fertilizer per coffee tree* 2- the percentage of respondents who are using organic fertilization 3- the percentage of respondents who are using the pulp as organic fertilizer*)	123 grams per coffee tree (49% of the recommended doses).  20% use organic fertilization.  53% composted the pulp and used it as fertilizer.	119 grams per coffee tree (48% of the recommended doses)  0% use organic fertilization.  59% composted the pulp and used it as fertilizer.	96 grams per coffee tree (38% of the recommended doses).  14% use organic fertilization.  62% composted the pulp and used it as fertilizer.	94 grams per coffee tree (38% of the recommended doses).  16% use organic fertilization.  50% composted the pulp and used it as fertilizer.	104 grams per coffee tree (42% of the recommended doses).  0% use organic fertilization.  70% composted the pulp and used it as fertilizer.	121 grams per coffee tree (48% of the recommended doses).  8% use organic fertilization.  65% composted the pulp and used it as fertilizer.

	Hedge rowing (percentage of respondents who are using hedge rowing)*	0% are using hedge rowing					
	Picking (1- the percentage of respondents who are using selective picking* 2- the percentage of respondents who are manually selecting defective beans before hulling*)	100% selective picking in the field.  21% and additional selection before hulling	100% selective picking in the field.  35% and additional selection before hulling	100% selective picking in the field.  13% and additional selection before hulling	100% selective picking in the field.  22% and additional selection before hulling	100% selective picking in the field.  14% and additional selection before hulling	100% selective picking in the field.  16% and additional selection before hulling
	Farm management (percentage of respondents who are using accounting records**)	2% are using accounting records.	25% are using accounting records.	13% are using accounting records.	44% are using accounting records.	0% are using accounting records.	7% are using accounting records.
Post-Harvesting	Hulling (percentage of respondents who have appropriate equipment**)	53% have clean and in good condition hulling machines.	59% have clean and in good condition hulling machines.	69% have clean and in good condition hulling machines.	89% have clean and in good condition hulling machines.	99% have clean and in good condition hulling machines.	90% have clean and in good condition hulling machines.
	Fermentation (percentage of respondents who have appropriate equipment**)	45% have proper fermentation facilities.	38% have proper fermentation facilities.	61% have proper fermentation facilities.	83% have proper fermentation facilities.	98% have proper fermentation facilities.	72% have proper fermentation facilities.
	Drying (percentage of respondents who have appropriate equipment*)	55% have proper drying facilities.	49% have proper drying facilities.	61% have proper drying facilities.	66% have proper drying facilities.	84% have proper drying facilities.	72% have proper drying facilities.
	Waste management (1- the percentage of respondents who have water treatment equipment* 2- the percentage of respondents who recycle water used to wash the coffee* 3- the percentage of respondents who have compost equipment*)	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  53% have composting facilities.	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  70% have composting facilities.	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  62% have composting facilities.	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  50% have composting facilities.	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  70% have composting facilities.	0% have proper water treatment facilities.  0% are reusing water after coffee is washed.  73% have composting facilities.
	Reselection (percentage of respondents who reselected during the previous harvest*)	80% manually select dry parchment coffee.	79% manually select dry parchment coffee.	92% manually select dry parchment coffee.	100% manually select dry parchment coffee.	100% manually select dry parchment coffee.	91% manually select dry parchment coffee.
Trading	Purchasing***	Quality sorted "al ojo" (A simple sorting based on the buyer's experience to	Quality sorted by Res 02/05.	Quality sorted by Res 02/05. The best quality coffee is selected	Quality sorted by Res 02/05. All coffee from associates with	Quality sorted by Res 02/05. All coffee from associates is cupped.	Quality sorted by Res 02/05.  Documentary traceability

		assess a price to the eye)		for a cupping test.	good factor is cupped.	Physical traceability	
	Threshing and sorting***	Blended with low quality coffee for local consumption, it lost its traceability.	Blended with other standard coffee to produce Excelso Coffee for export. It lost its traceability.	Documentary traceability for the first, physical traceability for the second.  One portion continues documentary traceability to produce Excelso Coffee for CAFE Practices.  Another portion continue the physical traceability as Specialty coffee for Caravela	Documentary traceability for the first, physical traceability for the second.  One portion sold as Excelso coffee, losing its traceability.  Another portion continues the physical traceability as Specialty coffee for Loha Beans.		It continues the physical traceability to produce Specialty coffee for Inconexus.  It continues the documentary traceability to produce Excelso Coffee for Nespresso
	Bulking and export***	NA	NA	One portion is exported and imported by Carcafé which deliver the coffee in Starbucks warehouses  The Specialty Coffee portion is exported, imported and sold to roasters by Caravela.	The Specialty Coffee is exported by Loha Beans and imported by local partners before selling to the roaster.	The Specialty Coffee is exported by Inconexus and imported by local partners before selling to the roaster.	Exported and imported by the FNC, which deliver the coffee Nespresso warehouses.
Roasting	Blending***	NA	NA	Starbucks blend the coffee to guarantee consistency and replicability in the flavor.  Specialty coffee is prepared by roasters depending on their signature. They could or not blend it.	Specialty coffee is prepared by roasters depending on their signature. They could or not blend it.	Specialty coffee is prepared by roasters depending on their signature. They could or not blend it.	Nespresso blends the coffee to guarantee consistency and replicability the flavor.
	Roasting ***	NA	NA	Starbucks uses S-Curves to guarantee a consistent and replicable flavor.  S-curves are used depending on the coffee and the roasters signature.	S-curves are used depending on the coffee and the roasters signature.	S-curves are used depending on the coffee and the roasters signature.	Nespresso uses S-Curves to guarantee consistent and replicable flavor
	Packaging and retailing***	NA	NA	Starbucks uses the DO Café de Nariño.	Different Specialty Roasters are	Different Specialty Roasters are	Nespresso uses the DO Café de Colombia.

					Different Specialty Roasters are using Buesaco reputation to add value to their packed coffee.	using Buesaco reputation to add value to their packed coffee.	using Buesaco reputation to add value to their packed coffee.
Communication	Communication**	NA	NA	Private investment in Starbucks Brand.	Different Specialty Roasters are using Buesaco reputation to add value to their packed coffee.	Different Specialty Roasters are using Buesaco reputation to add value to their packed coffee.	Private investment Nespresso Brand.
Brewing	Grinding***	NA	NA	NA	NA	NA	NA
	Brewing***	NA	NA	NA	NA	NA	NA

\* At a significant value of 12.5%, there are not statistically different.

\*\* At a significant value of 12.5% there are statistically different.

\*\*\* Qualitative information collected through interviews with traders and exporters.

Even though “average numbers” look different in almost all activities fooling us to believe that farmers are using resource constituents differently depending on the LRA the belong, the variation within each LRA generates a 90% confidence interval wide enough that overlaps between them. In other words, it is plausible to assume that “averages numbers” for the first two processes (planting and cultivation) are exactly the same in all the cases as it can be seen in our statistical annex 5.2, with the sole exception of the activity “farm management” that is statistically significant with a 97% confidence interval.

If we reduce the confidence interval to 87.5% two activities in the planting process (diversification and density), and another one in the cultivation process (pest/disease management) can be considered statistically different.

One plausible explanation to this similarity in uses is related to the fact that farmers in Veracruz are mainly exposed to all LRA, thus, as an insurance, they try to incorporate practices that allow them to sell their beans to any LRA or at least, to reduce at maximum the chances to be excluded. For example, farmers are following regulated practices to produce apparently incompatible services like “appellation Café de Colombia” and “exceptional coffee” by planting pest-resistant varieties in one portion of the farm and non-resistant ones in another.

Only those farmers that feel completely sure to continue selling on the one LRA they belong, would be willing to adopt some practices that are going to exclude them of others LRA. These farmers are the ones who explain the few differences between the LRAs (we transparently accept the 87.5% confidence interval) which happens to be those at the opposite extreme in terms of altitude.

Indeed, in table 19 we can see that with a 95% confidence interval the average altitude for those farmers who are selling in the LRA Standard, ranges from 1.944 – 2.043 m.a.s.l whereas, for farmers selling through the LRA CNilson, the interval goes from 2.027 to 2.137 m.a.s.l. Even though there is a small portion that overlaps, it is clear that the former tends to be placed in lower lands than the latter.

Table 19 Average altitude of coffee farms by LRA. Source: The author.

### Estimates

Dependent Variable: Altitude

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	2057.841 <sup>a</sup>	23.371	2011.124	2104.558
2	1993.887 <sup>a</sup>	24.652	1944.608	2043.167
3	2028.675 <sup>a</sup>	20.116	1988.464	2068.886
4	2050.534 <sup>a</sup>	17.129	2016.294	2084.774
5	2082.968 <sup>a</sup>	27.529	2027.938	2137.998
6	2040.870 <sup>a</sup>	21.339	1998.214	2083.526

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 5645.94.

Altitude plausibly plays a role in the decision of the farmer to remain in a particular LRA: In lower lands, the higher temperature excites the plants prompting cherry production but it reduces the chances to score high on cupping tests. The exact opposite happens in higher lands. So, farmers placed lower would prefer remaining in the LRA Standard, thus maintaining uses that trigger monetary services, “appellation Café de Colombia” symbolic service, and “clean cup” taste related service. The second would rather prefer to remain in the LRA CNilson by prioritizing uses to increase the chances of obtaining the “exceptional coffee” taste related services. That is why we can see that in the LRA Standard 96% farmers are planting pest-resistant varieties with the highest density (7.109 coffee trees per hectare) to maximize coffee production, as a result, 0% are using pesticide. Whereas in the LRA CNilson only 64% are planting pest-resistant varieties with the lowest density (5.769 coffee trees per hectare) because it is the quality of each bean that is important, but to protect those more vulnerable plants 58% are using pesticides.

The tradeoff between the two groups to produce the “monetary services” (the first one to increase productivity the second one to trigger the “exceptional coffee” service) is the main feature of the coffee culture in Veracruz. The LRA Standard and the LRA CNilson show the two extremes in which farmers tend to be more into one profile than the other plausibly because on the altitudinal localization, but as it can be proven through the wide confidence intervals that are shown in the Statistical Annex, this tradeoff is present between farmers within each LRA. Indeed, if we compare the confidence interval for the activity “variety”, the upper bound is placed in all cases higher than 89% of the area planted with pest-resistant varieties whereas the lower bound

reaches 40% and in five of six cases is lower than 64%: if all coffee farmers belonging to a particular LRA had behaved similarly to produce uniquely the profile sought by it, confidence intervals would have been smaller.

Another evidence of farmers' adaptation to this tradeoff is the fact that no matter the LRA, in some activities almost without exception, they are using resource constituent to produce the "monetary services" profile, but in another activity, uses sought the "exceptional coffee" profile. For example, in the activity "nutrition", the probability that the average dose of fertilizer is equal for all LRAs is 95%, showing that is preferred the "monetary services" over the "exceptional coffee" produced by the organic nutrition in all coffee units in Veracruz. Whereas in the activity "picking" there is an 88% probability that the average of farmers manually selecting defective beans before hulling is equal in all the cases, illustrating how uses to produce an "exceptional coffee" are prioritized over the "monetary services" in all farms of the *vereda*.

But what really shows a difference between LRAs is the use of the *know-how* in the third process of post-harvesting. Indeed, the probability that the average of farmers who have appropriate equipment for hulling and fermentation is equal in all LRAs is low: 8% in the former and 4% in the latter. In fact, less than 60% and 45% of farmers have the proper equipment for hulling and fermentation respectively in both the LRA Discount and the LRA Standard, whereas this figure is higher than 89% and 72% respectively in the LRA Cultura, LRA CNilson, and the LRA Nespresso. This difference in equipment possession that plausibly is dependent on previous capital accumulation or cooperation projects due to the fact of being placed in a particular LRA, has a huge influence in the following processes because both physical quality and cupping quality that is the basis of purchasing depends heavily on the post-harvesting activities. And as it is described, after purchasing all uses in the following processes (trading, roasting and communication strategy) are different depending on the LRA

In the post-harvesting activity, it is to highlight two opposite situations. On the one hand, the more important use to produce the "environmental responsibly" service activity is widely absent. Indeed, water treatment systems that guarantee the minimum water quality requirements for wastewater disposal do not exist in any of the farms surveyed. On the other, in all LRA more than 79% of respondents are implementing the most labor-intense activity to increase the chances for producing the "exceptional coffee" service even though the lack of post-harvesting equipment makes impossible to obtain high cupping scores.

To conclude this analysis, we can say that farmers prefer "monetary services" by prioritizing production of "exceptional coffee" but they are not going too far to risk their productivity, so uses are almost the same without regards of LRA membership. Nevertheless, the members of LRAs that explicitly sought for taste-related services, are located in highlands and have the post-harvesting equipment needed to increase the chances of producing these services. So, even though the majority of farmers strive to develop the "exceptional coffee", only farmers who had already produced this service, are the ones who will obtain higher cupping scores. Moreover, as farmers prioritize uses of "exceptional coffee", other uses whose production is not complementary are completely ignored, as the case of uses to generate "environmentally

responsible coffee” which demands an additional effort without any clear effect on taste related services.

#### 7.1.4. Services provided because of uses observed

Once we have identified how services are produced by the regulated uses and systematized the observed uses on average by LRA, we can now proceed to assess the services provision by each LRA.

We will start with the observed monetary services received on average by farmers who had the same number of coffee trees (area cultivated is integrated into this covariate) but sold their 2015/2016 coffee production through different LRAs. These observations are based on farmers’ responses to the survey conducted by Viviana Ramos which could not be completely accurate but memories are not correlated with the LRAs, especially because farmers are selling through various LRAs. The “lack of memory” have a similar impact in all LRAs so we can confidently compare between them.

Secondly, we will use the results of table 18 about observed uses, to assess symbolic and taste related services depending on the average observed use in each activity by each LRA. If all the regulated uses to produce a service were observed in an LRA, our assumption is that the LRA produced that service.

- Monetary services provision

When conducting an ANCOVA to test if there is a difference on the average income between groups (LRAs), the null hypothesis (average income is equal) is rejected using the number of coffee trees as a Covariate.

The ANCOVA in table 20 shows us that both the number of productive coffee trees and the LRA are significant (with a significance level of 0.05). Furthermore, the R squared of 0.6 explain that 60% of the variance in income within our sample is explained by our model. So, we can confidently say that once controlled by the number of coffee trees (that reflects the area of coffee each grower possesses), the average income a coffee farmer differs by LRA.

Table 20 Ancova Test. Source: the author using SPSS.

#### Tests of Between-Subjects Effects

Dependent Variable: Ingresos

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	589837692000 0000.000 <sup>a</sup>	6	983062820000 000.000	15.861	.000	95.167	1.000

Intercept	328169762500 000.000	1	328169762500 000.000	5.295	.025	5.295	.620
NplantasPro	382129664400 0000.000	1	382129664400 0000.000	61.655	.000	61.655	1.000
ARL	949186812600 000.000	5	189837362500 000.000	3.063	.015	15.315	.840
Error	390468543100 0000.000	63	619791338300 00.000				
Total	145745412700 00000.000	70					
Corrected Total	980306235100 0000.000	69					

a. R Squared = .602 (Adjusted R Squared = .564)

b. Computed using alpha = .05

As it can be seen in table 21, a coffee farmer that possess 6.552 productive coffee trees, obtained, on average, on the harvest 2015-2016 (Oct 2015 – Sep 2016) the following monetary services.

- COP 5.143.180 (USD 1.686<sup>649</sup>), equivalent to 8 legal monthly minimum wages (l.m.m.w)<sup>650</sup> if they are selling their coffee through the LRA Discount (11% lower than LRA Standard).
- COP 5.798.882 (USD 1.901), equivalent to 9 l.m.m.w., if they are selling their coffee through the LRA Standard.
- COP 6.516.319 (USD 2.136), equivalent to 10 l.m.m.w., if they are selling their coffee through the LRA CCEsp/Starbucks (12% higher than LRA Standard).
- COP 6.180.098 (USD 2,026), equivalent to 10 l.m.m.w., if they are selling their coffee through the LRA Caltura (7% higher than LRA Standard).
- COP 13.313.358 (USD 4.365), equivalent to 21 l.m.m.w., if they are selling their coffee through the LRA CNilson (130% higher than LRA Standard).
- COP 14.887.076 (USD 4,881), equivalent to 23 l.m.m.w., if they are selling their coffee through the LRA Nespresso (157% higher than LRA Standard).

Table 21 Estimates. Source: the author using SPSS.

### Estimates

Dependent Variable: Ingresos

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	5143180.251 <sup>a</sup>	2530985.867	85408.581	10200951.920
2	5798882.346 <sup>a</sup>	2668599.035	466112.703	11131651.990

<sup>649</sup> The exchange rate on average in 2016 was USD 1 = COP\$ 3.050

<sup>650</sup> In Colombia in 2015, the *Salario Mínimo Mensual Legal Vigente* was COP 644.355.

3	6516318.887 <sup>a</sup>	2125107.805	2269629.803	10763007.970
4	6180097.888 <sup>a</sup>	1855721.060	2471735.257	9888460.518
5	13313357.570 <sup>a</sup>	2979097.518	7360106.222	19266608.920
6	14887075.580 <sup>a</sup>	2289907.047	10311061.490	19463089.670

a. Covariates appearing in the model are evaluated at the following values:

NplantasPro = 6251.00.

- Symbolic and taste related services provision

Table 22 shows all services produced by each LRA after we conducted a test in which a service was produced if all uses observed in table 18 were conducted as they were regulated in Annex 4.4 to produce that particular service. It presents in the columns each one of the LRAs and in the rows, each one of the services demanded from the Resource.

Table 22 Services provision by LRA. Source: The author.

	LRA Discount	LRA Standard	LRA CCEsp /Starbucks	LRA Cultura	LRA CNilson	LRA Nespresso
Energy dose	X	X	X	X	X	X
Appellation Café de Colombia		X	X	X	X	X
Appellation Café de Nariño			X	X	X	
Brand reputation			X	X	X	X
Environmentally responsible						
Ethically traded			X	X	X	X
Shared value						
Transparent coffee			X	X	X	
Poverty reduction						
Baked coffee	X					
Clean cup		X	X	X	X	X
Terroir expression			X	X	X	
Sweet flavor and citric acid aroma						X
Exceptional coffee			X	X	X	

As observed uses in the first two processes were similar for all LRAs, it is not surprising that services provision is quite similar between LRAs, the major difference is placed on the activities after the post-harvesting process.

Indeed, the LRA Discount and the LRA Standard can produce only those services which are poorly regulated, so it does not really matter how the post-harvesting is conducted: The former produced barely 2 services whereas the latter 3.

The other four LRAs regulated in detail how this process must be conducted or at least, a threshold that must be reached. The main difference hereafter relies in how the trading is conducted, whereas the LRA Nespresso utilizes a documentary traceability that allows to follow a lot of coffee for roasting purposes (the need of an aromatic profile as a recipe: the taste related service “sweet flavor and citric acid aroma”) and not for the communication strategy (the final customer hardly can identify Buesaco origin in his cup), the other three use a physical traceability that in some cases would allow the final customer to identify the origin not only in Buesaco but also in a farm in Veracruz. This practice triggers the production of four services: two symbolic “appellation café de Nariño” and “transparent coffee”, which are linked to the social construction of the territory in consumers’ minds; and two taste related “terroir expression” and “exceptional coffee”, which are linked to the integrality of the product in the final beverage in order to squeeze out the full aromatic profile of the terroir. These four services lack in the LRA Nespresso, which produced the six services noted in table 22, whereas are present in the other three LRA which produced the same nine services.

On the other hand, services that are sought by some LRAs are not produced. Particularly the “environmentally responsible” symbolic service claimed by the LRA Nespresso and the LRA CCEsp/Starbucks, there is no way to protect the water resource if farmers are conducting a short fermentation (Coffee is washed and water leaves the fermentation tank highly polluted) but do not have any water treatment system that credibly diminishes its toxicity before being disposed of, as it was observed in the field. In the same path, the “shared value” symbolic service demanded by the LRA CNilson and the LRA Nespresso cannot be fulfilled because if clean water is polluted, it cannot be said that the economic activity is creating value for communities: it could create value for profiling actors like farmers, but not for local inhabitants who are losing their natural Resources without any compensation.

#### 7.1.5. In short, which are the LRAs that optimize the provision of the services demanded from the Resource in Veracruz in 2016?

To conclude this first subchapter, we present the services produced by each one of the LRAs in Veracruz in 2015/2016. Monetary services are presented in COP and its equivalent in legal monthly minimum wages of 2015, and symbolic and taste related services are presented in the number of this kind of services produced from the total of fourteen identified.

- LRA Discount: COP 5.143.180 (8 l.m.m.w.) and 2(14) symbolic and taste related services.
- LRA Standard: COP 5.798.882 (9 l.m.m.w.) and 3(14) symbolic and taste related services.
- LRA CCEsp/Starbucks: COP 6.516.319 (10 l.m.m.w.) and 9(14) symbolic and taste related services.
- LRA Cultura: COP 6.180.098 (10 l.m.m.w.) and 9(14) symbolic and taste related services.
- LRA CNilson: COP 13.313.358 (21 l.m.m.w.) and 9(14) symbolic and taste related services.
- LRA Nespresso: COP 14.887.076 (23 l.m.m.w.) and 6(14) symbolic and taste related services.

## 7.2. LRA, what does explain the collective action solution

We ended the first subchapter with a screenshot of the results of the collective action in terms of the services provided by the Resource from the ensemble of services demanded. And we showed that services provision was different in each one of the LRAs that were identified in Veracruz in 2015/2016.

In this second subchapter, we pretend to analyze each one of the LRA in terms of the three conditions: the extent or the amount of observable uses regulated by the LRA; the coherence or the governance mechanism to both coordinate actors by the LRA and coordinate the LRA by the actor; and the closure or the market power to profile the Resource.

### 7.2.1. Extent

The previous subchapter developed extensively this condition by describing for each LRA both regulated and observed uses. So, we are not going to describe it again. Nevertheless, it focused on the services provision no matter the actual intention of the LRA. Here the focus is the combination of services sought by the LRA, so we compare observed uses against the regulated uses to produce those services intentionally looking for.

As it is the same information previously presented but rearranged in terms of the combination of services by LRA, we explain transparently the procedure as it was conducted so we avoid a redundant presentation of new tables. Thus, we evaluated the extent by conducting an additional exercise in which firstly, we used the combination of services sought for by each LRA presented in Annex 3, and then, comparing with our data on observed uses (table 18), we evaluated among three possible options: the observed use was conducted as it was regulated; it was conducted differently, or it was not regulated (annex 7.2).

A clarification is necessary. In Veracruz in 2015/2016 the main service actors sought for was “monetary services”. However, there were two tendencies: those who prioritized uses oriented towards productivity and those who prioritized uses towards “exceptional coffee”. Thus, we can categorize three groups: the productivity group (LRAs Discount, Standard, and Nespresso), the exceptional coffee group (LRAs Cultura, CNilson). And a third one that prioritizes monetary services through both productivity and “exceptional coffee” (LRA CCEsp/Starbucks). Therefore, we conducted the evaluation, we assessed the observed uses of the first group against the regulated uses to enhance productivity; the observed uses of the second group against the regulated uses to enhance “exceptional coffee”; and the observed uses of the third group against both (In all cases, we took into account the regulated uses of the other services demanded in each LRA).

As a result, Table 23 shows that both the LRA Discount and the LRA Standard did not meet the two conditions because less than half of the activities observed are conducted as it was regulated.

In the case of Standard coffee, regulations to produce the “appellation Café de Colombia” (that are completely absent in the case of the LRA Discount) especially in the roasting and communication strategy process are not observed.

On the other hand, for four of the six LRAs presented in Veracruz, the two conditions were fulfilled: LRA CCEsp/Starbucks; LRA Cultura; LRA CNilson and the LRA Nespresso. In these cases, more than fifty percent of the total number of uses were observed as they were regulated by the LRA. In the latter, for example, uses observed/regulated were equivalent to 87% of the total. In addition, all were below 37% of the concentration in the first three processes so, they can be considered evenly distributed among all profiling actors.

Table 23 Extent assessment by each LRA. Source: The author.

	LRA Discount	LRA Standard	LRA CCEsp/Starbucks	LRA Cultura	LRA CNilson	LRA Nespresso
Average of observed/regulated uses (weighted by process)	20%	32%	60%	52%	62%	88%
Concentration in the first three processes.	53%	42%	37%	27%	8%	33%
Extent assessment	Low	Low	High	High	High	High

### 7.2.2. Coherence

As mentioned in the conceptual component, coherence refers to the governance mechanisms that incentive profiling actors to behave as expected in order to match regulated uses with the observed ones.

Unlike the extension attribute that is synthetically presented because data was presented in Annex 4 and 5, this section evaluates the presence (or absence) of coherence depending on the capacity of the LRA to align actors around a commonly agreed profile. Capacity that is systematized in the five elements previously described: Services; actors; institutions; governance and output.

- LRA Discount

The LRA Discount can be seen from a negative point of view: coffee that cannot produce other services is profiled to produce the “energy dose” symbolic service and the “baked coffee” taste related services.

It cannot be said that actors are aligned to produce these services, rather, on the contrary, actors produced these services because they were misaligned. It is not necessarily voluntary, in many cases, exogenous variables like a drought or a pest outbreak strongly hit the crop and diminish the quality of the coffee bean. From this perspective, the LRA Discount can be seen from a positive point of view: it allows profiling actors, especially farmers, to obtain monetary services from a low-quality agricultural product. In other agricultural markets, weather-related losses in quality may end up in farmers being unable to sell. In the coffee market, both immature and overripe beans are going to be bought (discounts could be significant, though) precisely, because it can be profiled afterward to produce the “energy dose/baked coffee” services.

Other than prices, one institution that plays a major role in this alignment is the *Resolución 5/2002 del CNC*: coffee that does not fulfill the requirements to be exported will be profiled differently by profiling actors. E.g. traders will sort it apart from *Excelso* to be sold locally to roasters, which in turn could use it for producing soluble coffee for consumers interested in a not-unpleasant shot of energy.

This LRA is completely governed by markets and governance mechanisms are completely absent. As consumer tries to minimize the payment to obtain this profile, cost reduction is a must. Thus, Profilers roasters are encouraged by prices to innovate for the least bad product at the lowest price: enhancing blending and roasting techniques; developing economies of scale; ameliorating capital management; improving logistics; etc. In the end, as long as there is coffee in the beverage to boost the energy and it is drinkable, roasters can go as low as they can in the final price to earn market share. In the case of farmers, no matter the uses of constituents, the parchment coffee needed for his profile will be produced. As production costs for low quality and standard quality coffee are very similar for farmers, prices for discount coffee hardly will incentivize them to change behavior in order to produce it. But it is true that low prices for standard coffee could discourage farmers and make them produce discount coffee (or abandon the farm).

To conclude, **coherence is low** (if not inexistent) in this LRA because markets forces alone easily provide this profile. There is no need for governance mechanism, and even though there is an institution coming from the public policy that facilitates coffee alignment, this works mainly to give the chance to higher quality coffee to produce other services, but it does not influence the provision of the “energy dose” and “baked coffee” services.

- [LRA Standard](#)

The assessment of coherence for the LRA Standard in Buesaco is exactly the same that the LRA Standard in Riosucio that can be consulted in chapter 5.2: both the non-inclusive governance mechanism and the powerlessness to maintain align all profiling actors around the same profile are characteristic of a **low coherent** LRA.

- [LRA Nespresso](#)

The LRA Nespresso was developed at the beginning of two thousand by the initiative of the Swiss roaster Nespresso. In the ecotope 220A (Gómez et al., 1991, p. 75), to which Buesaco / Veracruz are part from, this LRA sought for a profile featured by the “citric acid aroma and sweet flavor” taste related service; the “shared value”, “environmentally responsible” and “brand reputation” symbolic services and the monetary services in the form of productivity.

Producers, traders, and consumers are aligned by the roaster Nespresso: all farmers in Veracruz with more than 0.5ha cultivated in coffee and located between 1.932 to 2.086 m.a.s.l; both coffee cooperatives in Buesaco that use money from the FoNC (*La Cooperativa del Norte* and *La Cooperativa de Occidente*); The FNC through its logistics company, Almacafé, which threshes, storages, transports, exports, ships and imports the coffee bags from Colombia directly to Nespresso facilities in Switzerland; Nespresso which roasts and packages coffee in single-doses capsules to be directly delivered to ten million consumers around the globe (members of the Nespresso Club). In addition, stakeholders in both production and consumption: *Fundanatura* an NGO in Colombia and Rainforest Alliance an international NGO.

The central institutional piece that aligns actors is the “Tool for the Assessment of Sustainable Quality” and the governance mechanism to translate these regulated uses into observed uses is the “Nespresso AAA Sustainable Quality™ Coffee Program” implemented through the “clusters” (see chapter 5.2). One of these clusters is operated by the FNC in nearly fifty municipalities (including Buesaco/Veracruz) of Cauca and Nariño, 29.574 coffee growers cultivating 35.517 ha in coffee (FNC, 2014, pp. 34, 76 ). This cluster was formalized through a public-private partnership (FNC and Nespresso) in 2008<sup>651</sup> renovated in 2012 to encourage farmers and traders to fulfill the Tasq™ through monetary incentives, technical assistance and equipment delivery<sup>652</sup>.

This LRA operates on quarterly negotiations between Nespresso and the FNC<sup>653</sup>, in which both quantities and prices are agreed and deliveries are synchronized to manage the risk<sup>654</sup> and maintain a profitable business for both parties. It provides information that nourishes the FNC’s sales plan with its procurement network: *los comités de comercialización*<sup>655</sup>.

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<sup>651</sup> It focused on training and technical assistance oriented towards the achievement of the performance indicators related to the Tasq™ implementation. (Nespresso, 2014, p. 3)

<sup>652</sup> USD 17 million per year during five years divided in USD 7.5 million would be paid by Nespresso through premiums to coffee farmer and, USD 9.5 million to deliver the technical assistance and the equipment needed: USD 2.5 million paid by Nespresso and USD 7 million paid by the FNC. (FNC, 2012b)

<sup>653</sup> All information in this paragraph comes from the interview with José Felipe Jaramillo Mejía, logistics director of the FNC.

<sup>654</sup> The FNC purchases must be fine-tuned because there are some harvests that a smaller than usual portion of the costly FNC’s AAA purchases were bought by Nespresso because either aromatic profile deficiencies or too much production. Or the other way around, in which the FNC had not satisfied Nespresso demands for AAA coffee.

<sup>655</sup> It is composed of the FNC who has both the capital and Nespresso remarks about previous shipments; the municipal/departmental *Comités de cafeteros* who have the technical information to predict coffee production and are informed of uses that must prioritized by extension agents and, the coffee cooperatives which prepare to acquire the harvest.

It is through these *comités de comercialización* that traders and producers are integrated into the LRA as target groups that have to change their behavior but cannot influence the LRA. Traders are simply informed<sup>656</sup> and producers only have a one-direction relation through which the extension agent says what have to be done, producers cannot escalate their demands<sup>657</sup> but they have to make the effort if they want to continue in the program<sup>658</sup>. The consequence is that neither traders<sup>659</sup> nor farmers have real engagement with the AAA program<sup>660</sup>, farmers, for example, sell to the Cooperative only the minimum amount needed to continue in the program<sup>661</sup>.

The mechanism for encouraging coffee producers to use *infrastructures* and *know-how* as regulated in the first three processes is through a combination of three instruments. The first one is the price: In 2015, the premium was COP\$ 420 per kilo of parchment coffee (USD\$ 0.18), an addition of 7% over the FNC's coffee price<sup>662</sup>. The second is the strengthened "knowledge circuit" with more specific training in the Tasq® and more extension agents<sup>663</sup>, even though their efficacy is questioned because of the still small group and their multiple functions<sup>664</sup>. The third one is the direct investment in farmers' equipment for conducting as regulated the post-harvesting

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<sup>656</sup> "El programa Nespresso no tiene posibilidad de hacer una retroalimentación. Eso es lo malo con Nespresso, ellos hacen las cosas directamente con la FNC. A la larga es hágase y cúmplase". Interview with Robert Barco, CEO of the *Cooperativa de caficultores del Occidente de Nariño*.

<sup>657</sup> "Nespresso nunca ha hecho una reunión" Interview with Carlos Pantoja, president of Asoveracruz, the association of coffee farmers in Buesaco.

<sup>658</sup> This one-direction relation can be clearly seen once read *El Libro de Actas de Asoveracruz* (the minute book of the Association of coffee growers in Veracruz), in which it describes each intervention of the extension agents as a lecture in which farmers are pupils. There is not a single *Acta* in which it can be read a "recommendation" from farmers to the extension agent.

<sup>659</sup> "Ese ha sido uno de los errores de la cooperativa... ser un mandadero de Nespresso". Interview with James Botina, purchaser of the *Cooperativa de Occidente*.

<sup>660</sup> "No hay mucho empoderamiento hacia el programa. Lo que buscan ellos (coffee farmers) es precio". Interview with Oscar Ordoñez, Director of the Specialty Coffee Program at the *Comité Departamental de Cafeteros de Nariño*.

<sup>661</sup> "Ellos son café Nespresso, pero le venden un cupo a la Cooperativa y el resto al que pague más". Interview with Arturo Pascuaza, coordinator of the municipal agriculture office.

<sup>662</sup> In 2003 with premiums of COP 800 (USD 0.29) equivalent to the 30% of the annual average of the internal coffee price, its maximum value was reached in 2008 to COP 1.200 (USD 0.73) but remained at the same 30% of the internal coffee price. Calculated by the author using the daily FNC's prices since 2003.

<sup>663</sup> Expansion that was possible because Nespresso paid almost COP 3.000 million (USD 1.3 million) in 2015 to engage 47 additional extension agents. Interview with Hernando Delgado, Executive Director of the *Comité Departamental de Cafeteros de Nariño*. In Buesaco there was two extension agents before the Nespresso program, in 2015 there were seven FNC's extension agents. Interview with Oscar Ordoñez, Director of the Specialty Coffee Program at the *Comité Departamental de Cafeteros de Nariño*.

<sup>664</sup> With almost three thousand coffee farmers in Buesaco, 7 extension agents imply an average of more than four hundred producers per each one. It puts in question its personalized attention. In fact, as the main performance indicator for them is the percentage of the area renovated, they invest a very important portion of their time in the paper work needed to deliver the two program mentioned before to incentivize renovation: *Competitividad* (direct benefit transfer) and PSF (subsidized loan), so it is a feeling that they spent more time in the office than in the field working with producers "Los técnicos ya tienen un oficio como más administrativo. Ya no es ese técnico extensionista donde iba a la finca y hacía las recomendaciones. Por lo general permanece en la oficina rindiendo informes. Que uno se los encuentre por el campo prestando el servicio de extensión es bien complicado". Interview with Arturo Pascuaza, coordinator of the municipal agriculture office.

activities<sup>665</sup>. The AAA program had little impact because it initially focused on an altitudinal fringe below Veracruz<sup>666</sup>, and when arrived<sup>667</sup>, it stopped this delivery.

This LRA also influences traders' use of *know-how* during the purchasing activity through a very powerful mechanism: the FoNC. Indeed, both cooperatives buy coffee funded by the FoNC thus they have to exclusively sell to Almacafé (FNC logistics branch). So, the FNC, in its role of manager of both the FoNC (giving the money) and Almacafé (controlling the quality of purchased coffee), can strongly influence traders' *know-how* to buy coffee. Both cooperatives have to implement the documentary traceability of coffee sold by AAA farmers<sup>668</sup> with the qualities demanded<sup>669</sup>. Almacafé also was encouraged to use its *infrastructures* and *know-how* to guarantee the aromatic profile. Indeed, through an international development fund<sup>670</sup>, Almacafé acquired the labs and the training needed for cupping all lots of AAA coffee, in order to ship to Nespresso only the lots that fulfill the aromatic profile. Lots that have a different profile will be exported through the LRA Standard either by selling to high-quality buyers of Colombian coffee or by blending with low quality coffee from other regions to reach the Excelso quality as a whole.

Also, this LRA goes upstream to influence the very end of the value chain, the consumers as described in chapter 5.2.

To conclude, this LRA looks very well design to align the whole value chain, from farmers to consumers, around the profile characterized by: "citric acid aroma and sweet flavor" taste related service; the "shared value", "environmentally responsible" and "brand reputation" symbolic services and the monetary services. Nevertheless, governance mechanisms work in one direction in which decisions made between the FNC and Nespresso must be obeyed by the other profilers like farmers and traders. As these actors cannot participate in the decision process, their loyalty

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<sup>665</sup> "By 2010, over 7,700 fermentation tanks, 15,000 solar dryers, 6,700 waste handling equipment and 2,600 waste water treatment systems are installed" (Nespresso, 2014, p. 3)

<sup>666</sup> "*ellos no lo recuerdan mucho porque de Veracruz en ese momento no debieron haber habido muchos caficultores que estaban en Nespresso... el programa empezó a extenderse como en esa franja entre los 1700 a 1900 m.a.s.n.m que es lo más óptimo que se tiene para café, y sobre todo ahí en Buesaco. Veracruz está por encima entonces habían menos caficultores para entrar a Nespresso*" Interview with Oscar Ordoñez, Director of the Specialty Coffee Program at the *Comité Departamental de Cafeteros de Nariño*.

<sup>667</sup> Farmers in Veracruz started to join the program in 2012 as can be read in the minutes of Asoveracruz (the association of coffee farmers from Veracruz): In the Acta 38 (31<sup>th</sup> March 2012) the FNC's extension agent mentioned the AAA Program and its intention to invite the associates of Asoveracruz to join it. Additionally, in the Acta 39 (27<sup>th</sup> April 2012), the same extension agent said it was worried because it needed more affiliates from Veracruz.

<sup>668</sup> An initial list of AAA farmers in 2005 have suffered several updates related to the demand's expansion/contraction and the (absence/presence) of the aromatic profile.

<sup>669</sup> Cooperatives do not answer for the aromatic profile; their commitment is to deliver AAA coffee with a factor lower than 93. The *Cooperativa de Occidente* has their own facilities in Buesaco and the person who buys is their employee. Whereas the *Cooperativa del Norte* does not own a purchasing point there, so they supply through a local partner who use the Cooperative's capital to buy coffee and then, he is paid by each kilo of coffee bought (in 2016 he received COP 82 (USD 0.03)). Interview with Lucas Chavez, purchase agent of la *Cooperativa del Norte* in Buesaco.

<sup>670</sup> Through the Sustainable Coffee Program annual call for "field level projects - 2014" (today known as the Global Coffee Platform) funded by state donors (the Netherlands, Denmark and Switzerland). Source: Sustainable Coffee Program, "*ficha informativa*", February 2016.

is low reducing the portion of the Resource profiled by this LRA<sup>671</sup>. So, due to the lack of this second way in which all actors can influence the LRA, we categorize **coherence as low**.

- LRA CCEsp/Starbucks

This LRA has two layers. The first one was developed since 2004 by the initiative of the North American roaster Starbucks to guarantee its supply of high-quality coffee while enhancing economic accountability, social responsibility and environmental protection (CI, 2011, p. 4). Starbucks with their supplier Empresas de Nariño - EdN conducted a census from 2004 to 2010 to consolidate a database of 25 thousand coffee farms in Nariño<sup>672</sup>, then they decentralized their supply network through purchasing agents in the main coffee municipalities to buy the coffee from these farmers. In Buesaco, they were supplied by Pastor Gómez. In 2013, EdN was absorbed by the exporter Carcafé<sup>673</sup> (owned by one of the main global traders ED&F Man<sup>674</sup>) and the Pastor Gómez's purchase point was absorbed by the "*Cooperativa de Cafés Especiales de Buesaco*"<sup>675</sup> (CCEsp onward). Thus, since 2013 Starbucks, Carcafé and CCEsp are aligned to profile the combination of the taste related services "terroir expression", "citric acid aroma" and "clean cup"; the symbolic services "ethically traded", "environmentally responsible" and "brand reputation"; and the monetary services (in terms of productivity).

Similarly to the case of Riosucio, this alignment was built around the C.A.F.E. Practices profiling institution<sup>676</sup>. Differently, it was built on a succession of projects with different partners to implement the CAFE Practices program<sup>677</sup>. As a result, governance mechanisms varied depending on each project in turn (chapter 8.2) but there were always subject of the commercial agreement between Starbucks and their suppliers. This agreement gave an ample leeway for suppliers which were responsible for formulating, implementing and evaluating the projects. However, suppliers have had to answer for the same three conditions described in the case of Riosucio: 1- Quality; 2- Economic accountability; 3- External audit.

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<sup>671</sup> From having bought almost the entire harvest in Buesaco in 2012 (Chapter 8.4), this LRA bought only 14% of Buesaco Harvest in 2015 (table 2).

<sup>672</sup> It is highly probable that almost all farmers that were cropping coffee in Buesaco/Veracruz in that period were included in this database known as "*base del caficultor fiel*", thus were aligned in this LRA. Interview with Gerardo Sarasti, technical manager at Carcafé.

<sup>673</sup> "The Carcafé group was established in Colombia in 1983. Today the group comprises three distinct entities: Carcafé Ltda, with commercial presence in the entire coffee landscape; Empresas de Nariño, specializing in high-end coffees from the country's far South; The Carcafé Foundation (Volcafé, 2012, p. 4).

<sup>674</sup> ED&F Man coffee business provides "beans for 50 billion cups each year". Their strategy in Latin America was to "set up partnerships that later became fully owned subsidiaries (Volcafé, 2012, p. 2).

<sup>675</sup> Jairo Gómez (Pastor Gómez's son) took the reins of the company and joined others 25 coffee growers from Buesaco to raise the capital needed to buy the harvest. Taking advantage of the nascent specialty coffee market, they founded on the 30<sup>th</sup> June 2012 the CCEsp.

<sup>676</sup> To avoid redundancies, we invite the reader to see chapter 5.2.

<sup>677</sup> The Dutch Government funded the first project 2004-2008. One year and a half afterwards, a second project built over the previous one was funded by the USA Government through USAID from 2009 to 2012. "Near the close of the second project, in January 2012, the partners agreed to extend a new pilot project with farmers in the *Samaniego* region (Nariño's central zone) involving implementation of FairTrade certification. This pilot project incorporated additional resources from the Catholic Relief Services" (Pfisterer & Payandeh, 2014, p. 21).

Through the various projects, three main instruments to incentivize a change in behavior were financed. Firstly, a 40-people team was put in place to conduct the surveys of the *caficultor fiel* database, it provided an initial individual technical assistance when surveying farmers and noticing the non-compliance criteria <sup>678</sup> . Secondly, training workshops <sup>679</sup> in which neighbor farmers gathered together to receive practical knowledge in order to comply with the CAFE Practices norm<sup>680</sup>, including extra benefits to incentive its appropriation<sup>681</sup>. The third one was the delivery of infrastructure as drying patios<sup>682</sup> to improve coffee facilities; water tanks and kitchens to improve household living conditions <sup>683</sup> ; schools' computers to enhance community engagement<sup>684</sup>; three plantlets<sup>685</sup> and water treatment systems<sup>686</sup> to improve soil and water conservation. At the end in 2011, 238 farms fulfill 100% the C.A.F.E. Practices (Pfisterer & Payandeh, 2014, p. 24), equivalent to less than 1% of the participants in the CAFE Practices program.

The second layer was developed since 2013 by CCEsp to increase “monetary services” by profiling the “exceptional coffee” taste related services and the “transparent coffee” symbolic service. They partnered with the specialty coffee trader Caravela, who had commercial relation with 134 specialty roasters in 31 countries<sup>687</sup>. Both encouraged coffee farmers by offering better prices.

The profiling institution around which all profilers gathered is the Q system developed by the SCAA and the cupping score it produces, from 0 to 100 higher than 80 is considered Specialty Coffee<sup>688</sup>. If previous institutions produced a minimum quality to obtain a maximum price, this

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<sup>678</sup> This number changed in time and with each project a new team was launched, on average it could be said there was a 10/15-people team until 2012. Interview with Gerardo Sarasti, technical manager at Carcafe.

<sup>679</sup> 1.211 capacity building training workshops were conducted until 2012 (Pfisterer & Payandeh, 2014, p. 24)

<sup>680</sup> “The project started with training, through which we gained experience on how to better process our coffee, how to better sell it and how to identify good quality... they taught us to better work on our individual farms and we learned about recycling and garbage collection”. Reflection from the Duarte Coffee Association quoted in annex I of (Pfisterer & Payandeh, 2014).

<sup>681</sup> “We were involved in the *Carrera Cafetera*: a series of training session and capacity-building in an effort to get Sustainable Coffee certification (Rainforest Alliance). The *Carrera Cafetera* awarded benefits to associations who successfully accomplished stated objectives (...) with processing infrastructure parabolic dryers and drying patios for the individual farms, and tools for the association as a whole” Reflection from the *Nueva Esperanza* Coffee Association quoted in annex I of (Pfisterer & Payandeh, 2014).

<sup>682</sup> Farmers received the material to build a concrete slab in which they could dry their coffee.

<sup>683</sup> 1.160 farms benefit from infrastructure projects until 2012 (Pfisterer & Payandeh, 2014, p. 24), less than 5% of CAFE Practices farms.

<sup>684</sup> 450 computers donated to education centers (Pfisterer & Payandeh, 2014, p. 24),.

<sup>685</sup> 10.000 trees planted (Pfisterer & Payandeh, 2014, p. 24).

<sup>686</sup> 111 farms received water treatment system (Pfisterer & Payandeh, 2014, p. 24).

<sup>687</sup> Interview with Alejandro Cadena, CEO of Caravela Coffee.

<sup>688</sup> To put it on perspective, a Colombian Excelso could score 80-82 and would be paid roughly USD 1.50 per pound whereas the winning farm of the Cup of Excellence in Colombia in 2017 (Rodrigo Diaz from Buesaco) scored 91.28 and was paid USD 37.30 per pound. (ACE, 2017)

institution allocates a price depending on the cupping score<sup>689</sup>. So, each score-point is money<sup>690</sup>. This institution operates alongside the trading procedure: after coffee is purchased by CCEsp depending on the factor, *el fiel de báscula* (the buyer at the purchase point) decides which coffee would be scored<sup>691</sup>.

Through an informal agreement, Caravela installed a quality lab<sup>692</sup> and one of its quality advisors in the CCEsp purchase point, with the condition to have the priority over all coffee bought by CCEsp<sup>693</sup>. Caravela's advisor sorted coffee in five categories depending on the SCAA score: Under 83 qualify as no-specialty; 84-85 as A; 86-87 as AA; 88-89 as AAA; 90 or more as microlot. For the last four were accompanied by completely physical traceability. Afterward, Caravela will offer them through its network of specialty traders/roasters and once the coffee is sold, a premium will be paid to the farmer<sup>694</sup>. In exchange, CCEsp earns a portion of the premium paid back by Caravela to farmers<sup>695</sup> and is allowed to use the lab even to sell to other specialty clients<sup>696</sup>. Indeed, Caravela had a goal to supply 250 thousand kilos of specialty coffee in Buesaco, so if the goal was overcome or the high-score coffee was discarded for other reasons, CCEsp was free to offer it.

The Q system alongside prices are the mechanisms that govern this second layer, there are neither meetings nor regular communication because there is nothing different than prices to

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<sup>689</sup> "Precios dependientes de la calidad en taza: A mayor calidad, mejor precio" (A. Cadena, 2016, p. 33).

<sup>690</sup> If the trader sells a coffee and says it scores 87 and the roaster considers it scores 85, the trader lost a client. Or if the trader sells a 87 coffee and the roaster considers it scores 90, the trader is losing money. Examples provided by Alejandro Cadena CEO of Caravela Coffee.

<sup>691</sup> It is not feasible to make a cupping test for each farmer, so *fieles de báscula* have to take a practical decision based on their knowledge on farmers and farms: choosing those with "potential" to produce a high-score coffee.

<sup>692</sup> Caravela's quality team is divided by geographical zones. In of them, two Q graders people (People certificated to score coffee under the SCAA protocol) are quality advisors for four purchasing points (Buesaco, Tablón de Gómez, Sandoná and Pasto) and two quality labs (Buesaco and Sandoná) (Cadena, 2017, p. 41).

<sup>693</sup> CCEsp reputation is a heritage of almost one decade of a commercial relation between Pastor Gómez and coffee farmers, continued by his son, featured by paternalism in which they gave money in advancement for the cultivation that would be paid in coffee during the harvest. This reputation among farmers is a valuable asset for an exporter who does not know anyone in the territory. Interview with Jairo Gómez, CEO of CCEsp.

<sup>694</sup> In 2015, 88% of coffee sold by Caravela was either A (with premiums equivalent to the 16% of the FNC's price) or AA (a premium equivalent to 28% of the FNC's price); 7% was AAA (a premium equivalent to 40% of the FNC's price) and, 5% was sold as microlot (a premium equivalent to 40% of the FNC's price)(A. Cadena, 2016, p. 48).

<sup>695</sup> For example, a coffee farmer received COP 7.000 per kilo for a lot of coffee. This lot had a high score and was sold to a roaster. Caravela paid back a premium of COP 3.000. CCEsp decided to take COP 600. So, the farmer received in total COP 9.400. Premium prices are revealed to farmers by text messages, so if CCEsp wants to continue procuring from high-score farms, it has to charge reasonable charges. Interview with Flor Valenzuela, the quality advisor from Caravela in Buesaco.

<sup>696</sup> Usually in the lab they were both the advisor from Caravela and a cupper from CCEsp. If a specialty coffee was discarded by Caravela's advisor, the CCEsp's one would score it to sell to another client. Interview with Flor Valenzuela, the quality advisor from Caravela in Buesaco.

motivate a change in behavior by farmers<sup>697</sup>. In fact, communication with them is done through a text message in which they will receive their cupping report for each lot of coffee analyzed<sup>698</sup>.

To conclude, since 2013 the first layer of this LRA was misaligned and the profile reduced at the expense of the second layer. But both coexist. Coffee that cannot be profiled through the second layer built on the Q system could go through the first one built on the C.A.F.E Practices. The strength of the Q system to synchronize the “exceptional coffee” taste related service, the “transparent coffee” symbolic service and the attractive “monetary services” between profilers permits market prices to co-govern it. However, it contrasts with the weakness to fulfill its proposal for farmers. In Buesaco, only 13% of them fully fulfill this profile, especially the higher monetary services, even though they could have performed the practices as recommended.

So, we conclude that it is a **low coherent** LRA because it could not coordinate actors to produce all services demanded on the first layer, and on the second, it manages to coordinate just a few portions of actors to profile the resource as expected.

- LRA CAItura

The genesis of this LRA is the pastoral mission of the Society of Jesus, which through their *Fundación Social* (FS hereafter)<sup>699</sup>, decided to enhance social justice in the very impoverished northern region (the ancient Pasto-Popayan corridor). As their mission is to tackle down the structural causes of poverty<sup>700</sup>, they identified that the most attractive option to increase income in the region was to capture more value in coffee production, specifically through higher prices scaling through both upgrading within the value chain and moving towards an upper-end quality segment<sup>701</sup>. So, in order to produce the “poverty reduction” symbolic service, the FS led an alignment to profile both the “terroir expression” and the “exceptional coffee” taste related services; the “transparent coffee” symbolic service; and the “monetary services” (in terms of exceptional coffee)

How can you upgrade your competitive position when you own less than one hectare of land? The answer for the FS was through the consolidation of a coffee producers’ association that can

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<sup>697</sup> Flor Valenzuela, the quality advisor, said that Caravela developed meetings with groups of farmers and even individual engagement, to help them improve their practices. However, the cupping test in those four municipalities must be already too much work for two employees, it is hard to believe they can make also technical advice.

<sup>698</sup> Caravela analyzed 15.395 lots of coffee in Colombia in 2015 from 3.965 farmers, 84.5% of these lots were accepted, and 18 thousand text messages were sent (A. Cadena, 2016, p. 46).

<sup>699</sup> As it was said before, the *Fundación Social* was founded by Jesuits in 1911 to capitalize workers saving in order to increase their wellbeing in *La Caja de Ahorros del Círculo de Obreros* (today among the biggest financial groups in Colombia). Indeed, from the very beginning they participated in the economic live in banking, real state, insurances, etc., because they considered that it was a plausible strategy to increase common wellbeing. “*El enfoque estratégico (...) basado en las experiencias reales de esa forma de organización económica orientada a la solidaridad, el bien común y la preocupación por los más débiles*”. *Fundación Social*. Official webpage.

<sup>700</sup> “*Contribuir a superar las causas estructurales de la Pobreza para construir una sociedad justa, solidaria, productiva y en paz*”. *Fundación Social*. Official webpage.

<sup>701</sup> Interview with Guillermo Torres, regional director in Nariño of the *Fundación Social*.

produce, process, and sell their coffee<sup>702</sup>. Thus, the FS played a “hinge” role by helping farmers to organize themselves on the one hand, and to attract upper-end buyers interested in the coffee offered, on the other. They started this alignment in 2007 in which an association of 65 coffee farmers in Cartago and San Lorenzo (two Buesaco neighbor municipalities) was aligned with Caravela<sup>703</sup> (Davila, 2008, p. 18), from which it was escalated to the Departmental level (next chapter) but in the end, it was consolidated in Buesaco<sup>704</sup>. At the beginning in 2012, the FNC supported a producers’ organization of seventeen farmers (*Grupo Empresarial Buesaco SAS*), but as financial resources were insufficient to make any real change, they engaged directly as capitalist partners with the incumbent associates in 2015<sup>705</sup> creating a new company known as *Café con Altura Buesaco SAS* (Caltura hereafter)<sup>706</sup>. One year after, the FS bought the participation of the other partners in order to monopolize control<sup>707</sup>.

So, this LRA is constructed around the profiler trader Caltura. Similar to the previous LRA, Caltura avoided the FNC to build their direct supply network with farmers, thus they started their own baseline survey in Buesaco with a seven-person team at the beginning of 2015. From these surveys, farmers were invited to join and, once agreed, farmers start receiving technical assistance and cupping tests to score their coffee lots under the Q system. In 2016, they had already one thousand farmers in Buesaco participant in this LRA. On the other extreme of the value chain, they aligned one specialty exporter (plausibly the Colombian exporter Lohas Beans which had a network of ten specialty roasters<sup>708</sup>).

This LRA is built on the Q system profiling institution and in its local application the *Café con Altura’s* handbook for technical assistance in specialty coffee<sup>709</sup>. Indeed, for increasing farmers’ probability of a high score, Caltura developed in 2014 the uses of *infrastructures* and *know-how* that should be performed by farmers in Buesaco.

This local application of the Q system is a direct consequence of the particular governance mechanism in this LRA. Differently, from other LRAs govern by profilers through formal or informal mechanisms agreed between partners, this LRA is unilaterally governed by the stakeholder in production. The FS acquired the property rights on the purchase point to join the value chain in the very middle, creating a commercial relationship with both producers and

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<sup>702</sup> Interview with Guillermo Torres, regional director in Nariño of the *Fundación Social*.

<sup>703</sup> As it was said before, the first and main exporter of Colombian Specialty Coffee.

<sup>704</sup> In the Cup of Excellence in 2012, three of the ten finalists from the whole country came from Buesaco (including the winner), therefore the FS established in Buesaco because of the high potential for specialty coffee. Interview with Luz Dary Chicaiza, CEO Caltura.

<sup>705</sup> The FS capitalized it in 2015 with COP 2.5 thousand million (USD 1.35 million). Interview with Luz Dary Chicaiza, CEO Caltura.

<sup>706</sup> Interview with Luz Dary Chicaiza, Manager at *Café con Altura Buesaco SAS*.

<sup>707</sup> Interview with Luz Dary Chicaiza, Manager at *Café con Altura Buesaco SAS*.

<sup>708</sup> During the interview with Luz Dary Chicaiza, she did not want to mention it, but she clearly said it was neither Caravela nor Banexport. So, I searched for roasters selling coffee from Buesaco and trying to follow back their partners, I found one of them procured from the Colombian specialty exporter C.I. Kyoto Lohas Beans SAS (with almost 30 thousand coffee bags exported in 2015 is among the five biggest)

<sup>709</sup> *Café con Altura, “Cosecha y beneficio del café especial,”* 2014.

specialty coffee buyers. Interestingly, from this powerful position, the FS does not try to take advantage in terms of increasing their share of the generated value, but on behalf of coffee farmers. However, coffee farmers must behave accordingly. Indeed, the FS use this leading position to decide which the uses of constituents that must be followed are<sup>710</sup> and, how to incentivize them. It is easier to understand by analogy with the pastoral activity of the Catholic Church, in which a pastor intends to change their followers' behavior for their own wellbeing.

Regarding this, there were five strategies decided by the FS to incentivize the regulated uses<sup>711</sup>:

- The best base price for coffee: Caltura paid the highest price in Buesaco in 2015/2016, they offered COP 100 (USD 0.04) in addition to the FNC's price at the same factor<sup>712</sup>.
- A premium for quality depending on cupping score: After a farmer registered in their database sells a good factor coffee, cupping will be performed. If it scores higher than 83 it will be offered to potential clients. If it is sold as a specialty, 60% of the premium will be paid back to the farmer, and 40% will be for funding Caltura's own operations<sup>713</sup>.
- Agro-inputs: FS uses their economies of scale to negotiate lower prices for fertilizers, pesticides, herbicides, etc., aiming to resell them at the cost of purchase to participant farmers.
- Technical assistance: They had seven extension agents among whom they distributed a certain number of veredas (and the farmers within) to conduct the baseline survey; alongside they did some initial group training (with so low attendance that were discontinued). Once the database was consolidated, they divided it again in order that each one had more or less 150 farmers to work with, and from then, they work on a daily basis exclusively through individual assistance<sup>714</sup>.
- Organizational support: The goal of the FS is that coffee farmers could autonomously operate a profitable company.

Their value proposal was to sell specialty coffee, but they realized it was not so evident. Firstly, more than half of coffee farmers did not reach the factor demanded, only 458 had the minimum quality to produce the "clean cup" taste related service. After cupping these lots, they tried to sell them as specialty coffee but in the end, they were able to sell only 150 thousand kilos from the 870 thousand kilos bought as a good factor<sup>715</sup>. As debutant in the business, they focused all the energy in the specialty market. However, when they realized they cannot storage longer the coffee without losing money, they plausibly had to sell it through other LRAs at market prices.

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<sup>710</sup> The *Café con Altura's* handbook for technical assistance was a document produced entirely by an employee of the FS at request of the directives. Interview with Viviana Ramos, extension agent of *Café con Altura Buesaco SAS*.

<sup>711</sup> Interview with Guillermo Torres, regional director in Nariño of the *Fundación Social*.

<sup>712</sup> Interview with Luz Dary Chicaiza, Manager at *Café con Altura Buesaco SAS*.

<sup>713</sup> Interview with Elizabeth Montaña, extension agent of *Café con Altura Buesaco SAS*.

<sup>714</sup> Interview with Viviana Ramos, extension agent of *Café con Altura Buesaco SAS*.

<sup>715</sup> Caltura bought two-thirds of coffee from Buesaco and one-third from other municipalities. They accepted coffee from all farmers who wanted to sell to them, but premiums and benefits were only for participant farmers. Interview with Luz Dary Chicaiza, Manager at *Café con Altura Buesaco SAS*.

To conclude, this is a young LRA in process of development. Their governance mechanisms do not have the power to align profiling actors after the trading process (for more than 80% of the coffee), and still, there are not powerful enough to really coordinate half of the coffee farmers, which in addition does neither have voice nor vote in the decision-making process. If the majority of farmers do not improve their practices and do not obtain the minimum price because of low quality, and premiums are just for a small portion of privileges, there is no alignment to produce the “poverty reduction” symbolic service, the most important service in this LRA. That is why we consider it has **low coherence**.

- LRA CNilson

This LRA was developed as a consequence of Buesaco’s amazing participation in the 2012 version of the Cup of Excellence. The winner, Maria Etelvina Diaz obtained a cupping score of 90.85 and sold its coffee at USD 22.10 per pound. The fourth position, Franco Hector López had a score of 89.58 and sold at USD 8.8 per pound. Mother and the father in law of Nilson López, in 2012, the *fiel de báscula* (coffee buyer) at the purchase point of the *Cooperativa de Occidente* since they started their operation in Buesaco in the year 2000 and, three times since 2001, member of the municipal council, because of his charisma and popularity among buesaqueños. In other words, Nilson had familial ties with a 90-score coffee, he knew coffee farmers and, much more important, he had farmers trust. These features made him a perfect partner to join forces with: he had the access to the best coffee, in one of the municipalities with the best coffee; in one of the countries with the best coffee in the world.

Strategically enough, Inconexus a nascent exporter of specialty coffee with huge potential<sup>716</sup>, take advantage of the Cup of Excellence not to buy the coffee lots auctioned but to meet the producers (as much others should have done) and eventually, they meet Nilson and decided to buy at a higher price the eight thousand kilos of coffee produced by him (in his mother’s farm) and by his father in law<sup>717</sup>. After this initial negotiation, Nilson and Inconexus decided to create the LRA CNilson and invite other coffee producers to profile the resource in order to produce the “terroir expression and” “exceptional coffee” taste related services; the “transparent coffee” and “shared value” symbolic services; and the “monetary services” (in terms of exceptional coffee).

They aligned other coffee farmers to the extent that Inconexus’ exports increased. This LRA evolved from eight thousand kilos in 2012 procured from two farmers in Buesaco and 5.8 thousand coffee bags (each bag has 70 kilos Excelso coffee) exported by Inconexus in 2012, to 240 thousand kilos procured from 160 coffee farmers in Buesaco and 15 thousand coffee bags

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<sup>716</sup> They started in 2009 with a registered export of 600 coffee bags and in 2011, the exported 2.900 coffee bags, almost five times more (FNC, 2017b).

<sup>717</sup> Interview with Nilson López, owner of Café de Nilson.

exported by Inconexus in 2015<sup>718</sup>. It evolved progressively<sup>719</sup>. When Inconexus had more orders, they demanded more high-score potential coffee and Nilson, who knew farmers and their coffee, just invited them to join this LRA. On the other hand, Inconexus as exporter closely works with its imports ally in the USA, Royal Coffee Inc., which have a network of roasters who demand the profile offered by this LRA. Also, Inconexus as a roaster sells this coffee in his coffee shop in Bogotá known as *Café Cultor*.

All of them are aligned through the Q system profiling institutions. It operates differently than in the other LRAs. Firstly, there is not a purchase point. Instead, farmers call Nilson when they have a coffee lot ready to sell. Then, Nilson goes, takes a sample, evaluates the factor (he does not buy higher factor than 94), and makes an offer (in 2015 he offered COP 200 per kilo (USD 0.08) higher than the FNC's price). Afterward, Nilson sends the sample to Bogotá where Inconexus conducts the cupping, scores the coffee and make a final offer, which through Nilson is communicated to the farmer six days after the sample is taken. Finally, the farmer decides to sell or not. In 2015, from the 240 thousand kilos bought, 30% scored higher than 85 and was paid with a premium<sup>720</sup>.

The governance structure is built on the relation Nilson – Inconexus governed by a formal contract. Inconexus demands in advance the amount of coffee to be purchased during the whole year<sup>721</sup> and gives Nilson the financial resources to procure it, including a fixed amount for kilo procured (independently of the base price and the premium) as a payment for its procurement services. This contract would be risky to Inconexus if they were playing exclusively in the “85 plus market”. However, cleverly, Inconexus participates in different market segments: It sells regionals (coffee because of the region it was produced), single lots (coffee because of the size of the lot coming from a single farm), blends (in which the client fulfill a form provided in their webpage<sup>722</sup>), and the coffee beverage in their *Café Cultor* coffee shop in Bogotá<sup>723</sup>.

There is an additional governance mechanism: the trust nourished by encouraging communication among profilers. Indeed, the exporter (Inconexus) and the importer (Royal Coffee) invested COP 60 million (USD 21 thousand) in the logistics needed to bring roasters’

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<sup>718</sup> Data on coffee from Buesaco coming from the interview with Nilson López, data of exports coming from (FNC, 2017b)

<sup>719</sup> 60 thousand kilos of coffee purchased in 2013 and 120 thousand kilos of coffee in 2014. Exports of 70 kilos excelso coffee bags increased from seven thousand coffee bags in 2013 to nine thousand in 2014. Interview with Nilson López, owner of Café de Nilson.

<sup>720</sup> Interview with Nilson López, owner of Café de Nilson.

<sup>721</sup> During their first year in 2013, Inconexus demanded 60 thousand kilos of coffee, the year after they doubled the procurement to 120 thousand, and the following they doubled again to 240 thousand. Interview with Nilson López, owner of Café de Nilson.

<sup>722</sup> “Let us know what characteristics you would like to find in a coffee, from the fragrance to the aftertaste. We want to know everything! Then, we will analyze all the information you gave us and try to find a coffee that suits you perfectly”. Inconexus, official webpage.

<sup>723</sup> Of course, there is also the worst of the cases, in which they will sell it as a Nariño coffee, losing the COP 200 they had paid extra.

representatives<sup>724</sup> from the USA and East Asia (the two markets Royal is present) to auction the best 30 lots of coffee from Buesaco preselected by Inconexus quality team in August 2016, after the whole harvest 2015/2016 was collected. Alongside this commercial activity, this LRA created an opportunity to trigger trust through communication between farmers and roasters, organizing visits to the farms and meals with coffee farmers<sup>725</sup>. Communication that allows profilers to talk about prices received by farmers and prices paid by roasters, unmasking myths of abusing trading charges that contributes to enhancing the trust between roasters and the importer, and also between Nilson and participant farmers. Additionally, communication allows feedback to be provided in any direction: roasters can advise farmers in better practices<sup>726</sup> or farmers can advise Nilson in order to better perform his activity.

Trust and communication, accompanied by higher prices, is enough to encourage farmers and the other profilers to adapt their behavior in order to produce the demanded services. There is not any additional instrument like technical assistance, training or subsidized loans to make profilers change their uses of constituents.

Nonetheless, it is inaccurate to say that farmers were using their constituents to profile the “exceptional coffee” exclusively because of this LRA. It could be said, that participant farmers were not only influenced by all previous LRAs, but they were also among the early adopters of practices recommended by each of the new LRA arriving in the territory. It is highly probable that they were farmers benefited from technical assistance and subsidized loans provided by the LRA Standard/Nespresso, and/or infrastructures provided by the LRA CCEsp and/or the technical assistance provided by Cultura. Precisely it was because of their effort to improve their practices that Nilson, after knowing them for years as *fiel de báscula*, invited them to join this LRA.

To conclude. All profilers are fully coordinated to profile the Resource because 70% produce the “terroir expression” and 30% the “exceptional coffee” taste related services, all of them produce the “transparent coffee” symbolic services and in both cases, the “monetary services” increased for the whole set of profilers. There is a fourth service demanded by this LRA, the “share value” symbolic service, which is partially produced. Indeed, this LRA creates economic value for farmers but it does not create environmental value (previous chapter)<sup>727</sup>. So, even though there is not a complete fulfillment of the fourth service demanded, we considered that the governance

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<sup>724</sup> “Counter Culture Coffee, Anderson Coffee, Iconik Coffee, Bakporch Coffee Roasters, Volta Coffee, Mitsubishi Corp., Little Owl Coffe, Willoughby’s coffee & tea, La Cabra coffee, Mr. Espresso and Caffè Fantastico” (Inconexus, 2016, p. 2)

<sup>725</sup> “El objetivo de estas visitas era facilitar un espacio en donde los clientes y los caficultores se pudieran conocer y, compartir tiempo con ellos en sus hogares. Los caficultores se sintieron importantes y especiales, lo cual era también un objetivo: principalmente hacerles saber cuan importantes son para el negocio y empoderarlos para que sigan mejorando, teniendo en cuenta que la posibilidad de poder disfrutar de cafés tan increíbles alrededor del mundo, depende de ellos!” (Inconexus, 2016, p. 3)

<sup>726</sup> “Los clientes podían (...) no sólo hablarles (a los caficultores) sino también asesorarlos en las cosas en las que pueden mejorar con el fin de hacer su café mejor y su actividad más productiva.” (Inconexus, 2016, p. 4)

<sup>727</sup> Even though participant farmers in this LRA had better practices than their neighbors: e.g. 85% implemented integrated soil management when there is no other LRA in which more than 35% are implementing it.

mechanisms align profiling actors and allow a two-way coordination that could eventually trigger this service if it became a priority. So, we consider that this LRA has **high coherence**.

### 7.2.3. Closure

As mentioned in the conceptual component, closure refers to the market position of actors that allow them to profile the Resource in their advantage.

This section evaluates the presence (or absence) of closure in each LRA <sup>728</sup>, by analyzing throughout the coffee value chain the barriers of entry established by profiling actors. Namely: economies of scale; product differentiation; capital requirements; cost disadvantages independent of scale; access to distribution channels; government policy.

- LRA Discount

The barriers imposed to enhance the attractiveness of the LRA Standard, in practice eliminated all barriers of entry to the LRA Discount. If government policy tries to differentiate standard coffee, forcibly, discount coffee is left as undifferentiated as possible. In fact, when farmers are selling discount coffee, they do not ask for factor evaluation and rather prefer to sell it “to the eye” to avoid losing time. They know there is no significant price difference between a “near Excelso quality” but still discount coffee and a very low-quality coffee.

This LRA is so open that even farmers from other countries can sell through this LRA, as it happened during the Niña 2009-2012: due to 40% decrease in production, Colombian coffee prices rocketed, and 80% of the local consumption was supplied with coffee from Ecuador, Peru, and Brazil<sup>729</sup>.

To conclude, this LRA has a **low closure** because it has no barriers of entry to counter competition forces at the production shackle of the coffee value chain. On the contrary, these forces are well present increasing the competitive intensity and reducing the possibility to produce other services demanded by actors.

- LRA Standard<sup>730</sup>

Since the call to do politics by the President of the FNC in 1930 to its federates<sup>731</sup>, *la política del café*, has he said, started to be implemented in order to create a complex system of instruments

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<sup>728</sup> For the cases of the LRA Standard, LRA Nespresso, and the LRA Starbucks, information is the same that the one presented for the LRAs (with the same names) when analyzing closure in Riosucio.

<sup>729</sup> Garrido, Miguel. “¿Por qué Colombia está importando café? Autoridades responden”. In *El País*. 24th of March 2013.

<sup>730</sup> It is exactly the same when evaluating the LRA Standard in Riosucio.

<sup>731</sup> “Porque para que haya política del café, necesario es que el café haga política” (FNC, 1930, p. 6).

to enhance product differentiation, namely Café de Colombia as the best washed mild coffee in the world.

Explained in detail in chapter 4, this coffee policy has used a combination of incentives, regulations and marketing campaigns to encourage both the first profiling actors (producers and traders) to use their *infrastructures* and *know-how* in order to reproduce consistently the taste related services, and the last ones (consumers) to influence their *know-to-appreciate* so they could trigger the symbolic services. In order to create a reputation that increases the monetary services received by coffee farmers.

The FNC protected this reputation by obtaining the property rights over the Denomination of Origin “*Café de Colombia*”<sup>732</sup> through the activation of the “geographical indications” legal framework<sup>733</sup> in the Andean Countries in 2005<sup>734</sup> and, the European Union in 2007<sup>735</sup>. Also, they obtained the property rights over several brands and icons (including Juan Valdez®, Juan Valdez® coffee stores, and Buendía® soluble packed coffee among others) through the activation of the “trademarks” legislation<sup>736</sup> in the markets they are present.

Afterward, the Intellectual Property team of the FNC manages this wide portfolio of brands and Geographical Indications (not only “*Café de Colombia*” but also other regionals ones like “*Café de Nariño*”). It coordinates teams in different divisions within the FNC related with the reputation to develop concerted actions (from Cenicafé to the legal team). Also, it operates brands agents in different countries to develop marketing campaigns and, it monitors and controls the appropriate use of their brand portfolio<sup>737</sup>.

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<sup>732</sup> *Resolución No. 4819 de marzo de 2005 de la Superintendencia de Industria y Comercio de Colombia.*

<sup>733</sup> “Indications which identify a good as originating in the territory of a Member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographical origin”. Section three on “geographical indications” of “The agreement on Trade-Related aspects of Intellectual Property Rights is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994”.

<sup>734</sup> *Título XII de la Decisión 486 de la Comunidad Andina* that regulates the procedure for obtaining the *registro administrativo* as a prerequisite to constitute ownership of the geographical indication before the *Superintendencia de Industria y Comercio de Colombia – SIC* as the administrative authority.

<sup>735</sup> The FNC demanded legal protection in Europe by activating the Council Regulation (EEC) No. 2081/92 of 14 July 1992 “on the protection of geographical indications and designations of origin for agricultural products and foodstuffs”, which was obtained when the Protected Geographical Indication (PGI) for “*Café de Colombia*” was granted through the Commission regulation (EC) No 1050/2007 of 12 September 2007

<sup>736</sup> “Any sign, or any combination of signs, capable of distinguishing the goods or services of one undertaking from those of other undertakings, shall be capable of constituting a trademark”. Section two on “trademarks” of “The agreement on Trade-Related aspects of Intellectual Property Rights is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994”.

<sup>737</sup> “As an example of the success of the FNC’s efforts in protecting the origin of Colombian coffees, the European Union’s Office for Harmonization in the Internal Market (OHIM) recently banned the abuse of the reputation of Colombian coffee in restaurants and coffee shops that sought to improperly use the name COLOMBUENO” (Comunicaffee, 2015).

Hence, the FNC produces the barrier “product differentiation” for 12.7 million of Colombian coffee bags exported in 2015, from roughly 130 million coffee bags produced in other countries. A profile characterized by the symbolic service “reputation of the appellation café de Colombia”, that has to produce higher monetary services for coffee producers. Indeed, prices for Colombia coffee have been almost one third more than the average composite indicator price since 1990 (annex 6).

Nevertheless, within the Colombian border, there is no product differentiation. All coffee that fulfills the Excelso quality produced in roughly one million hectares in the 86 ecotopes identified in Colombia is equally paid by this LRA. It does not matter if coffee comes from a ten thousand resistant trees/ha, sun grown, low altitude, full fertilized production system, or three thousand exotic trees/ha, canopy, high altitude, organic production system. Both are paid exactly equal, so in the end, whereas the Excelso quality is reached, it will encourage uses to increase monetary services in terms of productivity at the expense of other services provision.

To conclude, we consider that this LRA has a **low closure** because of the lack of barriers within national frontiers.

- LRA Nespresso<sup>738</sup>

This LRA lead by the Swiss Roaster Nespresso is built over two main barriers of entry “product differentiation” and “access to distribution channels” which in part are a result of a clever strategy to use timely two other barriers “cost disadvantages independent of scale” and “capital requirements”: Firstly, Nespresso activated section five on “patents” of the TRIPS Agreement to interdict other to replicate their capsule machines (cost disadvantages independent of scale). Secondly, they use this period to activating section two on “trademarks” of the TRIPS agreement, to invest heavily on a marketing campaign (capital requirement) that created loyalty and produced the former two barriers.

In the eighties, Eric Favre, an engineer from Nestlé’s packaging department, identified an opportunity by creating a machine that “could brew a good espresso from the comfort of home”<sup>739</sup>. As a result, Nestlé created the single-dose coffee market inventing and patenting the coffee capsule system in 1986<sup>740</sup> that gave a functional benefit for consumers: a good homemade espresso. Even though third companies assembled machines, contracts and legal protection allowed Nestlé to effectively impede access to other competitors. But, as patents were going to expire 25 years later, Nespresso used this time to position their brand “*we wanted to shift our consumers’ attitude from ‘I’m buying Nespresso because it delivers functional benefits’ to ‘I’m buying this specific brand simply because I love it’*”<sup>741</sup>.

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<sup>738</sup> It is exactly the same when evaluating the LRA Nespresso in Riosucio.

<sup>739</sup> Simon, Ben. “The Nespresso story you never knew”. In *Business Report* 27<sup>th</sup> august 2016. (Simon, 2016)

<sup>740</sup> “Initial patent on capsule: patent number CH605293, source: Espacenet. Patent number US4,136,202, source: USPTO” (Conley, Bican, & Ernst, 2013, p. 6)

<sup>741</sup> Gerhard Berssenbrügge, Former CEO of Nespresso, quoted by Conley et al. (2013, p. 3)

So, they switch from patents to trademark protection<sup>742</sup> “A plethora of rival capsules will come out ... (but) ... the Nespresso brand is more important than the patents”<sup>743</sup>. Being part of Nestlé<sup>744</sup>, Nespresso had access to the capital needed to fund both an aggressive marketing campaign to position the brand Nespresso, and the consolidation of an extensive retail service: from placing an order (using the webpage, the call center or the boutiques) to the hand delivery of 10 million members of the Nespresso Club. This strategy had allowed Nespresso to capture one-fourth of the single-dose coffee market, selling USD 4 billion in 2014 (Nespresso. et al., 2017).

Also, being part of the main green coffee buyer in the market<sup>745</sup> gave Nespresso access to the benefits of Nestlé’s economies of scales, particularly the access to its supplier’s network, not only for obtaining better prices but also a higher commitment from powerful local actors. As said, through the cluster system they are working with the most powerful traders: Volcafé, Neumann Group, Expocafé and the FNC in Colombia<sup>746</sup>, so they can encourage change in farmers’ behavior to profile their demanded services.

On the other hand, this cluster system is clever enough to motivate competition between traders in order to reduce its dependency to both them and their supply zones. So, Nespresso has full control to decide whether to increase or reduce orders to a particular cluster, which in turn, has to increase or reduce its supply area by including new farmers or excluding old ones (as an example, at the beginning of 2016, the cluster of Expocafé had to reduce its zones in six municipalities because Nespresso reduced its orders<sup>747</sup>).

There are barriers of entry between participant farmers and non- participant ones, but it is not a barrier that they can control: the cluster decides, depending on Nespresso orders, to modify it. Even something unique to the coffee farms as the regional origin that could produce barriers of entry farmers could control, is very well controlled by Nespresso. The example is Nespresso’s limited edition: coffee is sold with the region’s name during a period long enough to make a profit but short enough to avoid regional loyalty. So, Nespresso invests in the reputation of that origin for a short period of time to increase symbolic services and through them, monetary services.

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<sup>742</sup> “The following Nespresso trademarks are registered in the USA: TM Serial Number: 73620470, 74696199, 73742734, 78431975 (Nespresso Essenza), 77842854, 76204673 (Nespresso Professional), 85307536, source: USPTO”. (Conley et al., 2013, p. 6)

<sup>743</sup> Eric Favre, inventor del sistema Nespresso, citado por (Conley et al., 2013, p. 6)

<sup>744</sup> With total sales of USD 92 billones in 2016. Forbes, 2017, <https://www.forbes.com/companies/nestle/> Última visita 05-02-2017

<sup>745</sup> Panhuysen and Pierrot (2014, p. 20) calculated Nestlé purchases in 860 thousand metric tons in 2012/2013, a slightly more than 10% of the world coffee harvest equivalent to 12.3 million coffee bags of 70 kilos.

<sup>746</sup> In the world, in 2012 Nespresso had already 25 clusters in 8 different countries, working with almost 53 thousand coffee farmers (Nespresso, 2014, p. 5)

<sup>747</sup> A local newspaper presented the perspective from coffee farmers, who did everything they were told to do, and in the end, they were just left behind. “José Eliécer Sierra, caficultor del Suroeste, cuestionó el anuncio y dijo que esa decisión unilateral demuestra que las multinacionales entran y salen del mercado cuando quieren. “Hicimos grandes esfuerzos para mejorar la infraestructura y cumplir los requerimientos y, ahora, nos salen con esto”, agregó.” El Colombiano, “Nestlé frena compras de café a 3 pueblos antioqueños”, 5th January 2016.

Eventually, they get “out of stock” and replace it with another origin and another marketing campaign. For example, they used a narrative of hidden terroirs discovered by Nespresso specialists<sup>748</sup> to offer during fall 2017 the *Colombia Aguadas* as part of the *Explorations collection* (Aguadas is a municipality of the Department of Caldas, in Colombia) alongside “Ethiopia Yirgacheffe”. They were replaced for the winter season with another regionals with other narratives, one of them the Grand Cru Limited Edition *Aurora de la Paz*, from Caquetá (a region that used to be controlled by the revolutionary armed forces of Colombia-FARC for decades) to associate Nespresso brand with the peace consolidation process<sup>749</sup> after an agreement was signed between this rebel group and the Colombian Government. On February 2018, this coffee was sold out and a new narrative was put in place around the birthplace of the two main commercial species of coffee, offering one Arabica coffee from Ethiopia and one Robusta coffee from Uganda<sup>750</sup>.

In the end, 53 thousand participant farmers are in “pure competition” among them, and with potential substitutes, i.e. neighbors that could produce similar taste related services but are not integrated, still. So, even though their membership reduces the competition, it cannot be said it is controlled by farmers. Barriers are developed at the roaster level, so this LRA has **low closure**.

- LRA CCEsp/Starbucks<sup>751</sup>

This LRA lead by the American Roaster Starbucks firstly used the “product differentiation” barrier of entry to overtake competition, and being attractive enough to raise funds to create the second barrier of entry “capital requirements” in order to build the third one “access to distribution channels”.

According to Marshall (2007) in the postwar period, consumers in the USA continued drinking ration coffee that came out of a can. Alfred Peet, a Dutchman that had worked in a coffee company in London, imported the European food culture paying attention to flavors and aromas. Peet opened a retail shop in 1966 and trained his buyers in the essentials of coffee quality, among them, owners of Starbucks<sup>752</sup>, a coffee shop funded in 1971. As a result, Starbucks mastered selection, blending and roasting of high-quality beans that were bought by Peet directly from growers to be sold to fine restaurants and espresso bars, creating a “product differentiation” that

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<sup>748</sup> “The *Explorations* collection is comprised of rare coffees from incredible terroirs that are all considered ‘hidden gems’ by the Nespresso coffee experts due to their remarkable taste notes” (Nespresso, 2017).

<sup>749</sup> “Following the peace agreement in Colombia, Nespresso will launch a coffee from Caquetá, a region heavily affected by the conflict, as a first step in its commitment to working in areas where 50 years of internal conflict has taken place. The company’s ambition is to encourage the reintegration into society of those who were impacted by the conflict and facilitate the return of those farmers who were displaced in order to support their transition into a sustainable means of income and improved livelihoods” (Nespresso, 2018a).

<sup>750</sup> On february 2018, coffee aurora de paz was sold out and a new narrative was put in place around the “birthplace of coffee”, offering one Arabica coffee from Ethiopia and one Robusta coffee from Uganda (Nespresso, 2018b).

<sup>751</sup> For the component Starbucks, it is exactly the same when evaluating the LRA Regional/Starbucks in Riosucio.

<sup>752</sup> One of Starbucks’ founders, quoted by Marshall (2007), said “he (Alfred Peet) generously shared with us how to cup, to roast and to blend, and instilled his uncompromising standards”.

Starbucks protected through the trademarks legal framework<sup>753</sup>. But it was only when a former manager bought Starbucks in 1987, that they integrated also the brewing process to provide a high-quality coffee brew for the final consumer. This strategy triggered their expansion from 6 stores in 1986 and to 116 three years after. This proposal was attractive enough to raise USD 25 million in an initial public offering on the stock market in June 1992.

Capital that gave them the financial muscle to multiply its presence in the American market, and to expand worldwide from 1996 onwards producing the third barrier of “access to distribution channels” and investing in the second one of “product differentiation”. Indeed, they used the capital to both acquire established coffee chains and sustain price wars with locals. One example is its entry in the UK market in 1998 by paying USD 83 for the Seattle Coffee Company “*its 49 outlets were soon swallowed up by Starbucks (...) As the competition struggled to compete, Starbucks kept running its expensive sites at a loss, prompting accusations that they were using their muscle to unfairly squeeze out the opposition*” (BBC, 2004). Two decades afterward they are present in 72 countries with 27.872 stores (Geomatics, 2018). On parallel, they developed a powerful marketing campaign investing more than USD 300 million annually on average since 2011 (Statista, 2018), to position a 14.9 billion brand, the 35<sup>th</sup> most valuable brand in the world (Forbes, 2018).

Additionally, 180 thousand metric tons purchased by Starbucks in 2012/2013, equivalent to 2.6 million coffee bags of 70 kilos (Panhuysen & Pierrot, 2014, p. 20) provided the economies of scale to negotiate prices and conditions, like the implementation of their C.A.F.E. Practices code of conduct, explained before. In Colombia, they bought approximately 700 thousand coffee bags in 2015<sup>754</sup> for 60 thousand coffee farmers in twelve departments with a portfolio of suppliers to avoid mutual dependency<sup>755</sup>. As Starbucks is looking for three different flavor baskets in Colombia, including the “clean cup” produced by the Colombian Excelso, the only practical barrier for including farmers is being working with a trader that has an information system to guarantee the documentary traceability and the account records demanded by the C.A.F.E. Practices program (see the previous *coherence* section).

So, in the end, both farmers and traders are easily interchangeable by Starbucks producing an LRA with **low closure**.

- LRA CAItura

This LRA lead by the Fundación Social tries to use “capital requirements”, to consolidate both the “product differentiation” and the “access to distribution channels”. But none of these barriers have been erected so far.

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<sup>753</sup> The brand Starbucks Coffee – Tea – Spices was firstly registered on august 8, 1978 before the United States Patent and Trademark Office (TESS, 2018).

<sup>754</sup> Interview with a FNC’s official from the commercial department.

<sup>755</sup> “*Compras en un abanico de proveedores (...) no se busca que alguien se sobreextienda*” Interview with Alfredo Nuño, general manager of Colombia’s Starbucks Farmer Support Center in Manizales.

FS focused on Buesaco farmers because of their remarkable participation in the Cup of Excellence contest. As the owners of one of the biggest financial groups in Colombia, FS used COP 2.5 thousand million (USD 1.35 million) to pay slightly more for coffee purchased in Buesaco, in addition to the technical advice they were offering to coffee farmers (as explained in the previous section). There was plausible to imagine a scenario in which if not all, the majority of Buesaco producers had preferred to sell to them. In this situation, Caltura (FS's trading company) would have been able to protect their reputation activating the geographical indications legal framework. Once the ownership was settled, they could have invested in the "product differentiation" and its distribution channel, including a network of importers and roasters of green coffee, and another one of retailers of packaged roasted coffee.

But it did not happen. Even though Caltura did pay more than the market price for all coffee bought in Buesaco, and invested in a technical team to work alongside farmers, they only acquired one-fifth of the Buesaco harvest in 2015-2016. An important amount, but it was not enough to legitimately capitalize the reputation to create the "product differentiation" barrier of entry because it was shared with the other LRAs in the municipality. It made it difficult to Calura investing in "product differentiation". The other traders, with the exception of Café de Nilson, had no incentives to empower farmers with a reputation that eventually, would imply a more expensive supply activity in Buesaco.

A possible failure to reach that critical mass was that Caltura invested more backward in the value chain than forwards, helping farmers to improve the value of their coffee while forgetting those who would pay for it. Other traders in Buesaco, on the contrary, strengthened upwards relations with importers and buyers of high-scored coffee, thus they could attract farmers through higher prices. Caltura fought back claiming loyalty and promising better prices instead of looking for clients<sup>756</sup>, an ill-advised strategy which, in addition to mismanagement<sup>757</sup>, profoundly affected trust<sup>758</sup>. In the end, as not all the one thousand participant farmers were selling coffee through this LRA, Caltura bought coffee from non-participant ones, even from other neighboring municipalities.

To conclude, even though this LRA could have had the barriers at the municipal level to profile the Resource prioritizing local demands for services, there are absent today. There are no barriers at the producers' level because both participants and non-participants farmers can sell through

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<sup>756</sup> A real example was given to me by Elizabeth Montaña, an extension agent of Café con Altura. A farmer produced 4 thousand kilos of a wonderful coffee. Café con Altura convinced him to sell the coffee to them by COP 7.100 per kilo because they were going to find a client that will pay much more, even though there was another trader that had a client and was willing to pay 7.500 per kilo. A few months later, the farmer received tree fertilizer bags as a "premium", equivalent to COP 200 thousand instead of COP 1.6 million if he had sold to the other trader.

<sup>757</sup> Luis Fernando Benavides, the former manager of Caltura, had a traditional short-term trading vision in which farmers were providers from whom added value should be squeezed. Farmers were not seeing as beneficiaries, thus it did not exist the long-term strategy to build a reputation for the benefit of farmers. Interview with Luz Dary Chicaiza, Manager at *Café con Altura Buesaco SAS*.

<sup>758</sup> In interviews with coffee farmers, Caltura was seen just like another trader who was pursuing their own interests at the expense of farmers' ones.

it. There are not at the trader level because with seven purchase points the competence for suppliers is intense. And there are not at the other segments because Caltura had not the product differentiation needed to control the upward value chain. Therefore, this LRA has a **low closure**.

- LRA CNilson

This LRA led by the Colombian exporter Inconexus is built over “cost disadvantages independent of scale”, which creates a certain “product differentiation” that allows the consolidation of “access to distribution channels”.

Indeed, in 2012 Inconexus allied with Nilsón López, the charismatic coffee buyer of the *Cooperativa de Occidente*, to have privileged access to those farmers that could consistently produce a high score coffee. Even though Inconexus had not the amount of capital that FS had, they used theirs strategically to allow Nilson paid twice the Caltura premiums to the few farmers Nilson believed could reach high scores. Farmers were attracted avoiding false promises because they had a baseline offer that paid a slightly more than market prices for the whole lot, and six days afterward they received a final offer depending on their coffee score. Farmers have an offer, not a promise when selling their coffee. In addition to the trust produced by this LRA among profilers, farmers’ loyalty was triggered guaranteeing favorable access to the best coffee in Buesaco. Hence, this LRA to impose the “cost disadvantages independent of scale” barrier of entry: It would be difficult for new entrants to attract this set of loyal high-score coffee farmers.

In parallel, the handpicked 160 coffee farmers enjoyed a privileged position because by maintaining their well-known practices (at least for Nilson), they did not face any competition by neighbors, neither in Buesaco nor in nearby municipalities. In fact, since the LRA started to spread in 2012, each year the amount of capital has increased allowing more coffee and more farmers to join the LRA without diminishing the competitive position of the incumbent participants.

The small scale of this LRA allowed personalized feedback that resulted in widespread consistent uses of constituents to profile the “terroir expression” taste related service, and for 30% of it, the “exceptional coffee” taste related service. Accompanied by the physical traceability that produced the “transparency coffee” symbolic service, they created a “product differentiation” that cannot be qualified as a proper barrier of entry. Neither Inconexus nor Nilson have ownership on Buesaco’s reputation captured by a geographical indication nor a private brand. So, there are other exporters of high-score coffee from Buesaco.

However, this profile was different enough for Royal, the American importer of high-score coffee, which decided to partner with Inconexus to sell coffee in the Asian and American market (where Royal was present). This alliance provided access to the distribution channels to roasters in the two markets, creating a barrier of entry for other traders in Buesaco. Indeed, as explained in the previous section, this LRA managed to bring into Buesaco a dozen of American and Asian roasters to make them compete for the best lots, encouraging their willingness to pay, and the higher monetary services for both farmers and traders.

Furthermore, Inconexus is vertically integrated through its retail service in both physical and virtual platforms: First, the *Café Cultor* boutique, with four stores in Bogotá, offers roasted packaged coffee, and brewed coffee, for the final consumer. They use their own brand “Inga Mystique” alongside the name of the coffee farmer and the farm, its altitude, the variety and some relevant practices like fermentation. Second, the Inconexus web page offers mainly green coffee for roasters and exporters depending on different profiles they supply in seven Colombian Departments<sup>759</sup>.

To conclude, there is a barrier of entry for non-participant farmers, which depends on Nilson’s personal criteria. Criteria over which is built the main barrier of entry of this LRA, the “cost disadvantages independent of scale” that allows Inconexus to have privileged access to farmers. In turn, this access was an important asset to bring about the partnership with Royal that gave Inconexus the second main barrier of entry “access to distribution channels”. These barriers counter competition at allowing the profiling of the symbolic and taste related services sought by this LRA, thus, it has **high closure**.

### 7.3. Intermediary synthesis: Inputs to test our first hypothesis

After analyzing each one of the LRAs in the light of the three conditions proposed in an independent manner, we can take a step forward to assemble together the combined variation of these dimensions by each LRA. Thus, we cluster them in three configurations.

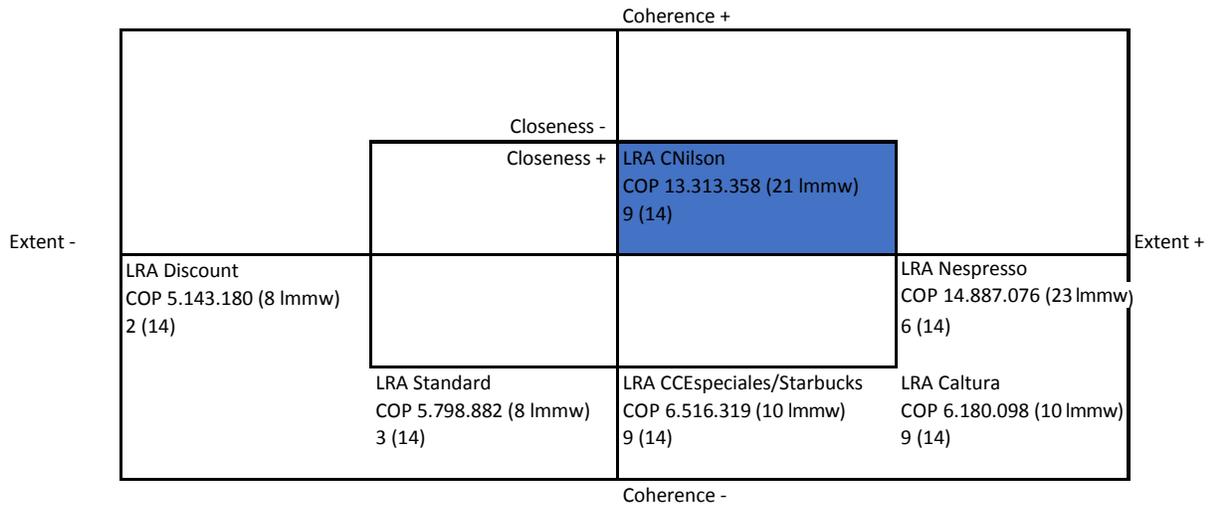
- 1- “Invisible hand”: In both the LRA Discount and the LRA Standard, uses of resource constituents are poorly regulated and coordination to enhance the provision of demanded services by all profiling actors is mainly absent, the strong competition incentivized profilers to prioritize the maximization of monetary services, boosting production while reducing costs.
- 2- “Ambitious”: In the case of the LRAs CCEsp/Starbucks, Caltura and Nespresso, uses of constituents are regulated but are not coordinated enough to profile the Resource as it is demanded by all profilers, because either there is one powerful enough to impose its demands over others, or competition is intense and orientates the profile towards the markets’ preferred one.
- 3- “Integral”: The LRA CNilson regulates uses of resource constituents in a coherent way, in order to profile the Resource as it was desired by participant actors.

Furthermore, we merged this LRA categorization with results from chapter 7.1 in figure 11.

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<sup>759</sup> As detailed in the precedent section, they sell five products: Sustainable and certified coffees (not in the case of Buesaco); coffee scored more than 85 points; Single lots coffee; Regional coffee; and personalized coffee.

Figure 11 Services provision by LRA according to the combined variation of the three conditions. Source: the author



Both LRAs Discount and Standard, clustered in the “invisible hand” configuration, have a profile featured by both the lowest provision of monetary services and the lowest number of symbolic and taste related services provided. On the other way around, the “integral” LRA CNilson optimized services provision <sup>760</sup> by providing the second highest monetary services and the highest number of symbolic and taste related services. In the middle, we have three “ambitious” configurations. Both LRAs CCEsp/Starbucks and Caltura with almost identical service provision, and the LRA Nespresso with higher monetary services but lower symbolic and taste related ones.

In Veracruz/Buesaco with few exceptions, all farmers can participate in all LRAs with the exception of the LRA CNilson. Farmers have been similarly exposed to the different outputs produced by the different LRAs. That is why farmers use constituents in the firsts two processes (planting and cultivating) almost equally. Differences came during the fourth process because of possession of post-harvesting equipment (hulling machines, fermentation tanks, drying facilities). However, LRAs get differentiate after the trading process.

The purchase transaction reflects the tradeoff to enhancing monetary services through either “productivity” or “exceptional coffee”. In the first case, all farmers participant in the LRA Nespresso receives a higher “premium when buying” sacrificing a potentially “premium after buying”. In the second cases, farmers are willing to accept a lower “premium when buying” because, among other reasons, they bet they would obtain a higher “premium after selling”. In the end, while the 100% of farmers in the LRA Nespresso obtained a COP 400 premium over the base price, only 14% of farmers in Caltura, 17% in CCesp/Starbucks and 30% in CNilson obtained a higher “premium after buying”. On the other hand, the three later LRAs developed two practices during the trading process (cupping of individual lots and physical traceability) that allowed them to profile 33% more symbolic and taste related services than the LRA Nespresso in which are inexistent.

<sup>760</sup> Compared with the LRA Nespresso, it produced 11% less monetary services but 33% more monetary and taste related services.

## Chapter 8. Actors' games

The variation of the *extent*, *coherence* and *closure* in each of the six LRAs that were identified in Veracruz/Buesaco, was a result of the activation of different institutions steaming from both the coffee public policy (described in chapter 4) and the regulatory system (described in Annex 2.1) in a complex process that could be traced to the Spanish arrival (described in Annex 2.3). In this chapter, we would explain the strategies to activate institutions followed by the actors in Buesaco, from the breakdown of the coffee quota agreement in 1989 to 2015/2016.

Having say the above, we divide this chapter in four consecutive actor's games (1989-1996; 1997-2003; 2004-2011; 2012-2015) composed of three actions (actors' coalition; mobilization of *resources of action* and institutional creativity) that explain the change of the LRA's conditions both within the incumbent LRAs and the newborn LRAs.

### 8.1. Incumbent LRA Standard, newborn LRA EdN (1989-2000)

#### 8.1.1. Actors' coalitions: low monetary services for producers and low taste related services for traders

The International Coffee Agreement and its local application by the FNC, shaped the Resource at the national level through the LRA Standard/LRA Discount<sup>761</sup> producing one combination of services for the whole Resource in Colombia that was perceived (in)sufficient by different actors: Sufficient for a coalition of entrepreneur farmers (which were mainly absent in Nariño), the FNC and, the Government who wanted to maximize monetary services. On the other hand, it was insufficient for farmers in Nariño whose ecotope was not suited enough for high production per hectare and for some coffee buyers who wanted the "terroir expression" taste related services from Nariño.

In regards to the first claim, the LRA Standard was governed by coffee representatives of the main producer's regions<sup>762</sup>, producing a bias in favor of those departments at the expense of others less productive like Nariño. The bias that could have influenced Cenicafé's research on agronomic practices: the main experiments were conducted under the environmental conditions of the main production zones like Caldas and Antioquia (even though Cenicafé had research farms in various departments). It could explain why the technology transfer did not have the same effect in production per hectare in Nariño as it had in other regions<sup>763</sup>.

In fact, it is considered that coffee grows properly in organic soils with soft slopes that allow the evacuation of water excess; short luminous days equivalent to 1500 hours of solar irradiation per

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<sup>761</sup> As the LRA Discount is the other face of the LRA Standard for coffee that did not fulfill the minimum requirements, from hereafter when we talk about the LRA Standard, implicitly we are talking about the LRA Discount.

<sup>762</sup> The number of delegates by Department to the *Congreso Cafetero* depended on coffee produced the previous year according to the article 3 of the *Estatutos de la Federación Nacional de Cafeteros del 14 de diciembre de 1930*.

<sup>763</sup> "Yo hago todo lo contrario a lo que diga la FNC". Interview with Javier Gómez, one of the more ancient coffee farmers in Veracruz, precisely because he felt that the recommended practices did not agree with his farm.

year; temperatures between 18 and 22 degrees Celsius; and 1500 to 3000 mm of rainfall per year in a bimodal climate (Herrón Ortíz, 2013, p. 6). Nariño, due to its localization close to the equatorial line, has 1620 hours of solar irradiation and due to its monomodal climate has 1612 mm of rainfall per year (Oberthür et al., 2011, p. 787), at the extreme top in the first case and the bottom in the second. Buesaco is less fit with 2010 hours of solar irradiation and 1140 mm of rainfall per year (AlcaldíaBuesaco, 2018). Conditions were acceptable for cropping coffee but were not ideal to trigger productivity<sup>764</sup>. In this line of arguments, it can be understood the claim of some coffee farmers in Nariño that monetary services were insufficient<sup>765</sup>.

In regards to the second, the LRA Standard blended coffee from all coffee zones to produce a consistent Colombian aromatic profile. Indeed, the FNC used money from the FoNC to buy the coffee through Almacafé (FNC's logistic operator) to be threshed in their facilities (one of them in Pasto) through a supply network widespread in the country composed of cooperatives and private agents. Once coffee was milled, the FNC had the data needed to decide which lots from which regions should be blended in order to maximize the amount of Excelso. In the end, the "clean cup" taste related service was consistently reproduced, but the particular aromatic profiles from some terroirs vanished. It affected some actors who demanded the "terroir expression" taste related services from Nariño.

Since the sixties in the United States according to Roseberry (1996), there was a growing tendency to move from the standardized coffee as a "proletarian hunger killer"<sup>766</sup> based on price towards a coffee based on taste related services<sup>767</sup>. It accelerated in 1975 a cause of the Brazilian frost that rocketed tasteless coffee prices and attracted consumers into the high-quality market because the latter, which once was regarded three times more expensive, was just a slight bit more than the former. This upper-end segment was attractive enough to motivate new entrants like gourmet shops, restaurants, espresso bars, and coffee shops. They supplied their roasted coffee from specialty roasters, which mastered buying of green coffee, blending and roasting techniques. To satisfy this increasing gourmet industry, which saw sales multiplied from less than USD 30 million in 1980 to USD 500 million in 1986 (Roseberry, 1996, p. 766), roasters had to establish a regular supply of high-quality green coffee, that cannot be guaranteed by the major importers. These roasters gather together in the Specialty Coffee Association of America (SCAA onwards) in august 1982, in which 40 members decided to work together to discuss common issues for their industry, set quality standards for the specialty coffee trade, and promote the specialty coffee (SCAA, 2009).

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<sup>764</sup> This could explain why Cenicafe did not conduct more experiments to produce recommendations in these areas. In fact, the recommendation should have been to prioritize other crops that could trigger in the local environmental offer.

<sup>765</sup> Interview with Jairo Rebolledo, a former: extension agent, technical manager, executive director and President of the *Comité Departamental de Cafeteros de Nariño* during the eighties and nineties, and advisor of the Governor of Nariño 2008-2012.

<sup>766</sup> Term coined by Sidney Mintz quoted in Roseberry (1996, p. 770)

<sup>767</sup> "Coffee is a wonderful product. I believe, however, that we have got to stop selling the product on price. We must sell coffee on quality, value and image". Said Kenneth Roman, an strategist, in an interview with the editors of an influential coffee magazine, quoted by Roseberry (1996, p. 765)

Among them was Starbucks, one of many small roasters that joined the movement in the seventies, purchasing green coffee to sell it roasted to restaurants and espresso bars. In the second half of the eighties, they decided to integrate the brewing process expanding exponentially their presence through coffee shops to the final customer in the USA. It implied firstly the exploration of high-quality coffee, and secondly, and more important, the assurance of its permanently and consistently supply<sup>768</sup>. They discovered what they called “the best coffee from Colombia” in Nariño<sup>769</sup> in this period and established a coffee purchase agreement with a private company called *Empresas de Nariño –EdN* (Levine, 2005), and instantaneously, they became an actor who demanded the “terroir expression” taste related service<sup>770</sup> from the Resource coffee in Nariño: they decided to take a very rare decision: to buy all the harvest in that year and the following four<sup>771</sup>.

Once the negotiation for a new quota agreement, the main chapter of the International Coffee Agreement broke down in July 1989, an institutional earthquake disintegrated the pillars over which the FNC had built its apparatus to fulfill the ICA commitments. Although the FNC retained its legal competences in the Colombian legal framework, its purpose (for guarantee an acceptable purchase price for coffee growers) was seriously threatened by free access for all other market players. Indeed, as expected, International prices plunged after the ICA breakdown from USD 1.4 per pound in May 1989 to a record low of USD 0.37 in August 1992.

The fall of international prices disincentivized farmers investing in their crop and it was plausible to assume that the taste related service sought by Starbucks in Nariño could have been at risk. So, Starbucks participated in the *LVIII Asamblea de la Asociación de Exportadores de Café de Colombia* (Asoexport onwards) in 1995 in which they detailed their successful operational strategies<sup>772</sup> emphasizing on their tailor-made roasting process that was dependent on the quality of the green coffee. Subsequently, they detailed how uses of resource constituents must be done to trigger that high quality they are looking for, prioritizing post harvesting and trading

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<sup>768</sup> “Una última preocupación que, quizás a la que yo le dedico más tiempo, es tratar de garantizar que haya un suministro permanente de cafés de óptima calidad”. Said Dave Olsen, Vicepresident of Starbucks. (Olsen, 1995, p. 89)

<sup>769</sup> “Starbucks (...) descubrió en Colombia el que consideramos el rey de los arábigos colombianos, el Nariño Supremo, que crece en las laderas del volcán Galeras a más de 2000 m.s.n.m; cuándo lo probamos se convirtió en una revelación” (Olsen, 1995, p. 84).

<sup>770</sup> “ese café, espeso, ácido, aromático, denso y oscuro” (Olsen, 1995, p. 84).

<sup>771</sup> “Tal fue el amor al primer sorbo de ese café, espeso, ácido, aromático, denso y oscuro, que Starbucks tomó la decisión, poco común entre compradores, de adquirir la cosecha de ese año y la de los cuatro siguientes” (Olsen, 1995, p. 84).

<sup>772</sup> “La primera estrategia es la búsqueda de la calidad del producto que empieza con la compra de café verde (...) Una vez que tenemos el café en nuestra planta, se tuesta en pequeños lotes por artesanos. En Starbucks se piensa que cada café es único y por lo tanto, debe tostarse a la temperatura más apropiada durante el tiempo correcto para poder extraer sus sabores especiales. Se empaca inmediatamente para que llegue fresco al cliente.” (Olsen, 1995, p. 87).

activities<sup>773</sup>. They concluded asking for collaboration to trigger quality-oriented practices in the Colombian coffee lands<sup>774</sup>.

As a result, a coalition of producers, stakeholders in production (Comité/FNC and Asoexport), traders (EdN), roasters (Starbucks), and stakeholders in consumption (SCAA) shared a definition of the problem in terms of the low monetary services due to the low provision of the “terroir expression” taste related service so with their individual purposes and resources they implicitly agreed on a joint action.

### 8.1.2. Selfishly mobilization of action resources of stakeholders in production over profiling actors

For the FNC, after three decades of standardization, quality was defined in terms of the size and appearance of the coffee bean: it was assumed that coffee would taste well enough if sorted by its physical characteristics. Moreno Gonzales (2015) showed that as recently as in 1988, the FNC started cupping aleatory samples of coffee lots but only to discard lots with unpleasant flavors (fermented, phenolic, musty, etc.). It was believed that coffee could not express the terroir as it happened in the wine industry, at least not at the consumer’s palates<sup>775</sup>. Nevertheless, an iconic publication on the different combination of soils and climates in the Colombian coffeelands, known as “*Ecotopos cafeteros*” by Gómez et al. (1991) commissioned by the FNC to adapt Cenicafé recommendations to the local particularities, showed 86 different Ecotopes.

This evidence could have produced, at least, the curiosity to move forward into the relationship between the Ecotope and the aromatic profile that was claimed by the SCAA/Starbucks. So, the FNC **strategically** mobilized its *AR personal* to produce the *AR information*: a multidisciplinary team of FNC’s employees<sup>776</sup> conducted a study on the “physical and sensorial characteristics<sup>777</sup> of coffee in different regions in Colombia and its relation with the agro-ecological conditions” in 1994 (Moreno et al., 1994). As expected, the study showed that both the physical and sensorial characteristics of the coffee bean had a relation with the ecotope from which it was harvested.

Moreno et al. (1994) study had one part devoted to Nariño. It showed that all coffee samples from Nariño had a better performance than the average Colombian coffee. Using the stratified

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<sup>773</sup> “Si yo estoy vendiendo cafés especiales, los de más alta calidad son aquellos muy bien tratados, muy bien lavados; donde se utiliza mucha agua en su beneficio, numerosa mano de obra, gran cantidad de trabajo en la trilla, no se utilizan máquinas de secado y consideramos el resultante de alta calidad” (Olsen, 1995, p. 89).

<sup>774</sup> “Pero en lo que ustedes nos pueden ayudar es en que el café sea siempre el mejor, y continuar buscando fórmulas y formas para que sea cada vez mejor” (Olsen, 1995, p. 89).

<sup>775</sup> Interview with Emilio Echeverri, FNC, *ibid*.

<sup>776</sup> A team composed of five employees of the FNC with the help of the Comité de Nariño that came from the program of scientific research; national consumption division and social development division (Moreno, Rodriguey, & Caballero, 1994, p. 2).

<sup>777</sup> Physical characteristics were defined as a product of the threshing: Excelso throughput (how many kilos of parchment coffee were needed to produce 70 kilos of Excelso coffee bag). Sensorial characteristic were define in four variables when cupping: aroma, acidity, body, overall impression (Moreno et al., 1994, pp. 4-5).

conglomerate sampling method, samples were taken in the four *seccionales* (one of them, San José, encompassed Buesaco) in which the *Comité Departamental de Cafeteros de Nariño* (hereafter the *Comité de Nariño*) divided the coffee zones of Nariño, and also from the *Cooperativa del Norte*, the *Cooperativa de Occidente* and *Almacafé*. Their study showed that in the seven groups, weight loss when threshing was between 18% and 17.5% (better than the 19.5% national average); the percentage of *pasilla* (a coffee quality that cannot be exported) was lower than 4% in all groups (in six was lower than 3%) when the national average was 5.9%; the factor (kilos of parchment coffee to produce a 70 kilos of Excelso coffee) was lower than 90 kilos in all groups (in six was lower than 88 kilos) when the national average was 94.8 kilos<sup>778</sup>. In addition, there were statistically significant differences in the sensorial characteristics between the seven samples but they all are characterized for having a good cupping test, highlighting its acidity and body<sup>779</sup>.

Jorge Rebolledo, as technical manager of the *Comité de Nariño*, participated in the elaboration of this study. Once results were presented in February 1994, he appropriated them as if they were the property of the *Comité de Nariño*<sup>780</sup> to **strategically** mobilize this *AR information* to produce the *AR consensus* around the “terroir expression” taste related services specifically from coffee from Nariño with other influential actors as the SCAA. Indeed, one month later, on the 15<sup>th</sup> of March 1994 Rebolledo in the name of the *Comité de Nariño*, did a “Presentation on Nariño Coffee” at the FNC’s headquarters in Bogotá to the participants in a trade mission organized by both the SCAA and the FNC (SCAA. & FNC., 1994), and afterward, he participated in the SCAA Coffee Expo in Houston<sup>781</sup>.

In parallel Starbucks **strategically** mobilized their *AR information* to influence other profiling actors and stakeholders in production to gain the *resource consensus* towards the “terroir expression” taste related service through the mentioned Asoexport assembly in 1995.

The *Comité de Nariño* and Starbucks, plausibly intended to produce the *AR consensus* to strategically mobilized it in order to innovatively activate the internal-external commercialization policy of the FNC to produce an output in which the coffee from Nariño will not be blended before reaching the final roasters, in order to profile the “terroir expression” taste related service, and increase the monetary services of farmers from Nariño.

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<sup>778</sup> Results are shown in Moreno et al. (1994, pp. 16-18)

<sup>779</sup> “En general las muestras de café de Nariño se caracterizan por tener una buena prueba de taza, siendo especialmente notoria su acidez y cuerpo” (Moreno et al., 1994, p. 14)

<sup>780</sup> “Sale el estudio (de características físicas y sensoriales en Nariño), (el autor) me pone el estudio sobre el escritorio, lo cojo y me dice - Jairo, eso no es tuyo. Y le dije - es mío. Y cogí el estudio y me fui para donde Emilio Echeverri (Gerente administrativo de la FNC) y se lo puse encima”. Interview with Jairo Rebolledo, Comité de Nariño, *ibid*.

<sup>781</sup> “Nos fuimos dos personajes (...) nos vamos no teníamos ni idea de inglés, no sabíamos cómo exponer esta mierda, llegamos allá como locos”. Interview with Jairo Rebolledo, Comité de Nariño, *ibid*.

But the FNC **selfishly** mobilized their *AR information and political support*<sup>782</sup> to take advantage of the *AR consensus* around the “terroir expression” taste related service by innovatively activating the coffee public policy and producing an intermediary output el “*Programa de Registro y Promoción de Cafés Especiales* through the *Resolución 3 de 1996*” centralized in Bogotá in which samples were chosen from all coffee regions, not only from a particular one.

### 8.1.3. Absence of Institutional creativity leaving behind demanded services by producers

When *el Comité Nacional de Cafeteros* launched the *Programa de Registro y Promoción de Cafés Especiales* through the *Resolución 3 de 1996* (Moreno Gonzales, 2015) centralized in the newly created “coffee quality office” and operated by the commercial department of the FNC: they concentrated the definition of the “terroir expression” taste related service. Indeed, the coffee quality office had the power to decide which coffee could produce this service, and the commercial office to decide through which channel the selected coffee was going to reach costumers.

This intermediary output wanted to reshape a certain portion of the LRA Standard, by producing additionally to its profile, the “terroir expression” taste related service. Inspired by both the study that identified several different ecotopes and, the study on the physical and sensorial characteristics linked to the ecotope, the LRA did not incentivize any change in uses of resource constituents by farmers. Instead, it focused on influencing the *know-how* in the trading activity and the *know-to-appreciate* in the communication strategy.

Through this “Specialty coffee registration and promotion program”, the FNC played the trader’s role demanding “the best” coffees samples through its decentralized structure: the *Comités Departamentales de Cafeteros*, and its supply network of *Cooperativas de Caficultores*<sup>783</sup>. It

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<sup>782</sup> The FNC as representative of the Colombian government, tried to push up international prices (and the monetary services produced by the LRA Standard) **strategically** mobilizing their *resource organization* to activate the international public law to create the Association of Coffee Producing Countries the 24<sup>th</sup> September of 1993 in Brazil, in which 28 coffee producers accounting for 85% of the world coffee harvest. An intermediary output in which actors decided to behave as a cartel fixing production quotas per country per year in order to produce the monetary services demanded by producers. The final output was the quota itself, for its implementation the FNC purchased and storage the difference between the national production and the quota (the Colombian coffee harvest 94/95 was 13 million coffee bags whereas the quotas was 9.3 million. In addition to the previous retention the FNC had six million coffee bags at the cost of USD 300 million in 1995 (ElTiempo, 1995). The international coffee price overtook the USD 1 per pound in May 1994 and it remained stable over this threshold for the rest of the decade (until another crisis disbanded the association in 2002), allowing the FNC to maintain its *AR political support* throughout the decade.

<sup>783</sup> The best coffee should have selected on a subjective basis, because each trader has his own cupping protocols and there was nothing like a shared definition of the best coffee. As an examples, as recently as 1992, the quality coffee criteria was harmonized between the FNC and Almacafé, FNC’s logistics operator (Moreno Gonzales, 2015, p. 22).

implied that extension agents collected coffee samples directly in the coffee farm<sup>784</sup> in those regions from where a *Cooperativa* was supplying. In an iterative process, the coffee quality office in Bogotá analyzed these samples throughout various harvests to assess its sensorial consistency: by repeating the sampling and tasting they were delineating the perimeter of the coffee land that produced the “terroir expression” taste related service. In parallel, the *Comites Departamentales*, either with his employees or by contracting experts, conducted a few studies to assess the socio-economic feasibility of this coffee production in the long run. The samples would be registered if both assessments guarantee the supply of this coffee in the long term, subsequently, it would be offered by the commercial division<sup>785</sup>.

The farmer himself did not have to change its uses of resource constituents, he continued his activities as usual. Nonetheless, the Cooperative had to change their behavior because they had to use their *infrastructures* and *know-how* in order to guarantee that this registered coffee would be kept apart from other purchases, starting the documentary traceability needed to effectively deliver these lots to the clients. Documentary traceability that, of course, had to continue along the value chain: once arrived in Almacafé’s threshing mills, then when transported to ports and, afterward when shipping and delivery to the final client, either an importer or a roaster.

In parallel, the FNC had to change roasters and consumers *know-to-appreciate* through its communication strategy in order to align themselves with the growing demand for the “terroir expression” taste related services. Thus, the commercial division of the FNC offered the whole set of registered coffees to those potential clients who were demanding this service from the Resource by targeting their meeting points, namely the specialized traded fairs. In fact, the first partnership to supply in the long term specialty coffee was made by the FNC in the SCAA Coffee Expo in Philadelphia in 1999 (FNC, 2012d, p. 6).

Therefore, the FNC created over the “LRA Standard” this “LRA Standard-Plus”, thus the opportunity to access was in principle available to all coffee regions from Colombia. But in practice, it privileged regions in which the extension service was stronger and where cooperatives had a room of improvement, not less those departments that had stronger ties with the central structure of the FNC in Bogotá. It is not surprising that the coffee sold was from Caldas, the historical main producer of coffee in Colombia (approximately 20% during the nineties) with strong ties with Bogotá<sup>786</sup>, not from a peripheral coffee producer as Nariño with more or less one or two percent of the total harvest. In fact, samples from Nariño were neither registered nor offered as specialty coffee until 2002<sup>787</sup>. So, this newborn LRA never saw the light in Nariño.

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<sup>784</sup> Usually farmers are cooperative to this kind of procedures in which an extension agent takes a coffee sample directly from his coffee trees. It is often used by the FNC to produce data on the coffee production system, from a pest outbreak in a region, to the floescence in order to predict the potential harvest.

<sup>785</sup> Interview with Pedro Felipe Gonzalez, specialty coffee coordinator in the *Comité Departamental de Cafeteros de Caldas*.

<sup>786</sup> For example, Emilio Echeverri, the Administrative Manager of the FNC was from Caldas. He was sufficiently engaged in the local politics that a few years after he leaved the FNC, he was elected Governor of Caldas.

<sup>787</sup> Interview with Jairo Rebolledo, Comité de Nariño, *Ibid*.

Independently of what were the causes<sup>788</sup>, what is relevant for this study is the fact that local demands for the “taste related” service exclusively from Nariño coffee were completely unrecognized.

Institutional creativity was absent because, even though there was a shared definition of the problem in terms of the low monetary services due to the low provision of the “terroir expression” taste related service, there was not any deliberative scenario to agree on the uses of Resource constituents by profilers: the higher monetary services demanded by producers implied uses of *infrastructures*, *know-how*, and *know-to-appreciate* by the FNC entities (Almacafé as trader, the FNC as an exporter and sales office) to open an exclusive commercialization channel for coffee coming from Nariño; and the “terroir expression” taste related service demanded by Starbucks/SCAA implied uses of *infrastructures* and *know-how* by farmers to guarantee both consistency and exceptionality. Nevertheless, these uses were never implemented because the FNC unilaterally decided on the uses or Resource constituents to be encouraged. Indeed, once the “specialty coffee registration and promotion program” was activated, the FNC developed the newborn LRA Standard-plus over the incumbent LRA Standard incorporating new regulations (using the same governance mechanisms) on compatible uses of *infrastructures* and *know-how* in the trading process (it targeted their purchasing network of Cooperatives and local agents to make them integrate the documentary traceability in order to take commercial advantages as an exporter <sup>789</sup> ) and *know-to-appreciate* in the communication strategy to profile the “terroir expression” taste related service without affecting the “clean cup” taste related service and the “appellation Café de Colombia” symbolic services.

Consequently, both the *Comité de Nariño* and Starbucks considered insufficient the provision of their demanded services. In the first case, creating an unsatisfying demand that would produce internal fractures within the FNC, the *Comité de Nariño* and coffee growers in Nariño. In the second, it would encourage the newborn LRA EdN.

For some producers in Nariño represented by Rebolledo, the fact that they did not obtain the privileged channel to commercialize 100% Nariño coffee was explained by the necessity of the FNC to blend it to produce the Colombian coffee reputation<sup>790</sup>: According to Rebolledo, its physical characteristics allowed its blending with lower quality coffee from other regions to maximize production of Excelso, and its sensorial characteristics would trigger the “clean cup” taste related service that was essential to the “reputation of the appellation” symbolic service, like a secret ingredient in a famous recipe. In other words, if Nariño coffee had been sold as a single origin, Colombian coffee would have either decreased their exports or affected their

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<sup>788</sup> it could have been that the amount of coffee was not attractive enough, or that it was against the goal of the diversification programs to reduce the area in marginal zones like Nariño (After the ICA was agreed, the FNC started in 1963 the promotion of diversification of agricultural activities in coffee zones to tackle overproduction by targeting the small coffee farmers (Palacios, 2009)) or from a commercial perspective it was not worthy because Starbucks had already the monopoly of the purchases with its own supplier, etc.

<sup>789</sup> The logic is that the commercial activity of the FNC as an exporter, would produce profits that increase the FoNC, which is the money used by the FNC to provide public services to coffee farmers.

<sup>790</sup> Interview with Jairo Rebolledo, Comité de Nariño, *ibid*.

reputation<sup>791</sup>. This narrative gave him political positions at the *Comité de Nariño* as both, firstly executive director and afterward President, but diminished his position in regards to the central structure that ended with him sacked<sup>792</sup>. It was the perfect excuse to spread his narrative that the FNC was cheating on Nariño's farmers, paying lower than they would obtain if selling their coffee through other channels. In addition, the FNC used their power to impede this fact went public. So, it was needed a new LRA that profile higher monetary services for producers avoiding the FNC, that would be sought in the local electoral arena.

- Newborn LRA EdN
- Actors' constellations

Consumer' palates appreciated the aromatic profile coming from Nariño but traders were used to blending coffee from all Colombian regions. Therefore, the low provision of the "terroir expression" taste related service shared by the actors, was defined by Starbucks in terms of the use of Resource constituents by both traders and farmers: In the first case, traders had to guarantee the documentary traceability so coffee from Nariño reaches Starbucks' roasting facilities without being blended with coffee from any other region. In the second, farmers had to implement the recommended practices to improve quality.

A coalition was then consolidated between interested producers, EdN (as a trader and exporter) and Starbucks to profile the Resource to provide the "terroir expression" taste related services, without producing the monetary services demanded by producers.

- Strategic mobilization of profilers (roaster)

As described before, in coalition with the SCAA they **strategically** mobilized the AR *information* to produce the AR *consensus* in order to activate the coffee public policy aiming to incentivize both Nariño producers to increase quality and FNC's trading departments to improve traceability. An unsuccessful effort that encouraged Starbucks to **strategically** mobilized their AR *law* to non-activate the "specialty coffee registration and promotion program" and rather, activating the civil code and have access to the Resource concretizing the art. 1495 *del Código Civil Colombiano*<sup>793</sup>

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<sup>791</sup> It has to be said that Colombia exported during the nineties between 10 and 14 million coffee bags, with some peaks at 16 million. With a maximum production of two hundred thousand coffee bags from Nariño in the nineties, the relation 50 (Colombian coffee bags) to 1 (Nariño coffee bag) make this assumption infeasible.

<sup>792</sup> From Rebolledo's perspective, the FNC realized he could put at risk the actual profile of the resource (by limiting the access to the "secret ingredient") so, to guarantee the LRA Standard it was better to get rid of him, thus through an internal disciplinary process he was sacked out from the *Comité de Nariño*. Interview with Jairo Rebolledo. Ibid. From FNC's perspective, it was never a process against Rebolledo's ideas, it was only he was performing political activities prohibited by the FNC's disciplinary code. Interview with Emilio Echeverri, former administrative manager of the FNC in the nineties, *ibid*.

<sup>793</sup> "Contrato o convención es un acto por el cual una parte se obliga para con otra a dar, hacer o no hacer alguna cosa. Cada parte puede ser de una o de muchas personas". Art. 1495, Colombian Civil Code approved by Law No. 84 of 1873.

to influence traders' behavior by making them compel with traceability practices through a final output: a contract to supply coffee from Nariño with EdN.

- Institutional Creativity

More than a contractual discussion between the partners, there was not any deliberative scenario with other actors, so institutional creativity was absent and Starbucks and EdN profiled the Resource to provide the "terroir expression" taste related services, without producing the monetary services demanded by producers or any other demand for other actors.

In this way, they created the newborn LRA EdN that profiled the entire Nariño coffee harvest (equivalent to 100 hundred thousand coffee bags produced in 13 thousand ha<sup>794</sup>) for several years<sup>795</sup>.

Neither the LRA Standard-plus nor the LRA EdN implied a change with respect to the LRA Standard, in terms of extent and coherence in the first three processes conducted by farmers. So, for producers in Nariño monetary services remain completely attached to the international coffee price: neither productivity increased because they continued to receive a diminished version of the knowledge circuit detailed in chapter 4.1.3, nor "terroir expression" taste related service would do it because they were paid exactly the same as any other coffee farmer in Colombia.

In fact, as Starbucks growth exponentially from the second half of the nineties to a level in which there was not a terroir that could have produced all coffee they demanded. According to Roseberry (1996, p. 769) Starbucks, alongside with other roasters/brewers, migrated from the "terroir" towards the styles and flavors in order to diminish their dependency to a particular coffee zone: Styles like "Italian blend" for stronger coffees or "Colombian blend" for mild ones, or the "house blend" to highlight a particular roast; flavors like "coffee with buttery caramel" or "coffee with rich, creamy vanilla" mainly to attract youngsters. In both cases, volume was more important than origin. So, Starbucks reduced significantly their dependency towards Nariño's supply and started a commercial relationship with the FNC to supply from the LRA Standard the "clean cup" taste related service (from the whole country), while continuing supplying from the LRA EdN their "terroir expression" taste related service (from Nariño). Plausibly as Starbucks was the main buyer of coffee from Nariño (during the nineties Starbucks bought on average two-thirds of the Nariño's Excelso (Levine, 2005, p. 2)), buy Colombian coffee from the FNC was a strategic movement to diminished competition for purchases in Nariño, removing these market forces that would have increase purchase prices and possibly, monetary services for farmers.

To profile the Resource Starbucks concentrated uses of resource constituents in the house: Uses of *infrastructures* and *know-how* in their roasting and brewing facilities by replacing farmers'

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<sup>794</sup> Interview with Jorge Rebolledo, Comité de Nariño, *ibid.*

<sup>795</sup> "Starbucks tomó la decisión, poco común entre compradores, de adquirir la cosecha de ese año y la de los cuatro siguientes" (Olsen, 1995, p. 84).

efforts (to produce a well-developed bean) with sorting technology, sophisticated labs (that would sort that well-developed bean from the bulked coffee), roasting techniques and brewing equipment, and uses of *know-to-appreciate* in their marketing and sales team. They bought Nariño coffee from EdN and in their facilities, they separated coffee lots to roast them alone and bring about the “terroir expression” taste related service from other coffee lots that would be blended into their style and flavor coffee. In parallel they invested 4% of their sales in positioning their brand: doing TV advertising (it had never been done before in the specialty coffee industry) and communicating directly to two million consumers in their coffee shops through images, information, and chatting with Starbucks employees (Olsen, 1995, pp. 88, 90).

As the new regulated uses of Resource constituents by LRAs in place in Nariño (Therefore in Buesaco and in Veracruz) only affected processes after trading, farmers were neither included nor excluded. The Resource in Nariño then was profiled from the fourth process onwards to produce the “terroir expression” and the “clean cup” taste related services; the “brand reputation” and the “appellation Café de Colombia” symbolic services; and the same monetary services for farmers.

#### 8.1.4. Outcome

The low monetary services for producers due to the low provision of the “terroir expression” taste related service produced by the LRA Standard, was the problematic defined by a coalition of producers, profilers, and stakeholders in production in Nariño/Buesaco once the international coffee agreement was disbanded.

The FNC selfishly mobilized their *AR information and political support* to innovatively activate the coffee public policy to produce the intermediary output “Specialty coffee registration and promotion program” that targeted their supply network of traders (meaning they used FoNC’s capital to fund their operations), which had to change their trading practices to implement documentary traceability.

The incumbent LRA Standard regulated uses of Resource constituents in the three activities of the trading process (purchasing; threshing, exporting) and one activity in the planting (variety) (equivalent to the baseline extent 17% of regulated uses<sup>796</sup> evenly distributed<sup>797</sup> (Annex 7)). This LRA intended to provide monetary services through the Appellation Café de Colombia symbolic service, federated coffee growers of the FNC using the governance mechanism (like Comités at the municipal, departmental and national level) to produce the outcomes of the coffee public policy described in chapter 4 (equivalent to the baseline coherence). It created the “product differentiation” Café de Colombia at the traders’ level (equivalent to the baseline closure). From this incumbent LRA Standard, the newborn LRA Standard-plus was developed. It regulated new

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<sup>796</sup> It refers to the first condition of the Extent (chapter 2.2.2): the regulated uses (weighted by process) by the LRA from the 26 uses identified in Annex 1.

<sup>797</sup> It refers to the second condition of the Extent (chapter 2.2.2): regulations are evenly distributed between the

seven processes, in operational terms, regulations are not concentrated in the first three processes.

uses of Resource constituents in one activity (communication strategy) potentially increasing the extent (31% of evenly-distributed regulated uses, Annex 7). It maintained the same aligned actors and governance mechanisms but it produced a new output, the “Special Coffee Registration, and Promotion Program” aiming to coordinate profiling actors from trading to roasting potentially increasing the coherence. Also, it intended to create “product differentiation” based on the origin, erecting barriers of entry at the producers’ level potentially increasing the closure. But this potential was not realized in Nariño during the nineties, so in practical terms, the conditions of this LRA remained unchanged.

Nonetheless, its non-activation created a “non-deliberative scenario” that gave legitimacy to Starbucks to sough individually their demanding services while leaving behind monetary services demanded by producers (who started to envision a new LRA avoiding the FNC). So, alongside their local commercial partner through a purchase agreement as a governance mechanism, they developed the tailor-made LRA EdN which, prior to intending influencing farmers behavior, relied on technology to trigger the “terroir expression” taste related service. It reached one-way coordination from the purchase to the brewing but as monetary service sought by farmers were not produced, coherence decreased. It regulated new uses of Resource constituents in the whole activities of the last three processes roasting, communications strategy and brewing increasing the extent (60% of completely non-concentrated regulated uses, Annex 7). Also, it created the “product differentiation” at the roaster level, decreasing closure. It was the only LRA present in Nariño for several years, and on average, 75% of the coffee produced in Nariño during the nineties went through this LRA.

## 8.2. Newborn LRA ACDI/VOCA Nespresso and Starbucks (2001-2007)

### 8.2.1. Actors’ coalitions: low symbolic services for stakeholders in production and consumption

As detailed in chapter 4.1 the coffee crisis sparked a change of the Institutional Regime at the international level through the ICA 2001 and, at the national level, through set of recommendations provided by *la Comisión de ajuste*: Both conceptualized the low provision of socio-environmental symbolic services by coffee farmers as a problem that must be solved through a public-private-partnership and project-based approach.

At the local level, coffee farmers in Nariño were neither able to capture added value from their reputation nor became indispensable for Starbucks, so their purchasing prices were completely attached to international prices fluctuation which started a progressive low trend at the beginning of 1998 from USD 1.5 per pound of coffee to a historical minimum of USD 0.37 in October 2001 and remained below of USD 0.5 from 2001 to 2004. Making it an unprofitable crop in the whole country but particularly in the low productive lands of Buesaco. Hence, as explained, from the second half of the nineties and especially at the beginning of the two-thousands, the only profitable crops in Nariño were the illegal ones. The department was the main producer of

coca in 2003 with 17.628 ha from the 86.340 ha nationwide (UNODC, 2005, p. 15) and the main producer of poppy in 2002 with 1.230 ha from the 4.153 ha nationwide (UNODC, 2005, p. 50).

This fact attracted new stakeholders in consumption (the United States Government) and stakeholders in production (the Colombian Government), which demanded the “drugs substitution” symbolic service<sup>798</sup>, to the problem of collective action of the Resource in Buesaco.

Indeed, the Plan Colombia<sup>799</sup> encompassed the *Fondo Nacional para la Paz*: with USD 500 million spent in “alternative development” programs. One of which was the *Familias Guardabosques* program, a subsidy scheme in which a monthly payment of a monthly minimum wage (US\$ 170) was agreed with a peasant family in return of the eradication of illegal crops and the recuperation of natural ecosystem for three years. It had two components: the technical one to protect natural resource while starting a new sustainable crop and, the social one to enhance family relationships and strengthen community organizations. Beneficiaries from this program could transit to the following phase that was supported through a second program known as *Proyectos Productivos*. It sought to reinforce the sustainable crop chosen to make them effectively alternatives to illicit crops (Giraldo & Lozada, 2008, p. 64). Clearly, the main challenge was to find such alternatives<sup>800</sup> and in Buesaco, in the middle of the area prioritized the alternative was coffee.

Momentum was in place (featured by the new ICA 2001 and the change in the FNC’s focus towards the small farmers see chapter 4.2) and at the beginning of the two-thousands, a coalition composed by stakeholders in production and consumption (governmental and non-governmental organizations) defined the problem as the failures of information that produced an oversupply of an undesirable coffee that endangered ecosystems, causing anxiety in consumers reducing their willingness to pay. It reduced monetary services for farmers so they had no other option than to cultivate illegal crops to make ends meet.

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<sup>798</sup> “Developed countries should help us to implement some sort of ‘Marshall Plan’ for Colombia, which will allow us to develop great investments in the social field, in order to offer our peasants different alternatives to the illicit crops” (Pastrana Arango & Gómez, 2005, p. 48) said Andres Pastrana when unveiling his plans to counterbalance drug production days after he was elected President of Colombia.

<sup>799</sup> This plan was afterwards launched as the *Plan Colombia* by the Colombian Government in September 2009, it was funded mainly by the US Government with USD 6.13 billion in the period 2000 – 2008 distributed between USD 4.86 billion in military support and USD 1.27 billion in socio-economic aid through its International Cooperation Public Policy (Biden & Ford, 2008, p. 15). It was hardly a revolutionary idea. From 1991-1995 the UNDCP engaged in a crop substitution program in Nariño, which provided the bases for the PLANTE (the national plan for alternative development) developed by the Government of Ernesto Samper from 1994-1998.

<sup>800</sup> “USAID’s goal for alternative development focuses on reducing the production of illicit narcotics by creating sustainable projects that can function without additional U.S. support after the start-up phase is implemented. In recent years, USAID modified its alternative development strategy to emphasize sustainability. With regard to its strategic goal, alternative development projects face two key challenges—USAID currently has almost no alternative development projects in areas where the majority of coca is grown, and a government of Colombia policy prohibits alternative development assistance projects in communities where any illicit crops are being cultivated” (Biden & Ford, 2008, p. 48).

One coalition was formed expanding the group that belonged to the LRA Standard/Standard plus: producers (Asoveracruz), traders (The Cooperativa de Caficultores de Occidentes) and stakeholders in production (the *Comité de Nariño/FNC* and the *Corporación Autónoma Regional de Nariño*) that eventually attracted a roaster (Nespresso). They shared the definition of the problem in terms of the low “monetary services” due to the low “environmentally responsible” symbolic service that encouraged illegal crops and agreed on joint action to profile these services in order to produce the “drugs substitution” symbolic service.

Another coalition was developed enlarging the group of actors belonging to the LRA EdN. Producers, Traders (EdN), Roaster (Starbucks) and stakeholders in consumption (Conservation International and the International Organization for Migration). In this case, big roasters were seen by some consumers as responsible for bringing “poverty in your coffee cup” (see chapter 4.2). Starbucks not only needed to tackle down potential damage to its brand that could decrease monetary services, but also the vulnerability of high-quality coffee supply <sup>801</sup> that the crisis highlighted (McFall, Rodehau, & Wofford, 2017).

They defined the problem in terms of the consumers’ anxiety due to the low “environmentally responsible” and “ethical traded” symbolic services that reduced their willingness to pay, and therefore monetary services that encouraged illegal crops. So, they joined action to profile the “terroir expression” taste related services demanded by Starbucks and the “environmentally responsible” and “ethical traded” symbolic services demanded by Conservation International on behalf of anxious consumers.

### 8.2.2. Strategically-Cooperative mobilization of action resources between stakeholders in production and profiling actors

There were two groups of mobilizations of *action resources*. Firstly, a strategical mobilization within the LRA Standard by the FNC and within the LRA EdN by Starbucks, and secondly, a cooperative mobilization by the ACDI/VOCA to transfer *resources of action* to farmers, so they could put forward their demands for services from the Resource.

- LRA Nespresso

Due to the loss of FNC’s stock of their *AR money* and *property*, they **strategically** mobilized in coalition with Corponariño their *AR personal* and *law* to concretize the International Cooperation Policy of the US and obtain the *AR money* to fund their own operations to profile the Resource.

The FNC managed to continue the provision of services profiled by the LRA Standard at the expense of their stock of their *money and property*<sup>802</sup> putting in doubt its continuity in time (in

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<sup>801</sup> Additionally, the relationship with the FNC suffered a setback when they opened its first Juan Valdez coffee store in New York in 2004. Interview with the project manager from the *Comité Departamental de Cafeteros de Nariño*.

<sup>802</sup> As described in chapter 4.2 the FNC had exchanged their *AR property* for the *AR money* (by selling the FoNC assets) to maintain their *AR political support* (by supporting the internal coffee price) in order to survive as an

practical terms losing their *AR political support*). Therefore, they had to partner with other well-endowed actors to guarantee provision of the monetary services even if it implied profiling other kinds of services they were not necessarily looking forward to.

In 2001 the *Comité de Nariño/FNC* in coalition with the *Corporación Autónoma Regional de Nariño* (Corponariño onwards) **strategically** mobilized their *AR personal*<sup>803</sup> and *AR law* (as the environmental authority at the local level<sup>804</sup>), in order to concretize the program *Familias en Acción* (the International Cooperation Public Policy of the US) in the poppy cropping northeastern corner of the Department, in order to obtain the *AR money* to fund their own operation.

As the focus of this program was to protect natural ecosystems from illegal crops, each partner produced one complementary output: Corponariño lead the intervention that focused on “training, technical assistance and advises to establish productive activities that permits the recovery, protection and sustainable management of strategic ecosystems while producing an income in the long term to trigger trust between participants and enhance the social tissue by strengthening the culture of legality and empowerment” (Corponariño, 2009, p. 3) and; the *Comité de Nariño* provided the “training, technical assistance and advise” related to coffee culture in those regions in which the agro-environmental conditions were optimal for this crop (it is plausible that the second extension agent that was placed in Buesaco at the beginning of the two-thousands was funded through this program).

But if training and technical assistance could have been enough for entrepreneurial coffee farms that were able to invest in the equipment (like hulling machines or fertilizers) needed to change their use of resource constituents, it was not the case when targeting small coffee farmers. Thus, to achieve long-term impact, the FNC **strategically** mobilized their *AR personal* to concretize the *Proyectos Productivos* program (of the same International Cooperation Public Policy of the US). They produced a final output known as *Proyecto del Macizo Colombiano*, which supported nine producers’ organizations in Buesaco. One of them in la vereda Veracruz, the *Asociación de Gestión de Cafeteros de la Vereda Veracruz Buesaco* (Asoveracruz onwards) was formally created in 2002 (as the other groups dissolved after the end of the Macizo project in 2004, Asoveracruz was the hinge between the *Comité de Nariño* and the farmers near Veracruz). The first meeting was recorded on the 25<sup>th</sup> of October 2002<sup>805</sup> as *Acta 1* in the *Libro de Actas de Asoveracruz* (Onwards when we quoted an *Acta* we are referring to this book).

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organization during the worst of the crisis. In the end, the FNC managed to survive but the stock of these three resources were severely diminished.

<sup>803</sup> Supported by FNC’s central office, employees at the *Comité de Nariño* formulated the projects to be presented to this fund. Interview with the project manager of the *Comité Departamental de Cafeteros de Nariño*.

<sup>804</sup> “*El Sistema Nacional Ambiental -SINA- es el conjunto de orientaciones, normas, actividades, recursos, programas e instituciones que permiten la puesta en marcha de los principios generales ambientales contenidos en esta ley (...). Para todos los efectos la jerarquía en el Sistema Nacional Ambiental -SINA- seguirá el siguiente orden descendente: MINISTERIO DEL MEDIO AMBIENTE, Corporaciones Autónomas Regionales, departamentos y distritos o municipios*”. *Art. 4 de la Ley 99 del 22 de diciembre de 1993 “por la cual se crea el Ministerio del Medio Ambiente”*.

<sup>805</sup> Asoveracruz was founded in 1999 and legalized it in 2000, with sixteen coffee growers in the Vereda Veracruz. Interview with Carlos Pantoja, a coffee farmers in Veracruz, cofounder and currently President of Asoveracruz.

This output targeted small coffee growers<sup>806</sup> associated<sup>807</sup> to increase the profitability of the coffee culture by decreasing some fixed cost of the coffee farm and the family material wellbeing. It delivered technical assistance (replicated by the associations<sup>808</sup>) to the participant coffee farmers: some of them were benefited with post-harvesting equipment: hulling machines, fermentation tanks, and concrete to build the drying patio, and the sanitary batteries to improve household conditions. Also, it delivered food-seeds and minor species to improve family nutrition. In the case of Asoveracruz, 13 of the 20 members were benefited with the concrete to build the drying patios from 2002 to 2003<sup>809</sup>.

By participating in these two programs<sup>810</sup> (*Familias Guardabosques* and *Proyectos Productivos*) coffee farmers in Veracruz obtain the *AR organization*. Then, Asoveracruz **strategically** mobilized it in coalition with the *AR personal* of the FNC to concretize the “Strategic Specialty Coffee Plan” of the Coffee public policy (Chapter 4.2.1) and produced an intermediary output: the registration of the brand *Familias Guardabosques* as a “Specialty Coffee” because of its sustainable production<sup>811</sup> aiming to produce the “drugs substitution” symbolic service<sup>812</sup>.

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<sup>806</sup> But not too small, the project demanded at least 0.75 ha cultivated in coffee as it said in the Acta 3 July/2002

<sup>807</sup> An example of associative synergies could be read in the Acta 3 July/2002. “*El técnico Hesner dijo que siendo revisada el área de café cultivado (...) dos beneficiados no cumplían con el área cultivada de café (...) Tomó la palabra el señor Antonio Gualguan y dijo que todo el grupo nos comprometamos a colaborarle a sembrar 2000 árboles de café*”.

<sup>808</sup> The associations were a powerful tool to replicate the “knowledge circuit” as it can be seen in Acta 5, in which three delegates that went to a training, explained to the others what they have learnt. “*Coger el café maduro y despulparlo el mismo día. Para sacar un café Bueno dejarlo fermentar doce horas, así sacar un café excelente. Para los que no tienen tanque, dejarlo en costales que no hay problema, para los que tienen secadora, la temperatura es de 12 horas para secar el café. Tiene que estar cerrado para que no entren animales y lo pisen*”.

<sup>809</sup> In the discussions of Asoveracruz, it is clear that they received the material needed to build fermentation tanks and drying patios. (Particularly “*tenermos que aportar el 60%*” (it meant in labor) Acta 3 December/2002; “*que alisten el material todos los beneficiados de la primera etapa*” Acta 4 January/2003; “*los que salieron beneficiados de la primera etapa que hayan terminado las obras, por favor devolver el material que haya sobrado*” Acta 5 February/2003; “*los 11 beneficiados de la primera etapa, si no les llegaba el material completo que no lo reciban*” Acta 6 March/2003; “*también nos informó que sobró dos tanques y dos patios (concrete), entonces dijo que se les diera a los que no tengan*” Acta 9 May/2002. “*habló del programa Macizo colombiano y dijo que en el mes de febrero tenía que seguir la segunda etapa. Por lo tanto, ahí entraban a participar el resto que no salieron beneficiados en la primera etapa*” Acta 14 October/2002. In the end, there was not a second phase because of changes at the national level. Interview with the Projects Coordinator of the *Comité Departamental de Cafeteros de Nariño*.

<sup>810</sup> At the beginning there were not associated, but as the Comité participated in both, eventually by monitoring the implementation and making some adjustments, these projects became closer so I would rather present them as a continuum. Felbab-Brown et al. (2009) presented a synthesis of the alternative development programs in Nariño from the *Fondo Nacional para la Paz* (2001-2003) that evolved into *Familias en Acción* (2003-2007) and *Proyectos Productivos* 2006-2007.

<sup>811</sup> In fact, in 2003 the “Strategic Specialty Coffee Plan” had “already helped to register 54 brands and launch 72 production projects of specialty coffees with an annual export potential of 500,000, 60-kilogram bags” (Giugale, Lafourcade, & Luff, 2003, p. 536).

<sup>812</sup> “*El café de Familias Guardabosques es el fruto de algunos programas de sustitución de cultivos ilícitos promovidos y apoyados por la Presidencia de la República a través del programa del gobierno colombiano conocido como Acción Social. Este programa busca promover el desarrollo social y el mejoramiento de las condiciones de vida de las familias cafeteras de los departamentos del Cauca, Nariño, Tolima y Huila*”. FNC. “*Programas de Cafés Especiales*” (FNC, 2018).

From the broad brand of *Familias Guardabosques* that benefited four Departments, the FNC's coffee quality office produced another output by identifying and registering two terroirs in Nariño to be offered through two different brands: *Café la Esperanza de Nariño* (from the North) and *Café Sindamanoy* (from the West)<sup>813</sup>. Consequently, the *Cooperativa de Occidente* delivered to Almacafé 120 thousand kilos of green coffee from various municipalities in 2002 that were bought by Nespresso<sup>814</sup>. The client was so pleased that from 2003 onwards, this coffee was paid with a premium-when-buying of COP 800 (USD 0.28) and the next year they bought 800 thousand kilos of green coffee<sup>815</sup>.

As a result, both the incumbent LRA Standard and the never implemented LRA Standard-plus evolved towards the newborn LRA Nespresso in Veracruz.

- LRA Starbucks

Starbucks, which had lost their *AR consensus* and was considered responsible of the unsustainable of the coffee culture, **strategically** mobilized in coalition with Conservation International and the International Organization for Migration their *AR money, consensus, infrastructure, and organization* to concretize the International Cooperation Public Policy of the Dutch Government to produce the *AR consensus*.

Firstly, Starbucks **strategically** mobilized their *AR money* in exchange of the *AR consensus* held by the environmental NGO Conservation International<sup>816</sup>, when the former contracted the latter to produce the Coffee and Farmer Equity - CAFE Practices code of conduct in 2004 (see chapter 7.2.2)

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<sup>813</sup> Interview with Oscar Emilio Ordoñez, coordinator of the specialty coffee program in the *Comité Departamental de Cafeteros de Nariño*.

<sup>814</sup> Interview with Rober Barco, general manager of the *Cooperativa de Caficultores del Occidente de Nariño*,

<sup>815</sup> Interview with Oscar Emilio Ordoñez, Comité de Nariño, *ibid*.

<sup>816</sup> "Starbucks Coffee Co. and Conservation International have announced a \$2.5 million direct loan by Starbucks to help capitalize CI's newly launched Verde Ventures fund (...) This new agreement extends Starbucks and CI's five-year partnership with an additional three-year, \$1.5 million grant to support CI's Conservation Coffee program to conserve the environment while providing economic opportunities for coffee farmers (...) In another significant move, Starbucks has renewed its partnership with CI with a total cash contribution of \$1.5 million over the next three years. Starbucks and CI will continue to promote environmentally sound coffee cultivation in the manner that improves the livelihood of coffee farmers, work to expand Starbucks green coffee sourcing guidelines program, and communicate the partnership to Starbucks customers and CI audiences" (Greenbiz, 2004).

Secondly, Starbucks with the EdN **strategically** mobilized their *AR money*<sup>817</sup> and *property*<sup>818</sup> to obtain the *AR organization* of the International Organization for Migration<sup>819</sup>. Indeed, the latter allowed them to cleverly involved into the project, national and local authorities, and academia, demanding abstract and effortless support that was not going to be denied<sup>820</sup>. Through this project, they postulated their private commercial relation as a public-private partnership to the “call of ideas” offered by the DGIS (Dutch Directorate-General for International Cooperation). As a result, they concretized the International Cooperation Public Policy of the Dutch Government in their efforts to achieve the global development goals (OIM, 2004, p. 54). The coalition envisioned this activation to obtain both the *AR money*<sup>821</sup> and the *AR consensus* (possessed by the Government of the Netherlands) in order to motivate farmers to engage in the project<sup>822</sup> and to change their behavior<sup>823</sup> according to the CAFE practices recommendation. As a result, this LRA EdN evolved towards the more complex newborn LRA Starbucks.

Indeed, this coalition produced as an output the project “sustainable development program for Nariño’s coffee growing families”. From 2004 to 2010 a 40-people team conducted a cumulative survey in Nariño’s coffee areas (including Veracruz) that eventually gathered a database of 22.00 coffee growers participant in the CAFE practices program in 2010 (CI, 2011, p. 6). It also encouraged 442 farmers to establish 25 producer associations with the goal to purchase coffee on behalf of EdN (Pfisterer & Payandeh, 2014, p. 24). Both results helped to reduce Starbucks exposure to brand deterioration and supply shortages and, to profile the Resource with the “ethically traded” and “environmentally responsible” symbolic services through this LRA.

Nonetheless this approach to categorizing “CAFÉ Practices farmers” through a survey and not through an audit was considered controversial (Timmerman, 2014): On the one hand, it is

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<sup>817</sup> EUR 1 million was invested by Starbucks either directly by paying a premium, or indirectly through EdN purchases. Their role in the project was describe as “Starbucks Co. paid 5 cents (USD) more per kilo of coffee purchased from ENA to fund the project; participate in 50% donation together with EdN(...) With a total budget of €2m” (DGIS, 2008, pp. 2, 7.).

<sup>818</sup> EdN reoriented its business model to the project, which implied the use of their infrastructures (like purchases points) and their administrative structure in order to achieve the project goals. Their role in the project was describe as “Identify, design, implement and finance the project; commitment to purchasing the coffee produces by 1080 families for the next five years” (DGIS, 2008, p. 2).

<sup>819</sup> “*la OIM identificó la oportunidad en asociación con Empresas de Nariño, de formular un programa de impacto masivo dirigido a comunidades vulnerables en alto riesgo de desplazamiento y migración forzada*” (OIM, 2004, p. 54)

<sup>820</sup> “(Colombian Ministry of Agriculture, National Planning Department and Nariño Government Office as well as Colombian universities) are involved to provide development synergies, access to beneficiaries and information to facilitate implementation according to plans and goals” (DGIS, 2008, p. 2).

<sup>821</sup> The other half EUR 1 million “Contribute 50% of the project financing; advisory and monitoring” (DGIS, 2008, p. 3).

<sup>822</sup> “RNEs (Royal Netherlands Embassy) participation also bolstered the legitimacy of the project vis-à-vis local communities and government bodies as its participation somehow diluted the strong commercial drive of the activities” (DGIS, 2008, p. 3).

<sup>823</sup> “A critical contribution from RNE to the project design consisted of placing greater emphasis on the social development activities to transfer capacity and tools to the beneficiaries in administration of personal finances, coffee growers association building, psycho-social training and land registration” (DGIS, 2008, p. 3).

justified because it avoids a poverty trap<sup>824</sup>, on the other, as there is no need of material support to produce the symbolic service, incentives to publicize are higher than to produce actual change. In Veracruz for example, even that the project funded a slightly more than one thousand farms with post-harvesting equipment and water treatment tanks, during the authors' fieldwork, farmers who had the plaques with the Starbucks logo stuck to the wall of their houses as a memory of this survey, were never beneficiaries of the infrastructures component<sup>825</sup>. In fact, the probability to find a beneficiary (a farmer that take care of the water)<sup>826</sup> among all CAFE Practices farmers in Nariño is lower than 5%<sup>827</sup>, but for Starbucks, the symbolic services were produced just by sourcing from them<sup>828</sup>.

- LRA ACDI/VOCA Nespresso and Starbucks

A third actor arrived in Nariño at the beginning of the two-thousands: ACDI/VOCA<sup>829</sup> **cooperatively** mobilized their *AR organization* to combine it with the *AR information* and *personal* possessed by the FNC and the *AR information and personal* possessed by the SCAA in order to activate the International Cooperation Public Policy in the hands of the United States Agency for International Development – USAID, with the final goal to empower coffee growers with the *AR information* so they would be able to understand the potential services their coffee could produce and potential demanders of them, which could produce higher monetary services.

USAID needed a viable alternative for illegal crops<sup>830</sup> and had the money to fund initiatives in this direction<sup>831</sup>; ACDI/VOCA had a global network<sup>832</sup> that could provide one viable alternative: selling

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<sup>824</sup> “If C.A.F.E. practices were enforced through a more conventional third-party certification process, farmers that did not meet the standard would not be certified, and Starbucks would not be able to purchase coffee from that farmer. The loss of Starbucks’ business would harm small farmers who may be working hard, but falling short, to meet standards that allow their coffee to be labelled as ethically- or sustainably-sourced” (McFall et al., 2017, pp. 2-3).

<sup>825</sup> The same plaques and farmers who did not remember any support by Starbucks in Nariño was widely exposed by Timmerman (2014), but his intentions were never to understand how the CAFÉ Practices program worked but only to support his thesis of the greenwashing Starbucks was doing.

<sup>826</sup> In practice, among the population of small coffee growers, only the beneficiaries of a project would have the equipment needed to treat water, the main environmental risk of the coffee production. In Veracruz is particularly the case, in which no one of the 93 farmers had water treatment.

<sup>827</sup> 1191 coffee farmers beneficiated with water treatment equipment (Pfisterer & Payandeh, 2014, p. 24) among “22.000 farms identified as active participants” (CI, 2011, p. 6) in the CAFE Practices in Nariño

<sup>828</sup> “Starbucks is proud to have reached the milestone of 99% ethically sourced coffee”. Starbucks official webpage.

<sup>829</sup> With 1270 employees worldwide and USD 143 million of total revenues, ACDI/VOCA is an American Economic Development Organization which has worked in 146 countries since 1963. The name comes from a merger in 1997 between Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance. ACDI/VOCA official website.

<sup>830</sup> “USAID will continue to play a pivotal role in support of the U.S. efforts to reduce the entry of illegal drugs into the United States. USAID will help governments of key drug source countries (...) provide environmentally and economically sustainable alternatives to farmers” (USAID, 2001, p. 13).

<sup>831</sup> “For Fiscal Year 2002, the President is requesting appropriations of \$7,716,500,000 in discretionary funds for USAID-administered programs” (USAID, 2001, p. 15).

<sup>832</sup> An extensive list of the global network ACDI/VOCA had built since its foundation can be read in their commemorative 45<sup>th</sup> anniversary annual report 2008. Actors were categorized in four categories: Public Sector &

coffee to the newly US specialty coffee market by linking local farmers with members of the SCAA. To do so, they had to upgrade Colombian coffee from the commodity to the specialty coffee market: firstly they need the knowledge to crop coffee in Colombia that the FNC had produced since Cenicafé was founded in 1938<sup>833</sup>. Secondly, they had to reach the farmers through FNC's employees<sup>834</sup>. Thirdly, they needed the *know-how* to enter into the specialty market that possessed the SCAA<sup>835</sup>.

This escalated process was developed through the output known as the "Specialty Coffee Program" (SCP1 onwards)<sup>836</sup> whose main goal was to "facilitate the development of the high-quality coffees to be offered to the specialty coffee market as a development alternative to illicit activities in coffee-growing communities" (ACDI/VOCA, 2008a, p. 4). This program had seven pillars: 1- renovation providing seeds and fertilizer; 2- post-harvesting equipment (supporting the construction of facilities); 3- food security (providing seeds and small-animal breeding stock); 4- quality improvement (providing training in both the SCAA cupping protocol and practices to enhance the quality of the coffee); 5- marketing and commercialization (linking farmers with potential clients in the US Specialty market); 6- technical assistance and the environment (providing environmental workshops) and; 7- institutional strengthening (supporting producers organizations) (ACDI/VOCA, 2008a, pp. 1,2), which arrived in Veracruz at the beginning of 2004: after the first phase of the *Proyecto del Macizo Colombiano* finished and hopes for the second phase were fading, news from this program arrived in Veracruz<sup>837</sup>.

In one particular Acta, it can be seen the mechanism through which actors empowered with the *AR information* the coffee farmers: Before the implementation, it could be said that for farmers, the "Specialty coffee" was believed to be a particular seed delivered by the FNC<sup>838</sup> (like the variety Castillo or the variety Colombia). Farmers did not know they were different segments in the coffee market that could be access to, by modifying their usual uses of resource constituents.

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multilateral organizations; Ngo's Institutions, Cooperatives & Associations; Private sector firms; Local Financial Institutions (ACDI/VOCA, 2008b, pp. 34-35).

<sup>833</sup> Affirmations like "in agreement with the parameters of Fedecafé, as indicated by their technicians" (ACDI/VOCA, 2008a, p. 1) in their official reports, indicated the extent to which they were using knowledge gathered by the FNC.

<sup>834</sup> "With the National Federation of Coffee Growers of Colombia, through its Departmental Committees in the five assigned departments, thirteen projects were executed in the following manner: ten projects (two for each department), called Phase I and Phase II and three Phase III projects". (ACDI/VOCA, 2008a, p. 5)

<sup>835</sup> Affirmations like "in evaluation of coffee through standardized methods of cupping established by the Technical Standards Committee of the SCAA" (ACDI/VOCA, 2008a, p. 19) in their official reports, indicated the extent to which they were using the *know-how* developed by the SCAA.

<sup>836</sup> "A five-year Cooperative Agreement No. 514-A-00-02-00227-0 for the implementation of the "Colombia Specialty Coffee and USAID/GOC Public-Private Partnership Program", was signed on June 28, 2002 between USAID/Colombia and ACDI/VOCA" (ACDI/VOCA, 2008a, p. 1).

<sup>837</sup> "El señor técnico mencionó en este año hay proyectos de trabajar con la Federación. Sobre estos proyectos Seguridad Alimentaria. Estas ayudas no vienen del Plan Colombia (...) También mencionó que para este año sobre el programa de soca, para una hectárea de soca la Federación ayuda con 10 bultos de abono" Acta 16. February/2004,

<sup>838</sup> "También informó los que estén interesados en sacar café especial pueden hacerse anotar porque el Comité de Cafeteros está haciendo un proyecto de entrega de café especial". Acta 21 July/2004.

The first phase of the SCP1 started with the first three components, the basis to move forward towards quality. 1- renovation<sup>839</sup>: Members of Asoveracruz decided to buy a piece of land to build a nursery<sup>840</sup>, and once the seeds delivered by the program were big enough, they would share the labor<sup>841</sup> to plant the plantlets in the various farms using the fertilizer delivered by the program; 2- post-harvesting equipment<sup>842</sup>: similar to the previous *Macizo* project it delivered materials to build fermentation tanks and drying patios, in Buesaco there were 50 beneficiaries<sup>843</sup> (among probably two thousand coffee farmers in Buesaco in that year); 3- food security<sup>844</sup>: it promoted the family's food production in the farm, ensuring a balanced diet with animal and vegetable origins<sup>845</sup>.

During the second phase, SCP1 continued the investment in the component of renovation<sup>846</sup> and post-harvesting equipment<sup>847</sup>, but it focused on the other components: 4- quality<sup>848</sup>: it utilized the Cascade Training System in which 88 cuppers were trained in cup testing by the Coffee Quality Institute at the SCAA headquarters in Long Beach, California (87 cuppers were certified as Q-graders<sup>849</sup>). When they returned, they transfer this knowledge to 85 technicians of committees and cooperatives, and with all them, 1442 small producers were trained in basic knowledge of cupping. Afterwards, they received also an additional transfer of knowledge in order of how this taste related services could be produced through "workshops covering the production of high-quality coffee (...) consisted basically in harvest training on farms to groups of producers, ecological wet processing and drying, using appropriate handling indicators" (ACDI/VOCA, 2008a, p. 20). 5- Marketing<sup>850</sup>: the SCP1 funded the participation of coffee growers in the SCAA Expo from 2003 onwards, and commercial mission to Colombia of the some of the main actors in the

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<sup>839</sup> A total investment in Nariño phase 1 of USD 20.825 (ACDI/VOCA, 2008a, p. 37)

<sup>840</sup> "Habló de comprar un lote en sociedad para el invernadero y también sembrar café entre todos los socios que se asocien" Acta 21 July/2004. "Quienes estaban de acuerdo en comprarlo? A todos les gustó el lote, 16 socios estaban de acuerdo" Acta 22 August/2004.

<sup>841</sup> They had decided previously to share the work on Saturdays: the owner of the farm has to provide the lunch, and associates would work until 15h. If an associate cannot go, he has either to send another person to fulfill his commitment or pay for a worker; if an associate fails three times, he would be expelled from the group. Acta 7 April /2003.

<sup>842</sup> A total investment in Nariño phase 1 of USD 71 thousand (ACDI/VOCA, 2008a, p. 37)

<sup>843</sup> Interview with the Projects Coordinator of the *Comité Departamental de Cafeteros de Nariño*.

<sup>844</sup> A total investment in Nariño phase 1 of USD 33 thousand (ACDI/VOCA, 2008a, p. 37)

<sup>845</sup> Carlos Pantoja, the President of Asoveracruz, remembered he received 10 *cuyes* (guinea pigs), 10 chickens, one bags of animal food and mesh for animal pens.

<sup>846</sup> A total investment in Nariño phase 2 of USD 23 thousand (ACDI/VOCA, 2008a, p. 37)

<sup>847</sup> A total investment in Nariño phase 2 of USD 134 thousand (ACDI/VOCA, 2008a, p. 37)

<sup>848</sup> The total budget for the collaboration with Coffee Quality Institute of the SCAA was USD 900 thousand, the specific investment for Nariño phase 2 was USD 8 thousand (ACDI/VOCA, 2008a, p. 37). Plausibly it was invested in the workshops.

<sup>849</sup> "The Q Grader™ Program is a rigorous testing and certification process. This is the first comprehensive professional accreditation for coffee graders and cuppers, recognizing the best talent at work in the industry. The Q Grading System, developed by the Coffee Quality Institute (CQI), defines standards for quality, both cup and grade. The result is a grading certificate that offers potential buyers a "picture" or tangible measure of the individual flavor profile for a specific lot of coffee" (ACDI/VOCA, 2008a, p. 19).

<sup>850</sup> A global investment for the whole project including the five departments of USD 119 thousand (ACDI/VOCA, 2008a, p. 37)

specialty coffee industry<sup>851</sup>. 6- Technical assistance and environment<sup>852</sup>: they developed environmental workshops in the five departments in order to “identify, throughout the activities of cultivation and coffee processing and that of other associated crops, the possible environmental impacts and recommended prevention, mitigation, and control measures. The analysis that was carried out and the commitments of applying the measures that are to be applied during the time the project is in effect were duly documented” (ACDI/VOCA, 2008a, p. 27). Even though they were supposed to be one Environmental Card by each Department, the FNC considered that only one card that followed their recommendation must be used in the whole project<sup>853</sup>.

In the end, this training transferred the *resource information* to farmers in the sense they were able to understand the potential services their crop could produce. In other regions, this project encouraged other services (like the symbolic services “organic coffee” and “Fairtrade coffee”<sup>854</sup>) but in Nariño they focused on profiling the resource in order to produce the “terroir expression” taste related services alongside the “environmentally responsible” symbolic service. Its main goal was to increase “monetary services” received by farmers by linking them with actors who demand those symbolic and taste related services. As a positive effect, it also empowered farmers to have a saying in how to profile its Resource coffee in Veracruz.

### 8.2.3. Institutional creativity to align interventions and profile the “terroir expression” taste related service; the “environmentally responsible” and “ethical trade” symbolic services; and higher monetary services for producers

Communication bridges produced by the mobilization of the *AR organization* by ACDI/VOCA created an indirect deliberative scenario that transmitted information related to the uses of resource constituents needed to reshape the profile of the Resource sought individually by both LRA Nespresso and LRA Starbucks. Indeed, by activating the International Cooperation Public Policy of the US<sup>855</sup> it encouraged different actors to put forward their demands for services, including the “environmentally responsible” and the “ethical traded” symbolic services and the “terroir expression” taste related service, in order to enhance monetary services for farmers as a shared basis profile for both LRAs that we will denominate the LRA ACDI/VOCA, from which

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<sup>851</sup> SCAA; CQI; Coffee Corps; Peet’s Coffee&Tea; Oren’s daily Roast; WBC; Caribou Coffee; Tim Hortons; Sustainable Harvest; Allegro Coffee; Ecologic Finance; Green Mountain Coffee Roasters; Alterra Coffee Roasters; Artisan Coffee&Tea; Intelligentsia; Coffee Lab International; Atlas Coffee Importers; Cafes Vita; Coffee Selections; Tailor maid farms; Counter Culture Coffee (ACDI/VOCA, 2008a, p. 24).

<sup>852</sup> A total investment in Nariño phase 2 of USD 28 thousand (ACDI/VOCA, 2008a, p. 37)

<sup>853</sup> “It was agreed that it should be only one card with which all projects executed with the Departmental Coffee Growers’ Committees in the five departments assigned to the Program are covered, given the business unit and also sole guidelines issued by the Central Office of the Federation for the Committees” (ACDI/VOCA, 2008a, p. 28).

<sup>854</sup> The Project “The production and commercialization of certified organic Coffee” was developed in the Cauca Department, and “the Corpoagro project” developed in the Department of Tolima achieved the FLO-Fairtrade certification. (ACDI/VOCA, 2008a, pp. 8-10)

<sup>855</sup> Eventually USAID replace the Dutch funding “after the exist of the Dutch Embassy, USAID entered the partnership as co-funder” (Pfisterer & Payandeh, 2014, p. 20)

they profile their own complementary services through the LRA ACDI/VOCA Nespresso and the LRA ACDI/VOCA Starbucks.

Firstly, at the end of the implementation of the SCP1, communication between ACDI/VOCA and the other big players in Nariño: Nespresso and Starbucks, allowed them to work together in Nariño to separately implement their VSS (the Nespresso AAA and the CAFÉ Practices). In the first case, Nariño phase 3 supported 400 farmers with the training needed to be part of the AAA program<sup>856</sup>, in the second, they partnered with the National Training Service (*Servicio Nacional de Aprendizaje* - SENA) to train their instructors so they would train producers leaders, which in turn would multiply in their communities. In 2007, “in Nariño 105 producers participated (...) the focus was on production for markets with the CAFÉ Practices verification” (ACDI/VOCA, 2008a, p. 16).

Secondly, once ACDI/VOCA realized that a “value chain approach” would produce the indirect deliberative scenario that they needed to profile the Resource as divers actors demanded, they obtain a second USD 7.8 million funding from the USAID to implement a second “Specialty Coffee Program” (SCP2 onwards) from 2007 to 2012<sup>857</sup> which leveraged additional US 23 million from the other partners (ACDI/VOCA, 2012, p. 8).

The value chain approach meant that a differential strategy would be adopted depending on the link in the coffee value chain (they identified six links: coffee production; Post-harvesting; Coffee grading and selection; Coffee roasting; preparing a perfect cup; specialty coffee buyers). So, it was decided with key partners and co-investors which interventions should be produced by the SCP2 to strengthen each link, starting with associations<sup>858</sup>.

Through this approach, both the Nespresso AAA program developed through a public-private partnership between the FNC and Nespresso and, the CAFÉ Practices program implemented initially through a project funded by the IDGIS (from 2002 to 2006)<sup>859</sup> and then by USAID (from 2009 onwards) were strengthened with their common needs: productive farmers that harvest high quality coffee while reducing the environmental negative impact. In fact, according to ACDI/VOCA (2012, pp. 8,9,10), farmers were assisted to use their *infrastructures* and *know-how* in the planting: “to renew their coffee plantations, replacing old plants with newer more productive and pest resistant varieties”; the cultivation: “trained producers in sustainable

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<sup>856</sup> “The technicians carried out the following activities: Socialization of the program; Farm-to-farm visits; Self-diagnosis; Action plan; Training in the production and beneficio of high quality coffee; Training in environmental topics and the defense of natural resources; Training in management of the coffee farm; Quantification of commercialization per farm and per region; Constitution of an organization of Nespresso producers” (ACDI/VOCA, 2008a, p. 18) Nespresso did arrive in Veracruz in 2007: the first meeting of Asoveracruz in which AAA Program was mentioned by the FNC’s extension agent is recorded in the Acta 25 on the 2th of March 2007.

<sup>857</sup> USAID – ACDI/VOCA Cooperative Agreement No. 514-A-00-08-00300

<sup>858</sup> “Formation of associations was not a goal during the first project but it surfaces as a mechanism to stimulate farmers to seek a direct relationship with the exporter; the development of associations became a main activity during the second project”. (Pfisterer & Payandeh, 2014, p. 19)

<sup>859</sup> “However, the Dutch Embassy did not provide any further financial assistance because of their policy of not funding replications of strategies that had already been implemented” (Pfisterer & Payandeh, 2014, p. 19)

agricultural practices that minimize or eliminate dependence upon chemical fertilizers and pesticides”; post-harvesting: “purchase depulping machines, build solar dryers to accelerate the drying process, build simple water treatment systems”; trading: “training sessions for the association included developing commercialization capacity for the association as a collective”<sup>860</sup> and “establishment of coffee laboratories, coffee producers were also introduced to the art and science of coffee tasting with help from CQI, farmers were educated as to the reasons coffee beans became damaged or produced poor quality”; roasting “trained SENA instructors on good coffee roasting practices”; communication strategy: “organized numerous local, national and international championships in an effort to contribute to an increased demand for specialty coffee in Colombia”; brewing “trained Colombian baristas in how to prepare a cup of espresso, cappuccino, or latte that both tastes good and looks good”.

Progressively, by concretizing the AAA code of conduct the Standard plus and Standard LRAs evolved towards the new LRA ACDI/VOCA Nespresso: the LRA Standard-plus was in a few years completely absorbed by it<sup>861</sup> and eventually, the LRA Standard was merged with it. In a lustrum, it could be said that almost all coffee bought by the FNC in Nariño which had a factor lower than 94, was bought through the LRA Nespresso<sup>862</sup>. Similarly, by concretizing the CAFE Practices code of conduct, the LRA EdN evolved into the LRA ACDI/VOCA Starbucks.

As farmers in Buesaco could participate in both LRAs at the same time by selling either to the EdN or to the Cooperativa de Occidente, each intervention to enhance productivity, quality, and good environmental practices, was in fact increasing the extent and the coherence of both the LRA ACDI/VOCA N&S to profile the “terroir expression” taste related service; the “environmental responsibility” and the “ethical traded” symbolic service; and higher monetary services for farmers. It was in line with the ACDI/VOCA objective to profile the Resource depending on clients’ demands, in order to enhance the monetary services for farmers and make coffee a real alternative from illicit crops, providing the “drugs substitution” symbolic services demanded by the USAID<sup>863</sup>.

#### 8.2.4. Outcome

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<sup>860</sup> (Pfisterer & Payandeh, 2014, p. 21)

<sup>861</sup> Indeed, it is understandable that both brands *Esperanza de Nariño* and *Sindamanoy* vanished because the FNC’s commercial division should have focused their attention in other deals: Nespresso was a reliable client that was increasing their orders and was paying an attractive premium.

<sup>862</sup> A factor lower than 94 from farmers excluded from the LRA Nespresso would be bought through the LRA Standard, and coffee with a factor higher than 94 from included or excluded farmers would be bought through the LRA discount.

<sup>863</sup> This complementarity could be read between lines in the few meetings Asoveracruz had from 2006 to 2012, only 12 Actas were written between July 2005 and February 2012. Indeed, the association itself was not needed because intervention was directly between the programs and the beneficiaries, whose number increased faster than the support provided by the programs, reducing the probability of being a beneficiary of not only equipment, but also technical assistance: for example, it was considered to eliminate the group because neither the associates nor the extension agent from the FNC were participating in the meetings. Acta 34 November/2008.

The coffee crisis in Buesaco spark out poppy crops, bringing attention of new actors that consolidated a coalition of profilers (producers, traders, roasters) and stakeholders in production and consumption who defined the problem as the failures of information that produced an oversupply of an undesirable coffee that endangered ecosystems, causing anxiety in consumers reducing their willingness to pay. It reduced monetary services for farmers so they had no other option than to cultivate illegal crops to make ends meet.

A **strategic** mobilization by the FNC and Starbucks, and a **cooperative** mobilization by the ACDI/VOCA to transfer *resources of action* to farmers, so they could put forward their demands for services from the Resource, concretized Specialty Coffee Program of the Coffee Public Policy; the International Cooperation Public Policy of the US and the Dutch Government that target small (potentially coffee) farmers that had (or were potentially attracted to) illegal crops, in order to encourage substitution through technical assistance, equipment delivery and networking with buyers in the “VSS market” in order to implement practices in the farm that would profile the Resource demanded by VSS buyers (Nespresso and Starbucks): enhancing productivity, quality and reducing environmental impact.

ACDI/VOCA created and indirect deliberative scenario through its value chain approach, in which depending on the link of the chain it partnered with different actors. Thus, through ACDI/VOCA, a stakeholder in production like the FNC, profiling actors (supported farmers’ associations- among them Asoveracruz, to roasters- among them Starbucks and Nespresso) and stakeholders in consumption like USAID were able to put forward their services demanded. As a result, for the LRAs ACDI/VOCA N&S, actors agreed on the uses of Resource Constituents to enhance productivity, quality and good environmental practices in two new activities during the planting (diversification and renovation), four activities during the cultivation (soil management; coffee borer beetle management, pest and disease management and picking), four activities during the post-harvesting (hulling; fermentation; drying; waste management) and the whole set of activities during the last four processes, increasing the extent in both cases (85% of evenly-distributed regulated uses, Annex 7). They intended to produce the “drug substitution” symbolic service by profiling the “terroir expression” taste related service; the “environmentally responsible” and the “ethical traded” to enhance the “brand reputation” symbolic service; and monetary services for farmers. But each one (The LRA ACDI/VOCA Nespresso and The LRA ACDI/VOCA Starbucks) with their own group of aligned actors, profiling institutions, governance mechanism and outputs increasing the coordination. In the first case Asoveracruz; Cooperatives; FNC/Comité and Nespresso aligned around the TASQ® to implement through the cluster FNC an extensive series of outputs (*Familias en Acción*; *Proyectos Productivos*; Strategic Specialty Coffee Plan; SCP 1; AAA Implementation project; SCP 2) to coordinate profiling actors in a two-way (by supporting and empowering farmers’ associations, both them and the roasters could influence the resulting outputs). Similarly, in the second case, Farmers’ associations, Starbucks and EdN aligned around the CAFE Practices to be implement through their commercial agreement that activate four complementary outputs (DGIS’ call of ideas; SCP 1; SCP 2; SENA’s technical assistance project) in order to control the change in behavior in two-way direction. Finally, in both cases the “brand reputation” symbolic service was sought to enhance the trademarks

Nespresso and Starbucks owned by the roasters of the same name, hence, the “product differentiation” was erected at the roaster level, decreasing closure.

### 8.3. Newborn LRA Specialty (2008-2011)

#### 8.3.1. Actors’ coalition: Low provision of an “exceptional coffee” taste related service that produces the “poverty reduction” symbolic service for stakeholders in production and some profiling actors (farmers)

Alongside a recuperation of international coffee prices to levels between USD 1 and USD 1.5 per pound of coffee from 2005 to 2010 (Macrotrends, 2018), both Nespresso and Starbucks sales growth exponentially<sup>864</sup> pushing up demand for Nariño coffee to levels they had never seen. Soon enough both former and new farmers cultivated in coffee one and a half thousand hectares each year on average from 2004 to 2012<sup>865</sup>.

Alongside the mentioned actors in the previous sequence who were demanding services from the Resource coffee in Nariño, one actor timidly started its demanding of the “exceptional coffee” taste related services. Timidly in the sense, it did not intend to create a stable LRA which could maintain this profile in the long run.

This service goes deeper than the “terroir expression” of a particular ecotope to dig down into the coffee farm. “Exceptional coffee” taste related service is a farmer’ masterpiece dependent on farmer’ agronomic practices that bring about the full potential of the environmental offer in his plot of land.

From the actors demanding this service in Nariño, probably the first one was the Italian main roaster, Illy Café. Their CEO (from 1964-2004) Ernesto Illy, led the creation of the Promotion Committee (from which he was the first chairman) of the International Coffee Organization during the ICA 2001 negotiations, with a clear mission: to fight the fear of coffee consumption by promoting the pleasure of drinking it (Illy, 2015). Inspired in the Illy Prize for Quality Coffee in Brazil in 1991, they developed in 2002 the contest “Colombian Award to Coffee Quality for the Preparation of espresso, whose main goal has been to encourage and reward coffee producers whose product surpassed strict quality standards” (Colcoffeinsights, 2012), which was held in Nariño in 2003. It encouraged coffee farmers in Veracruz to focus on quality through attractive prizes<sup>866</sup>.

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<sup>864</sup> In the case of Nespresso, since 2006 they increased their sales in CHF 500 each year until 2013 (Cornu, 2014, p. 6). In the case of Starbucks, the almost doubled their ten thousand coffee stores in 2005 to 17 thousand at the end of 2010 (Telegraph, 2011).

<sup>865</sup> Increasing from 25 thousand in 2005 to 37 thousand in 2012, equivalent to an additional 6% each year. Calculus made by the author using the official annual reports of the *Comité Departamental de Cafeteros de Nariño* from 2004 to 2013.

<sup>866</sup> “Y tomó la palabra el doctor Libardo (FNC Extension agent) y nos informó sobre la calidad del café que había unos premios de COP 15 millones (USD 5.200) y COP 30 millones (USD 10.430) para los grupos que mejor café saquen”.

Following this idea of encouraging quality through contests, the ICO launched jointly with the SCAA an auction platform in Brazil<sup>867</sup> in 1999 that spread in Latin-American coffee countries and then in Ruanda and Burundi (Dubois, 2002, pp. 121-131). In Colombia, it arrived as the Cup of excellence in its 2005 edition: An international jury composed by representatives of roasters from Europe, Japan, and USA, cupped the preselected samples from hundreds of 2 thousand kilo lots from different Colombian regions<sup>868</sup> gathered by the FNC<sup>869</sup> and score it through the SCAA Cupping Protocol<sup>870</sup>. Samples with the higher score won a predetermined prize<sup>871</sup>, but the real reward was that the whole lot of two thousand kilos would be sold through an internet auction (where it could reach from 5 to 40 times the standard price)<sup>872</sup>. Progressively, the term “specialty coffee” was captured by the SCAA, and other actors started label as Specialty Coffee only those lots that scored higher than 85 in the SCAA cupping protocol, which in turn were the lots that produce the “exceptional coffee” taste related services (from here onwards, “specialty coffee” mean coffee that score higher than 85 in the SCAA)

In 2005 a farmer from Buesaco obtained the 14<sup>th</sup> position; in 2006 three Buesaco farmers were finalists, including the second position. In combination with this higher visibility, this group of actors arrived in larger numbers thanks to the marketing component of the SCP1, which in partnership with the SCAA gather together the high-quality producers with the high-quality buyers<sup>873</sup>.

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Acta 9 May/2003. In Nariño, it was won by a group of farmers from la Vereda Matitui in the Municipality of La Florida, 60 kilometers away from Buesaco.

<sup>867</sup> It had been developed by the International Trade Centre with funds from the Common Fund for Commodities in the second half of the nineties.

<sup>868</sup> Until 2017, two contests were held to synchronize with harvesting seasons, the north and the south (from which Buesaco is part). The assumption that coffee from the south is more accepted was confirmed when one national Cup of Excellence was held in 2017 in which with one solely exception, the other 29 finalists were from the south, including 10 farms from Buesaco.

<sup>869</sup> Farmers registered their lot with a sample in any purchase point of the FNC’s supply chain. If the sample is selected to the second round they will have to deliver them the whole two-thousand lot that will be paid once the coffee is sold either as Specialty Coffee through the auction or as standard coffee through the FNC.

<sup>870</sup> By grading the fragrance, acidity, flavor, body, aftertaste and balance, they obtain an overall score from 50 to 100. Colombian Excelso is graded usually at 80, samples over 85 are labeled as Specialty. Winners of the Excellence Cup are usually a few points over 90.

<sup>871</sup> “The rules of this competition are tough, but clear. In the top 10 rounds, 3 coffees were removed, lots that had been cupped and approved by tens of coffee experts, re-cupped at least 6 times, brewed to make 100 individual cups, and that 1 bad one is enough to toss it out.” Said Owen (2005), representative from Sweet Maria (Roaster from USA).

<sup>872</sup> When the international prices were near US 1 per pound, winners reached more than US 40 per pound and the lower price paid to finalist was US 5. Cup of Excellence official webpage.

<sup>873</sup> “Aleco Chigounis started sourcing coffee from Nariño in 2007 for Stumptown, then continued buying there for Coffee Shrub before buying Nariños for his own company, Red Fox. George Howell was part of the earliest exploration of Nariño microlots. There were others, including Gimme! and La Minita. Geoff Watts was buying Amigos de Buesaco for Intelligentsia. Maritza and Jeff Taylor were buying coffee from the COE-winning Finca Villa Loyola for PT’s Coffee, as well as a few other small lots” (Sheridan, 2015).

This kind of unstable LRA could work acceptably for profiling actors who demand the “exceptional coffee” taste related services because, in the end, they would always find it through these kinds of contests. But for some stakeholders in production, the instability was undesirable. More accurately, they considered that by stabilizing an LRA that produced the “exceptional coffee” consistently, it would also produce the “poverty reduction” symbolic service.

Indeed, according to Preti (2010) in 2005, 64.4% of the population in Nariño lived under the poverty line and 43.8% of the population had basic needs unsatisfied. Even though the situation was better at the National level, it was also critical: 50% of Colombians lived under the poverty line and 27,6 had basic need unsatisfied (Preti, 2010, p. 14).

Coffee prices stabilized over US 1 per pound in 2005, better than before but still, it did not make a great difference for small coffee farmers and the premiums paid by Nespresso (In its highest the premium was US 0.6 in 2008) were perceived small in comparison with premium paid to winners in the contests. Nothing to say about Starbucks which did not pay premiums.

So, a group of actors started to perceive that both LRAs ACDI/VOCA N&S which were buying almost the entire harvest in Nariño, were actually defrauding coffee farmers. For a moderate group that included the *Fundación Social* (FS onwards), both LRAs limited farmers’ possibilities for moving forward by chain them to produce a coffee cherry to be sold in a purchase point as parchment coffee<sup>874</sup>. For other more radical, in which Jairo Rebolledo was included, they paid too low because roasters wanted to increase their profits and had the market power to do it. Eventually, both groups gather together under a shared definition of the problem in terms of the lower add value captured by producers that stuck them in poverty, so they agreed on the joint action (with their individual purposes and resources) to trigger the maximum value by producing the “exceptional coffee” taste related service and capture it through the vertical integration, namely a company owned by coffee farmers that sold directly to consumers.

### 8.3.2. Cooperative mobilization of action resources between stakeholders in production

There were three groups of mobilizations of *action resources*. Firstly, a **cooperative** mobilization led by the FS that created a stable but small LRA Specialty; secondly, a **cooperatively** mobilization led by the Governor’s office of Nariño that unsuccessfully intended to enlarge this LRA Specialty at the departmental level; thirdly, a **selfishly** mobilization of the Governor’s to being invested as the local authority in coffee public policy aiming to succeed with their LRA Specialty in Nariño.

The first group of mobilizations: The FS **cooperatively** mobilized their *AR organization and information* to concretize the International Cooperation Public Policy of the EU, in order to implement the *Laboratorio para la Paz* methodology that transferred the *AR information and organization* to farmers, which having been beneficiated also by the *AR information* previously,

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<sup>874</sup> “Esta situación limita el radio de acción del pequeño caficultor básicamente a dos tareas: producir y entregar el grano a las cooperativas” (Arellano Rosero & Narváez de la Rosa, 2016, p. 23).

identified a commercial opportunity profiling the “exceptional coffee” taste related service, and created the first stable LRA Specialty with Caravela. It gave them the resource *consensus* to expand this LRA in Nariño.

Indeed, at the end of the nineties in another region very hit by violence (the Magdalena basin), scholars showed a strong relationship between violence and poverty<sup>875</sup> and recommended to prioritize the local development from the communities to enhance peace. They developed a methodology known as *Laboratorios de Paz* to produce peace through an integrated approach to local development<sup>876</sup>. In clear opposition to the military prioritization of the US support of the Plan Colombia<sup>877</sup>, the European Commission through its International Cooperation public policy announced a contribution of EUR 140 million to fund the spread of this initiative in Colombia (León, 2009, p. 100).

It is possible that in 2004 the FS **strategically** mobilized their *AR organization* to obtain the *AR information* of the International Center for Tropical Agriculture<sup>878</sup> in order to conceptualize coffee not as a “productive chain” but as a “value chain”, which expand opportunities to producers by actively participating in the other links of the chain (Arellano Rosero & Narváez de la Rosa, 2016, p. 24).

Then, in December 2005 the FS **strategically** mobilized their *AR organization* and *information*<sup>879</sup> to concretize the *Segundo Laboratorio de Paz de la Unión Europea*<sup>880</sup> (International Cooperation

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<sup>875</sup> “la Sociedad Económica de Amigos del País SEAP y el Centro de Investigación y Educación Popular CINEP realizan un diagnóstico, en el cual observaron que existía una relación cercana entre la violencia que se daba en la región y la pobreza de la misma; así crearon una propuesta regional que promueve el fortalecimiento institucional a través de una construcción colectiva que lleva a las comunidades a impulsar el desarrollo sostenible necesario para generar paz” (León, 2009, p. 95)

<sup>876</sup> “el conjunto de procesos sociales de participación y fortalecimiento institucional que, a nivel local y regional, busca realizar, en medio del conflicto, transformaciones en el orden económico, social, cultural y político, para construir colectivamente las condiciones de una paz duradera basada en la vida con dignidad para todos los habitantes”. *Convenio de Financiación Específica entre la Comunidad Europea y la República de Colombia, Disposiciones Técnico Administrativas Anexo 2, Convenio Núm. COL/B/-3100/2001/0094. Quoted by León (2009, p. 100)*

<sup>877</sup> “En esta conferencia sucede un hecho muy importante que va a marcar el inicio de la formulación de la política pública de los Laboratorios de Paz, en palabras del padre De Roux: “...a nosotros no nos invitan, el gobierno no nos invitó entonces yo envié una carta a Londres explicando por qué el proceso del Magdalena Medio no es Plan Colombia, y por qué nosotros no estamos de acuerdo. Eso generó un escenario muy complicado, Pastrana (Colombian President) dijo en Londres que para él el mejor ejemplo de lo que era Plan Colombia era el Programa de Desarrollo y Paz del Magdalena Medio, Lugan de Cafot pidió la palabra y dijo: “le voy a leer lo que piensa el Programa de Desarrollo y Paz del Magdalena Medio”, y leyó la carta mía en público...” Francisco de Roux, quoted by León (2009, p. 99)

<sup>878</sup> Based in the Department of Valle del Cauca (Colombia) since 1967, this research center mission is to “reduce hunger and poverty, and improve human nutrition in the tropics through research aimed at increasing the eco-efficiency of agriculture” at a global level. CIAT official webpage.

<sup>879</sup> It managed to obtain support from the Government of Nariño, the Ford Foundation, and the Local Agency for the Development of Nariño (Arellano Rosero & Narváez de la Rosa, 2016, p. 25).

<sup>880</sup> *Convenio 243 Acción Social* –European Union. It was signed in December 2005 for a two-year period. In 2007 the FS invested COP 1.021 (USD 492 thousand) of which COP 475 million (USD 229 thousand) came from *Acción Social/European Union* (Davila, 2008, p. 18)

Public Policy of the EU) and produced as an output, the implementation of the “integral development” methodology in six northern municipalities of Nariño in order to empower communities with both the *AR information*<sup>881</sup> and *organization*. It intended to tackle down poverty by supporting coffee farmers upgrading in the coffee value chain.

According to Davila (2008, p. 18), as a result, a partnership was consolidated in 2007 between 65 farmers and Caravela, the first Colombian exporter of “specialty coffee”<sup>882</sup>. The latter, **strategically** mobilized their *AR property* by establishing purchases points in La Unión and Taminango (two municipalities near Buesaco) to stabilize the first LRA Specialty that profiled a small portion of the Resource coffee in Nariño in order to produce consistently the “exceptional coffee” taste related service.

Coincidentally, in 2007 the quality component of the SP1 was developing, spreading all over Nariño one use of *know-how* during the trading process completely unknown for farmers: the cupping. This transference of *AR information* to farmers (it included the equipment needed<sup>883</sup> and the cascade system in which the benefited cuppers transfer the knowledge to local farmers<sup>884</sup>), started from 2007 to empower the FS and Caravela with the *AR consensus* towards their objective to expand the LRA Specialty in the whole department, producing both the “exceptional coffee” taste related service and the “poverty reduction” symbolic service.

The second group of mobilizations: The group of producers that felt their demand for services left behind when the FNC implemented the LRA Standard-plus appeared again with the candidate in the electoral campaign 2008 demanded an LRA Specialty at the departmental level. Once in the Governors’ office, they **cooperatively** mobilized their *AR law* and *consensus* to concretize the Competitiveness Public Policy, in order to empower with the *AR organization* and *consensus* the *Comisión Regional de Competitividad de Nariño*, which decided to create a department-wide LRA Specialty. This commission **strategically** mobilized in coalition with the Government and farmers their *AR information* and *organization* to obtain the *AR property* (both a roasting facility to vertically integrate the value chain, and the Denomination of origin Nariño) needed to produce the LRA Specialty coffee, but they failed.

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<sup>881</sup> “Lo que hicimos desde la Fundación es gestionar la generación de conocimiento en los jóvenes caficultores, permitiéndoles el roce internacional para aprender de la calidad” Burbano (FS’s operative employee) quoted by Arellano Rosero and Narvárez de la Rosa (2016, p. 27)

<sup>882</sup> Caravela was the first exporter of Colombian coffee that decided to use their *infrastructures* and *know-how* in the trading process to produce the “exceptional coffee” taste related service: They developed the 100% physical traceability in 2002 and the first vacuum packing system to export Coffee in Colombia in 2005 (Cadena, 2017, pp. 10,13).

<sup>883</sup> The SPC1 equipped two coffee quality labs in Nariño, one in the north (La Unión) another in the west (Sandona) in 2004. (ACDI/VOCA, 2008a, p. 22).

<sup>884</sup> “Wbeimar Lasso Bolaños, quien luego de “educar” sus sentidos del gusto y el olfato, se categoriza como Catador Q y regresa a la zona a transferir el conocimiento mediante la creación de las escuelas de catación (...) A la fecha existen cerca de 100 escuelas de catación y algunas instituciones educativas dedicadas a la misma labor” (Arellano Rosero & Narvárez de la Rosa, 2016, p. 27)

Indeed, in the midst of a political campaign to elect a new Governor of Nariño, Jorge Rebolledo<sup>885</sup> **strategically** mobilized in an iterative process, the *AR political support* in favor of his political chief Antonio Navarro to obtain a reshaped version of the *AR consensus* possessed by the FS, in order to **strategically** mobilize the latter to increase the former. Indeed, they participated in the political rallies claiming for a department-wide LRA Specialty that was blocked by the powerful FNC and its commercial allies, they blamed the traditional coffee business in which farmers make the greatest investment but receive the lower profits<sup>886</sup>. In their words, farmers made all the effort to profile the “exceptional service” taste related services but they received the lowest “monetary services”.

Navarro was elected as Governor for the period 2008-2011, and Rebolledo was appointed as General Manager of the North region<sup>887</sup>. Once in office, they **strategically** mobilized their *AR law*<sup>888</sup> to activate the Competitiveness Public Policy<sup>889</sup> by producing an intermediary output: the *Comisión Regional de Competitividad de Nariño* (The Comisión onwards), an institution representative of the academia and, the private and public sector. Then, the Governor **strategically** mobilized its *AR consensus* to gather together all actors that were against the traditional coffee business (namely both LRAs ACADI/VOCA N&S), including the FS, the Q-graders and numerous farmers and associations into the Comisión to produce another intermediary output: the prioritization of the coffee value chain<sup>890</sup> transferring both *AR information and organization* to the Comisión in order they sought the LRA Specialty Coffee without taking into account the FNC recommendation (or constraints), nor using FNC’s trading services (Cooperatives; Almacafé; FoNC; FNC’s commercial division).

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<sup>885</sup> Rebolledo, as a former President of the Comité de Nariño that was sacked in the nineties by the FNC central office, joined the *Polo Democrático* political party, a leftist opposition party to participate in the 2008 electoral contest. Interview with Jairo Rebolledo, Gobernación de Nariño, *ibid*.

<sup>886</sup> “Cuándo Navarro comenzó a hacer campaña andaba con un libra de café y decía “Esta libra de café vale tanto en el exterior (...) esto se vende en (COP 30.000 / USD 14 per pound) y a ustedes les están pagando esto (COP 2.000/ USD 1 per pound), les están robando!”. Interview with Rober Barco, *Cooperativa de Caficultores del Occidente*, *ibid*.

<sup>887</sup> Nariño was divided in four zones (north, south, west and Pacific), each one with a general manager that coordinated all public effort in that particular region.

<sup>888</sup> “El Gobierno Nacional, en coordinación con las autoridades departamentales y por recomendación de la Comisión Nacional de Competitividad, promoverá la creación de comisiones regionales de competitividad, cuya composición reflejará la adecuada participación de los principales actores sociales de la región”. Art. 9 “Comisiones Regionales de Competitividad”. Decreto 2828 del 23 de agosto de 2006 del Presidente de la República De Colombia “por el cual se organiza el Sistema Administrativo Nacional de Competitividad y se dictan otras disposiciones”.

<sup>889</sup> “Sistema Administrativo Nacional de Competitividad”, *Documento del Consejo Nacional de Política Económica y Social 3439 de agosto de 2006*. This public policy decentralized the decision on both the economic activities that would be prioritized by each Department and the strategic project needed to achieve them. The National Government, in the hands of the Ministry of Commerce, Industry and Tourism, has the competence to coordinate the system and support the local initiatives.

<sup>890</sup> “El primer ejercicio de sinergia se realiza con la cadena del café, aprovechando que en ese entonces el producto de nuestro departamento fue seleccionado como el mejor café de Colombia” Eduardo Vicente Menza Vallejo, *coordinador de la Comisión Regional de Competitividad de Nariño 2010-2012*. Quoted by Arellano Rosero and Narváez de la Rosa (2016, p. 25)

The Comisión considered that coffee farmers in Nariño were privileged with their environmental offer that allowed production of the “exceptional coffee” taste related service<sup>891</sup>. But remaining in the first link of the productive value chain was the cause they had not prospered with their extraordinary product. Farmers had to avoid selling the green bean to the traders (not only the FNC but also Starbucks and Caravela) and move upwards in the coffee value chain to capture the whole value. The strategy was to encourage associativity among farmers so the new entities would be able to roast, pack and commercialize directly their product to consumers in the local market<sup>892</sup>.

To do so, through the *Gobernación the Nariño*, the Comisión **strategically** mobilized their *AR information* to obtain the *AR property* on the geographical reputation, by placing a demand for the Denomination of Origin Café de Nariño before the SIC during the second semester of 2009<sup>893</sup>. Their idea was to regulate the profile of the Resource through the DO specifications developed between them and controlled by the department government<sup>894</sup>.

Farmers **strategically** mobilized their *AR information* and *organization* to group together in a private company so they could develop this business model by obtaining the *AR infrastructure* through the Comisión<sup>895</sup>. Indeed, ten associative groups representing 2.300 associates from ten different municipalities founded on June 2010 *Alianza Café de Nariño S.A.S* (Gobnariño, 2011, p. 64). Afterward, the Comisión tried to activate the financial branch of the Competitiveness Public Policy to fund through Fomipyme the equipment needed by the Alianza Café for the roasting process<sup>896</sup>.

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<sup>891</sup> “El Gobierno Departamental buscó aprovechar la ventaja comparativa de la que goza en el café en el Departamento de Nariño caracterizado por una buena taya, limpia, alta acidez y cuerpo medio, cremoso y dulce acaramelado” (Gobnariño, 2011, p. 64)

<sup>892</sup> “Se invita a los caficultores del departamento a organizarse en asociaciones de pequeños productores con el ánimo de que éstos, bajo su propia autonomía y contando con la asesoría del departamento, transformen o consoliden sus asociaciones en procesadores del café producido por sus asociados para que sea comercializado en el mercado local y nacional, obteniendo mejores precios por sus productos” (Gobnariño, 2011, p. 64).

<sup>893</sup> “Asimismo, se busca que la Superintendencia de Industria y Comercio le dé el aval de Denominación de Origen, para garantizar la calidad a los consumidores. Esta solicitud se hizo hace seis meses y se espera un pronunciamiento.” Said Antonio Navarro, the Governor in an interview for the newspaper Portafolio (2010)

<sup>894</sup> “vamos a crear un sello de calidad de origen que administrará la Gobernación y que identificará en sus empaques los mejores granos del departamento”. Antonio Navarro, Governor of Nariño. Quoted by Semana (2010)

<sup>895</sup> “Para la Comisión, fue impactante descubrir el talento apropiado en nuestro territorio y se convirtió en la oportunidad que la región necesitaba para fortalecer su producto, sobre todo en el área tecnológica, en la que desafortunadamente adolecemos” Eduardo Armero Martínez, Catador Q Equipo Técnico Asprounión. Quoted by Arellano Rosero and Narváez de la Rosa (2016, p. 31)

<sup>896</sup> “A finales del segundo semestre del 2010, la Comisión emprende su tarea en pleno hacia el fortalecimiento productivo regional, postulando tres grandes proyectos ante el Fondo Colombiano de Modernización y Desarrollo Tecnológico de las Micro, Pequeñas y Medianas Empresas (Fomipyme). El primer proyecto, “Mejoramiento de la competitividad de la caficultura en el departamento de Nariño, mediante la optimización de los procesos de transformación el incremento de la capacidad de gestión comercial de las microempresas productoras y transformadoras de café de alta calidad” (Arellano Rosero & Narváez de la Rosa, 2016, p. 32)

Nevertheless, both strategies failed: The FNC **strategically** mobilized their *AR personal*<sup>897</sup> to concretize the rules of origin legal framework and obtain the DO Café de Nariño from the SIC in February 2011<sup>898</sup>. And the three projects presented to the Fomipyme were not approved<sup>899</sup>.

The third group of mobilizations: It could be considered that a local coffee public policy was needed to grasp more resources, so the Government of Nariño **selfishly** mobilized both their *AR political support* and *consensus* to obtain the *AR law*. Indeed, they innovatively activate the Competitiveness Public Policy through an intermediate output: the *ordenanza*<sup>900</sup> No. 002 del 30 de marzo de 2011 “por medio de la cual se adopta el acuerdo de competitividad de la cadena productiva de café como política pública del Departamento de Nariño” approved by the *Asamblea Departamental* (Departmental council). It practically invested the Departmental Government with the local authority in the coffee public policy that had been uncontested in the hands of the FNC since the first contract was signed with the National Government eighty years before, in order to seek the LRA Specialty Coffee<sup>901</sup>.

### 8.3.3. Institutional creativity to profile the “exceptional coffee” taste related service and “poverty reduction” symbolic service in a tiny portion of the Resource

La *Comisión* worked as a deliberative scenario in which producers and stakeholders in the production were able to move forward the services they demanded from the resource, namely increasing the monetary services for the former to trigger the “poverty reduction” symbolic service demanded by the latter. It could have been done by both producing the “exceptional coffee” taste related service and upgrading in the coffee value chain to sell directly to consumers.

Then, they activated this local coffee public policy through the Action Plan 2011, aiming to encourage a change in the uses of *know-how* in the planting, cultivation and post-harvesting processes depending on the very local particularities of the soil in the farm. According to the Nariño Government report (Gobnariño, 2011), they utilized a three-step process in which they invested COP 5,3 thousand million (USD 2.86 million): Firstly they conducted a baseline survey for 3.047 coffee farmers in 22 municipalities in which each plot was geo-referenced. Secondly, they took a sample of both coffee and soil in almost half of the surveyed farms (coffee samples were analyzed in the quality lab by the SENA Q-graders, and soils samples were analyzed in the soil lab of the Universidad de Nariño) in order to identify correlations between soils and aromatic

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<sup>897</sup> The Intellectual Property team that (as said in chapter 5.2, subsection closure) was recognized for its intellectual property strategy.

<sup>898</sup> *Resolución No 6093 de la Superintendencia de Industria y Comercio de Colombia del 11 de febrero de 2011.*

<sup>899</sup> “Sin embargo, pese al esfuerzo, los resultados con Fomipyme no fueron favorables.” (Arellano Rosero & Narváez de la Rosa, 2016, p. 32)

<sup>900</sup> The decisions approved by the Departmental Council are known as *ordenanzas*

<sup>901</sup> “La Gobernación de Nariño (...) consideró que se requerían adoptar estrategias técnicas y comerciales para lograr un proceso de comercialización directa (...) decide entonces tomar un papel activo en la formulación de alternativas de solución” (Gobnariño, 2011, p. 64).

profiles<sup>902</sup> and the proper agronomic practices that should be implemented to enhance them. Thirdly they supported the creation of “Corseagrocol” a private enterprise whose mission was to transmit these practices to the farmers, activating the Agriculture Public Policy that transferred money from the Ministry of Agriculture to support the plan of rural technical assistance in the Department <sup>903</sup> that could be contracted with private entities <sup>904</sup> . The idea was to provide personalized assistance which could have implied different uses in different activities in the first three processes (for example a tailor-made spatial distribution of coffee trees; a specific fertilizer plan, or a detail fermentation process) aiming to obtain the full aromatic profile.

Its main focus, though, was to encourage a different use of *infrastructures* and *know-how* in the trading and roasting process. It encouraged farmers, through training and workshops provided by the SENA, to group together in producer’s associations that could both bulk all parchment coffee from their members and score it in quality labs by Q graders. Then, different members of the Comisión (*la Gobernación de Nariño, Universidad de Nariño, la Fundación Social, el SENA y la Cámara de Comercio de Pasto*) joined efforts to build a roaster facility in the municipality of La Unión (Arellano Rosero & Narváez de la Rosa, 2016, p. 32), with the goal that these associations could use the proper s-curves in the roasting process to enhance a particular aromatic profile for their end-product<sup>905</sup>, its first prototype was presented in September 2011. (Prensa-FS, 2011)

Finally, they wanted to change the use of the *know-to-appreciate* by potential consumers both domestic and international in the communication strategy process. At the local level, even before this public policy was legally approved, the *Comisión* wanted to shape the reputation Colombians had of coffee from Nariño: on February 2010, they developed the event “*Café de Nariño, el mejor de Colombia*” in Bogotá in which they presented to a select audience the reasons why this coffee was extraordinary. Then, they had a business roundtable for two days in which associations were connected with potential buyers in the Nariño’s official house in Bogotá<sup>906</sup>. At the international,

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<sup>902</sup> A regional consolidation was made, in which three main aromatic profiles were identified: the three regions shared the orange and chocolate aroma, the citric acidity, the creamy body and the caramel-like sweetness. But they differ in the complexity of their profiles: for example, region two, which comprised Buesaco, had in addition, a green apple aroma, a malic acidity, an oily body and a sweetness remembering roasted nuts.

<sup>903</sup> “*Para tales efectos los municipios elaborarán un plan general de la asistencia técnica directa rural que será prestado por las entidades prestadoras de dichos servicios, los cuales serán pagados con los recursos que por virtud de la Ley 60 de 1993 o aquella que la modifique o esté vigente les corresponde invertir en las actividades de desarrollo rural y agropecuario y las demás fuentes de financiación que se describen en la presente ley*”. Numeral b, Art. 4. *Ley 607 del 3 de agosto de 2000 “Por medio de la cual se modifica la creación, funcionamiento y operación de las Unidades Municipales de Asistencia Técnica Agropecuaria, UMATA, y se reglamenta la asistencia técnica directa rural en consonancia con el Sistema Nacional de Ciencia y Tecnología”*.

<sup>904</sup> “*Las entidades encargadas de prestar los servicios de asistencia técnica son de carácter público, mixtas, privadas, (...) tendrán como objeto social la prestación de asistencia técnica directa rural*” Numeral e, Art. 4. *Ibíd.*

<sup>905</sup> “*Hasta ahora, la torrefacción en Nariño se ejecuta con tecnologías deficientes en control de temperatura y conservación de calidad del grano. El café especial requiere cuidado particular en dichos aspectos. La planta modular (the roaster facilities in la Unión) cuenta con mecanismos innovadores que permitirán ejecutar una tostión precisa y compenetrada con el grano nariñense*”. Guillermo Torres Daza, director de la Fundación Social Regional Nariño. Quoted by Arellano Rosero and Narváez de la Rosa (2016, p. 39)

<sup>906</sup> “*Grupos asociativos y organizaciones cafeteras de Nariño, tendrán la oportunidad de ofertar el café del Departamento, durante el desarrollo del evento: “Café de Nariño, el mejor de Colombia”, que se realizará en Bogotá*

level, as the FNC commercial division was not an option, the *Comisión* relied this effort in the *Cámara de Comercio de Pasto* who could activate the export promotion component of the Competitiveness Public Policy by Proexport: On the one hand, Proexport brought international experts to guided workshops in Pasto to teach producers the basics of exporting. On the other, it opened a window of opportunity to *Alianza Café de Nariño S.A.S.* to improve their product so it could be sold in the international markets through their commercial offices around the world.

Nevertheless, the Departmental Government finished its term before this LRA could be stabilized. And when this administration left at the end of 2011, *Alianza Café* had not been able to sell as roasted-packaged coffee the production of the three thousand participant farmers. So, they could not pay higher prices and the majority of farmers continued to sell their coffee through both incumbents LRAs EdN and Nespresso. Just a very tiny portion of the Resource in Nariño was sold through this LRA Specialty as roasted-packaged coffee.

#### 8.3.4. Outcome

Coffee Contests held in Colombia since 2005, showed that there was a market willing to pay between five and forty times the international coffee price when the present LRAs ACDI/VOCA N&S in the territory were paying either the standard price or a standard price plus a premium, which in its highest was two-thirds plus. As it happened in a context of widespread poverty in Nariño and Colombia, producers and stakeholders in production shared a definition of the problem in terms of the lower add value captured by producers that stuck them in poverty, so they agreed on the joint action (with their individual purposes and resources) to trigger the maximum value by producing the “exceptional coffee” taste related service and capture it through the vertical integration, namely a company owned by coffee farmers that sold directly to consumers.

Through a series of **cooperative** and **selfishly** mobilization of *action resources*, this coalition circumvented the coffee public policy by innovatively activating the Competitiveness Public Policy to put in the hands of the Government of Nariño, the authority to target the small coffee farmers in order to make them produce the specialty coffee and capture the whole value created by delivering technical assistance not to fulfill any code of conduct but to enhance the aromatic profile of their coffee; encouraging associative enterprises and; supporting these enterprises to vertically integrate the whole coffee value chain (so they were able to bulk, roast, communicate and sell the final product to the end-consumer).

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*entre el 24 y 26 de febrero y que contará con la presencia de empresarios, exportadores y personalidades del Gobierno Nacional y Cooperación Internacional (...) El objetivo del evento (...) es el de promocionar el consumo de cafés finos producidos por familias cafeteras de Nariño en las zonas de occidente y norte y posicionar el producto en el mercado para comercializarlo sin intermediarios (...) El 25 y 26 de febrero se realizará la Rueda de Negocios, en la Casa Delegada de la Gobernación de Nariño. Este será el espacio para que los empresarios y exportadores invitados caten, degusten y reconozcan la calidad de los cafés nariñenses y se motiven para iniciar negocios directos con las organizaciones nariñenses productoras de café”. (P. GobNariño, 2010)*

The institutional creativity was triggered by the deliberative scenario produced within the *Comisión* in which producers and stakeholders in the production could agree in the uses of resource constituents that would be needed: *Infrastructures* and *know-how* would be used by farmers in the three first processes, not by following any code of conduct but the ecotope-specific practices recommended to maximize the probability of a high scored coffee. *Infrastructures* in the following processes must be owned by an associative enterprise of farmers, in order that they could use them and the *know-how* to produce a roast-packed coffee for the end consumer. And influence the use of the *know-to-appreciate* by consumers through investing in coffee from Nariño reputation.

Nevertheless, the LRA Specialty got orphan once the Departmental government left. It had not the maturity needed to be stabilized and in the end, it just profiled a tiny portion of the Resource. As the LRA Specialty was dreamed (attracting enough consumers to be feasible), it would have de-regulated uses of Resource constituents in all activities during the first four processes encouraging experimentation and tailor-made interventions to increase the probability of a high-scored coffee. Nonetheless, as only the well-developed beans have the full potential aromatic profile, two activities were unavoidable: picking and reselection. On the other hand, it would have regulated uses in all activities during the trading, roasting, and communication strategy processes. It decreased the extent (48% of evenly-distributed regulated uses, Annex 7). A group of producers and stakeholders in production aligned towards the Q system profiling institution, to produce the “poverty reduction” symbolic service, by profiling an “exceptional coffee” taste related service that would increase “monetary” services. Initially through the *Comisión* as a governance mechanism, they developed a series of outputs (Laboratorio de Paz; Action Plan 2011; Corseagrocol's Technical assistance) that created the *Alianza Café* (a company owned by coffee farmers) which internalized the change in behavior needed to profile the Resource increasing coherence. Also, it would have erected the barriers of entry “product differentiation” at the producers’ level.

#### 8.4. Incumbent LRA Specialty, newborn LRA Nespresso, LRA Cultura, LRA CCEsp/Starbucks and LRA CNilson (2012-2016)

During the first decade of the two-thousands, actors mobilized their *resources of action* to activate institutions in order to trigger production of their services, which were guaranteed in their expected life span by two dynamics: 1- Land cultivated in coffee grew in parallel to the new demand from services, especially from the second half of the decade in which the area increased from 25 thousand ha in 2004 to 33 thousand ha in 2010<sup>907</sup>; 2- Farmers’ uses of Resources constituents encouraged by the different LRAs were complementary, in the sense that they all wanted to produce the full aromatic profile (then, other complementary uses would trigger the “exceptional coffee”, the “terroir expression” or the “clean cup” taste related service), to increase monetary services (other complementary uses would produce the “ethical trade” or the

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<sup>907</sup> Data comes from the annual report of the *Comité* from 2004 to 2010, known as *Informe Comité Departamental de Cafeteros de Nariño*.

“poverty reduction” symbolic services) while guaranteeing the “environmental responsibility” symbolic service.

Nevertheless, these dynamics changed when a strong Niña arrived in 2008-2009 (and again in 2011 – 2012), increasing cloud cover and precipitation while reducing solar irradiation (vital for productivity) in the whole country, including Nariño<sup>908</sup>. Indeed, from the 21 million kilos of coffee produced in Nariño in 2008, la Niña reduced it to 16 million in 2009<sup>909</sup>.

On the one hand, low temperatures and high precipitation (characteristics of la Niña in Colombian Andes) were ideal for the sporulation of the fungus *hemileia vastatrix*, responsible for the coffee leaf rust. It affects the leaves leaving the coffee tree without the photosynthetic material needed to fill the beans. Farmers did not have many options: they could either accept yield reduction or, pay the cost of a short term using pesticides or a long term renovating with leaf rust-resistant varieties. The last option was preferred as they were encouraged by the LRA Nespresso to renovate (by concretizing two instruments of the coffee public policy described before: *Competitividad* a subsidy in cash and fertilizer for each coffee three renovated; and *PSF* a subsidized loan equivalent to 40% of the capital to renovate the crop). In a few years<sup>910</sup>, they managed to renovate with pest-resistant varieties like Castillo®, almost 70% of the total coffee zones in Nariño (FNC, 2014, p. 83). Homogenization of the coffee crops with pest-resistant varieties started to menace the “exceptional coffee” taste related service sought by some actors.

On the other, a lower harvest meant that the stock of the Resource was not large enough to guarantee that all actors received their demanded services: If it was difficult for both Nespresso and Starbucks to access to the Resource, which monopolized purchases<sup>911</sup>, it was a real challenge for other actors.

In the first half of the decade, the EdN bought almost the entire harvest (around 20 million kilos of coffee in 2005)<sup>912</sup>. It was reduced to the 60% (from the 25 million kilos produced in 2007) when the LRA ACDI/VOCA Nespresso started paying premiums-when-buying (Torres, 2007) and in combination with the Niña, their purchases started to decrease<sup>913</sup> until the 20% of the harvest in 2012). It became so complicated for EdN purchase’ agents to fulfill their supply commitments that it could have been possible they decided to buy coffee in other departments to blend it with

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<sup>908</sup> “Las zonas ubicadas entre Nariño y Antioquia, son las que presentan la mayor reducción en brillo solar, en todas las estaciones, con valores superiores al 10% (...) lo que puede significar caídas en la producción potencial del 20% en promedio. Sin embargo, existen zonas donde esta disminución puede alcanzar el 54,7%” (FNC, 2012a, p. 36).

<sup>909</sup> Informe Comité Departamental de Cafeteros de Nariño 2008 and 2009.

<sup>910</sup> “When we started working in Colombia in 2002, about 90% of the coffees that we purchased were 100% Caturra, with the rest being blends with some Colombia and Typica. Back in those days, Roya was not an issue and farmers really did not take that into account”. Alejandro Cadena, CEO of Caravela quoted by Sheridan (2014, p. 1).

<sup>911</sup> “by the time we collected baseline data in Nariño in 2012, Nespresso and Starbucks were buying more than 98 percent of the region’s coffee” (Sheridan, 2015)

<sup>912</sup> Interview with Gustavo Sarasti, former technical director of EdN and currently employee at Carcafé.

<sup>913</sup> According to the FNC’s exporting records (FNC, 2017b) EdN exported: 16.7 million kilos of coffee in 2007; 14 million in 2008; 5.5 million in 2009; 5.2 million in 2010; 3 million in 2011 and 3.1 million in 2012 and 0.3 million until august 2013.

the Nariño coffee until coffee was rejected by Starbucks because it did not have the Nariño's aromatic profile<sup>914</sup>. In any case, from the second half of 2013, EdN stopped its exporting activity<sup>915</sup> and was absorbed by the local branch of the worldwide commodities trader ED&F, the coffee exporter Carcafé<sup>916</sup>. In the case of the LRAs ACDI/VOCA Nespresso, both the *Cooperativa de Occidente* and the *Cooperativa del Norte* managed to buy almost the entire coffee harvest in Nariño, that was delivered to Almacafé (13 million kilos of coffee was purchased (FNC, 2012c, p. 65) from the plausible 16 million produced in 2012<sup>917</sup>). But due to the decrease in production, they struggled to fulfill their commitments with Nespresso in the number of kilos of coffee<sup>918</sup>.

On the other hand, before 2007 some specialty roasters came to Nariño to buy isolated coffee lots that had won the quality contest (which could be described as a one-transaction relationship). When Caravela arrived thanks to the FS, they consolidated the mentioned small LRA Specialty in the north of Nariño with few customers: two of them could have been Stumptown Coffee Roasters from 2007 and PT's coffee in 2008 (Sheridan, 2016, p. 56). But at the end of the decade, demand from this service boomed. "Then something truly magical happened. During the 2010 Cup of Excellence competition, held in Nariño, the region produced a perfect coffee<sup>919</sup>" (Sheridan, 2016, p. 56). It was not only the perfect coffee produced by Jose Antonio Gualguan (co-founder of Asoveracruz) whose coffee was auctioned in USD 40 per pound, but also 17 of the 21 finalists were from Nariño. Furthermore, in the 2012 version of the Cup of Excellence more than Nariño, it was Buesaco who came under the spotlight when three farmers were in the top 10, including the first position (Etelvina Diaz); the fourth position (Franco López)<sup>920</sup> and the tenth position (Amelio Santacruz). Specialty roasters turned their faces to Nariño, but then, they realized they could not buy single lots of Nariño coffee because both LRA (LRA Nespresso and

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<sup>914</sup> Even though there is not any hard evidence, numerous times interviewers talked about this situation. Some even described the tactics used by agents to deceive EdN by filling with non-Nariño coffee the portion of the bag that was not reached by the sample-taken method.

<sup>915</sup> The lattes export reported by EdN in the export records administered by the FNC, was in august 2013 (FNC, 2017b)

<sup>916</sup> An example of this takeover was the environmental duties that were transferred from EdN to Carcafé. "*se manifiesta la cesión de las obligaciones ambientales de EDNSAS(Liquidada) a CARCAFE LTDA*" *Antecedentes, Resolución No 1247 del 30 de diciembre de 2015 "Por medio de la cual se Renueva un Permiso de Emisiones Atmosféricas y se dictan otras disposiciones" de la Corporacion Autonoma Regional de Nariño – Corponariño.*

<sup>917</sup> We assume similar production as the first Niña period because it is particularly difficult to find official numbers for this second Niña period in Nariño, even though they are available for other regions. Acknowledging the difficulties for fulfilling coffee deliveries, a mantle over the Nariño's production was needed to avoid suspicious.

<sup>918</sup> They bought 13.2 million kilos of coffee in Nariño in 2011, from which 12.5 were delivered to Almacafé (FNC, 2011, p. 72). It was near a third less than the 18.6 million kilos delivered by both cooperatives to Almacafé in 2010 (FNC, 2010a, p. 92).

<sup>919</sup> "That experience will forever be tattooed in my memory. It was the first time I'd ever awarded a Colombian coffee a perfect 100-point score. It was a mind-bending, unfathomably delicious coffee (...) Several of the jury members gave it a perfect score, which has only happened a handful of times in over 15 years of the competition " Geoff Watts, vice president for coffee at Intelligentsia Coffee, quoted by Sheridan (2016, p. 56).

<sup>920</sup> Mother and father in law of Nilson López, the coffee buyer of the purchase point of the *Cooperativa de Occidente* in Buesaco.

LRA Starbucks) bulked coffee lots from several municipalities, hindering potential treasures like Gualguan's coffee and hiding agronomic practices<sup>921</sup>.

At the municipal level, people started to realize that farmers that crop over the two-thousand m.a.s.l. had the best cupping scores in the Cup of Excellence contest. So, since 2006 coffee crops started to increase in altitude<sup>922</sup> towards the *páramos*, the water springs of the municipality. During the discussion of the new development plan for the municipality, this expansion of the agricultural frontier was regarded as a problem for conservation of the water Resource<sup>923</sup>. So, it was agreed on a whole environmental chapter, "*Capítulo VII Buesaco ambientalmente sostenible y previsorio*", in the Development Plan approved by the municipal council<sup>924</sup> which, even though agriculture was targeted as responsible, focused mainly on soft general intervention to enhance the "environmental culture"<sup>925</sup>.

So, different traders and roasters had a real threat to maintaining their access to the Resource that they wanted to solve profiling other symbolic and/or taste related services. A first coalition composed of profilers (Carcafé and Starbucks) and stakeholders in consumption intended to profile the Fairtrade symbolic services; a second coalition composed of profilers (Cooperatives and Nespresso) and stakeholders in production (FNC and the local authority) intended to profile the "environmental responsible" symbolic service firstly, and then, with stakeholders in consumption to profile the "exceptional coffee" taste related service. A third coalition composed of profilers (producers and specialty roasters and importers) demanded the "transparent coffee" symbolic service, that allows them to know precisely from which farm the coffee came from, and which practices had been implemented: from variety planted to post-harvesting techniques.

#### 8.4.1. Strategically-cooperative mobilization of action resources between profilers.

La Niña reduced the stock of Resource coffee in Nariño (And Buesaco/Veracruz), so both LRAs ACIDI/VOCA N&S coalitions **strategically** mobilized their *action resources* in coalition with other actors to enhance farmers' loyalty to their purchasing agents in order to increase their access to the Resource. In both cases, the mobilization produced the contrary outcome: they lost their *AR consensus*. Farmers did not supply them but instead, they sold through other commercial channels. As a consequence, Asoveracruz and the local authority of Buesaco **cooperatively** mobilized their *AR organization* and *money*, to endow a recently founded producers' association

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<sup>921</sup> "For years, as a coffee taster, I got used to seeing generic Nariño coffees come into our cupping room (...) I never knew if the sample represented one grower or 100, one community or 20. And I never knew what sort of quality practices, if any, were going into the coffee." Timothy Hill, coffee quality manager at Counter Culture Coffee, quoted by Sheridan (2016, p. 58).

<sup>922</sup> Interview with Arturo Benavides, coordinator of the agriculture office (UMATA) of the Alcaldía de Buesaco.

<sup>923</sup> "*Este capital hídrico junto con la extraordinaria condición climática, constituye la principal fortaleza ambiental del municipio, sin embargo, la ampliación de la frontera agrícola y la extracción de madera como combustible doméstico están ocasionando la transformación de la base natural que la soporta*". (CTPB, 2012)

<sup>924</sup> Acuerdo No 11 de mayo 31 de 2012 "por el cual se adopta el Plan de Desarrollo del Municipio de Buesaco para el Periodo 2012-2015. Buesaco sin Barreras" del Consejo Municipal de Buesaco.

<sup>925</sup> Art. 38. Programa Cultura Ambiental. En Acuerdo 11, *ibid*.

(GEB) with the *AR property* needed to start the physical traceability and the *AR organization* to connect with both coffee farmers in Buesaco and other actors at the departmental level, namely the Comisión. The latter **strategically** mobilized their *AR law* to produce the *AR information* and *consensus* on a new kind of LRA Specialty featured not by the vertical integration but by the physical traceability.

The Carcafé-Starbucks coalition could have explored other than premiums-when-buying strategies to sustain coffee farmers' loyalty and increase their access to the Resource<sup>926</sup> by **strategically** mobilizing its *AR organization* to partner with the Catholic Relief Services and the Howard G. Buffet Foundation (HGBF onwards). Combining the *AR consensus*<sup>927</sup> from the former and the *AR money*<sup>928</sup> from the latter to concretize the Specialty Coffee Program and produce a final output known as the CRS Borderlands Coffee Project (Borderlands hereafter) from 2011 to 2016 in order to gain access to the VSS market using the Fairtrade certification mark.

This output intended to profile the "fair trade"<sup>929</sup> symbolic services for probably both improve their "brand reputation" symbolic service and to reinforce the links between initially EdN and afterward Carcafé and, farmers: "during the project's first year of operations in partnership with Starbucks Coffee Company. Borderlands' farmers engaged in a Fair Trade Certification pilot which represented the first time participants ever organized to bring their coffee to market collectively" (HGBF, 2014, p. 47). When Borderlands started in Nariño in March 2012 by conducting a baseline survey<sup>930</sup> and then in June through the "Fairtrade for all" pilot project<sup>931</sup> it was clearly profiling the Starbucks demands. But afterward in the second half of 2013, Borderlands joined the third coalition when an Advisory Board composed of six leading us roasters and importers<sup>932</sup> was enlisted to support the Borderlands excluding Starbucks. In an event hosted by the Gobernación de Nariño, this Advisory Board met two hundred farmers (from whom only three had ever met a

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<sup>926</sup> Farmers' loyalty to continue selling to the LRA Starbucks was an issue foreseen by EdN since the very beginning of the relationship between Nespresso and the FNC. "FNC's challenge has made Empresas' farmer loyalty-building program all the more important" Jorge Enrique Vasquez, CEO of EdN quoted by (Levine, 2005, p. 8)

<sup>927</sup> "CRS has been working closely with the Colombian Catholic Church and local institutions since 1953 to encourage a culture of peace and an organized response to the internal conflict". CRS official webpage.

<sup>928</sup> "To support the Borderlands Coffee Project, in December 2010, HGBF committed more than \$10 million over five years to benefit these smallholder coffee growers in Colombia and Ecuador" (HGBF, 2012, p. 48)

<sup>929</sup> In 2011 Fairtrade USA broke away from Fairtrade International in order that big plantations and small farmers non-associated could be benefited from the Fairtrade Label. By using the phrase "fair trade for all", Fairtrade USA opened the doors for big buyers like Starbucks.

<sup>930</sup> "Beginning next month, more than 40 agronomists and community organizers will fan out across the highlands of Nariño, Colombia, and along the agricultural frontier in Ecuador's northern Amazon region to collect baseline data from more than 1,000 smallholder farmers participating in our Borderlands Coffee Project". (Sheridan, 2012c).

<sup>931</sup> "Fair Trade USA CEO Paul Rice visited CRS headquarters in Baltimore to explain why Fair-Trade USA was splitting with FLO and launching its Fair Trade for All initiative. As part of that conversation, we learned that FTUSA's first pilot project with independent smallholder farmers was being planned for some of the same communities in Nariño where we had been planning to implement the Borderlands project. And that we had a common partner in Empresas de Nariño." (Sheridan, 2012a). "I announced here our involvement in an FT4All (Fair trade for all) innovation pilot with independent smallholder farmers in Nariño, Colombia" (Sheridan, 2012b)

<sup>932</sup> Atlas Coffee Importers; Counter Culture Coffee; Green Mountain Coffee Roasters; Intelligentsia Coffee; Stumptown Coffee; Sustainable Harvest Coffee Importers (Sheridan, 2013).

coffee buyer) “to begin to build new trading relationships built on a mutual commitment to quality and value” (Sheridan, 2013). Borderlands changed to incentive the profiling of the “transparent coffee” symbolic service<sup>933</sup>, a service that was not sought by Starbucks, and moreover, could increase their risk to access to the Resource coffee in Nariño.

The FNC-Nespresso coalition partnered with the local authority to gain access to the Resource needed by the former<sup>934</sup> by profiling the “environmental responsible” symbolic service demanded by the latter to **strategically** mobilized their *AR personal*<sup>935</sup> to take advantage of the *AR organization* possessed by Asoveracruz<sup>936</sup> (which, as said before, had practically vanished during the 2006-2012 period) to concretize the *Proyecto de Alianzas Productivas*<sup>937</sup> from the Agricultural Public Policy. Their goal was to formulate projects that could produce outputs to influence the uses of *infrastructures* and *know-how* of producers<sup>938</sup>, particularly the “environmentally responsible” symbolic service by protecting the water<sup>939</sup> and the soil<sup>940</sup>. The

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<sup>933</sup> “The main idea was to find ways to make the coffee trade more profitable and more sustainable for smallholder growers in Nariño, Colombia. We didn’t know exactly how we could do that until we got our boots dirty in the field and started to understand the region’s coffee sector better. Now it is very clear: help growers effectively separate their coffees for different segments of the market and help them connect with buyers in each of those segments.” (Stumptown, 2015)

<sup>934</sup> “Técnico Carlos Chimachana (FNC’s extension agent in Buesaco) dijo que la producción de café para el año presente estaba muy baja por eso la Federación (FNC) no le llegaría recursos por lo tanto se dificultaría para dar ayudas a los cafeteros” Acta 37 February/2012. “Carlos Chimachana habló sobre el programa de Café Nespresso (...) los que no estén se les afiliaría” Acta 38 March/2012. “Tomó la palabra el técnico, mencionó la falta de afiliación de algunos caficultores a Nespresso” Acta 39 April/2012.

<sup>935</sup> Namely the seven extension agents of the FNC and the four employees of the *Umata (agricultural office of the municipality)*

<sup>936</sup> “Tomó la palabra el director de la Umata mencionó que el programa se llamaba “oportunidades para el campo” (The proper name was Alianzas Productivas). *El Gobierno (Nacional) siempre trabaja con los grupos y de todos los grupos el de Veracruz reúne todos los requisitos, a diferencia de los del municipio. Por eso deseaba trabajar con este grupo en unión con la Federación (FNC). Entre más grande el grupo, recibiría más ayudas económicas que podría utilizarse para fertilizar el café, arreglo de beneficiaderos, en adquirir maquinaria despulpadora*”. Acta 37 February/2012.

<sup>937</sup> Its objective was to strengthen a commercial alliance between small farmers and their private buyers, by improving the small farmers’ weaknesses identified by the alliance (Minagricultura, 2012, p. 3).

<sup>938</sup> “Director de la Umata (...) además animó a tener un cultivo sostenible en todo aspecto. Para ello nos mostró una diapositiva sobre el manejo de agua sucias con lo cual contribuir para mejorar el ecosistema”. Acta 40 May/2012. “Director de la Umata (...) habló sobre la necesidad de mejorar el cultivo de café en las fincas, para ello era esencial la certificación de la finca lo cuál mejoraba el precio del café (...) habló que para la certificación es esencial un manejo adecuado de basuras, un sistema de tratamiento de agua en la finca. 50 fincas para certificación”. Acta 41 June/2012.

<sup>939</sup> “Director de la Umata habló sobre un cultivo alternativo de guadua en la finca cafetera (...) este cultivo puede beneficiar o ayudar a salir o mantener el agua”. Acta 41 June/2012. “Representante de Corponariño especialista en cultivo de guadua mencionó sobre lo importante que es este cultivo para reforestar las fuentes de agua (..) por otro lado, la cantidad de hojas que caen protege el suelo (...) Director de la Umata habló sobre convenio para crear un vivero para sembrar árboles”. Acta 42 August/2012.

<sup>940</sup> “El técnico (...) felicitó a los caficultores por esfuerzo al hacer el croquis de la finca, como también complementarlo lo que faltaba como la cantidad de árboles de cada lote, la variedad de café, los años de producción, esto le ayudaría al caficultor a la hora de renovación. Hoy es muy diferente el manejo de la hierba en los cafetales, mencionó el manejo de una nueva herramienta para proteger el suelo: el selector de maleza con el cuál sólo se destruye la maleza que daña el cultivo y se deja la que protege el suelo”. Acta 39 April/2012.

output was not produced because the requirement<sup>941</sup> was not fulfilled by their commercial ally, the *Cooperativa de Occidente*<sup>942</sup>. This failure disintegrated the coalition FNC-Asoveracruz-Local Authority.

With the same goal to have access to the Resource, the FNC/Comité strategically mobilized its *AR property*<sup>943</sup> combined with the *AR organization*<sup>944</sup> of the Alliance for Coffee Excellence (ACE) at the international level and the *AR organization* Asoveracruz at the local level, in order to innovatively activate the Strategic Special Coffee Plan (chapter 4.2.1) and produce an output known as the “Cup of Excellence” in order to strengthen the LRA Nespresso. Even if this contest withdraws a portion of the Resource from this LRA to be profiled differently by other upper-end roasters, the fact that it was held once a year with the very best farmers, implied that the quantities removed were insignificant<sup>945</sup>. But by offering the possibility of selling coffee at incredible prices if they registered in both *Cooperativa de Occidente* and *Cooperativa del Norte* in Buesaco<sup>946</sup>, the FNC intended to trigger both loyalties to the LRA Nespresso and farmers’ effort to improve quality.

But, instead of increase loyalty to the LRA Nespresso, the “Cup of Excellence” diminished it: the extraordinary performance of farmers in Buesaco in the Cup of Excellence 2012 (two of whom were part of Asoveracruz<sup>947</sup>) created the momentum for farmers in Buesaco to found the *Grupo Empresarial Buesaco* (GEB onwards)<sup>948</sup> in order to increase their monetary services by producing the “exceptional coffee” taste related service and then, commercialize it in the specialty market.

Due to the previous transfer of the *AR information* to farmers produced by the SCP1, SCP2 and Alianza Café SAS, it was considered that the key to the specialty business market, was the cupping

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<sup>941</sup> The special line of the *Proyecto de Alianzas Productivas* for “specialty coffee” demanded that the commercial allied guarantee both of a premium over the standard coffee price and a cofounding equivalent to 3% of the total value (Minagricultura, 2012, p. 16).

<sup>942</sup> “El señor presidente mencionó que hubo problemas al presentar el proyecto Alianzas principalmente con el Presidente de la Cooperativa de Occidente porque tenía que consignar en una cuenta (COP) 12 millones en servicios”. Acta 39 April/2012.

<sup>943</sup> As said before, coffee samples were registered in any of FNC’s purchases points in the country, and then, the whole coffee lots of the sectioned samples to be auctioned, were transported, threshed, exported and finally paid to farmers, through the FNC’s logistics entities (this cost were discounted from the final price).

<sup>944</sup> Their Jury for the Colombia 2017 contests, for example, was composed by seven roasters in Asia, five roasters in Europe, four roasters in USA, two roasters in Oceania, and four observers from the USA and UK.

<sup>945</sup> Two thousand kilos per farmer multiplied by a few dozens of finalists that would have never sold more than one hundred thousand kilos. When compared with the two hundred million kilos exported by the FNC annually, it would be less than 0.001 percent.

<sup>946</sup> “Además mencionó sobre el concurso Tasa a la Excelencia. Para participar el usuario debería concursar con 2.000 kilos. Animó a todos los socios a que participaran en dicho concurso”. Acta 40 May/2012.

<sup>947</sup> “Tomó la palabra Carlos Pantoja (President of Asoveracruz) y felicitó a los dos socios que participaron en el concurso taza a la excelencia”. Acta 43. September/2012. Both associates Nilson López and Franco López won the first and the fourth position respectively.

<sup>948</sup> Interview with Nilson López, CEO of Café de Nilson.

knowledge of coffee farmers, so it was absolutely needed a quality lab<sup>949</sup>. Asoveracruz partnered with the local authority and **cooperatively** mobilized their resource *AR organization* and *money*<sup>950</sup> to concretize the *programa de oportunidades rurales*<sup>951</sup> from the Agricultural public policy and produce as an output the project to acquire a lab<sup>952</sup> and empower the GEB with both the *AR property*<sup>953</sup> and *organization*<sup>954</sup>. As a result, GEB joined the Comisión to represent Buesaco farmers (including Asoveracruz) at the departmental level<sup>955</sup>.

The Comisión **strategically** mobilized their *AR law*<sup>956</sup> to concretize the program “*Rutas Competitivas*”, an instrument of the Competitiveness Public Policy and produce an output known as the *Iniciativa Café Plus*<sup>957</sup>: With a COP 600 million (USD 325 thousand) financial effort, an international consulting firm was contracted<sup>958</sup> to support the Comisión’s effort to formulate a territorial strategy to enhance profitability of actors involved in Nariño’s coffee value chain (Innpulsa, 2014, p. 6). A six-month process divided into three phases (1- Challenges identification; 2- Strategy formulation; 3- Launching of actions) produced the *AR information* once it finished in June 2013.

#### 8.4.2. Institutional creativity to profile the “exceptional coffee” taste related service and the “transparent coffee” symbolic service.

It was through the *Café Plus* scenario that demands from profiling actors in the specialty industry arrived in Nariño, namely the combination of “exceptional coffee” taste related service and the “transparent coffee” symbolic service through two main mechanism: on the one hand, this

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<sup>949</sup> Asoveracruz invited another associative group that was beneficiated with a quality lab during through the *Familias Guardabosques* project: “*Habló sobre la necesidad de ingresar al Grupo Empresarial (...) tomó la palabra Nilson López, habló sobre el laboratorio que la Fundación Social envió a la bodega de Guardabosques. Mencionó que esta unión con Guarda Bosques beneficiaria en gran manera al grupo con el precio del café pues permitiría vender a compradores de Estados Unidos directamente*” Acta 44. November/2012. This effort was unsuccessful.

<sup>950</sup> The municipality co-funded the project with COP 10 million (USD 5.350) (Gabinete, 2015, p. 67)

<sup>951</sup> Its main objective was to support rural producer organizations to improve its competences in their markets (Minagricultura, 2013) .

<sup>952</sup> It costed COP 25 million (USD 13.376). Interview with Carlos Pantoja, Asoveracruz, *ibid*.

<sup>953</sup> “*Por otro lado, se presentaría un proyecto para la compra de un laboratorio de café para el grupo asociativo y se lo ubicaría en la sede del grupo empresarial Buesaco*”. Acta 46. January/2013

<sup>954</sup> By joining the GEB, Asoveracruz transferred its resource organization and allow them to expand in the whole municipality.

<sup>955</sup> “*Tomó la palabra Nilson López mencionó la reunión en la Cámara de Comercio (namely the Comisión) con el fin de ayudar con recursos a grupo micro empresariales para lo cual asistiría el representante legal del grupo asociativo Veracruz*” Acta 46 January/2013.

<sup>956</sup> “*(...) Las comisiones regionales de competitividad formarán parte del Sistema Administrativo Nacional de Competitividad*”. Art. 9 “*Comisiones Regionales de Competitividad*”. Decreto 2828 del 23 de agosto de 2006 del Presidente de la República De Colombia “*por el cual se organiza el Sistema Administrativo Nacional de Competitividad y se dictan otras disposiciones*”.

<sup>957</sup> All information from this initiative comes from the webpage <https://iniciativacafeplus.wordpress.com/> they launched to interact with their beneficiaries.

<sup>958</sup> The Cluster Competitiveness Group, based on Washigton.

process conducted interviews with these actors in Seattle, California, and Portland<sup>959</sup>, on the other, it recommended that instead of vertical integration to increase monetary services (as previously considered) they should focus on commercialization of high score coffee<sup>960</sup>.

It changed completely local actors' perspective<sup>961</sup> and its recommendation was clearly incorporated when local actors within the Comisión agreed on an intermediary output: The *Café plus* Action Plan. It has one objective: to commercialize only coffee scored 85 or higher<sup>962</sup>, and two main strategies: to enhance quality and to commercialize it. The FS agreed to focus their efforts in the two projects oriented to produce quality: a quite ambitious program to identify the practices that produce consistently an 85+ SCAA score<sup>963</sup>; and to establish a research farm to test these practices. The Government of Nariño was to lead the commercialization strategies for external markets (which implied mainly funding business missions and participation in specialized trade fairs) while the Chamber of Commerce of Pasto would focus on the domestic market to trigger local demand for high-quality coffee. And plausibly Borderlands agreed to support the linkages with specialty roasters<sup>964</sup>.

It could be said that even though Caravela was present since 2007, a stable LRA Specialty in Buesaco was firmly established only after 2013. Firstly, with the launch of the GEB at the end of the previous year; secondly with the participation in the *Café Plus* initiative; thirdly with the first coffee negotiation between GEB and Banexport (after Caravela, the biggest exporter of Specialty Coffee in Colombia) in March 2013<sup>965</sup>; and fourthly with the Advisory Board of the Borderland Project that gave visualization towards the specialty roasters community<sup>966</sup>.

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<sup>959</sup> Companies interviewed by the *Café Plus* initiative : Victrola Coffee Roasters; Four Barrel Coffee; Zoka Coffee Roasters and Tea Co; Starbucks; SCAA; Portland Roasting Coffee; Sight Glass; Sustainable Harvest; The American Barista & Coffee School; Fonté Coffee Roasters; Vivace espresso; Bellissimo Coffee and Ritual Coffee Roasters. (Caféplus, 2013a, p. 63)

<sup>960</sup> "En el largo plazo el café de Nariño sea considerado de alta calidad en el mercado de alta calidad por los consumidores expertos que están dispuestos a pagar más por su café (...) Márgenes mayores y consistentes para los productores de este negocio" (Caféplus, 2013b, p. 28). "Requisitos del Mercado: Calidad excelente; SCAA >85; Perfil en taza; Trazabilidad; Consistencia; Largo plazo (Caféplus, 2013b, p. 38).

<sup>961</sup> For example, the FS who had lead the process, finally understood the "specialty coffee" industry in which they had been working since 2005. "Se hablaba de café especial pero no había nada para validarlo. Esos recursos (*Café plus* initiative) produjeron un documento técnico sobre hacia dónde deberían orientarse los esfuerzos de Nariño. Aparece la Ruta! Ya hay datos!" Interview with Luz Dary Chicaiza, CEO of *Café con Altura* Buesaco.

<sup>962</sup> "se definió un objetivo estratégico particular: comercializar cafés de alta calidad con tazas de 85 puntos en adelante en la escala SCAA". (Prensa-FS, 2013a)

<sup>963</sup> "Programa para la producción de café calidad en el departamento de Nariño. Implementación de Buenas Prácticas Agrícolas Específicas, enfocadas a asegurar calidad en taza requerida por los compradores del negocio de café de calidad (Puntaje superior a 85 en escala SCAA)" (Caféplus, 2013b, p. 50).

<sup>964</sup> They participated in the *Café Plus* initiative through Ricardo Mendoza Hurtado (who worked at the interinstitutional relations office of CRS). Participant's list uploaded in the official webpage of *Cafeplus*. <https://iniciativacafeplus.files.wordpress.com/2013/04/asistentes-2da-presentacion.pdf>. Last visited 28-03-2018.

<sup>965</sup> "El día 24 de marzo llegaría el Presidente de Banexport a negociar como pagaría el kilo de café, por lo cual se invitó a todos los socios a asistir ese día a la negociación" Acta 45 March/2013.

<sup>966</sup> "In 2013, it was just 16 tiny single-farm lots and one container of coffee from a Fair-Trade Certification pilot from barely 100 growers. After that, we committed to expanding the number of farmers involved in the process and

The *Café Plus initiative* consolidated the Comisión as a deliberative scenario which could incorporate demands from other actors than producers and stakeholders in production as in the incumbent LRA Specialty. Indeed, firstly through the interviews and afterwards through the Advisory Board of the Borderland Project, demands from traders and roasters were incorporated alongside with demands from a few stakeholders in consumption to profile the Resource and produce larger monetary services by providing both the “exceptional coffee” taste related service (focusing mainly on practices adapted to the environment than in varieties) and the “transparent coffee” taste related service (through commercialization of green coffee, not roasted coffee). Least notorious but uncontested were the efforts to produce also the “environmentally responsible” symbolic service. This initiative gave to the Comisión a strategic plan to move forward, but their agreed actions to build the LRA Specialty needed to be funded.

In this sense, since 2012 a group of legal pieces<sup>967</sup> allowed any local authority in Colombia access to the (previously restricted to oil/mineral producers regions) National Royalties fund that boomed thanks to the high raw material prices during the second half of the decade. It was expected an astonishing COP 100 million of millions (USD 55.6 billion) to fund projects during the following ten years<sup>968</sup>. As it could only be activated by territorial authorities, the Buesaco representatives of the Comisión composed of producers (the GEB) and stakeholders in production (the FS) formulated a project<sup>969</sup> to build a community coffee processing facilities<sup>970</sup> in order to develop the Specialty LRA at the municipal level. In August 2013, it was presented before the municipal council of Buesaco in order to develop the whole set of post-harvesting processes to optimize the aromatic potential, reducing the environmental impact and maximizing income for farmers<sup>971</sup>. The idea was that farmers focused their uses of *infrastructures* and *know-how* in the planting and cultivation processes, especially in the timely and selective picking of coffee cherries. Then *infrastructures* and *know-how* in the post-harvesting and trading processes would be carried on by the GEB in order to reduce cupping defects due to avoidable practices (like bean damage due to inappropriate equipment; or the full sour bean due to untimely fermentations;

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growing the volume gradually every year. In 2014, it was 25 single-farm lots and 16 community lots from over 300 growers” (Sheridan, 2015).

<sup>967</sup> *Acto Legislativo 005 del 15 de julio del 2011 “por el cual se constituye el Sistema General de Regalías”; Ley 1530 del 17 de mayo de 2012 “Por la cual se regula la organización y el funcionamiento del Sistema General de Regalías”; Decreto 1077 del 22 de mayo del 2012 de la Presidencia de la República “por el cual se reglamenta parcialmente la Ley 1530 de 2012 en materia presupuestal y se dictan otras disposiciones”.*

<sup>968</sup> *“Hoy, el Sistema General de Regalías, que representará cerca de 100 billones de pesos en inversiones en proyectos de impacto regional en los próximos 10 años” (Botero López, 2012)*

<sup>969</sup> *“La propuesta fue construida colectivamente por miembros del sector caficulator, quienes, luego de varios encuentros, determinaron centrar los esfuerzos en el proceso del beneficio del grano”. (Prensa-FS, 2013b)*

<sup>970</sup> *“Proyecto “Aprovechamiento de la producción de café especial, mediante la instalación de una planta de beneficio en el municipio de Buesaco – Nariño” (...) Con un total solicitado de \$546 millones de pesos (Prensa-FS, 2013b).*

<sup>971</sup> *“La experiencia de trabajo apunta a que el grano en la planta posee todas las calidades, una vez sale de ella, dichas calidades comienzan su deterioro, en especial en la etapa del beneficio producto de inadecuadas prácticas agrícolas. De ahí la importancia de la instalación de la planta de beneficio de la que habla el proyecto (...) el proyecto se está apuntando además a (...) infraestructura tecnológica de punta, sobreprecios apropiados en café especial, consolidación de las agremiaciones cafeteras, conservación del medio ambiente, entre otras bondades. (Prensa-FS, 2013b)*

or contamination when drying and transport) and to reduce pollution of the water resource in the sense that it was much feasible to have one big water-treatment facility than three thousand small ones. On the other hand, the critical mass of GEB and its very near relation with farmers would allow them to have direct contact with both the specialty coffee farmer and the specialty coffee roaster, producing both the physical traceability the latter needed and the higher monetary services demanded by the former.

This project was supported by the local authorities: both the mayor and the city council of Buesaco approved it to be funded by the National Royalties fund<sup>972</sup>.

#### 8.4.3. Selfishly mobilization of action resources by stakeholders in production

In Colombia, projects formulated by the *Comisiones Regionales de Competitividad* to be funded with the Royalties Fund after 2012, were a result of long negotiations between different actors mainly taken during the previous Departmental Governments (2008-2011). The new Departmental Governments (2012-2015) considered that these kinds of commitments were unfair with their electorate who had voted for their proposals<sup>973</sup>. So, they mobilized their *AR political support* in order that the regulatory pieces gave to them a determinant role in the final decision: indeed, the Law 1530/2012 and the *Decreto* 1077/2012 empowered the departmental authority with the *AR law*. Governors were to decide which projects in their department could be subject to funding, and then, to be part of a triparty decision committee that would approve the funds: la *Secretaria de Planeación de la Gobernación* has the competence to register the projects<sup>974</sup> that were going to be analyzed by the decision committee OCAD - *Órgano Colegiado de Administración y Decisión*<sup>975</sup> to be funded. It was a shot in the foot for the Competitiveness Public Policy because, in the end, decisions taken by the *Comisiones Regionales de Competitividad* were replaced by a one actor decision: The Governor of the Department. Only if the Governor agreed, action plans made by the *Comisiones* were going to be implemented<sup>976</sup>.

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<sup>972</sup> “La idea contó con el aval del Concejo Municipal y de la Alcaldía. El paso siguiente es la presentación del documento ante el Sistema General de Regalías a fin de obtener la financiación solicitada” (Prensa-FS, 2013b).

<sup>973</sup> “Sin embargo, es necesario pedirle al gobierno nacional que, en el tema de la distribución de las regalías, tales recursos no queden amarrados a proyectos que dejaron anteriores administraciones, permitiendo que los nuevos gobernantes podamos construir, replantear y decidir acerca de tales proyectos de acuerdo con nuestras necesidades, propuestas de gobierno y planes de desarrollo”. Said Botero López (2012), the president of the *Federación Nacional de Departamentos* during the *Asamblea Extraordinaria de Gobernadores* in February 2012, a few month earlier than the *Ley 1530 del 17 de mayo de 2012* was approved.

<sup>974</sup> “las Secretarías de Planeación de las entidades territoriales (...) presentarán dentro de los cinco días hábiles siguientes a su recepción, el respectivo proyecto a la Secretaría Técnica del Órgano Colegiado de Administración y Decisión”. Art. 11. *Decreto* 1077/2012, *ibid*.

<sup>975</sup> *Órgano Colegiado de Administración y Decisión Regional* was composed of five Ministries, all Governors in the Region (Nariño belonged to the Pacific Region alongside other four Departments) and three local authorities. *Ley 1530/2012 and Decreto 1077/2012*.

<sup>976</sup> “Para ello, los primeros y principales insumos que se pusieron en marcha fueron los Planes Regionales de Competitividad. Sin embargo, algunos de los gobernadores no están abiertos a recibir opiniones sobre el destino de las inversiones en el departamento durante el cuatrienio de su mandato. Esta situación ha llevado a que el éxito de las CRC dependa, en gran medida, del compromiso e interés del gobernador de turno”. Gómez Restrepo and Mitchell (2016)

In Nariño, the Governor **selfishly** mobilized its *AR law* to create a new table to discuss a new action plan for the coffee issue in the Department that placed it again in the realm of the Coffee Public Policy lead by the FNC. Plausibly it was just a matter of ignorance of the process itself, and the departmental government wanted to start from zero just because they wanted to lead the formulation process<sup>977</sup>.

#### 8.4.4. Absence of institutional creativity

But deeply involved actors in the previous exercise like the FS got frustrated and abandoned the collective effort, leaving the way clear for a new coalition between the CRS and the FNC to formulated a project that focused on production (lead by the FNC) and entrepreneurship (lead by the CRS)<sup>978</sup>: At the production level the FNC would concretize the PSF (chapter 4.2.2) by promoting renovation at high densities with pest-resistant varieties (subsidizing the planting and fertilizer) and improving post-harvesting (subsidizing 1.500 post-harvesting facilities); at the commercialization level the CRS would support farmers associations by establishing two coffee processing facilities in two municipalities (La Florida and Taminango), and by strengthening their commercial activities to sell their coffee in the specialty market. This project is known as *“Fortalecimiento de la cadena de valor del café de alta calidad en el departamento de Nariño”* was funded by the National Royalties Fund with COP 13.500 million (USD 5.4 million) in 2015 (Rodríguez-Camayo et al., 2015, p. 3) started to be implemented at the time of the fieldwork conducted by the author.

In Nariño the deliberative scenario, produced by the Comisión to agree on how to profile the Resource Coffee from Nariño between the extensive group of actors who demanded different services, was completely erased. As a result, numerous actors that had participated in the Comisión felt that they were defrauded by the Government in both the national and departmental level. It was said to them by public officials from all levels, that regional competitiveness was a matter of local consensus to strategically define a common goal and to prioritize the most relevant actions to achieve it. But in the end, they realized that representatives of the national, departmental and municipal Governments in the OCAD were indifferent to their collective efforts<sup>979</sup>.

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<sup>977</sup> For Pedro Sanguino there was not anyone interested in destroy the previous exercise, it was just a matter that the Governor wanted to create their own project. *“Pero el problema es la sostenibilidad política, que los sueños de hoy sean lo sueños del próximo Gobierno. Cada uno va creyendo en su propia apuesta (...) los proyectos se vuelven muy institucionales, logrando los objetivos institucionales, pero no comunitarios”*. Interview with Pedro Sanguino, representative of the FS in the Café Plus Initiative.

<sup>978</sup> *“El que formuló gran parte del proyecto fue la CRS (...) La FNC en producción y el CRS en fortalecimiento empresarial”*. Interview with Santiago Caldas, Professional in charge of coffee at the agricultural office of the Department of Nariño.

<sup>979</sup> *“El problema de la sostenibilidad es social, todo lo que tiene que ver con asociatividad, se sufre de disociación: no hay comunión entre los actores, las apuestas no son definitivas”*. Interview with Pedro Sanguino. Ibid.

So, a coalition of profilers (specialty coffee producers and specialty roasters) and stakeholders in production (FS) defined the problem as the lack of transparency in the coffee value chain that hindered valuable aromatic profiles for both consumers and producers. But as collective action was unfeasible due to the previous mobilization of action resources, the LRA Specialty coalition, even though sought for a common profile featured by both the “exceptional coffee” taste related service and the “transparent coffee” symbolic service to increase the “monetary” services, was divided among three LRAs led by three different specialty traders.

Actors intended to profile this combination of services on the whole Resource (2.83 million kilos of coffee) in Buesaco in the harvest 2015/2016. But in the end, it was done only on 372 thousand kilos of coffee<sup>980</sup>. It meant that the 87% of the Resource, did not produce this combination of services, depriving the huge majority of coffee farmers in the municipality of the monetary services promised <sup>981</sup>, even though they had done the recommended practices to enhance quality <sup>982</sup>. Additionally, the “environmentally responsible” symbolic service sought by stakeholders in production and consumption was completely absent: Pollution in water and soil did not decrease<sup>983</sup> and rivalries to access to the water increased<sup>984</sup>.

- LRA Nespresso (actors’ coalitions, mobilization of AR, institutional creativity and outcome)

As said before, the coalition FNC/Comité-Nespresso unsuccessfully tried to guarantee its access to the Resource by mobilizing its AR *personal* and *property* combined with the AR *organization* of Asoveracruz and the ACE by profiling firstly the “environmentally responsible” symbolic service and then the “exceptional coffee” taste related service. In the first case, they failed to activate the agricultural public policy and in the second they innovatively activated the Strategic Specialty

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<sup>980</sup> The number is a result of the addition of kilos sold as high-score coffee by CNilson, Caltura, and Cespeciales. I mean completely because a large amount of high-score coffee was sold as standard coffee because there was not a demand for it.

<sup>981</sup> Moreover, with the promise of higher premiums-after-buying if coffee scored high (and was paid as high-score coffee), farmers despised the premium-when-buying of the LRA Nespresso: despite being the main buyer in Buesaco in 2012, the FNC through both cooperatives bought 402 thousand kilos (96% of which was through the LRA Nespresso), only the 14% of the harvest 2015/2016. The low proportion of coffee sold as specialty, means that, in the end, a high proportion of them did not receive any of the two premiums, effectively reducing their monetary services.

<sup>982</sup> For example, the 70 farmers surveyed in Veracruz implemented the labor intensive reselection process: bean by bean they manually discarded the beans with physical defects.

<sup>983</sup> At least in Veracruz from which we have data, the 100% of farmers surveyed in Veracruz did not treat water after fermentation (this water is so toxic, that farmers cannot pour the water into their crop because the coffee trees would die) and pour it into a nearby ditch; 41% instead of use the pulp as an organic fertilizer leave it as a polluting waste; and 63% do not implement integral practices to protect the soil.

<sup>984</sup> In low precipitation regions as Buesaco, access to water channels produces healthy coffee crops. During the field work the author observed creeks full of pipelines instead of running water, which conducted the liquid towards private-owned irrigation system. This reproduces a vicious circle in which the farmer with the money to pay for the pipe, would have a better production and quality hence would receive the high-score premiums, while depriving the poorer farmer of both a better production, quality and prices.

Coffee Plan with completely contrary-to-pretended results they lost their AR consensus. From being an actor to work with, in the search of solutions, they became the actor to fight: The FNC was responsible for impeding farmers to obtain the high prices of the high-score coffee. As a result, from almost monopolizing coffee purchases during the second Niña period, in 2015 they bought only 14% of the Buesaco coffee harvest (according to table 2 in section 3.2.2) and 35% of the Veracruz coffee harvest (according to table 15 in section 7.1.1).

Nonetheless, as the authority in the coffee public policy, they concretize both the Specialty Coffee Program and the renovation program by renovating FNC-Nespresso agreement in 2012 to invest USD 17 million per year in premiums and both technical assistance and equipment delivery to fulfill the TASQ® profiling institution. Outputs that influence the use of *infrastructures* to enhance productivity through young, dense, pest-resistant coffee trees and controlled shade during the planting process and the use of *know-how* so an integrated farm management to enhance conservation during the cultivation and post-harvesting (delivery of equipment to improve the quality of coffee and to reduce pollution of the watersheds). Training that emphasized on the integrated farm management, shade regulation, maintenance of coverages and protected areas around the creeks. Nevertheless, as explained in chapter 7.2.2 in Veracruz neither the equipment arrived nor the personalized technical assistance.

As a consequence, in 2015 the newborn LRA Nespresso downgraded two conditions of the incumbent LRA ACDI/VOCA Nespresso. It regulated new uses of Resource constituents in two activities (shade and reselection) but deregulated four in the first three processes (soil management; coffee borer beetle management; pest and disease management and waste management). It decreased the extent (85% of evenly-distributed regulated uses, Annex 7). Additionally, even though they maintained the same alignment and the same governance mechanism, once they lost their consensus their access to the Resource was seriously put in question reducing its capacity to influence the change in farmers' behavior, reducing its provision of the demanded services decreasing the coherence. And barriers of entry remain exactly the same (equal closure).

- LRA CCesp/Starbucks (actors' coalitions, mobilization of AR, institutional creativity and outcome)

This newborn LRA was led by the ancient purchase point of the EdN in Buesaco, renamed as the *Cooperativa de Cafés Especiales de Buesaco* in 2012. Plausible when losing funding when EdN bankrupted, the purchases were funded by 25 associates from Buesaco. They began selling through the LRA Standard willing to move into the mysterious specialty market<sup>985</sup> that was understood thanks to the Café Plus Initiative (in which they were participants<sup>986</sup>). In 2013, once the problem was defined in terms of poor taste related services due to the lack of a transparent

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<sup>985</sup> "Se creó porque no había líneas de comercialización (...) se identificaron los cafés especiales". Interview with José Ignacio Gómez, CEO and founder of the CCespeciales.

<sup>986</sup> They participated in the Café Plus initiative through José Ignacio Gómez (Pastor Gómez's son who funded CCespeciales). Participant's list uploaded in the official webpage of Café plus.

commercial channel, a coalition between profilers (producers, CCEsp, Caravela) decided to strategically mobilize their CCEsp' *AR property* and *organization* at the local level<sup>987</sup> and Caravela's *AR property* and *organization* at the international level<sup>988</sup> to divert the Specialty Coffee Program of the Coffee Public Policy through an informal coffee purchase agreement to create a market in which coffee was traded depending on its cupping profile: they target CCEsp *infrastructures* and *know-how* in the trading process to profile this combination of services: they made a cupping test for every coffee lot with good factor, and a full physical traceability for higher-than-84 coffee lots creating the newborn LRA CCEsp (Caravela would buy only coffee scored higher than 84).

The absence of institutional creativity left behind services demanded by other actors. Even though all actors were interested in the full profile, especially the monetary services, only the 17% of all coffee purchased in 2015 produced the combination "exceptional coffee" taste related"; "transparent coffee" symbolic service and higher "monetary" services. The 83% remaining<sup>989</sup> was sold through both the LRA Standard and the LRA Starbucks (when Carcafé resumed the EdN operations). Hence, from the incumbent LRA Starbucks, the newborn LRA CCEspesiales, with the exception of the three activities during planting (variety, renovation, density) encouraged by the PSF-coffee public policy, de-regulated the uses of Resource constituents that have to be done by farmers and were encouraged by previous outputs (diversification; soil management, coffee borer beetle management, pest and disease management; waste management). Nonetheless, the better prices that a high-scored coffee could provide, incentivized one very labor intense activity during the post-harvesting: reselection. Additionally, the "transparent coffee" implied that three activities in the last four processes were regulated (blending; packaging and communication). In this sense, extent was reduced (60% of evenly-regulated uses, Annex 7). Also, CCEspesiales aligned with Caravela to profile the "exceptional coffee" through an informal agreement in which scored-coffee higher than 83 (using the Q system profiling institution) could be bought preferentially by this specialty exporter<sup>990</sup>. This LRA did not intend to influence farmers' behavior, instead it focused on the sorting process, but in the end, just 17% of the Resource profiled the services sought for<sup>991</sup>. Hence, the coherence is quite low. In any case, for this small portion, it created the "product differentiation" barrier of entry at the producers' level through both the origin and the exceptional aromatic profile increasing closure.

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<sup>987</sup> Being the local partner of EdN, they had a purchase point in the urban center of Buesaco and a long lived commercial relation with hundreds of coffee farmers.

<sup>988</sup> Caravela had the exporting facilities in Colombia, Guatemala, México and Perú. And importing facilities in USA, UK and Australia. They partnered with 134 roasters in 31 countries. Interview with Alejandro Cadena, CEO of Caravela Coffee.

<sup>989</sup> From 1.2 million kilos of total purchases in 2015/2016: 200 thousand kilos of coffee had not a good factor, 800 thousand kilos had either a lower-than-84 cupping or were not sold as high-score coffee and, 200 thousand kilos were sold as high-score coffee. Interview with José Ignacio Gómez. CCEspesiales, *ibid*.

<sup>990</sup> The remaining could be sold through other Specialty traders or roasters, or through the LRA Standard or Starbucks.

<sup>991</sup> And the remaining, if previously was increasing its coherence to profile services sought by the LRA Starbucks, afterwards was going on the other way down.

- LRA Caltura (actors' coalitions, mobilization of AR, institutional creativity and outcome)

The FS abandoned the collective action at the departmental level, and decided to focus in Buesaco to profile the “exception coffee” taste related service and the “transparent coffee” symbolic service but including higher monetary services for farmers to produce the “poverty reduction” symbolic service<sup>992</sup>. With extensive participation<sup>993</sup>, the FS defined the problem from the poor wellbeing of farmers due to the lack of a transparent commercial channel. And in the second semester of 2014, a coalition of producers (GEB ) and stakeholders in production (FS) decided to **strategically** mobilize their GEB's *AR organization*<sup>994</sup> with the FS's *AR money*<sup>995</sup>, to divert the Specialty Coffee Program of the Coffee Public Policy by launching a company to create a market in which coffee was traded depending on its cupping profile.

Indeed, instead of investing in public goods as the community coffee processing facilities (that fail to be funded by public authorities), the FS decided to intervene directly in the market by supporting with capital the trading activity<sup>996</sup>. At the beginning of 2015, the GEB was relaunched as a new trading company known as “*Café con Altura Buesaco SAS*” (Caltura) funded with capital from both the FS and the GEB's associates: FS would capitalize Caltura with COP 2.5 thousand million (USD 1.35 million)<sup>997</sup> and GEB associates including Nilson López, and Asoveracruz had to capitalize with COP 16 million (USD 5 thousand)<sup>998</sup> creating the newborn LRA Caltura.

The Caltura developed a *Café con Altura's* handbook that described the uses of Resource constituents needed to produce their non-negotiable profile. So, unilaterally the FS decided<sup>999</sup> which uses of *infrastructures* and *know-how* should be made by farmers in the first three processes (planting, cultivation, post-harvesting) to increase the probability of a high-score coffee, particularly picking and re-selection to guarantee only perfect ripe beans in their lots. Also uses of *infrastructures* and *know-how* in the trading process by cupping samples of coffee from

<sup>992</sup> Interview with Luz Dary Chicaiza, Caltura, *ibid*.

<sup>993</sup> “*Se realizó un trabajo de 30 talleres con 1.000 caficultores en veredas y corregimientos del municipio para concertar la propuesta de valor y servicios que se implementan para mejorar el ingreso y calidad de vida de los caficultores de Buesaco*”. Email received from Guillermo Torres, *ibid*.

<sup>994</sup> As a representative group of producers in Buesaco, they have strong ties with both coffee farmers at the municipal level and other actors at the departmental level like the Comisión.

<sup>995</sup> The Fundación Social is the owner the *Banco Caja Social Colmena*, the eight bank in Colombia by profits in 2016. (Dinero, 2016)

<sup>996</sup> “*Mencionó que la directora nacional de la fundación social está completamente interesada en Buesaco principalmente al Grupo Empresarial, por eso manifestó el deseo de prestar un dinero a dicho grupo para la comercialización de café*” Acta 56. September/2014. Initially they focused on coffee production to enhance its aroma precursors but then, they realized that to offer high-scored coffee, they have to buy it first because specialty traders cup samples to define the price they are willing to pay. Thus, capital was needed to buy the lots of each farmer then, send the samples, and wait until a specialty trader agreed to purchase.

<sup>997</sup> Interview with Luz Dary Chicaiza, Caltura, *ibid*.

<sup>998</sup> “*El presidente (...) mencionó sobre un convenio que hará la Fundación Social con el Grupo Empresarial para crear una nueva empresa. Por lo tanto, cada socio del Grupo Empresarial deberá aportar COP 16 millones*”. Acta 60. February/2015.

<sup>999</sup> The technical assistance guidebook was a document produced entirely by the FS. Interview with Viviana Ramos, extension agent of *Café con Altura Buesaco SAS*.

participant farmers, and establishing the full physical traceability for the high-scored samples. Similarly to the previous LRA, only 14% of the coffee purchased produced the profile sought by actors (paid as a high-score full traceability coffee). The remaining was sold through the LRA Standard and the LRA Starbucks <sup>1000</sup>.

Inspired in the LRA Specialty, the newborn LRA Caltura deregulated all uses of Resource constituents during the first two processes to encourage experimentation and tailor-made practices depending on the environmental offer, with the sole exception of the picking (which is extensively detailed in the *Café con Altura's* handbook). On the other hand, they focused all their regulations on the post-harvesting activities (hulling, fermentation, drying and reselection) to enhance the aromatic profile, while to guarantee the “transparent coffee”, similar to the previous one, three activities in the last four processes were regulated (blending; packaging and communication), reducing significantly the extent (52% of evenly-regulated uses, Annex 7). So, producers and the FS aligned to produce the poverty reduction symbolic service through higher monetary services due to the profiling of the “exceptional coffee” taste related service and the “transparent coffee” symbolic service. They founded the *Café con Altura Buesaco SAS* to both encourage, in a one-way direction, experimentation (through both technical advice on the farm and higher premium-when-buying) so farmers could produce high-scored coffee and, to reach the specialty roaster that would pay better prices. This second goal was more difficult than previously assumed, so only a small portion was profiled as intended, decreasing the coherence. Similar to the previous one, for the small portion that was actually bought, it created the “product differentiation” barrier of entry at the producers’ level through both the origin and the exceptional aromatic profile increasing closure.

This hostile takeover as it was called by the President of Asoveracruz <sup>1001</sup> or the voluntary retirement as consider by the FS<sup>1002</sup>, caused that only seventeen associates transited from GEB to Caltura, but those without the money were forced to withdraw like Asoveracruz<sup>1003</sup> and Nilson López.

- LRA CNilson (actors’ coalitions, mobilization of AR, institutional creativity and outcome)

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<sup>1000</sup> From 630 thousand kilos of total purchases in 2015/2016: 540 thousand kilos had either a lower-than-84 cupping or were not sold as high-score coffee, and 90 thousand kilos were sold as high-score coffee. Interview with Luz Dary Chicaiza, Caltura, *ibid*.

<sup>1001</sup> Interview with Carlos Pantoja, Asoveracruz, *ibid*.

<sup>1002</sup> “*Fueron los mismos socios los que voluntariamente y libremente decidieron retirarse de la empresa y ofrecieron sus acciones. En ningún momento la Fundación Social sugirió, recomendó o intentó la adquisición de esta participación. La evidencia de esta voluntad de retiro de los socios y su posterior venta se puede comprobar en la correspondencia y varias comunicaciones escritas que enviaron los socios. Por el contrario y en un acto de mucha responsabilidad y solidaridad con los socios del proyecto, la Fundación Social compró estas acciones a un precio justo y concertado con ellos*”. Email received from Guillermo Torres, *ibid*.

<sup>1003</sup> “*La Asamblea mencionó que no estaría en capacidad de aportar estos recursos. Por lo tanto, la Asamblea propuso retirarse de la asociación (GEB)*”. Acta 60. February/2015.

As a coffee farmer, Nilson had participated in the Comisión, in the GEB/*Café con Altura* initiatives aiming to obtain higher “monetary” services by profiling both the “exceptional coffee” taste related service and the “transparent coffee” symbolic service. Once the former failed and the latter excluded him, a window of opportunity was opened with Inconexus, a nascent exporter of specialty coffee with whom he had sold his family’s coffee since 2011, which was looking for the “share value” symbolic service. They defined the problem as an unequal value creation caused by the lack of transparency in the commercial transaction that discourages farmers to trigger the full aromatic profile and obtain the most money from their crop. Hence, they consolidated a coalition of profilers (producers close to Nilson and Inconexus) that **strategically** mobilized the Nilson’s *AR organization* at the local level<sup>1004</sup> and Inconexus’ *AR organization* at the international level<sup>1005</sup> to divert the Specialty Coffee Program of the Coffee Public Policy by signing a formal contract in which Nilson will procure the amount of coffee demanded by Inconexus, through the farmers he knew had the practices to optimize the full aromatic potential, creating the newborn LRA CNilson.

The absence of intuitional creativity that impede the collective action among other actors participant in the incumbent LRA Specialty, was not inherited by this LRA which, contrary to the previous cases, had a completely dynamic profile that was shaped by a closed list of participant actors (160 coffee farmers, Nilson, Inconexus, Royal Coffee, Specialty roasters) through both mechanism described previously in chapter 7: direct and frequent interaction between producers-Nilson and Nilson-Inconexus and, producers-roaster interaction in periodic coffee auctions. They agreed on the use of their *infrastructures* and *know-how* in the trading process: they would use Nilson’s knowledge to purchase only in farms with high-score potential and would pay the highest premium-when-buying in Buesaco; then samples would go to Bogotá where there were cupped in Inconexus’ lab; a final price would be offered back to the farmers in six days depending on the cupping score: 30% of coffee is bought as high-score coffee <sup>1006</sup> paying premiums-after-buying, and the remaining 70% is paid with premium-when-buying higher than the standard price to produce the “terroir expression”, that would be sold in Inconexus either packaged (as regional, single lots or blended) or brewed in their *Café Cultor* coffee store.

Being also inspired in the Specialty LRA, it deregulated all uses of Resource constituents during the first three processes to encourage experimentation to increase chances of high-scored coffee, with the sole exception of the picking and reselection. On the other hand, it regulated all activities in the last four processes (trading, roasting, communication strategy and brewing) decreasing extent (62% of evenly-regulated uses, Annex 7). Consequently, the mentioned actors sought the “shared value” symbolic service through higher monetary services due to the profiling

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<sup>1004</sup> As mentioned, as *fiel de báscula* at the purchase point of the *Cooperativa de Occidente* since 2000 he had the knowledge of who the best farmers were (in terms of potential aromatic profile) and much more important, he had their trust.

<sup>1005</sup> Inconexus is the Colombian supplier of Royal Coffee, a specialty coffee importer in the US with warehouses in the West (Seattle and Okland), the south (Houston) and the northeast (Madison). And a fifth one in China (Shangai). Royal Coffee official webpage.

<sup>1006</sup> From 240 thousand kilos of total purchases in 2015/2016:72 thousand kilos were sold as high-score coffee. Interview with Nilson López, *Café de Nilson*, *ibid*.

of the “exceptional coffee” taste related service and the “transparent coffee” symbolic service, through a purchase contract supported on a trust-based relation (Producers-Nilson-Innconexus) to reach high-scored coffee according to the Q System profiling institution, that is maintained because of the better prices all participants are receiving. It created the “product differentiation” barrier of entry at the producers’ level through both the origin and the exceptional aromatic profile increasing closure.

### 8.5. Intermediary synthesis: Inputs to test our second hypothesis

Throughout the four actors’ games in which we divided this chapter, and whose systematization is presented in annex 8.2. We identified ten different LRAs since the breakdown of the International Coffee Agreement that are presented in table 24 and whose detailed development is presented in Annex 9.2.

Our diachronic analysis implies that we observed the change caused by the actor’s games, by comparing the final configuration of the LRA(s) against the initial configuration of the incumbent LRA. In some cases, actor’s games affected one, two or the three conditions of the incumbent LRA, in other cases, actor’s game produced newborn LRAs.

The extent is measured in terms of the change in the percentage of regulated activities from the 26 activities (in percentage points); the coherence in terms of a failed/successful coordination among profilers to provide the services sought by the LRA; and the closure in terms of the placement of the barriers of entry. This exercise is presented in Annex 7.2.

Table 24 Variation of the LRA’s conditions explained by the three analytical dimensions in Buesaco: Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Standard	NA	NA	NA	Baseline: 17 pp evenly distributed	Baseline: Failed: two-way coordination among producers	Baseline: Barriers at the traders’ level
LRA Standard-plus	PF+SHP	Selfishly	Absence	Plus 14 pp evenly distributed (over the incumbent LRA Standard)	Failed: two-way coordination among producers	Product differentiation (potentially origin)
LRA EdN	PT+PR	Strategically	Absence	Plus 43 pp evenly distributed (over the incumbent LRA Standard)	Failed: one-way coordination among profilers	Barriers at the roaster level
LRA ACDI/VOCA N	PF+PT+P R+SHP	Strategically / Cooperative	Presence	Plus 57 pp evenly distributed (over the incumbent LRA Standard-Plus)	Successful: two-way coordination among profilers	Barriers at the roaster level
LRA ACDI/VOCA S	PF+PT+P R+SHP	Strategically / Cooperative	Presence	Plus 28 pp evenly distributed (over the incumbent LRA EdN)	Successful: two-way coordination among profilers	Barriers at the roaster level
LRA Specialty	PF+SHP	Cooperative / Selfishly	Presence	Less 40 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: two-way coordination among producers	Product differentiation (potentially origin)
LRA Nespresso	PT+PR+S HP	Strategically	Absence	Less 3 pp evenly distributed (over LRAs ACDI/VOCA N&S)	Failed: one-way coordination among traders	Barriers at the roaster level

LRA CCEsp/Star bucks	PF+PT	Strategically	Absence	Less 28 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: one-way coordination among traders	Product differentiation (potentially origin, specialty)
LRA Caltura	PF+PT+SHP	Strategically	Absence	Less 36 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: one-way coordination among producers	Product differentiation (potentially origin, specialty)
LRA Cnilson	PF+PT+PR	Strategically	Presence	Less 26 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Successful two-way coordination among all profilers	Product differentiation (origin and specialty)

\*SHP = Stakeholders in production; SHC = Stakeholders in consumption; PF = Profilers farmers; PT = Profilers traders; PR = Profilers roasters

## Forth Part: Conclusions and Recommendations

### Chapter 9. Conclusions

This chapter is divided into four subchapters. The first is a contextual recapitulation that leads to the selection of the antagonist contexts that supports the generalization of our results. The second test our first hypothesis and the third tests our second hypothesis. It ends with a discussion on the validity of our analytical framework.

#### 9.1. A contextual recapitulation

Assuming that the categorization of Gereffi et al. (2005) can be considered exhaustive<sup>1007</sup>, the global population of LRAs developed to govern the Resource coffee in a given time and space could be classified either as a *market*, a *modular* or a *relational* type. Taking the most antagonistic cases in which the global demand for services landed in a small enough geographical area to be synchronically study, we claim that we have two extreme representative cases of the whole population that permit us to generalize our results: if our conditions explain the level of services provision in the most complex cases, it would explain the level of services provision in all other less complex cases.

In chapter 3.2.1 we explained the logic of our selection of Colombia and the two regions. In this conclusive chapter, we demonstrate that the logic functioned to select Riosucio in Caldas and Buesaco in Nariño. Both regions have an inverse historical tendency<sup>1008</sup> explained by the local features of two property rights institutions: the *Resguardos Indígenas* in Caldas and the *Haciendas* in Nariño that explained the divergent implementation of the Colombian coffee public policy, which sparked a global demand for services. A divergence that results on two completely opposed types of governance: *modular* in Riosucio and *relational* in Buesaco, which informs our criteria to select the most antagonist cases.

##### 9.1.1. Market and modular value chains in Riosucio (Caldas)

In Riosucio, the Resguardos played a major role in the shaping of the coffee Resource by being instrumental for concretizing the Coffee Public Policy: firstly, when the priest as co-authorities encouraged coffee farming to “civilize” indigenes. Then, by the land grabbing following their disintegration to consolidate the commercial coffee farming sought by the FNC. Finally, the

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<sup>1007</sup> In chapter 3.2.1 we explained that the capabilities in the supply-base have no other variation than *high* in the coffee industry, so we excluded both the *captive* and *hierarchical* modes of governance.

<sup>1008</sup> During the twentieth century coffee expanded in the main coffee regions in Colombia like Caldas while remained a marginal crop in Nariño, but liberalization of international coffee markets and deregularization of agriculture in Colombia since the nineties inverted the tendency: while coffee culture declined in the regions featured by commercial coffee farming, in the peripheral coffee lands featured by the family farming it increased. Caldas reduced from 91 thousand ha cultivated in coffee in 1997 to 74 thousand ha in 2014 whereas Nariño increased from 20 thousand ha in 1997 to 39 thousand in 2014. Data from 1997 comes from the Censo Cafetero 1997, data from 2014 comes from the SICA/FNC.

reestablishment of the Resguardos attracted stakeholders in consumption that fueled an innovative concretization of the coffee public policy.

The Convenio Max Havelaar that focused on the family farmers to support their indigenous organization, gave the Cooperative a competitive advantage to concretize the Specialty Coffee Public Policy with other actors who wanted to access to the Resource. Eventually the commercial coffee farming disappeared, and the family farms were attracted by the Cooperative, which was capable enough to canalize the demands for services sought by some profiling actors including international rosters (Starbucks, Nespresso, Keurig and Equal Exchange); stakeholders in consumption (Max Havelaar, Fairtrade Labelling Organizations, the Sustainable Agriculture Network and Conservation International) and stakeholders in production (FNC, local authorities, indigenous movements, fundanatura).

As a result, the global consensus on a productive and environmentally responsible coffee-growing landed in Riosucio alongside the European demand for coffee fair traded; the American demand for organic coffee culture; Canadian demand for coffee farming that respects indigenous communities; Swiss demand for a coffee aromatic profile featured by the winy aroma and; North American demand for coffee with a citric-acid aromatic profile. Demands that encouraged actors to concretize the coffee public policy to change profilers' behavior, so they would use constituents to profile the Resource through *market* and *modular* value chains.

### 9.1.2. Market and relational value chains in Buesaco (Nariño)

In Buesaco, due to the lack of historical evidence of coffee crop evolution in Nariño, we assembled secondary data to put forward our conjecture that diversified pre-capitalist haciendas shaped the coffee Resource by preventing the concretization of the Coffee Public Policy: Firstly, cultivating coffee as a marginal crop oriented towards the domestic market until the first half of the twentieth century. Then, in its transformative process into commercial food farms by displacing the ancient sharecroppers towards the agricultural frontier were coffee (and illegal crops) started to be the only option for smallholders that were pushed out of the fertile plateau, skipping the commercial coffee farm that benefited from the FNC's coffee public policy. Finally, these peasants were the target group of public policy to substitute illegal crops with "specialty" coffee, which eventually created a competitive spirit that limited the concretization of the coffee public policy.

The Family farming was also encouraged to crop coffee in order to substitute illegal crops through public-private partnerships, which discovered an exceptional aromatic profile in Nariño that triggered demand for services hardly achievable by the Coffee Public Policy in place. So, international rosters (including Starbucks and Nespresso, and a plethora of Specialty Roasters<sup>1009</sup>); stakeholders in consumption (US Agency for International Development, the Dutch Directorate-General for International Cooperation, alongside the Specialty Coffee Association of

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<sup>1009</sup> Including remarkable firms in this business like Atlas Coffee Importers; Counter Culture Coffee; Green Mountain Coffee Roasters; Intelligentsia Coffee; Stumptown Coffee; Sustainable Harvest Coffee Importers.

America, the Alliance for Coffee Excellence) and stakeholders in production (FNC, local authorities, *Fundación Social*) independently tried to profile the Resource.

As a result, the global consensus on a productive and environmentally responsible coffee-growing landed in Buesaco through the American demand for coffee as a substitute for coca and poppy crops. It came alongside the Swiss and American demand for the “terroir expression”, and eventually a global demand for the exceptional aromatic profile developed in the highlands of Buesaco. Demands that encouraged actors to divert and circumvent the Specialty Coffee Public Policy to change profilers’ behavior, so they would use constituents to profile the Resource through mainly *market* and *relational* value chains.

## 9.2. First hypothesis on the optimization of services provision

We present our results in four sections: the outset that tests our first hypothesis; the evidence that supports it, the evidence against it and the discussion.

### 9.2.1. Outset

To test our first hypothesis, we combined the results from chapter 5.3 and chapter 7.3 that are presented in table 25.

*Table 25 Level of Services provision by LRA according to the combined variation of the three conditions in Riosucio and Buesaco: Source: The author.*

LRA	Extent	Coherence	Closure	Level of services
R- LRA Organic	High	High	High	High
B- LRA CNilson	High	High	High	High
R - LRA Nespresso	<b>High</b>	<b>High</b>	<b>Low</b>	<b>High</b>
R- LRA la Vereda	<b>High</b>	<b>Low</b>	<b>High</b>	<b>Low</b>
R- LRA Fairtrade	High	Low	Low	Low
B- LRA Nespresso	High	Low	Low	Low
B- LRA Cultura	High	Low	Low	Low
B- LRA CCEsp/Starbucks	High	Low	Low	Low
R- LRA Starbucks	Low	High	Low	Low
R- LRA Standard	Low	Low	Low	Low
B- LRA Standard	Low	Low	Low	Low
B- LRA Discount	Low	Low	Low	Low

Our results show that we cannot entirely accept our first hypothesis because, in addition to the case of an LRA with “high” in the three conditions, an LRA with low closeness also maximizes the level of services provision.

- *LRAs that are lacking high extent, high coherence and high closure cannot simultaneously optimize the provision of symbolic, taste related and monetary services.*

We first present the analysis of the 10 LRAs that fits our conjectures, and then we present the analysis of the two cases that provided contradictory evidence to open the discussion: a LRA featured by high extent, high coherence and low closure that optimize the level of services provision and, a LRA featured by high extent, low coherence and high closure that did not optimize the level of services provision.

### 9.2.2. Evidence that supports our first hypothesis

In Riosucio and Buesaco we found two “visible hand” LRAs (the cases of the LRA Organic and LRA CNilson). Both LRAs profiled a high level of services alongside the combined presence of the three conditions. Both increased monetary services for all profilers by producing symbolic (“natural” and “transparent coffee”)<sup>1010</sup> and taste related services (“clean cup” and “exceptional coffee”) prioritizing one main profiling institution (USDA Organic and Q system).

In both cases, the extent was high because LRAs regulated more than half of the uses of Resource constituents evenly among profilers, increasing the chances to produce the foreseeable services. Also, coherence was high because there was a successful two-way coordination among all profilers: a relatively closed group of farmers (153 and 160 respectively) aligned alongside traders (the Cooperative/Trillacoop/Expocafé and Nilson/Inconexus/Royal Coffee) and roasters (Equal Exchange and Inconexus/Royal Coffee’s clients) to profile a commonly agreed combination of services. Coordination remained feasible due to the low transaction cost in both relatively small-groups, easily managed through a face-to-face interaction: both a daily-based relation farmers-traders (Asprocafé’s promoters and Nilson) and a periodically one farmers-roasters (The annual visit of Equal-Exchange and the Inconexus coffee Auction). This interaction was strong enough to make profilers behave as expected, so they hardly relied on other outputs steaming from the IR. Finally, closure was high because the “product differentiation” was built on the terroir and local practices to enhance organic farming (Riosucio) and the aromatic profile (Buesaco). Thus, actors erected barriers of entry at the producers’ level, strengthening farmers’ position to profile the Resource in their benefit.

In ten LRAs featured by low closure, the low level of services is explained because either there was low coherence or low extent, or both conditions were low.

The four “Ambitious” LRAs identified in both contexts (the LRA Fairtrade in Riosucio and the LRAs Nespresso, Caltura, CCEsp/Starbucks in Buesaco) profiled a low level of services because the high extent (74%; 87%; 52% and 60% of evenly regulated uses) combined with low coherence and low closure. These LRAs failed to profile the demanded services (taste related services in the LRA Fairtrade; environmental responsibly in the LRA Nespresso; exceptional coffee in both LRAs Caltura and CCEsp/Starbucks).

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<sup>1010</sup>To avoid wordiness, in parenthesis, we will write as brief as possible the observations from each LRA in their order of appearance. So, in this case, “natural” refers to the LRA organic, and “transparent” refers to the LRA CNilson.

The extent was high because they all shared a profiling institution (Fairtrade certification mark; TASQ®; CAFÉ Practices and the Q System; Q system) that evenly regulated among profilers more than half of the uses of Resource constituents. Coherence was low because control goes in one direction, as we can expect when closure is low: local services are underprovided when actors erect barriers of entry at the trader and roaster level.

Indeed, these four LRAs have large groups of producers (832; 2950; 1000; 2000) and traders (Cooperative; *Cooperativas de cafeteros del Norte y del occidente/Almacafé/FNC; Cooperativa de Cafés Especiales; Café con Altura*), in one case it also included a roaster (Nespresso). The LRAs aligned this group of actors through various governance mechanism (Asprocafé and its internal control system; the cluster FNC; commercial agreements with Caravela and Carcafé; Fundación Social's extension service) that differ in their outputs production (Asprocafé that activate both the coffee public policy and its own social premium to produce outputs; the Cluster FNC that is supported in outputs that reinforced the implementation of the coffee public policy; the self-funded outputs produced by the FS and; the CCEspeciales that do not relied on any output).

However, in all cases, coordination goes from the top to the bottom, meaning that producers have not a word in how the Resource could be profiled. Powerful actors impose the profiling institutions, and Governance mechanisms only intended to encourage farmers to change their behavior, but there are hardly real chances for producers to shape this intervention. In the case of the LRA Fairtrade in Riosucio, the Fairtrade system in which representatives of buyers and producers of all over the world agree on the standard, remains so far away from the very local demands (e.g. taking advantage of the terroir expression of a region to trigger monetary services for those farmers) that in practical terms is impermeable. Similarly, this impermeability features the LRA Nespresso in Buesaco at the national level: the cluster FNC is built on the governance structure of the FNC in which representatives from Buesaco had to negotiate with representatives of the other 594 coffee municipalities in Colombia, their very local demands hardly could escalate. In the other two LRAs (Cultura and CCEsp/Starbucks) there are not any scenario to take into account producers' demands.

There is one LRA "Cunning entrepreneur" identified in Riosucio (LRA Starbucks) which profiled a low level of services provision combining the absence of closure and extent with the presence of coherence. The low closure reflects the case of a foreigner profiler with the market power needed to profile its demanded services not matter other actors' demands; the low extent reveals the very few uses that must be regulated to provide the services demanded by this actor; and the high coherence evidence its capacity to influence the other profilers to profile the combination of both symbolic ("ethically traded") and taste related services ("terroir expression").

This LRA prioritized one central profiling institution (the CAFÉ Practices) which regulated fewer than half of observed/regulated uses of constituents. However, the LRA coordinated pretty well the uses in a two-way among all profilers: a large group of 981 coffee farmers aligned alongside traders (the Cooperative/Trillacoop/Expocafé) and the roaster (Starbucks) through a commercial agreement between the Cooperative and Starbucks. This LRA had, on the one hand, a robust control mechanism from top to bottom (the triple quality, economic accountability, and external

audit) and, on the other, a deliberative scenario with local participation to shape the final output through the improvement plans supported by the Starbucks Farmer Support Center.

Three LRAs “Invisible hand” are identified in both contexts (LRA Standard in Riosucio and LRAs Standard and Discount in Buesaco), providing the lowest level of services with the combined absence of extent, coherence and closure. In fact, with fewer than half of observed/regulated uses, they failed to profile the demanded services (monetary services through “appellation Café de Colombia”). Even though the FNC’s governance mechanisms are well suited to coordinate in one-way farmers through the outputs derived from the coffee public policy, these mechanisms cannot align profilers at the end of the coffee value chain (roasters and consumers). The latter erected the barrier of entry “product differentiation” at the traders’ levels.

### 9.2.3. Evidence that contradicts our first hypothesis

However, two LRAs contradict the conjecture that market power concentration in traders and roasters would produce fewer demanded services by locals. Indeed, on the one hand, the LRA Nespresso shows that if market power is on the hands of foreign actors, it does not necessarily mean that it cannot profile services demanded by other actors. On the other hand, the LRA La Vereda shows that if local actors own market power, it does not necessarily mean that the LRA will profile the services demanded by all the actors.

The only LRA “Responsible Entrepreneur” identified in Riosucio (LRA Nespresso) profiled a high level of services with the combined presence of two conditions, extent and coherence, and the absence of the third one, closure. This LRA profiled a combination of services that enhance monetary services for all profilers, by producing both symbolic (environmentally responsible principally) and taste related services (winy).

The LRA Nespresso has the highest extent of the 12-cases sample. It prioritized one primary profiling institution (TASQ®) whose implementation regulated 95% of the whole set of uses of constituents evenly distributed among profilers.

It had high coherence because there was successful two-way coordination among all profilers. Even though this group composed of more than 700 coffee farmers hardly could be classified as small. Farmers successfully aligned alongside traders (the Cooperative/Trillacoop/Expocafé) and the roaster (Nespresso). Actors overtook the higher transaction costs of this relatively larger group through a complex public-private partnership that collectively agreed on outputs (mainly derived from the coffee public policy), which would be developed either individually or in partnership by participant actors but coordinated by a specialized operator (cafexport) to influence profilers’ behavior.

However, it had low closure because the barriers of entry are erected at the roaster level strengthening Nespresso’s position to profile the Resource in their benefit.

A second contradictory case is the LRA “Naïve” identified in Riosucio (LRA La Vereda). It had the combined presence of two conditions, extent and closure, and the absence of the coherence profiling a low level of services. It unsuccessfully intended the provision of two incompatible profiles: the “indigenous coffee” and, the combination “environmentally responsible” and monetary services.

This LRA is the second one with the highest extent in the sample. It had 93% of evenly distributed observed/regulated uses. As a result, the prioritization of the Keurig’s “Responsible Sourcing Supplier Guidelines” profiling institution (entirely acceptable with the Rainforest Alliance Standards). And it has high closure because the barriers of entry erected at the producers’ level when the “product differentiation” is built on the indigenous community of the Resguardo de San Lorenzo,

However, coherence is low because the coordination between the larger group of approximately 1500 coffee growers in the Resguardo de San Lorenzo misaligned with traders (cooperative; almacafé; FNC as an exporter) and the roaster (Keurig). Keurig prioritized the implementation of the renewed SACEV agreement through a series of outputs produced by both the Cooperative and the Comité, at the expense of coffee growers. In the end, the use of constituents did not profile the demanded services by the local community.

These two cases contradict the first assumption that market power concentration in others than producers would lead to fewer services production and, the second assumption that this concentration in producers’ hands would trigger services provision. The idea behind is that traders and roasters are usually foreigners who are interested in others than locally demanded services, so if they have the market power, the LRA would not provide the locally demanded services. On the other way around, we assumed that if locals have the market power, they will provide both their demanded services as well as demanded services by foreigners in exchange for monetary services.

However, these cases prove us wrong: even though a foreigner has the market power, not only their demanded services are profiled but also local ones. Moreover, even though locals have the market power, their demanded services are not profiled.

#### 9.2.4. Discussion

These results allow us to explain the level of services provided by the combined presence of the extent, coherence, and closure. In the two cases (LRA Organic and LRA CNilson) what it first draws attention is the fact that a small group of profilers is profiling the highest number of services demanded by the whole group of actors in both contexts. As showed, participant actors in both LRAs demanded a lower number of services that they are producing. Why are they making this extra effort?

This observation also questions the effect of the closure on the level of services provision: both a low closure and a high closure LRAs optimised the provision of services. It suggests that market-

power ownership (produced by barriers of entry) is less relevant to the final result than an agreement on the uses of Resource constituents to produce a well-coordinated complex profile.

Indeed, if local actors own market power, it does not necessarily mean that they profile services demanded by all the actors (including roasters and stakeholders in consumption among others). On the other hand, if market power is on the hands of foreign actors, it does not necessarily mean that it is not possible to incorporate demands of other actors (including profilers and stakeholders in production among others). The results show both possibilities: barriers both at the producers (LRA La Vereda) and at the roasters level (LRA Starbucks; LRA CCEsp/Starbucks; LRA Nespresso in Buesaco) that did not optimise services provision and, barriers both at the producers (LRA Organic; LRA CNilson) and at the roasters level (LRA Nespresso in Riosucio) that did optimise services provision.

It is relevant because it presents evidence to move forward a widely accepted explanatory framework developed by Benoit. Daviron and Ponte (2005) to explain the “coffee paradox”, a phenomenon in which the “coffee boom” in consumer countries during the nineties developed alongside a “coffee crisis” in producing countries. They argue that coffee paradox is caused by market power, which is understood “not simply on the basis of controlling market share, but also in relation to the ability to define the identity of a coffee – in other words the ability to set the language and the reference values that determine production norms and quality standards” (p. xvii).

Our research does not contradict their central hypothesis that explains the coffee paradox: a group of profilers in consumer countries impose their demanded services on profilers in producer countries. However, our results show evidence that there is a misfit when automatically linking market power to the control of both market share and identity.

Indeed, we have shown that there are cases in which a company that controls both market share and identity (in the terms of Benoit. Daviron and Ponte (2005)) like Nespresso creates a “coffee boom” in their consumer market while it does not create a “coffee crisis” in their supply market, at least neither in Riosucio nor in Buesaco. On the contrary, it is closer to a “coffee boom” because it doubles the monetary services of their suppliers when compared with coffee producers selling to the mainstream markets.

We want to contribute to their hypothesis. Firstly, the concept of the profile should replace the concept of identity (as the brand and its associated rules). Secondly, there is not an automatic link between the control of market power and the control on the profile.

First, identity is a misleading concept. It encourages researchers to look at the brand and then back to the uses of Resource constituents, denying the whole complexity of its implementation. For example, a researcher would look at the brand Nespresso and then back towards the uses of constituents mandated by the TASQ®. This researcher cannot observe other uses of constituents (like the mestizo practices) implemented because of outputs mobilised by other actors.

Indeed, the “identity” is always in the hands of the ultimate profiler. This focus on the brand takes sides with profilers who have the final transaction with consumers. Hence, with this lens, the only way to avoid the coffee paradox is through vertical integration.

However, we have shown that a foreigner market power concentration does not produce the coffee paradox. Also, local market power concentration does not avoid the coffee paradox.

What matters is not the identity and their associated rules but the profile of the Resource and the whole profiling process. Indeed, the “identity” is associated to a particular activity carried on by roasters (we refer to the actor, who can also be a farmer, that roasts coffee to produce roasted coffee for the end consumer) to communicate to consumers the attributes of the roasted coffee, as the cultivation forcefully is associated to the coffee grower. The brand is an essential part of the Resource as it is the coffee cherry, but does not tell the whole story. The profile of the Resource instead, takes into account the sum of all parts and the whole.

In this sense, we can move forward the second refinement: the control over the profile. As we said, the roasters forcefully have control on the identity, is their job. However, they can or cannot have control over the profile. There are cases in which the market power is used by the roaster to profile only their demanded services, but as we have shown, there are cases in which the market power is used to profile their demanded services but also the services demanded by other actors. Also, if producers have control over their identity, it does not mean they have control over the profile. Similarly to the previous cases, producers can use their market power in their solely benefit, or in the benefit of a wider group of actors.

Hence, the coffee paradox could still be explained by market power in the case in which the actor, who successfully erects barriers of entry, also controls the profile.

Having said that, more interesting than the actual placement of the barriers of entry in one particular segment of the coffee value chain, it is to know how/why actors who had successfully erects barriers of entry do not monopolise the profile and, decide to participate in an agreement on the profile that would increase both the extent and the coherence, and eventually the level of services provision. Indeed, these results make us question why did the LRA Nespresso, led by the market-powerful Nespresso, profile the services demanded by other actors? Alternatively, why did not the indigenous community take advantage of their market power to provide their demanded services within the LRA La Vereda?

Interesting enough, these questions could not be answered by internal-to-the-actor responses because we have shown that the combined presence of conditions is more related to the synergies among actors than the participation of a particular actor. We can provide two examples in table 26 in which the participation of the same roaster in two different LRAs is associated with a different configuration.

First, the two LRAs Nespresso in Riosucio and Buesaco: In both cases, the FNC and Nespresso are participant actors, but conditions between both LRAs differ. The LRA Nespresso in Riosucio has

high coherence, whereas the LRA Nespresso in Buesaco has low coherence. Second, the case of the two LRAs in which Starbucks participated. The LRA CCEsp/Starbucks in Buesaco has high extent and low coherence, whereas the LRA Starbucks in Riosucio has low extent and high coherence.

Table 26 LRAs in both context that share the same roaster but have a different configuration. Source: the author.

LRA	Extent	Coherence	Closure
R - LRA Nespresso	High	High	Low
B- LRA Nespresso	High	Low	Low
B-LRA			
CCEsp/Starbucks	High	Low	Low
R- LRA Starbucks	Low	High	Low

We answer these questions through the analysis of the actors’ games because the LRAs’ configurations that we presented reflect the final picture of an extensive game in which different actors had mobilized their resources of action to activate institutions to influence the extent, the coherence, and the closure.

### 9.3. Second hypothesis on the “integral” LRA.

We present our results in five sections: the outset that tests our second hypothesis; then, we look at each one of our three analytical dimensions (actors’ coalition; mobilization of action resources; institutional creativity) to analyze the eventual relationships between them and the LRA’s configuration. Each section briefly presents our results (which are more detailed in chapters 6.5 and 8.5) and then, we open the discussion. In the end, we present our concluding remarks.

#### 9.3.1. Outset

Why does an “integral” LRA reach its higher extent, coherence, and closure? We demonstrate that the presence of these conditions depends on whether actors were able to overcome the conservative bias to profile not only their demanded services but the services demanded by other actors.

This process is composed of three analytical dimensions: a starting point depending on how actors defined the “real situation” incorporated into the **actors’ coalition**; a first “negotiation dilemma” to either deceive and take advantage to govern the Resource in its favor or to cooperate and endow the powerless to “balance” the initial discussion, incorporated into the **mobilization of action resources**; a second “negotiation dilemma” to agree on both the combination of services provided by the Resource and who should assume the costs and benefits of changing the use of constituents, incorporated into the **institutional creativity**.

The underlying assumption is that the coalition solves the first negotiation dilemma through a cooperative mobilization, the positive coordination could emerge and solve the second

negotiation dilemma through the institutional creativity, increasing the extent, the coherence, and the closure.

Chapter 6 and 8 measured the effect of these three analytical dimensions on the variance of the three conditions. Its results come from an evolutionary perspective: we evaluate the changes of a particular LRA according to the incumbent LRA from which it had its origin. We standardized those results by categorizing the change either as “higher” or “lower”, so we can compare among the whole set of the 17 LRAs identified in both Riosucio and Buesaco since the breakdown of the quota agreement in 1989.

We present them in table 27 organized according to their “higher” effects on the conditions<sup>1011</sup>. So, the first three LRAs (MH-Riosucio, Natural-R, Organic-R) had a “higher” effect in the three conditions, the following five a “higher” effect in both extent and coherence (Nespresso-R; ACDI/VOCA N-Buesaco; ACDI/VOCA S-B; CS Standard-B; Reg/Starbucks-R), the next groups of LRAs on both the coherence and closure (CNilson-B), and so on.

Table 27 Variation of the LRA's conditions explained by the three analytical dimensions in Riosucio and Buesaco. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA MH-R	PT+SHP+SHC	Cooperative	Presence	Higher	Higher	Higher
LRA Natural-R	PF+PT+PR+SHP+SHC	Selfishly-	Presence	Higher	Higher	Higher
LRA Organic-R	PF+PT+PR+SHC	Cooperative	Presence	Higher	Higher	Higher
LRA Nespresso-R	PT+PR+SHP+SHC	Strategically	Presence	Higher	Higher	Lower
LRA CR Standard-R	PF+PT+PR+SHP+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA Reg/Starbucks-R	PT+PR	Strategically	Presence	Higher	Higher	Lower
LRA ACDI/VOCA N-B	PF+PT+PR+SHP+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA ACDI/VOCA S-B	PF+PT+PR+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA Cnilson-B	PF+PT+PR	Strategically	Presence	Lower	Higher	Higher
LRA Standard-plus-B	PF+SHP	Selfishly	Absence	Higher	Lower	Higher
LRA EdN-B	PT+PR	Strategically	Absence	Higher	Lower	Lower
LRA Fairtrade-R	PF+PT+SHC	Selfishly	Absence	Lower	Lower	Lower
LRA La Vereda-R	SHP	Selfishly	Absence	Lower	Lower	Lower
LRA Specialty-B	PF+SHP	Cooperative / Selfishly	Presence	Lower	Lower	Higher
LRA Nespresso-B	PT+PR+SHP	Strategically/ Cooperative	Absence	Lower	Lower	Lower
LRA CCEsp/ Starbucks-B	PT+PR	Strategically	Absence	Lower	Lower	Higher
LRA Cultura-B	PF+PT+SHP	Strategically	Absence	Lower	Lower	Higher

\*SHP = Stakeholders in production; SHC = Stakeholders in consumption; PF = Profilers farmers; PT = Profilers traders; PR = Profilers roasters

<sup>1011</sup> As a reminder, the level of services provision was the dependent variable explained by the configuration of the LRAs. We tested this first hypothesis through a synchronic analysis using the collected qualitative/quantitative data in both contexts of study. Our second hypothesis does not intent to assess the level of services provision. It tries to test if the configuration of the LRA is explained by the actors' games through a diachronic analysis developed mainly through qualitative data collected through interviews and documentary analysis, which is why in table 41 we do not present an additional column at the extreme right with the level of services provision.

Our results show that we cannot entirely accept our second hypothesis because a cooperative mobilization in which institutional creativity is present, is also associated with a lower extent and coherence.

- *If actors' coalitions do not cooperatively mobilize their resources of action to bring about institutional creativity, actors' games will not produce LRAs with high extent, high coherence, and high closure.*

There is one case, the LRA MH-R in which the cooperative mobilization of resources of action and the presence of the institutional creativity produced high extent, high coherence, and high closure. Nonetheless, there are two cases, the LRA Natural-R and the LRA Organic-R in which the higher extent, higher coherence and higher closure were reached not only by a cooperative but also a selfish mobilization of *resources of action*, and by a strategical mobilization. Also, the LRAs ACIDI/VOCA N&S-B and the LRA CS Standard-R produced higher extent, higher coherence but lower closure even though there had the cooperative mobilization and the presence of institutional creativity, furthermore, the case of the LRA Specialty-B also featured by the cooperative mobilization of Resources of action and the presence of institutional creativity produced a lower extent, lower coherence, and higher closure.

### 9.3.2. The social construction of the problem shared by a coalition of actors.

In the whole set of LRAs, the social construction of the problem explained the actors' involvement in the problem of collective action. Furthermore, when they share a definition of a "real situation" in which their demanded services are at risk, they would form coalitions.

- Results

A transversal lecture of the first analytical dimension brings about four groups of LRAs. Two groups in which the actors' coalitions are associated with higher extent and coherence; one group associated mainly with lower extent and coherence and the last group with mixed results. In all the cases, there is not a clear association between actors' coalitions and closure.

The first group is composed of the LRAs (Natural-R, CS Standard-R, ACIDI/VOCA N-B) in which the whole group of actors (Profilers – farmers, traders and roasters; and both stakeholders in production and consumption) participates in the coalition. These coalitions brought about different demand for services through regulations in the use of constituents by including both stakeholders (increasing the extent); Also, these coalitions made it possible to control the change in the uses as it was regulated by including the whole set of profilers (increasing the coherence).

The second group is composed of the LRAs (Organic-R, ACDI-VOCA S-B, Nespresso-R, and MH-R) featured by coalitions including at least two profilers (trader and roaster<sup>1012</sup>), one stakeholder in consumption, and either an association of farmers or one stakeholder in production. The only difference with the previous one is that either the Stakeholder in production is engaged to escalate the local demands for services into the LRA and to incentivize the demanded change in behaviour in farmers, or the farmers directly escalate their demands and adopted the compromised changes. Hence, the participation of both (farmers and stakeholders in production) is not crucial for increasing both the extent and coherence as long as local demands escalate.

The third group is composed of the LRAs (Fairtrade-R, Cultura-B, Nespresso-B, Standard-plus-B, Specialty-B, La Vereda-R) in which stakeholders in consumption are absent, so it is their demand for services and the regulations it implies<sup>1013</sup> (decreasing the extent). Also, the whole set of profilers is incomplete, so coordination for profiling the demanded services is challenging (decreasing the coherence).

The last group is composed of (Cnilson-B, Reg/Starbucks-R, EdN-B, CCesp/Starbucks-B) in which there are neither stakeholders in consumption nor production within the coalition, but in all cases, the profiler roasters and traders participate. The evolutionary perspective<sup>1014</sup> intrinsic to the 17 LRAs is particularly salient in this last group to explain the mixed results in terms of the extent: In all cases, the group of profilers is interested in a combination of services that increases the monetary services. In two cases, it implied new regulated uses over the incumbent LRA (The LRA Standard in Nariño in the case of the LRA EdN-B, and the LRA Standard in Caldas in the case of the LRA Reg/Starbucks-R) and in two cases it implied less regulated uses over the incumbent LRA (The LRAs ACDI/VOCA N&S for both LRAs Cnilson and CCesp/Starbucks).

In term of coherence mixed results are also present. In this last group, the LRAs that incorporated the whole set of profilers (LRAs Cnilson-B and LRA Reg/Starbucks-R) increased their coordination to implement the regulated uses whereas the others, which includes only the trader and the roaster (LRAs EdN-B and CCesp/Starbucks-B), cannot coordinate due to the high cost of influencing farmers. So, they rely on their uses to compensate as much as they can the unrealized practices of farmers. An interesting feature is that in the case of the LRA Nilson-B, farmers participate in the coalition as a small group with familiar ties with Nilson López (the owner of the trading company). In the case of the LRA Reg/Starbucks-R, farmers participate as individuals aggregated into a collective actor (the Cooperative). In the other two cases, EdN-B and CCesp/Starbucks-B, farmers are just suppliers with just a commercial relationship with both traders (*Empresas de Nariño* and the *Cooperativa de Café Especiales*).

- Discussion

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<sup>1012</sup> In the case of the LRA MH, we conceptualized MH's *organization* as its network with roasters. So, we can say that MH, as a stakeholder in consumption, aligned a group of roaster in this LRA.

<sup>1013</sup> The LRA Standard-plus is the only exception in which the extent increased, because it was developed from the much unregulated LRA Standard.

<sup>1014</sup> It means that LRA conditions are evaluated in reference to the incumbent LRA from which they were derived.

This last observation gives us a first insight into the discussion: unorganized individuals are powerless. Only when they come together into a collective actor that move forward their demanded services, they could be considered participants in a coalition. Indeed, someone could say that farmers participate in all LRA's coalitions because their coffee is the essence of each one of the LRAs, but as individuals, they do neither have the critical mass to claim the provision of their demanded services nor to propose regulation, less to influence the final outputs.

Aggregation into a collective actor is salient: when looking at the configuration of both LRAs Starbucks (Reg/Starbucks in Riosucio and CCEsp/Starbucks in Buesaco showed in table 28), the conditions differ because, in Riosucio, the Cooperative aggregates farmers, so they can move forward their demand for services increasing the extent and the coherence. In Buesaco, on the other hand, farmers are unorganized suppliers that sell their coffee but cannot influence the LRA, decreasing both extent and coherence.

Table 28 LRAs Starbucks in both contexts with a different configuration. Source: the author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closeness
LRA Reg/Starbucks-R	PT+PR	Strategically	Presence	<b>Higher</b>	<b>Higher</b>	Lower
LRA CCEsp/Starbucks-B	PT+PR	Strategically	Absence	<b>Lower</b>	<b>Lower</b>	Higher

Interestingly enough, too much aggregation has a similar effect. It affects the LRA's conditions because it vanishes the very local demands for services when the governance mechanisms are developed at different perimeters of the Resource.

The best example is the different configuration between the LRA Nespresso in Riosucio and the LRA Nespresso in Buesaco (showed in table 29), in both cases the perimeter is the area in which the Nespresso cluster has jurisdiction: 17 municipalities in Caldas and Antioquia equivalent to 7 thousand coffee farms approximately in the first case and nearly fifty in Cauca and Nariño equivalent to 30 thousand coffee farms in the second case.

However, in Riosucio the governance mechanism (*Encuentro Bianaual*) is composed exclusively of collective and corporate actors that represent individuals interested in the services provided at the same Resource's perimeter: coffee farmers, cooperatives, traders and roasters interested in the coffee produced exclusively in the seventeen municipalities in Caldas and Antioquia.

In the second case, collective<sup>1015</sup> and corporate actors that represent individuals interested in the services provided at different Resource's perimeter participate in the governance mechanism of the LRA: namely the FNC-Nespresso's quarterly meeting. Indeed, the FNC<sup>1016</sup> represents five

<sup>1015</sup> The FNC as an association according to (Scharpf, 1997, p. 57) with joint action, collective purpose, collective resources, and a voting decision making.

<sup>1016</sup> The Federación Nacional de Cafeteros de Colombia is an association according to (Scharpf, 1997, p. 57) with joint action, collective purpose, collective resources, and voting decision making.

hundred thousand farmers interested in the Resource coffee in more than five hundred municipalities in Colombia, including the thirty thousand participant growers interested mainly in the coffee produced in the nearly fifty municipalities in Cauca and Nariño. Hence, the very local demands from this group of farmers that are supposed to reach the quarterly negotiation through their democratic procedures (elections to the municipal and departmental Comités and Congreso Nacional Cafetero), are completely blended with the demands from the Resource coffee at the Colombian level. As a result, the very local demands never reached the quarterly negotiation.

Table 29 LRAs Nespresso in both contexts with a different configuration. Source: the author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closeness
LRA Nespresso-R	PT+PR+SHP+SHC	Strategically	Presence	<b>Higher</b>	<b>Higher</b>	Lower
LRA Nespresso-B	PT+PR+SHP	Strategically / Cooperative	Absence	<b>Lower</b>	<b>Lower</b>	Lower

Thirdly, the aggregation has to be associated with the demanded services from the Resource. This lack of connection is the most plausible answer to the question of why the indigenous community did not take advantage of their market power to shape the LRA La Vereda. In this case, the collective actor that aggregated the indigenous people had a broader agenda than the demanded services from Coffee in Riosucio. Indeed, the indigenous movement moved forward their claims associated with the indigenous issue like education, culture, health, justice, and other issues. That is why they were not exclusively interested in the “indigenous coffee” symbolic service demanded by indigenous coffee growers in the Resguardo de San Lorenzo in Riosucio. So, in the end, these indigenous growers were a passive group within the LRA La Vereda’s coalition without any chance of influencing it.

A lesson that we can derive from the analysis of this analytical dimension, that could encourage future research, is: the aggregation of individuals into collective actors, which move forward demanded services, is fundamental to diminish the transaction cost within a coalition so they could agree on joint action to manage the Resource in a precise perimeter. Nevertheless, the collective actor either exclusively represents individuals interested in the Resource at the same perimeter or it develops an internal mechanism so that affiliates, exclusively interested in that particular perimeter, can participate with voice and vote within the coalition.

A second discussion is that the smaller and homogenous coalitions tend to be associated with lower coherence and lower extent, not necessarily lower closure. Indeed, if actors do not participate, fewer services are demanded, so fewer regulations are needed, or it is harder to provide the demanded services precisely because the LRA excludes actors that have to change their behaviour. The LRA CNilson-B is an excellent example of the first one, in which the small group of participant actors is demanding fewer services; therefore, there exist fewer regulations. On the other extreme, the LRA Standard Plus-B which regulates a complex profile impossible to produce because it excludes profilers, especially at the end of the value chain.

Claiming that a full and varied coalition is associated with higher extent and higher coherence may not sound very novel, but it goes deep into our research interest. Indeed, a broad coalition means that somehow the zero-sum game did not exist or actors overtook it.

In our research, we described different actors' constellations: few were constellations of "pure coordination" like the CRIDEC-Cooperative-MH-FNC within the LRA MH in Riosucio. Some were constellations of "pure conflict" like the indigenous movement against the FNC/Comité within the LRA La Vereda in Riosucio and the group of producers against Nespresso and Starbucks within the LRA Specialty in Buesaco. However, actors usually faced the collective action dilemma in which the most significant benefit is only possible if everyone cooperates even though they benefit individually by deceiving.

Our research provides evidence of this dilemma faced within actors' coalitions: in some cases, the collective action is disintegrated breaking apart the coalition like the transition between the LRA Natural-R and the LRA Organic-R or the transition between the LRA Standard-B and the LRA Standard Plus-B. In others, collective action is rebuilt bringing together new actors to the coalition, like the case of the LRA CS Standard in Riosucio or the transition towards both the LRAs ACDI/VOCA N&S in Buesaco.

We then turn the attention to the other analytical dimension of the actors' games to explain this dynamic of actors' coalitions.

### 9.3.3. Mobilization of action resources

We conjecture that the solution of the first negotiation dilemma (either support or not a power balance) creates the conditions to solve the second negotiation dilemma (agree on the profile and the distribution of costs and benefits), explaining the collective action.

In our empirical study, we observed the first negotiation dilemma through our second analytical dimension, the mobilization of *action resources* (AR onward) for activating institutions.

- Results

A transversal lecture of the second analytical dimension can differentiate among LRAs grouped according to the three types of mobilization of *action resources*: cooperative; selfish and strategic.

In the first group of six LRAs (Natural-R, MH-R, CR Standard-R, ACDI VOCA N-B, ACDI VOCA S-B, and Specialty-B in table 30), there was a cooperative mobilization of action resources that was mostly associated with higher extent and higher coherence without any apparent effect in the closure.

In this group, with one exception (LRA Specialty-B), Stakeholders cooperatively mobilized their "organization" and "political support" to bring into the LRA both local and foreign demands for

services, and other resources like information, personal, property, consensus, to endow the collective actors representative of the voiceless.

Table 30 First group of LRAs categorized by the cooperative mobilization of action resources. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA ACDI/VOCA S-B	PF+PT+PR+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA CS Standard-R	PF+PT+PR+SHP+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA ACDI/VOCA N-B	PF+PT+PR+SHP+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA MH-R	PT+SHP+SHC	Cooperative	Presence	Higher	Higher	Higher
LRA Natural-R	PF+PT+PR+SHP+SHC	Cooperative / Selfishly	Presence	Higher	Higher	Higher
<b>LRA Specialty-B</b>	<b>PF+SHP</b>	<b>Cooperative / Selfishly</b>	<b>Presence</b>	<b>Lower</b>	<b>Lower</b>	<b>Higher</b>

In four of the six LRAs in this group, the stakeholders in consumption (MH in two LRAs in Riosucio and ACDI/VOCA in two LRAs in Buesaco) cooperatively mobilized their AR *organization*, which functioned as a vector to mainly bring into the LRA foreign demands for services (by consumers, roasters, other stakeholders in consumption and stakeholders in production at the national and departmental level) and other *action resources* (*information, personal, property, law*), in order to endow in the *action resources* needed a collective actor representative of the voiceless: the indigenous movement with *money* and *political support* so they could effectively represent the interest of the indigenes (LRA MH-R); the small coffee farmers with the *personal* by stablishing Asprocafé so their interest could be put forward (LRA Natural-R); and the coffee farmers in Buesaco associated (like Asoveracruz) with the *information* so they improve their negotiation position with roasters (both LRAs ACDI/VOCA N&S-B). In all cases, they concretized the Specialty Coffee Program to develop the VSS market<sup>1017</sup> so the whole group of profilers changed their uses of constituents to profile a commonly agreed combination of services, which implied additional regulation and stronger coordination, therefore increasing both the extent and the coherence.

In the fifth case, the stakeholder in production (Alcaldía de Riosucio) cooperatively mobilized their AR *political support*, which functioned as a vector to bring into the LRA mainly local demands for services (indigenous and communal leaders), in order to endow with the *consensus* the FNC/Comité, so they could move forward their demands. As a result, they were able to innovatively activate the two instruments of the coffee public policy: the renovation and the diversification programs to incentivize farmers to profile a mestizo-type of climate-smart coffee culture, increasing both the extent and the coherence.

In the sixth case, the LRA Specialty in Buesaco, the cooperative mobilization of the *political support* was associated with lower extent and coherence because, the small and homogeneous coalition of farmers and stakeholders in production agreed on reducing the regulations to trigger experimentation (reducing the extent) while vertically integrating in their enterprise the whole

<sup>1017</sup> In fact, the first cooperative mobilization (LRA MH) innovatively activated the coffee public policy to create the first “specialty” coffee market profiling the Fairtrade symbolic service.

set of processes from trading to roasting and brewing. In other words, they cooperatively mobilized their action resources within an LRA that explicitly wanted to exclude other profilers. Nonetheless, this enterprise failed <sup>1018</sup> in influencing the *know-to-appreciate* of enough consumers to produce the “exceptional coffee” taste related service and with it, the monetary services sought by the coalition (reducing the coherence)<sup>1019</sup>.

The second group of LRAs (Natural-R, Specialty-B; Fairtrade-R, LRA Standard-plus-B, La Vereda-R)<sup>1020</sup> was mostly associated with lower extent and lower coherence without any apparent effect in the closure. In this group, with one exception (LRA Natural-R), Stakeholders selfishly mobilized their “political support” and “property” to take advantage of the unbalanced power game to profile their demanded services at the expense of the other actors.

Table 31 Second group of LRAs categorized by the selfish mobilization of action resources. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Natural-R	PF+PT+PR+SHP+SHC	Cooperative / Selfishly	Presence	Higher	Higher	Higher
LRA Specialty-B	PF+SHP	Cooperative / Selfishly	Presence	Lower	Lower	Higher
LRA Fairtrade-R	PF+PT+SHC	Selfishly	Absence	Lower	Lower	Lower
LRA Standard-plus-B	PF+SHP	Selfishly	Absence	Higher	Lower	Higher
LRA La Vereda-R	SHP	Selfishly	Absence	Lower	Lower	Lower

Indeed, in three of the five LRAs in this group, the stakeholders in production selfishly mobilized their AR *political support* to take advantage of the unbalanced power game to profile their demanded services at the expense of the other actors:

- LRAs Standard-Plus-B: The FNC concretized the coffee public policy at the expense of the “terroir expression” demanded by the Comité de Nariño and the EdN;
- LRA La Vereda-R: The Indigenous movement circumvent the coffee public policy to discourage the over-cultivation of coffee at the expense of the monetary services demanded by the Cooperativa and the Comité de Caldas.
- LRA Specialty-B: the Gobernación de Nariño circumvent the coffee public policy to invest itself with the authority to incentivize farmers profile the “exceptional coffee” taste related service at the expense of the profile demanded by the FNC/Nespresso and Starbucks.

In a fourth case, the LRA Fairtrade-R, the stakeholders in consumption selfishly mobilized their AR *property* to take advantage of the unbalanced power game to concretize the coffee public

<sup>1018</sup> Even though the change of the departmental administration explained the failure, if it had continued, it could not be said that it would have succeeded because the roasted packaged coffee market is a very mature industry with very well positioned players.

<sup>1019</sup> Eventually, they would realize through the Café Plus initiative that given the state of market’s maturity, it was smarter to include traders and roasters than exclude them to increase the higher monetary services.

<sup>1020</sup> As there are two LRAs (Natural-R and Specialty-B) featured by both a cooperative and a selfishly mobilization of action resources, we preferred to include them in both groups, so we do not lose analytical inputs.

policy by imposing the use of the certification mark to produce the “Fairtrade coffee” symbolic service at the expense of the “monetary services” of the indigenous community and a portion of coffee growers. In all cases, by leaving behind some actors, coordination to profile the same combination of services was severely affected reducing coherence. In three cases the fewer services implied fewer regulations (only the LRA Standard-plus-B had more regulation because it derives from the very low regulated LRA Standard-B), reducing extent.

In a fifth case, the LRA Natural, the selfishly mobilization of the *organization* was associated with higher extent and coherence that we explain through our diachronic analysis. After the first selfishly mobilization, there were two other complementary cooperative mobilizations. First, MH endowed the small farmers with the *personal* to consolidate Asprocafé, their collective actor. Second, the indigenous community and the Comité/Cooperative (negatively affected by the previous selfish mobilization) were empowered again with *information* by Asprocafé and Asproinca. As a result, this LRA could optimise the provision of demanded services, including the mestizo and environmentally responsible practices (increasing the extent) and the coordination among actors through the interinstitutional committee (increasing the coherence).

The third group of LRAs (Organic-R, Nespresso-R, Nespresso-B, EdN-B, Reg/Starbucks-R, CCEsp/Starbucks-B, Cnilson-B, Cultura-B), featured by the strategic mobilization of various action resources (*organization, personal, money, property and law*) associated with both “higher” (four cases) and “lower” (four cases) configurations. Indeed, this mobilization is the expected one when the power game is balanced: actors attempt to activate institutions in order to incentivize the production of their demanded services but they are neutral in the sense that they neither intend to empower other actors nor to impose their demanded service at the expense of the services demanded by others.

Table 32 Third group of LRAs categorized by the strategic mobilization of action resources. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Organic-R	PF+PT+PR+SHC	Strategically	Presence	Higher	Higher	Higher
LRA Nespresso-R	PT+PR+SHP+SHC	Strategically	Presence	Higher	Higher	Lower
LRA Cultura-B	PF+PT+SHP	Strategically	Absence	Lower	Lower	Lower
LRA Nespresso-B	PT+PR+SHP	Strategically	Absence	Lower	Lower	Lower
LRA Cnilson-B	PF+PT+PR	Strategically	Presence	Lower	Higher	Higher
LRA Reg/Starbucks-R	PT+PR	Strategically	Presence	Higher	Higher	Lower
LRA EdN-B	PT+PR	Strategically	Absence	Higher	Lower	Lower
LRA CCEsp/Starbucks-B	PT+PR	Strategically	Absence	Lower	Lower	Lower

- Discussion

These results support our claim that in an unbalanced-power initial state of the negotiation, the actors face a first negotiation dilemma: either they cooperate to balance it improving the LRA’s conditions, or they deceive to take advantage deteriorating LRA’s conditions.

Indeed, we have shown that, when actors in an LRA look for balanced-power negotiation through a cooperative mobilization of *action resources* like *organization* and *political support*, they can bring into the LRA foreigners (like roasters) and locals (like community leaders). By giving voice to the previously unheard actors, such games can enlarge the commonly agreed set of demanded services, increasing the extent and the coherence.

On the contrary, when actors look for an unbalanced-power negotiation through a selfish mobilization of *action resources* like *political support* and *property*, they can influence profilers' behaviour to provide their demanded service at the expense of the services demanded by other actors, decreasing the extent and lower coherence.

Nonetheless, an additional step can be done for squeezing learnings from the strategic mobilization group. We can cluster the LRAs in two sets depending on whether institutional creativity is present (table 33).

Table 33 Third group of LRAs clustered by the presence of institutional creativity. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Organic-R	PF+PT+PR+SHC	Strategically	Presence	Higher	Higher	Higher
LRA Nespresso-R	PT+PR+SHP+SHC	Strategically	Presence	Higher	Higher	Lower
LRA Caltura-B	PF+PT+SHP	Strategically	Absence	Lower	Lower	Lower
LRA Nespresso-B	PT+PR+SHP	Strategically	Absence	Lower	Lower	Lower
LRA Cnilson-B	PF+PT+PR	Strategically	Presence	Lower	Higher	Higher
LRA Reg/Starbucks-R	PT+PR	Strategically	Presence	Higher	Higher	Lower
LRA EdN-B	PT+PR	Strategically	Absence	Higher	Lower	Lower
LRA CCEsp/Starbucks-B	PT+PR	Strategically	Absence	Lower	Lower	Lower

On the one hand, we have four strategic mobilizations (LRA Organic-R, LRA Nespresso-R, LRA Cnilson-B, LRA Reg/Starbucks-R) associated with the presence of institutional creativity and, with one exception (LRA Cnilson-B) higher extent and higher coherence. On the other hand, four strategic mobilizations are associated with the absence of institutional creativity (LRA CCEsp/Starbucks-B; LRA Caltura-B; LRA EdN-B; LRA Nespresso-B) and, with one exception (LRA EdN-B) lower extent and lower coherence.

This observation illustrates that, in the case of a strategic mobilization, in order to trigger the higher extent and coherence (without a clear effect in closure), what looks relevant is the result of it associated with the presence of institutional creativity.

This learning can be extrapolated to the actor's games composed of various types of mobilization as can be shown with the example of the four-mobilization game within the LRA Natural-R: one strategic, one selfishly, one strategic and one cooperative. The failed first strategic mobilization of the indigenous movement's *consensus* and the second selfishly mobilization of the MH's *organization* weakened both the Cooperative and the indigenous movement but empowered the coffee farmers. The third strategic mobilization of the Comité's *personal* and the Cooperative's *property* improved their negotiating position. And finally, the cooperative mobilization of

Asproinca and Asprocafé's *information* empowered the indigenous movement again and attracted closer to the Comité-FNC. In the end, this set of mobilizations produced the distribution of the *action resources* needed so that all actors could put forward their demand for services. It is this last result in combination with the presence of institutional creativity that looks relevant to trigger the high extent and high coherence.

Hence, the mobilization itself is no important if we do not take into account the second negotiation dilemma in which actors agreed on both the "production" and the "distribution". The institutional creativity through which actors reach an agreement on the profile and on how to distribute the burden of the changes in the uses of Resource Constituents and the benefits. Because if it is clear that a power-unbalanced negotiation hardly would profile the services demanded by all interested actors, it is not straightforward that a power-balance one would do it.

#### 9.3.4. Institutional creativity

Completely attached to the type of mobilization of *action resources*, institutional creativity is the action that transmits causal force from this power-related first negotiation and the final production of services.

We analyze the presence of institutional creativity in each LRA depending on both the procedural element (deliberative scenario) and the substantive element (the second negotiation dilemma), which is composed of both the distribution (uses of Resource constituents) and the production (the profile).

- Results

A transversal lecture of this third analytical dimension can differentiate among LRAs grouped according to whether institutional creativity is present or is absent.

In the first group of ten LRAs where institutional creativity is present (Natural-R; CS Standard-R; ACDI/VOCA N-B; Organic-S; ACDI/VOCA S-B; Nespresso-R; MH-R; Reg/Starbucks-R; Cnilson-B Specialty-B;), we documented deliberative scenarios among the coalition and how actors reached the agreements on both the distribution and the production: there was a clear decision on the distribution on who has to assume the costs/benefits of changing the uses of constituents (that would be encouraged/discouraged when shaping the outputs derived from the institutional regime) and a favourable distribution of the added-value generated throughout the coalition; also there was an agreement on the expected profile to be provided.

In the second group of seven LRAs where institutional creativity is absent (Standard-plus-B; EdN-B; Fairtrade-R; Caltura-B; Nespresso-B; La Vereda-R; CCEsp/Starbucks-B), there were no deliberative scenarios documented and the distribution of costs and benefits favours some actors: We documented services demanded by the winners at the expense of those demanded by the losers.

Table 34 LRAs categorized by the presence or absence of institutional creativity. Source: The author.

LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Natural-R	PF+PT+PR+SHP+SHC	Selfishly-Cooperative	Presence	Higher	Higher	Higher
<b>LRA CS Standard-R</b>	<b>PF+PT+PR+SHP+SHC</b>	<b>Cooperative</b>	<b>Presence</b>	<b>Higher</b>	<b>Higher</b>	<b>Lower</b>
LRA ACDI/VOCA N-B	PF+PT+PR+SHP+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA Organic-R	PF+PT+PR+SHC	Strategically	Presence	Higher	Higher	Higher
LRA ACDI/VOCA S-B	PF+PT+PR+SHC	Cooperative	Presence	Higher	Higher	Lower
LRA Nespresso-R	PT+PR+SHP+SHC	Strategically	Presence	Higher	Higher	Lower
LRA MH-R	PT+SHP+SHC	Cooperative	Presence	Higher	Higher	Higher
LRA Reg/Starbucks-R	PT+PR	Strategically	Presence	Higher	Higher	Lower
LRA Cnilson-B	PF+PT+PR	Strategically	Presence	Lower	Higher	Higher
<b>LRA Specialty-B</b>	<b>PF+SHP</b>	<b>Cooperative / Selfishly</b>	<b>Presence</b>	<b>Lower</b>	<b>Lower</b>	<b>Higher</b>
LRA Standard-plus-B	PF+SHP	Selfishly	Absence	Higher	Lower	Higher
LRA EdN-B	PT+PR	Strategically	Absence	Higher	Lower	Lower
LRA Fairtrade-R	PF+PT+SHC	Selfishly	Absence	Lower	Lower	Lower
LRA Cultura-B	PF+PT+SHP	Strategically	Absence	Lower	Lower	Lower
LRA Nespresso-B	PT+PR+SHP	Strategically	Absence	Lower	Lower	Lower
LRA La Vereda-R	SHP	Selfishly	Absence	Lower	Lower	Lower
LRA CCEsp/Starbucks-B	PT+PR	Strategically	Absence	Lower	Lower	Lower

Table 34 shows that the presence of the institutional creativity is mainly associated with higher extent and higher coherence without any apparent effect in the closure. Indeed, in the first group, eight of the ten cases in which institutional creativity is present, both the extent and the coherence are higher with two deviant cases (LRA CNilson-B and LRA Specialty-B). In the second group, the absence of institutional creativity is associated with lower coherence in all the cases and with lower extent in five out of seven.

Furthermore, five cases (LRAs Natural-R; CS Standard-R; ACDI/VOCA N-B; ACDI/VOCA S-B and MH-R,) show a relation between the cooperative mobilization of action resources (first negotiation dilemma), the presence of the institutional creativity (second negotiation dilemma) and both higher extent and coherence (no effect on closure) whereas three cases (LRAs Standard-plus-B, Fairtrade-R, La Vereda-R) shows a relation between the selfish mobilization of action resources (first negotiation dilemma), the absence of the institutional creativity (second negotiation dilemma) and lower coherence and/or extent (no effect on closure).

However, there is a deviant case (LRA Specialty) in which there is a both selfishly and cooperative mobilization with the presence of institutional creativity and lower extent and coherence but higher closure.

- Discussion

This exception invites us to take a closer look in the relation between institutional creativity and the three conditions: extent, coherence, and closure, respectively.

The deliberative scenario is a fundamental element that could pave the way to agree on the uses of Resource constituents that should be (dis) incentivized and the outcomes to do so. This activation affects the first of the conditions of the LRA in our conceptualization: extent.

It is plausible to assume that institutional creativity, as a transmitter of demands for services, tends to increase the extent by incorporating additional uses to those previously regulated by fewer actors. At first sight, our analysis reflects this logic given that as more actors join the coalition, new demands request new regulated uses and therefore, as time progresses, extent increases. Also, the other way around, such as the case LRA CNilson-B in which extent is lower because the previous coalition (LRAs ACIDI/VOCA N&S-B), which included stakeholders in consumption and production, was reduced to only profilers, so the coalition demanded fewer services and fewer regulations.

A diachronic analysis of two LRAs gives us a more enriching reading. During the development of the LRA Natural-R, institutional creativity worked to make all the uses of the Resource constituents compatible with the "natural coffee" symbolic service, thus obstructing the rise of regulations on uses to provide other services and in this sense, impeding a potential increase in the extent. The transition once the FLO certification mark dismembered the actors' coalition in the LRA Natural, showed that in order to implement different uses of Resource constituents, it was necessary to break the agreement (so to eliminate institutional creativity) and incentivize excluding uses of Resource constituents in different groups of profilers (AAA farmers, organic farmers, La Vereda farmers). Similarly, in the case of Buesaco, when the institutional creativity triggered by ACIDI/VOCA agreed on a profile that enhances productivity, quality and reduces the environmental impact, it obstructed the enactment of regulation to provide other services like the "exceptional coffee" taste-related service, which eventually led to its weakening. When la Niña put in danger the access to the Resource, the coalition melted and some groups of producers, among them Asoveracruz, broke away from the agreement to join other coalition that incentivized different uses to profile other services.

We would say that these examples demonstrate the institutional complexity trap (Bolognesi et al., 2018) in which the demands for new services (that implies higher extent) were so incoherent (if implemented) that they were in some sort kept under pressure by the coalition until an unmanageable situation, like the external events mentioned, generated an implosion of the LRA.

However, the research also has shown a case in which actors overtook this complexity trap: the LRA CS Standard-R. Indeed, actors changed the logic of the LRA from a "towards" to a "from". Instead of an agreement on rules "towards" a specific profile, actors agreed on a set of minimum rules "from" which they could profile different services. This minimum-rules agreement on a basic profile in the whole perimeter encouraged the different coalitions to add other layers of regulations, increasing the extent in their LRAs.

The minimum-rules agreement could optimize the provision of services up to the limit in which they begin to be incompatible. Then, new uses are encouraged through different LRAs to profile those incompatible services in different perimeters of the Resource.

Contrary evidence is observed in Buesaco, in which the opposite phenomena occurred. The institutional complexity trap is repeated in a brief period because the demanded services (hence the regulations) are so inherently incoherent that the LRAs imploded one after the other.

The example is LRA Specialty-B. Actors bring about the institutional creativity to shape uses of constituents "towards" a profile featured by the high-scored coffee, transparently traded and well paid. This profile as desirable as it looks is inherently incoherent because systematically among the whole population of farmers who implement the regulated uses, only the very top would produce it: if everyone could produce the high-scored and well-paid coffee, new farmers would be attracted until the price would equal the standard coffee.

It was a doomed promise since the beginning. Unsurprisingly, the LRA Specialty left unsatisfied actors behind. Like Sisyphus, actors created the new LRA CCEsp/Starbucks from the incumbent LRA Specialty in the same logic towards the doomed profiled, with the same consequence. A new group of unsatisfied actors was left behind and created a new LRA Cultura in the same logic (towards the doomed profiled) with the same consequence. In this last case, a group of unsatisfied actors was intelligent enough to create the new LRA CNilson only with the demanded quantity of coffee produced by the proven high-scored coffee farmers<sup>1021</sup>.

Therefore, institutional creativity is a necessary but not sufficient condition to increase extent. Nevertheless, our empirical observations allow us to argue that only if all stakeholders in production and consumption participate in the deliberative scenario and, the institutional creativity prioritizes the "from" logic (minimum regulated uses), it could be necessary and sufficient to increase the extent before imploding due to unsurmountable incoherencies, in other words, overtaking the institutional complexity trap.

Coherence also is associated with institutional creativity. The LRA La Vereda-R, in which institutional creativity was absent, there were rivalries so intense that in one coffee producer's farm two actors arrived with (dis)incentives to use Resource constituents oppositely: the FNC to increase the production of coffee and the indigenous movement to eliminate the crop. Whereas in the cases in which institutional creativity is present, the (dis)incentives on the coffee farmer tend to be oriented in the same direction.

However, the fact that institutional creativity acts on the coffee farmer does not necessarily imply that it acts on the other profilers: the LRA Specialty-B featured by the presence of institutional creativity had a low coherence because its coalition is deprived not only of both stakeholders in consumption and production but also other profilers. As a result, even though it had less

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<sup>1021</sup> Still, during the fieldwork, farmers wanted another LRA that could provide them with the high-scored coffee profile.

regulated uses, it could not adequately profile the fewer services it sought for because, by excluding traders and roasters from the deliberative scenarios, the exceptional coffee beans lost their uniqueness when selling them as standard coffee. It was impossible to control the final profile of the Resource, especially the symbolic and taste-related services dependent on the origin.

Therefore, institutional creativity is a necessary but not sufficient condition to increase coherence. As it showed the previous case, the latter requires participation in the deliberative scenarios of all the profilers, regardless of their domicile. Hence, we venture to affirm that only if all profilers along the coffee value chain participate in the deliberative scenario, institutional creativity could be a necessary and sufficient condition to increase coherence.

By defining uses of Resource constituents among a large group of actors, institutional creativity should decrease the closure and maintain the power balance. Curiously, institutional creativity is absent only in one of the five LRA with high closure (Standard-plus-B), but it is present in the other four (LRA MH-R, Organic-R, Natural-R, and CNilson-B). Interesting, in these cases, participant actors, including other profilers, decided to create barriers of entry at the municipal level to produce the "product differentiation" that would add value for the whole group of profilers. Hence, institutional creativity is not a necessary or sufficient condition to decrease closure. However, if the coalition agrees, through deliberative scenarios, to impose barriers at the municipal level, institutional creativity could be a necessary and sufficient condition to increase closure.

#### 9.3.5. Concluding remarks

Having shown that high closure is not salient to increase the level of services provision, three lessons could be explored in further research to increase the extent and the coherence, so the level of services provided.

Firstly, a broad and heterogeneous coalition composed of the whole group of profilers and stakeholders in both consumption and production could increase the extent and the coherence by reducing the transaction costs through collective (or corporate actors) which exclusively represent the aggregated individuals interested on services from the Resource at the same perimeter.

Secondly, even though the cooperative mobilization is neither necessary nor sufficient, the first negotiation dilemma remains salient: actors should either sought for a power-balance starting point through cooperative mobilizations or improve their position through strategic mobilizations to create the conditions to solve the second negotiation dilemma, and eventually, increase the extent and the coherence.

Thirdly, the presence of institutional creativity is a necessary but not sufficient condition to produce an LRA with both high extent and coherence. The institutional complexity trap would make it implode with the arrival of new actors and new services. Nevertheless, if actors solve the

second negotiation dilemma through the “from” logic (minimum regulated uses), it could overtake this trap and increase both the extent and the coherence.

#### 9.4. Usefulness of the analytical framework

We finish this concluding chapter evaluating our analytical framework in regards to its usefulness to answer our question: How do actors negotiate an LRA that optimizes the provision of symbolic, sensory and monetary services from the Resource Coffee?

We start recognizing that the complexity of the framework impeded a simple verification of our two hypotheses. However, from our epistemological perspective, it was more critical to falsify them. Moreover, in this sense, from the operational perspective, the framework was perfectly suited.

##### 9.4.1. Epistemological perspective

Thus, from an epistemological perspective, we adhere to Favre (2005) *philosophie de l'histoire* presented in three theses: “Thesis 1: the world (present and past) is integrally determined, so it is integrally cognizable by the science; thesis 2: that the world is determined does not mean that its future is predictable: the world is nonetheless contingent; thesis 3: human action cannot be based on the prediction of its effects, must be based on values established by reason and therefore generalizable” (translation by the author (pp. 31-32)).

In short, we can explain past events but we cannot predict future ones because of its inherent contingency. Nevertheless, there is one certain future: the impossible one. So, we follow Favre (2005) concept of “*dissymétrie structurelle* between what can happen and what cannot happen (...) if a person hesitates to appear in a competition, the two branches of the alternative are dissymmetrical as to the success of the competition: if the person does not show up she will not succeed for sure, if she shows up, she can succeed or fail” (translation by the author (p. 200)).

This analytical framework works not for identifying the mechanism that would enhance the sustainable management of Resources, but the mechanisms that surely cannot enhance it. Furthermore, this last chapter has shown quite a lot of combinations that would not enhance the sustainable management of Resources: small coalitions that selfishly mobilized their *action resources* or broad coalitions that cooperatively mobilized theirs but are so homogeneous that fail.

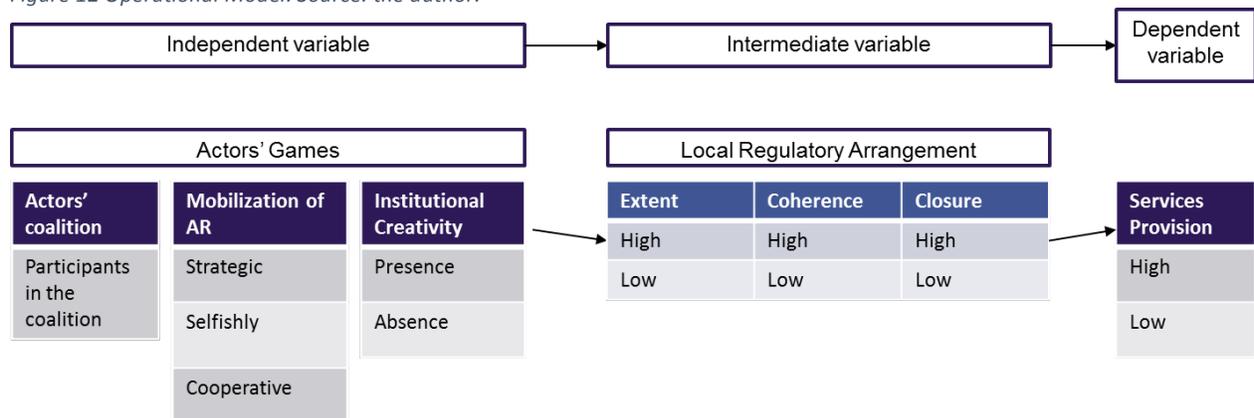
Knowing that all of those combinations would not enhance the sustainable management of Resources, at least we know that a large and heterogeneous coalition of collective actors (which exclusively represent the aggregated individuals interested on services from the Resource at the same perimeter), which sought for a power-balance starting point through cooperative mobilizations to trigger institutional creativity through the “from” logic, *could* enhance the sustainable management of Resources.

We consider the analytical framework a successful tool because of its strength to recommend avoiding some actions. Additionally, it opens a door for trying something that could function, even if the success is not sure.

### 9.4.2. Operational perspective

We come back to our operational model (figure 29) that we developed in chapter 2. Initially, we proposed to explain the sustainable management of the Resource by the Local Regulatory Arrangement (LRA) categorized through eight configurations (the combined presence/absence of three conditions, *extent*, *coherence*, and *closure*). Then, we proposed to explain the LRA configuration by the actors' games, originally conceptualized as a sequence of three analytical dimensions: an *actors' coalition* which could decide on a cooperative, strategic or selfishly *mobilization of action resources* to produce or not *institutional creativity*.

Figure 12 Operational Model. Source: the author.



From an operational perspective, this framework is robust because it produces a convincing picture of the variable to explain: the level of services provided by the Resource in a given Resource perimeter.

The heuristic technique to identify them through the purchase transaction is both feasible and compelling. At the beginning, we thought that it could exclude some local services negatively related with coffee like the threat on the cultural identity of the indigenous farmers, because they were not in the interest of coffee buyers, but actually, they were at the heart of the purchase transactions because they were the ones that inspired the profiling institutions.

Still, the purchase transaction could not reflect some negative services because profiling institutions do not seek for them. It happens because there is no critical mass. Thus, this invisibility is a consequence of the actors' game, not the heuristic technique. When actors reach the critical mass, profiling institutions will reflect the previously invisible service.

Even though the framework is empirically demanding to assess the observable provision of services by each LRA, it proved robust enough to provide a convincing picture of the level of services provided by each LRA.

Firstly, supported mainly on quantitative data, chapters 5.1 and 7.1 statistically demonstrated that LRAs produce a different level of services provision. Then, supported mainly on qualitative data, chapters 5.2 and 5.3 demonstrate that conditions varied between LRAs.

The framework has allowed us to provide enough evidence to support our initial assumption that when the conditions are absent, market forces will profile the Resource. If this combination of services is acceptable enough, actors will not interfere. However, if market forces put at risk some valuable service for a group of actors, layers of extent, coherence and closure begin to settle to profile other combination of services.

Conditions have not equal explanatory power. There is a hierarchy: coherence is the most relevant condition, whereas extent follows and closure ends the line. Indeed, if the participant actors in an LRA demand a combination of services just a little bit over the one encouraged by market forces, which implied few regulations (low extent), coherence would be the only necessary condition to provide the high level of demanded services. However, it does not work the other way around, if coherence is low, no matter the level of the extent and closure, there will be a gap between the observed services and the demanded ones that forcefully will decrease the level of services provided.

In this sense, coherence cannot be compensated by extent nor by closure. However, extent and closure can compensate each other as long as coherence is present. The high extent can compensate the low closure because by codifying the agreed uses of Resource constituents it does not matter market power assignment. On the other hand, high closure can compensate extent because usually the former implies a small enough group of actors that can autonomously use their Resource constituents to profile the services demanded even if they are not regulated.

Nevertheless, we can improve the framework by refining the variation of conditions. Our research design showed that the presence or absence of conditions explains the different level of services provision; in other words, a different configuration is associated with different results. However, we have also shown that results are different between LRAs with the same configuration as in Buesaco. Three LRAs (CCEsp/Starbucks; Caltura; Nespresso) were categorized as “ambitious” and, at the same time, differed in the level of services provision. The explanation is straightforward: the binary variation of the conditions in our research is too wide to capture the subtleties of the LRAs. In this example, the three LRAs have low coherence, but if we had used a more refined technique, we could have shown a different level of the “absence” of coherence that could have explained the difference.

Furthermore, we have demonstrated that extent, coherence, and closure were not spontaneously laid down but they were a result of the actors’ games. Following our epistemological approach, we consider that the picture composed by different LRAs, with various

levels of services provision in a given perimeter, was determined so it can be explained. In chapters 6 and 8 we have traceback in a very (maybe too) detailed way the actions that transmitted causal force to laid down those layers: actors' coalitions, mobilization of actions resources and institutional creativity.

Contrary to the previous case, the diachronic approach implies a sequence in which it is irrelevant to evaluate the different explanatory capacity of the evaluated variables. I mean, first there is an actor' coalition so actors could mobilize their resources of action, and then, they could trigger institutional creativity. So, if there is not any coalition, then, the other actions would not happen, and no LRA would be produced.

We demonstrated the existence of actors' coalition in the decision-making process of each one of the LRAs identified, as well as their mobilization of action resources. Once these two actions were present, then institutional creativity could appear or not. For the third action to happen, the previous two have to happen. In this sense, all analytical dimensions are equally important to explain the emergence of a certain LRA.

## Chapter 10. Recommendations

This final chapter is divided into three subchapters, the first one presents the key message in which we venture to propose the kind of negotiations that could enhance the sustainable management of the Resource coffee. The second one analyzes the effect of profiling institutions to highlight their relevance. The third one presents particular recommendations with regards to the sustainable management of the coffee Resource in Colombia, starting with recommendations at the national level and concluding with recommendations for each actor (farmers; stakeholders in production; other profilers, and stakeholders in consumption).

### 10.1. Key message

The general recommendation is straightforward: from this anthropocentric perspective on sustainability, the key to enhance the collective action is the dialogue at the appropriate resource-perimeter level, in which interested individuals are aggregated in collective or corporate actors that represent the whole set of profilers and stakeholders in production and consumption. If they solve the first negotiation dilemma privileging a power-balanced initial stage and the second negotiation dilemma through a minimum of regulated uses, they would trigger either a responsible entrepreneur or integral LRA, which could enhance the sustainable management of the Resource.

In the case of Coffee, our results suggest an escalated dialogue at the various perimeters of the Resource. A kind of “cunning entrepreneur” regime from the whole world coffee harvest at the international level in which a small group of representatives of collective actors (profilers and stakeholders in production and consumption) exclusively interested on services at this global perimeter negotiates, from a power-balanced initial stage, the minimum requirements for the whole coffee harvest.

This aggregation is one main challenge that opens the door for future research. How can be consolidated a group of actors large enough to represent the whole set of demanded services from the Resource Coffee, but at the same time, small enough to make it feasible a negotiation? Are countries the appropriate “collective actor” that aggregates the whole set of demanded services within their frontiers? Profilers should be disaggregated on the various segments of the coffee value chain? To which point stakeholders should be aggregated into a bigger collective actor?

The Fairtrade System<sup>1022</sup> explained in chapter 5.2.2 shed light on an interesting grouping that could be further explored: Actors are aggregated firstly because of the demanded services and then because of geographical proximity. Henceforth, they aggregate both producers around the monetary services and, other profilers and stakeholders around the Fairtrade symbolic service. Secondly, they aggregate at the very local perimeter (E.g. Asprocafé in Riosucio aggregates more

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<sup>1022</sup> The source for this paragraph is the Fairtrade official webpage: [www.fairtrade.net](http://www.fairtrade.net)

than 800 individuals) then at the regional one (E.g. Asprocafe, alongside more than 800 producers organizations involved in different agricultural products<sup>1023</sup> in 24 countries in Latin-America are aggregated in one collective actor: the *Coordinadora Latinoamericana y del Caribe de Pequeños Productores y Trabajadores de Comercio Justo* – CLAC) and finally, at the global level (the CLAC alongside two other collective actors, Fairtrade Africa and the NAPP in the Asia Pacific). So, this aggregation allows that three collective actors could represent individuals that demand monetary services, namely 1.6 million agricultural producers in 75 countries. Similarly in the case of actors who demand the Fairtrade symbolic service.

If this structure would be replicated for the whole set of services demanded by the Resource Coffee at the global perimeter, one collective actor could represent each demanded service. In this case, it could be possible to have a set of interested actors both representative and small enough to overcome transaction cost and substantially negotiate the minimum requirements for the whole coffee harvest.

This will only work if this minimum profile produced by this global regime is agreed at the national level by a small group of representatives of collective actors exclusively interested at this perimeter. Such an agreement should include a power-balanced initial stage, a context-related extra layer of minimum uses, and the final outputs to spark the coherence needed to effectively bring about this global and national agreed profile.

Finally, at the local level, the widest possible coalition of profilers and both stakeholders exclusively interested in that particular perimeter, should negotiate, again on the basis of a power-balanced initial stage, a third layer of context-dependent minimum uses over which the different actor's coalitions could profile, at lower perimeters (a Vereda, a group of farms, etc.), "responsible entrepreneur" or "integral" LRAs that in sum, could profile the whole set of their demanded services.

It is true that the more the minimum uses are regulated at different levels, the highest is the risk of the complexity trap that would implode the whole system. But on the other side, the "invisible hand" LRA is being questioned not only by coffee growers and consumers, and stakeholders in production and consumption but also by the companies themselves that are facing challenges in both their supply departments and their marketing ones: the supply of high-quality coffee and the positive brand reputation. Logically the free market would profile just one combination of services derivate from the highest efficient coffee culture. If actors feel their services provision threatened in the long turn, such a poorly regulated and incoherent LRA would never satisfy them. We have shown how another kind of LRAs with higher extent and coherence could provide a different combination of demanded services.

In addition, the power-balanced initial stage looks like a naïve recommendation when there is a USD one-hundred billion industry at stake. However, we have provided evidence that when the

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<sup>1023</sup> Oils, nuts and seeds; Sugar and Panela; Banana; Cocoa; Coffee; Fresh Fruits; Dried Fruits; Juices and pulps; Honey; Wine; Quinoa; Handcrafts; Infusions, aromatic herbs and tea; Flowers; Vegetables.

first negotiation dilemma privileged an unbalanced power initial stage, the second negotiation dilemma is solved in favor of a portion of actors who would profile their demanded services, at the expense of the demanded services of other actors. Defining sustainability when all services demanded by actors from the Resource are guaranteed in their expected life span, this naïve-like recommendation takes its positive standing: an unbalanced power initial stage would not profile the whole set of services from the Resource demanded by actors.

This recommendation is not a childish optimism. Remember that a small movement of people (Levy et al., 2015) that started the political vindication for the sustainable (in the socio-economic and environmental sense) symbolic service of coffee, were able to irrupt into the business-as-usual coffee market. They mobilized their *organization* to empower the voiceless, echoing their message that business-as-usual were endangering their way of life and natural environment. And this message reached a population big enough<sup>1024</sup> that companies had to change their uses of constituents to intend to profile these symbolic services in order to attract this population. And, as we have shown in our research, it sparked actors' coalition that resulted in "responsible entrepreneur" and "integral" LRAs that enhance the sustainable management of coffee in the given perimeter. In short, enterprises which want to remain profitable, and by analogy political leaders to remain in power, have to follow people's preferences. If the proportion of people that prioritized the communal benefit over the self-benefit continues to grow, eventually business and public policies would favor the kind of negotiations we have discussed to profile "responsible entrepreneur" or "integral" LRAs.

## 10.2. Profiling institutions matter

We have used the "lens of negotiation" to understand how actors could optimize services provision, one main component is the use of profiling institutions. That is why we are interested in using the "lens of contract" so we can improve our knowledge on the institutions by assessing the effect of institutions against their problem definition.

The uncompetitive coffee culture in Colombia after the breakdown of the quota market (chapter 4.2) generated a widely shared definition of the problem: the international coffee market did not provide enough monetary services for coffee growers causing poverty, and its associated problems regarding environmental degradation, weakening of social cohesion or illegal crops. In this sense, the whole set of profiling institutions, which were mobilized in our two contexts of study, had the intention to improve the monetary services received by farmers.

Our research design is particularly well suited for testing the effect of institutions over the monetary services of coffee farmers. In other researches<sup>1025</sup>, scholars conducted this test by randomly selecting farmers implementing a profiling institution (e.g. farmers' participant in the Nespresso AAA program) and farmers that do not in one particular region, then they repeat this

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<sup>1024</sup> A highly attractive 37% of consumers categorized depending on their engagement with sustainability (Bemporad et al., 2012).

<sup>1025</sup> In both chapters 1.3.1 and 1.3.2 we present them.

exercise in different regions to avoid local particularities that rest generalization power. Nevertheless, this sampling method has weaknesses. Firstly, related to the salience of the ecotope: soil, water, temperature, solar irradiation are conditions that explain both the productivity and the implementation of the profile institution; Secondly, it cannot assess synergies brought about by other profiling institutions affecting the same population of coffee farmers; Thirdly, it is poorly informed of previous dynamics that better explain the result than the institutions itself.

In our research, we selected the two most antagonist coffee regions in which the global demand for services reached the smallest possible geographical area. It implied that we would be able to find the highest quantity of profiling institution influencing the same group of coffee growers. Henceforth, we obtained the data from the whole population of coffee farmers in the same ecotope controlling for external factors like precipitation or solar irradiation; then through the series of ANCOVA statistical tests, we controlled for internal factors like the number of coffee trees, the age, and the variety. So, we can convincingly claim that the difference in the monetary services received on average by coffee farmers was due to the successful implementation of a profiling institution.

It is worthy to say a word about the data we used. In Buesaco data was obtained through the widely used survey method in which questions were asked to the whole population of coffee farmers. This method relies on farmers' memory so whenever there is not a relationship between the memory and the LRA, results are considered acceptable.

However, data could be closer to reality. In Riosucio, the monetary services were assessed not by asking the coffee farmers but by checking the purchases registered in the Cooperative at the identification number of each coffee farmer. The uses of Resource constituents were assessed by checking the farm features related to the identification number of the coffee farmers in the SICA database, data that is day-to-day updated and verified by the extension agents.

Thanks to the hard work of employees from the Cooperative and the extension agents of the FNC, we worked with data on purchases and uses of Resource constituents for more than three thousand coffee farmers who are simultaneously affected by six profiling institutions including the official quality standard in Colombia (Resolución 5/2002); one private quality standards (SCAA's Q system); one of the most well-known GI (Café de Colombia); five out of the seven most important VSS ( Fairtrade; Organic; Rainforest Alliance; C.A.F.E Practices: Nespresso AAA) and one UNESCO's world heritage protection (Coffee Cultural Landscape of Colombia).

As far as I know, there is not any study that had this kind of data, which on the one hand, can match uses of Resource constituents to the monetary services produced, and on the other, can have the variety of profiling institutions in the same population affected by the same external variables.

The robustness of our data in the case of Riosucio, allow us to convincingly affirm that profiling institutions work for improving the monetary services of coffee farmers. Indeed, for a coffee

farmer in Riosucio that possessed 4,581 coffee trees, 3/4 parts of which were pest-resistant, with an average age of 8.4 years and, planted with a density equivalent of 5,120 plants per hectare, and sold more than half of their 2015 harvest through the LRA Standard (Resolución 5/2002 profiling institution), obtained on average 8 legal monthly minimum wages (l.m.m.w).

However, if the farmer sold through the LRA Reg/Starbucks (C.A.F.E Practices profiling institution) or the LRA La Vereda (Rainforest Alliance profiling institution), he obtained 11 l.m.m.w (or 26% higher than LRA Standard); if the farmer sold through the LRA Fairtrade (Fairtrade profiling institution) or the LRA Organic (Organic profiling institution), he obtained 13 l.m.m.w (or 58% higher than LRA Standard); and if the farmer sold through the LRA Nespresso (Nespresso AAA profiling institution), he obtained 17 l.m.m.w (or 98% higher than LRA Standard).

These results contradict the unproven narrative that profiling institutions diminish monetary services received by farmers, particularly present in farmers communities (as we showed in chapter 8.3 and 8.4). Indeed, leaving the other factors equal, we showed that profiling institutions increase the monetary services. There are other factors like land concentration, cost of agricultural inputs (including labor cost, fertilizers, access to credit, interest rates, etc.), weather phenomena, heterogeneous competitiveness among coffee lands, etc., that come alongside the implementation of profiling institution, but specially in the case of Riosucio, if we control for these other factors, the profiling institutions are part of the solution. In other words, one mechanism for decreasing farmers income is by avoiding profiling institutions and pushing them to compete in the free coffee market.

We do not pretend to say that profiling institutions are the panacea: between them are differences and other effects than monetary ones. But it is important to make a point clear for both farmers and consumers. Better than regarding profiling institutions as a “new form of colonialism”, they should be seeing as a tool of coordination that could be improved. In this second sense, stakeholders in both production and consumption should encourage the other profilers to proactively participate in the profiling institution’s improvement.

This last statement introduces us to the last critic we made of mainstream research (presented in chapter 1.3.1 and 1.3.2) on the monetary effects of profiling institution: they are poorly informed of previous dynamics. Our sampling method that focused on two coffee lands by providing a static picture (the observable profiles produced by different LRAs), allowed us to trace the history back, to understand why a particular profiling institution worked very well in one place and not so well in another. We are not interested to make a judgment on which institution is better than others because our interest is on the agreement. And profiling institutions are part of the solution because they are an input of very complex agreements embedded in the actor’s games history that had been developed. We have shown that these actors’ games have changed not only the agreement but also the profiling institution itself. Like the special dish on a restaurant in which the kitchen team had refined both the main ingredient and its cooking, actors’ coalition had shaped both the profiling institution and its implementation to enhance the profile they are looking for.

To conclude this section, profiling institution matter and are part of the solution. Hence, farmers and consumers should look at them as a tool that could be improved. Of course, it only could be possible if stakeholders and the rest of profilers are open to its discussion.

### 10.3. Particular recommendations

We have developed general recommendations that could enhance the sustainable management of Resources by triggering “integral” and “responsible entrepreneurial” LRAs through negotiations, from a power-balanced starting point at the appropriate resource-perimeter level, between representatives of the whole set of actors. Even though this study shows that each negotiation is context-dependent on the services demanded from the Resource, there is neither a single solution nor a desirable profile, in this final subchapter we take a personal position to recommend the minimum regulated uses to profile the Resource coffee in Colombia.

We consider that a coalition composed of a small group of collective actors (aggregated by the demanded services) representatives of the whole set of actors (profilers and stakeholders in production and consumption) should decide on a very few but crucial uses of constituents, which risk to put in danger its own stock by depleting the stock of associated Resources (like water and soil). They should agree to profile a basic combination of symbolic and taste related services in order to trigger monetary services to produce the profile sought by the ICA 2001/2007.

We would like to emphasize the focus on symbolic and taste related services to trigger monetary services, not the other way around. The ICA (1962-1989) on quotas tried for various decades to shape a profile of the Resource that produces monetary services for profilers. It left behind services demanded by stakeholders in production and consumption, increasing the pressure until incoherencies made it imploded. Whereas the ICA (since 2001) on VSS, as our research has demonstrated, shows that when symbolic services are regulated, monetary services increased for the whole group of profilers, including coffee growers. However, there is an issue of distribution in which producers feel being the losing party.

In fact, it is because of this perceived unfairness for farmers that the profile sought by the ICA on VSS has being questioned in Colombia, producing the implosion of some VSS-based LRAs (like the LRAs ACIDI/VOCA N&S in Buesaco) in the quest for the taste related services sought by the specialty coffee profile. The actors that favor the specialty profile have prioritized a competition-based approach, which is believed to multiply monetary services by encouraging experimentation to produce exceptional aromatic profiles<sup>1026</sup>. However, this profile is inherently doomed because it encourages the change of behavior of the whole population of farmers by

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<sup>1026</sup> In the Specialty coffee market contest are very common. Hundreds of coffee growers deliver lots of coffee with excellent scores, usually only the very few at the top reach 30 times or higher prices, when the following two or three dozen would have prices lower than 10 times higher prices. For the rest, a high quality standard price would be paid. As an example the last Cup of Excellence auction in Colombia in 2017, in which, competing with coffee from the whole country, five farmers of Buesaco were in the top ten including the first, fourth and fifth (ACE, 2017).

promising them a combination of services (including higher monetary services), knowing in advance that only a few farmers will profile.

This scheme is based on two assumptions: first that through hard work the coffee grower can produce a high-scored coffee; second that high-scored coffee can effectively be sold as high-scored coffee. Auction results and attractive anecdotes in which coffee are sold at prices tenfold higher are used to sustain the validity of these assumptions and to gain adherents. This assumption was hardly contested because farmers who tried hard (incurring in higher costs) and failed to produce high-scored coffee, usually blame the cupping agents and sent samples to independent laboratories until one gave them the reason. Likewise, the high-scored coffee lots that cannot be sold as high-scored coffee increased the coffee farmer's distrust towards traders. However, this gap is inherent to the competition-based approach which only rewards the winner coffee lot, no matter if the loser is also specialty coffee that scored slightly less.

We consider a different approach to tackling down the distribution issues by combining both taste related and symbolic services originated in the territory through “integral” or “responsible entrepreneur” LRAs at the local perimeter. Privileging the “terroir expression” taste related service like the case of Nespresso in both Riosucio and Buesaco and the “exceptional coffee” taste related service as a collective bet, like the case of the LRA Organic in Riosucio, in which the whole burden of the change in uses of Resource constituents (cupping and communication strategy) is on the shoulders of the collective actor and its commercial partner, reducing the risk farmers had to face. When these services are associated with the symbolic ones, it could produce the product differentiation that could improve the monetary services received by farmers.

Likewise, when matching taste related and symbolic services at a national/global perimeter, through the minimum regulated uses, it would produce a first separation between an “invisible hand” global regime that put in peril communities’ environment and social cohesion, and another “cunning entrepreneur” global regime that is encouraged by market forces to the extent they do not risk the provision of these services. I mean, companies can compete and be as innovative and efficient as possible as long as they do not put in danger the environment and the social cohesion of coffee communities. These minimum regulated uses would not negatively affect the economy if it equally affects the global population of profilers, but it would only work if it is regulated on a global scale<sup>1027</sup>.

In the last scenario, this profile should regulate uses of *infrastructures*, *know-how*, and *know-to-appreciate* that are valuable not only in the first processes of the coffee value chain but also on

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<sup>1027</sup> Labor legislation for example, obligate companies to compete to the extent they do not endanger the wellbeing of employees: “Globally an overwhelming majority of countries reviewed have established a right to a minimum period of annual leave in legislation (96%)” (Ghosheh, 2013, p. 16). It was possible to make companies accountable for their labor practices without generating a massive bankruptcy because higher labor cost due to working laws affected all companies in the same jurisdiction. Nevertheless there are huge imbalances among jurisdictions because laws are not equal (in Europe for example 94% of countries offer more than 20 days of annual leave whereas, in Asia and the Pacific, 54% of countries offer less than 14 days of annual leave (Ghosheh, 2013, p. 17), causing a perceived unfairness that sparked unilateral trade barriers.

the last processes, affecting farmers, traders and roasters. As an example, the organic labeling legislation showed that it is equally important targeting the first processes in the hands of profilers and the last in the hand of consumers.

In this sense, we could have at least three kinds of LRAs in Colombia that could differently impact three groups of coffee farmers present in Colombia. A “cunning entrepreneur” LRA for entrepreneurial coffee farmers in the low lands, an “integral” LRA for entrepreneurial coffee farmers in the high lands. And a “responsible entrepreneur” LRA for family farmers.

In the next sections, we will propose recommendations for the whole set of actors in regards to the developing of these three types of LRAs through national legislation, that from our personal perspective, could optimize the provision of demanded services from the Colombian coffee.

### 10.3.1. Farmers

When doing the fieldwork, an effect derived from the implementation of the coffee public policy that targets the small coffee grower, was that they and their families had to work more time in their farms: A coffee farmer with two thousand coffee trees has enough time to work both on his farm and as a day laborer on neighboring farms. More than eight thousand plants are too much for a single farmer<sup>1028</sup>, if he does not rely on the family workforce, he would need to hire labor.

The increase in the number of trees per unit of land produced by the renovation program (chapter 4.2.2) increased the time small coffee farmers devoted to their own farm while reducing the time available for working on the neighbors' farms, especially at harvest time. Consequently, it put upward pressure on the cost of labor and reduced the monetary services for coffee growers who had to pay for labor. In Riosucio for example, given the decreasing trend in coffee prices and the increasing trend in labor costs, the profitability of entrepreneurial coffee farming was seriously questioned<sup>1029</sup>.

So, we can divide the Colombian coffee culture into two main groups depending on their dependency on labor: low dependent family farms and high dependent entrepreneurial farms. The second group can also be divided into two groups depending on comparative advantage:

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<sup>1028</sup> This number is a result of our experience during the field work. Usually the family composed of a couple and one or two sons can work a coffee farm with five or six thousand coffee three. Frequently, farmers said they could not cultivate more than that because they sons would leave and labor was scarce. Only one family farm I visited had eight thousand coffee threes because there were three adolescents that worked alongside their parents. Of course, the maximum number of coffee trees a family farm can manage, had to take into account other variables like the ecotope, idiosyncrasy, equipment, age, climate, etc.

<sup>1029</sup> In 2010, a coffee farmer received on average COP 1.1 million per coffee load (125 kg of coffee). He paid on average COP 20 thousand for a one-day-wage of labor; COP 300 for one kilo of coffee cherry harvested. In 2016, they received on average COP 800 thousand per a load of coffee, the wage for a day of labor increased to COP 30 thousand; and one kilo of coffee cherry harvested increased to COP 500. Interview with Luis Eduardo Castro, an entrepreneurial coffee farmer in Riosucio and employee of the agricultural office in the Alcaldía de Riosucio.

farms in the low land with higher temperature and higher yield, and farms in the high lands with lower temperature and lower yield<sup>1030</sup>.

We developed our case studies in coffee zones in which the global demand for services reaches the local level. It forcefully excluded the regions featured by the most competitive coffee farming in Colombia because the profile encouraged by market forces suit them perfectly. Alongside high productive farms in other countries, especially Brazil and Vietnam, they are the winners of the “invisible hand” LRA predominant to profile the world coffee harvest.

We refer to the entrepreneurial coffee farming in the low lands. They are featured by the intensive coffee farming in farms with tens of hectares, cultivated with ten thousand full-sun-grown coffee three per hectare, dependent on synthetic fertilizers and high solar irradiation to maximize the yield. Alongside poor working conditions for workers (which are paid on a daily basis without any social protection) and mechanization of the post-harvesting process (which takes a massive toll on water integrity), these coffee farms can internalize labor costs and maintain their profitability.

But also, they are the target group of the “cunning entrepreneur” LRA that we discussed previously, which would agree on minimum regulated uses to profile the socio-environmental demanded services from the Resource. So, entrepreneurial coffee farmers could continue looking for efficiencies through innovations and experimentation to the extent they respect the minimums, for example conserving water and biodiversity and guaranteeing the appropriate working conditions for their workers.

Entrepreneurial coffee farming in the high lands would also have to fulfill this “cunning entrepreneur LRA”. But they could also profile the “exceptional coffee” taste related service adding extra layers of extent, coherence, and closure to produce an “integral” LRA. Indeed, the specialty profile is perfectly suited for entrepreneurial coffee farming in the high land because the lower-temperature that reduce its productivity (and competitiveness on volume) triggers the aromatic precursors (and competitiveness on quality). As these farms struggle with labor cost that cannot be afforded through standard market prices nor VSS/GI prices, the only option they have to survive in the long term is by taking a risk, which they could afford, of implementing high-cost practices to produce the exceptional aromatic profile and reach the ten-fold higher prices.

However, the specialty profile is not convenient for family farming. Clearly, these farms can produce exceptional aromatic profiles, but they do not forcefully have to rely on labor cost and it is hard for them to assume the risk of implementing high-cost practices, particularly the liquidity costs of delivering their coffee and waiting for months (samples have to be sent to several clients, cupped, negotiated and finally bought) before the payment arrives. Additionally, it erodes social cohesion by affecting confidence among neighbor farmers and between them and the traders, as the case in Buesaco showed.

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<sup>1030</sup> The most productive farms in the low lands, between 1.200 and 1.600 m.a.s.l can produce 8.750 kg per ha whereas in the high lands more than 1.600 m.a.s.l. it is rare to reach more than 4.000 kg per ha.

Furthermore, simplistic economic reasoning would suggest that for family farming to succeed, the specialty profile is contrary to their interest. Indeed, if market prices remain low, it would be more strategic for the small coffee farms take advantage of the higher labor cost to eliminate their local competition: the entrepreneurial coffee farm. A family farm can internalize higher labor cost through family workforce and the *manos cambiadas* schemes, whereas several labor-dependent entrepreneurial coffee farms (farms with more than 5ha), which represent 4% of the total coffee farms and 27% of the cultivated area (FNC., 2014, p. 14), would not be able to reach the productivity needed to remain in the business. Eventually, the bankruptcy of entrepreneurial coffee farms would decrease the total amount of Colombian coffee offered to the international market pushing high its premium (as it happened during La Niña <sup>1031</sup> ), and improving the monetary services for family farms. It is simplistic reasoning because, in Colombia, both entrepreneurial and family farming have been associated for years. The latter provides labor for the former, in exchange family farmers receive not only cash but also the knowledge that is replicated in their farms, and commercial ties that eventually result in better prices for their harvest.

We have shown that the family farms could focalize on profiling symbolic services like organic, Fairtrade, indigenous coffee, etc., associated to the “terroir expression” taste related service through “responsible entrepreneur” LRAs, which can increase their monetary services without increasing their cost of production. In fact, these services tend to rely on knowledge and labor: instead of buying fertilizer and pesticides, farmers have to understand the plants demands for nutrients and how to produce this nutrient using organic material; and instead of expensive experiments to enhance the aromatic profile farmers have to develop a well-conducted picking and post-harvesting processes to fulfill the maximum aromatic profile and obtain more money for the same quantity. Clearly, uses of constituents are regulated and coordinated, increasing the extent and the coherence, but reducing the closure. Indeed, high closure implies a significant and risky investment to influence the *know-to-appreciate* of consumers in order to create barriers to entry. Low closure, on the other hand, would imply that a collective actor, which aggregates family farmers, in collaboration with its commercial partner would create and maintain the barriers of entry to succeeding in the very competitive coffee market.

In the case of Buesaco, the LRA Specialty showed the difficulties for producers (aggregated in the collective actor *Allianza Café*) to establish successful barriers of entry in the roasted coffee market. In the case of Riosucio the year after we did our field work, producers in the LRA Fairtrade (aggregated in the collective actor *Asprocafé*) struggled to maintain the roasted coffee brand *Ingrumá Asprocafé*, whose operational activity was subsidized by premiums from the LRA Organic, Fairtrade and partially Nespresso. It could be true that family farmers can earn more through an “integral” LRA if their collective actor succeeds in implementing the barriers of entry for having market success. However, it is a risky bet when they try to vertically integrate the whole chain as the Specialty LRA in Buesaco showed. In fact, this failure is not a surprise,

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<sup>1031</sup> During la Niña phenomenon in which Colombian coffee production fell by 40%, the price of Colombian coffee during 2009, 2010 and 2011 was 54%, 50% and 35% higher than the indicative price of the ICO (Annex 6).

Berdegú (2003) interviewed 1050 rural producers organization in Chile and analyzed financial reports of half of them. He concluded that there is not any relationship between the fact farmers being aggregated into a collective actor and the market success. For him, market success depends fundamentally on the intrinsic features of the product.

However, we have shown that if the collective actor (that aggregates family farms) participates in an actors' coalition alongside traders, roasters, and stakeholders, this coalition would be able to create and maintain barriers of entry. It is so because actors' coalitions could increase the extent and the coherence to profile symbolic and taste related services linked to the territory, therefore generating product differentiation. This barrier of entry is created and maintained through the activation of institutions to incentivize the uses of constituents through outputs for incentivizing uses of *Infrastructures* and *know-how* by profilers (through technical assistance to transfer knowledge to farmers, for example), and influencing the *know-to-appreciate* of consumers (through marketing campaigns, for example). This shared effort by the whole set of actors in the coalitions would create higher monetary services for the whole set of profilers, including the family farmers.

An iconic example of this "integral" LRA profiled by the whole set of actors that produces higher monetary services for the family farms is the LRA organic in Riosucio. This LRA profiled a combination of symbolic and taste related services linked to the territory: the "organic" symbolic service, and the "exceptional coffee" taste related service. Unusually, the "exceptional coffee" taste related service is a collective bet of the whole actor's coalition, not an individual effort by one or a few actors. In Buesaco we showed the usual way for profiling the "exceptional coffee" symbolic service: farmers have to take the whole risk by assuming costly practices without any assurance they would succeed because a contest would reward few winner farmers. In Riosucio, participant farmers in the LRA organic do not have to assume any risky practices to profile the "exceptional coffee" because they are done by the cooperative and the roaster: Farmers deliver the organic coffee, the cooperative sort them depending on the cupping score, and the Roaster markets "*los cuernos del diablo*" as a special edition using the high-scored organic coffee from Riosucio. Thus, the highest price paid by consumers is not concentrated in a few farms, but it comes back as a premium-after-buying for almost half of the participant farmers in the LRA organic.

### 10.3.2. Stakeholders in production

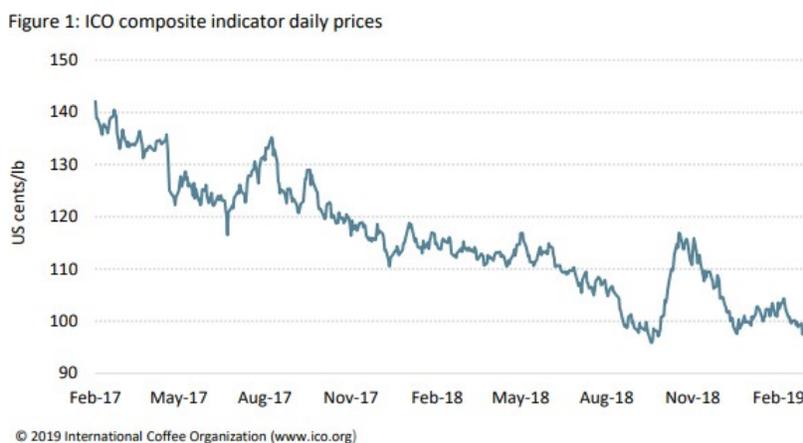
Three stakeholders in production could play an important role in supporting the consolidation of the three previous LRAs in Colombia. We refer to the FNC as the national authority in regards to the coffee public policy, then the local authorities, and finally other stakeholders in production such as the indigenous organization in Riosucio and the *Fundación Social* in Buesaco.

- FNC

The FNC has focused its energies mainly on improving the monetary services for producers, as it was evident in the fourth world coffee conference in Ethiopia in 2016, in which the FNC's CEO claimed it was needed a dialogue among actors to improve and stabilize coffee prices<sup>1032</sup>. Also, in the conclusion of the first world coffee producers forum in Medellin in 2017, in which participants agreed to develop an action plan to face the main problem of the coffee culture: the low prices received by producers<sup>1033</sup>.

For the FNC, the most evident solution is to claim for better prices because it is the best solution for all its coffee producer federates, including both hundreds of thousands of family farms and hundreds of entrepreneurial coffee farms in Colombia. But since the intentions for improving prices perceived by farmers were written down in Medellin, prices had lost one-third of its value as figure 13 shows.

Figure 13 International coffee prices. Source: International Coffee Organization.



However, when prices are regulated usually it will mainly benefit a group of individuals. In the case of coffee, price regulation does not only beneficiate producers versus other profilers and stakeholders, who demanded other services from the Resource. Price regulation in producer countries produced unequally distributed benefits between farmers as we showed in the historical sections in Riosucio and in Buesaco (annex 2.2 and 2.3): high coffee prices in the second half of the twentieth century benefited the socio-economic elite in Colombia at the expense of indigenous farmers, sharecroppers, and small farmers.

The proven intrinsic bias in favor of one of the parts bring about by prices regulation engenders a pure conflict actor's constellation that would hardly be solved. This proposal would waste energies that could be invested in other possible agreements, and worryingly, would be misused

<sup>1032</sup> The whole presentations could be accessed in the official web page of the International Coffee Organization. <http://www.ico.org/wconference.asp>

<sup>1033</sup> "Trabajar de manera corresponsable con todos los agentes de la cadena global del café y con el apoyo de la OIC, en la elaboración de un Plan de Acción que deberá partir de la problemática que enfrentan las caficulturas de las diversas regiones del mundo, a saber: Bajísimos niveles del precio al productor y excesiva volatilidad, quedando la mayor fracción del valor de la cadena en los eslabones siguientes (...)" (FNC, 2017a, p. 32).

demonizing the other actors, like blaming traders and roasters of benefiting from exploiting farmers. Foreseeably, the negotiation would be even more difficult.

We recommend that the FNC, as the coffee public policy authority in Colombia, should understand the sustainable management of Colombian coffee from this anthropocentric (hence context-dependent) perspective. So, there is not a single profile featured by monetary services to which the whole coffee harvest have to move “towards”. There should be several profiles built over a “cunning entrepreneur” LRA with few well-coordinated regulated uses. In this sense, from this basic LRA, “responsible entrepreneur” and “integral” LRAs should be developed and encouraged.

In this sense, the FNC should look for a “cunning entrepreneur” regime at the global perimeter. They should partner with other collective actors who mainly demand monetary services for family farmers, like other stakeholders in production and especially stakeholders in consumption, so, eventually, they could attract roasters.

We have shown that the best way for improving monetary services for family farmers is by profiling the symbolic and taste related services associated with the origin. So, we propose that the FNC mobilizes their international *consensus* to agree on a set of minimum regulated uses of constituents that profiles a minimum “environmental responsible” symbolic service (which would mainly target the *infrastructures* and *know-how* of the highly productive entrepreneurial farmers) and the “terroir expression” taste related service (which would target *infrastructures* and *know-how* of traders and roasters). It implies that all actors would use their *infrastructures* and *know-how* in the communication process to influence the *know-to-appreciate* of consumers, so two LRAs could clearly be distinguished: The “invisible hand” LRA that looking for efficiencies threatens the local environment and social cohesion, and the “cunning entrepreneur” that does not. By creating this difference, the segmentation could encourage entrepreneurial coffee farms to internalize their environmental and social costs.

It would be politically difficult because of the significant production of the relatively few entrepreneurial coffee farmers gave them an important representation at the center of the National Coffee Congress. But if the FNC wants to support the sustainable management of Coffee in Colombia, it would have to target differentially the represented coffee farms: Entrepreneurial coffee farming through a “cunning entrepreneur” LRA, and family farming through “integral” and “responsible entrepreneur” LRAs.

Regarding this second set of LRAs, the FNC has to decentralize itself so that the local offices could negotiate autonomously with other actors interested exclusively at the same Resource perimeter, for example, the *Comité Departamental de Cafeteros de Nariño* could negotiate directly alongside members of the cluster Nespresso in this Department. So, these decentralized offices could solve the first negotiation dilemma providing a power-balance initial state so that they could agree on the minimum context-dependent regulated uses, which should be encouraged through the locally shaped outputs of the coffee public policy. Over it, other actors should profile their LRAs providing a complementary combination of services.

- Local authorities

The FNC is a hierarchical organization with local branches that do not have the autonomy needed to negotiate the profile of the Resource at the local level. That is why, in the two contexts of our research, the local authority has joined the actors' coalition to support the provision of services demanded by some unsatisfied local coffee producers.

As authorities, they can mobilize *action resources* to activate other than the coffee public policy in order to produce final outputs, which (dis)incentive a change in the use of constituents. They are powerful actors capable of triggering a change when opposing incumbent LRAs, either by affecting LRAs configuration (even to the point of implosion) or creating new ones.

Clearly, like other powerful actors, they can selfishly mobilize their action Resources to take advantage of the power-unbalanced game to profile their demanded services at the expense of other actors reducing the sustainable management of the Resource. The example is the LRA Specialty in Buesaco, in which the Gobernación de Nariño selfishly mobilized their *political support* to circumvent the coffee public policy, in order to incentivize farmers to profile the "exceptional coffee" taste related service, at the expense of the profile demanded by the incumbent LRAs.

But we showed that they also can improve the sustainable management of Resource, by incorporating into the incumbent LRA an extra layer of extent and coherence to profile some services demanded by actors that were left behind. The example is the LRA CS Standard, in which the Alcaldía de Riosucio cooperatively mobilized their *political support* to encourage the deliberation between indigenous leaders and the FNC/Comité, so the latter was endowed with the *consensus* needed to innovatively activate the coffee public policy through locally shaped final outputs, which profiled the indigenous demands for services.

In this sense, we consider that local authorities have a major role to play to guarantee that LRAs do not leave any relevant local actor behind. If they are interested in the sustainable management of the Resource for gaining political recognition in the long term and not in the short-term victory taking a position in favor of an electoral attractive actor, they should not mobilize their *action resources* to activate institutions to provide the services demanded by this single actor, and furthermore, they should focus their energies in supporting the mechanism that we have shown to trigger the "integral" or "responsible entrepreneurial" LRA at the local perimeter:

First by encouraging the consolidation of an actors' coalition composed of all interested actors. At least, from local actors that demand services from the Resource.

Secondly, by intervening in the quest for a power-balanced initial negotiation. If other powerful actors sought only their demanded services, the local authority should intervene cooperatively

mobilizing their *action resources* to endow (or to support the creation of) the collective actor that represents the voiceless individuals that cannot move forward their demanded services.

Thirdly, by creating or enhancing deliberative scenarios among the actors' coalition. Then, by actively participating in the negotiations to agree on the profile and the distribution of cost and benefits using its role as authority. Indeed, they can produce the collectively shaped outputs to (dis) incentivize the collectively agree uses of constituents to profile the collectively agreed combination of services.

- [Other stakeholders in production](#)

In our cases, we have two other stakeholders in production for which we consider pertinent proposing recommendations for enhancing the sustainable management of the Resource coffee: the indigenous organization in Riosucio and Fundación Social in Buesaco.

For the first one, we strongly recommend making peace with the past, if the expression is valuable, in order to overtake the "pure conflict" actors' constellations that were usually described in our research.

I mean, "pure conflict constellation" is needed in the occasions in which there is no negotiation possible. It was the case with the indigenous organization that had to fight in the international arena firstly, and then in the national one for the full recognition of their rights. We consider this recognition by the Colombian institutions (inherited from the colonial one who imposed a heavy burden on indigenous population for the benefit of the Spanish elite dismembering the indigenous social structure and profoundly affecting indigenous population, which were reshaped by the Republic to eliminate any trace of the indigenous cosmovision to the benefit of the new Colombian elite) was not negotiable. So, the conflict was inevitable and eventually, in a power game that in Colombia implied the death of many indigenous leaders since the sixties, the recognition was agreed in the Constituent Assembly of Colombia in 1991.

But in other cases, the "pure conflict constellation" is not necessary. Opposing coffee because it was a symbol of the Resguardos disappearance and indigenes dispossession does not automatically bring back the Resguardos and could deprive actual indigenes of some cash needed to improve their material well-being. Moreover, opposing the "foreign" just because it is contrary to the "native" could produce isolation that eventually would be traduced in vulnerability. In some cases, it looked as if the only legitimate service was the one that the indigenous organization was moving forward, and the rest demanded by other actors were almost harmful. However, we showed that when the indigenous organization embarked in other than "pure conflict" constellations, they were able to shape the final outputs in order to profile a combination of services that were not only acceptable but also beneficial for the indigenous population.

In this sense, we strongly recommend the indigenous organization to accept that they are part of this world of mankind. They have a lot to contribute for making it more respectful of nature and living beings, but it would only be possible if they engage in negotiations with an open spirit to take into account also the demands of other actors. The best way to profile their demanded services is by actively participating in a negotiation that implies taking and giving.

In regards to the Fundación Social in Buesaco, we recommend them to change their value chain approach, which focus on upgrading their position through both vertically integrating the process of the coffee value chain and moving towards the more attractive specialty coffee markets, to the LRA approach that focus on agreements, among the whole set of actors, to profile symbolic and taste related services to increase the monetary ones, an eventually diminishing poverty.

The FS started their quest because they considered the VSS produced insufficient monetary services to farmers and the specialty coffee was an attractive opportunity to reverse the situation and reduce poverty. I would suggest that the diagnosis maybe was not completely accurate, and if poverty was widespread, it was more related to the little production on the very small holdings in Nariño (whose ecotope is not suited for triggering productivity), than to the fact of selling through the VSS mechanisms (which of course was aggravated when prices sunk). But in any case, the failed experience with the Alianza Café (a vertically integrated producers' association in Nariño) showed that producing the barriers of entry for succeeding in the market is more costly and risky than, an association with little capital, and especially little patience from its associates, can afford. And the experience with Café con Altura (a trading company in the specialty market) showed that there is not a relationship between a farmer that invests itself in producing a high-scored coffee and the higher price received. Both are good experiences that shed light on the paths that should be discontinued.

We think that the experience of the LRA Organic is a good benchmark for what the Fundación Social is intending to do: improving the wellbeing and the social tissue of coffee farmers. From our perspective, the FS has the *money* and the *personal* that is needed if three adjustments are made. Firstly, "*Café con Altura S.A.S*" should be the collective actor of the aggregated farmers, today it is just another trader funded with money that demands a social return. Secondly, they should target the symbolic services inviting actors to join their LRA like Fairtrade, Organic, Rainforest Alliance, etc. Thirdly, they should bet for the collective profiling of the "exceptional coffee" that we explained previously, in which the costs were assumed by the trader and the benefit shared as widely as possible. The exceptional taste related services would guarantee, once associated with the symbolic services, the development of barriers of entry at the municipal level that would increase the monetary services for the whole set of participant profilers, including the coffee farmers.

### 10.3.3. Other profilers (traders and roasters)

We previously discussed the evidence that suggests that market power is not forcefully associate with a lower level of services provision. And we also presented the inconveniences associated with the vertical integrations of coffee farmers association. In this order of ideas, we consider

traders and roasters a fundamental part of the solution to enhance the sustainable management of coffee.

On the other hand, roasters should be interested in being part of the solution. They have played the capitalist game of encouraging efficiencies to reduce to the minimum the cost of production, while increasing to the maximum the quality, to offer in the shelves roasted packed coffee at prices attractive enough for consumers. If they want to offer a different product that takes care of the environment and communities, for example, they have to invest massively on marketing campaigns to create barriers of entry that distinguish them from the competition. Many enterprises have faded in the effort, and some survivors are despised by a progressively bigger population that consider they full the pockets of a few shareholders at the expense of the many inhabitants of this planet, in terms of environmental and social degradation.

We have shown that there is an option in which the whole set of profilers improve their monetary services: profiling symbolic and taste related services associated with the origin.

Firstly, it is needed the “cunning entrepreneur” LRA at the global level to allow consumers to distinguish it from the profile of the “invisible hand” LRA, which negatively affect the environment and communities.

Participant roasters in the “invisible hand” LRA will not necessarily lose because they are offering their products at the lowest possible price, and their price-sensitive consumers will remain as far as prices remain low. But participant roasters in the “cunning entrepreneur” LRA have much to win. They should support this negotiation because they can embark in this quest without having to lose money in a costly and unsuccessful marketing campaign to influence the *know-to-appreciate*: barely one of ten consumers believes in companies when they marketed their environmentally and socially responsible commitment (Bemporad et al., 2012, p. 16). Moreover, usually, roasters participate in both segments with different brands like Nestle, pushing economies of scale to the maximum through their Nescafé brand, and profiling the socio-environmental services through their Nespresso brand.

Secondly, following the example of the two LRAs ACIDI/VOCA Nespresso and Starbucks in Nariño, roasters should invite other interested actors into the coalition, like stakeholders in consumption and production, so this coalition could cooperative mobilize their *action resources* to empower a collective actor, which aggregates the voiceless, as a trader. It would enhance the loyalty of farmers guaranteeing the supply of the coffee harvest from the perimeter.

The LRA Nespresso in both contexts shows that it is a very smart strategy because the coalition will agree on a profile that suits them all (farmers, both stakeholders, and roasters). So, the whole set of actors would invest the *action resources* to produce the final outcome that would (dis)incentivize the uses of constituents. When roasters try to incentivize the uses without a wide coalition, it is so costly that it would work only for the short period in which *financial resources* are available, like the project to implement the C.A.F.E. Practices in Nariño using money from the Dutch cooperation.

Thirdly, roasters have to invest themselves and actively participate in the LRA's negotiation at the appropriate perimeter with an open spirit to avoid the "pure conflict constellation". In this sense, they have to move forward their demanded services but also take into account the services demanded by others. One interesting practice of the LRA Nespresso is the division between the general TASQ® that every cluster in the world have to follow, and the TASQ® local application. These complementary profiling institutions could profile both the basic demanded service by Nespresso and the other combination of services demanded by local actors.

#### 10.3.4. Stakeholders in consumption

Stakeholders in consumption have two complementary roles. Firstly, they move forward their demand for services at the global level gaining the *AR consensus* to the point they create the *AR organization*. Secondly, this latter *action resource* is mobilized to incorporate into the LRA this global demand for services.

The stakeholders in consumption that arrived in Riosucio and Buesaco successfully developed a wide enough *consensus* toward their demanded services in consumers' countries that, either by conviction or commercial interest, traders and roasters joined the movement and decided to use their constituents in order to profile that service. Some of them, without being part, internalized the service as their own, so they could offer it to their customers. Others were so actively involved, that eventually became aggregated into the stakeholder in consumption producing the *AR organization*.

In our research, the cooperative mobilization of the *AR organization* by stakeholders in consumption, explains four out of seven cases in which both the extent and the coherence increased. Indeed, this *action resource* is very powerful because it introduces this global demand for services into the LRA through the most important service demanded by profilers: the monetary services. In all cases, it implied empowering the collective actor representative of the voiceless: indigenous communities in the case of the LRA MH in Riosucio or small coffee farmers in the case of the two LRAs ACIDI/VOCA in Buesaco. If other profilers like traders and roasters and, stakeholders in production were to take advantage of the commercial benefit derived from this *AR organization*, they had to listen to them and take into account their demanded services.

It is a virtuous procedure at the local level, because it empowers the voiceless on the one hand, and encourages the powerful to listen to the previously ignored ones, through their own demanded monetary services.

In this sense, the straightforward recommendation is that if stakeholders in consumption want to enhance the sustainable management of the Resource coffee, they should invest their efforts in increasing their *AR consensus* at the consumer's markets, and they should privilege investing this *action resource* in increasing the *AR organization* with other profilers like traders and roasters. Then, they should cooperatively mobilize this *AR organization* to empower the voiceless at a given perimeter and encourage powerful local actors to join the actors' coalition.

Furthermore, they could trigger institutional creativity by both encouraging deliberative scenarios and participating in the final shaping of the outputs that would (dis)incentivize uses of constituents to profile the Resource.

However, it has to be said that stakeholders in consumption were not exempted of the temptation of profiling their demanded services at the expense of the services demanded by other actors, diminishing the sustainable management of the Resource. The example is the LRA Fairtrade in which FLO selfishly mobilized their AR *property* to concretize the coffee public policy and impose the use of the certification mark at the expense of the indigenous community and a portion of coffee growers.

We have shown the salience of the negotiation among actors exclusively interested in service demanded at the same Resource perimeter because each territory has its own particularities. The profiling institutions move forward by stakeholders in production have a similar effect if they are incompatible with the local demand for services and cannot be negotiated.

The case of the Fairtrade LRA is interesting. The profile was negotiated at the global level “towards” the Fairtrade profile, sustained on very detailed regulated use in the Fairtrade profiling institution, which actually included uses to improve environmental and labor practices. This high extent regime at the global perimeter produced unsurmountable incoherencies to profile the serviced demanded at the local perimeter, causing the institutional complexity trap that made imploded the Natural LRA.

Then, our recommendation for stakeholders, is that they should privilege profiling institutions at the global level with very few crucial regulated uses of constituents to profile their main demanded service and detailed governance mechanism to implement them (like mandating democratic and participative governance mechanism within collective actors, or commercial transparency between farmers, traders, and roasters). Then, they can encourage very detailed local adaptation of the profiling institution negotiated among the interested actors at the local perimeter like the “*Normas y sanciones que rigen a los asociados de Asprocafé Ingruma*”, and they could transparently present the geographical origin to their consumers.

As in the case of label in the wine industry, the perimeters could start by the local group of profilers (As an example, the roaster can sell their coffee with the brand from the municipal level like Fairtrade-Riosucio) and eventually, because of the customers’ acceptance they would adapt to smaller units (like Fairtrade-Resguardo de San Lorenzo) or bigger one (like Fairtrade-Nariño), and coffee from other regions without any reputation could be sold as Fairtrade-Colombia.

In this way, the stakeholders in consumption would be able to profile their demanded service, and at the same time, they could support the combination of symbolic and taste related service associated to a particular territory, that could enhance the monetary services for the whole group of profilers, including the farmers.

## V. Annex

### V.1. List of activities needed to profile the Resource

Table 35 List of activities needed to profile the Resource Coffee. Source: the author.

Processes	Uses	Description	Trade-offs
Planting	Diversification	Proportion of the farm that is used to crop coffee.	Either the whole are is used to cultivate coffee to maximize coffee production, or it is used with other purposes like food production or natural forest protection.
	Variety	After being planted, a coffee tree will be producing services for two or three decades. Depending on the <i>Ecotopo</i> and the productive system, coffee trees reduce both coffee	Variety can be selected for its productivity/efficiency or its TR&SS.
	Renovation of Coffee trees	production and quality of the coffee cherry in the first five to eight years. They are renovated four or five times before a new planting takes place.	Younger coffee trees are more productive, but renovation is costly.
Planting	Planting density	Number of coffee trees planted in one hectare.	A higher density implies more production but less TR&SS because ecological services are reduced due to the monoculture and the fact that more fertilization is needed to feed the whole population. In addition, full sun coffee systems increase plants metabolism so coffee berries can ripe faster by consuming more energy. As a consequence, a higher proportion of sugar reserves in the coffee bean will be consumed by the coffee tree rather than by coffee consumers
	Shade	Coffee is grown whether under the shade of a canopy provided by others species of taller trees, or not (fully-sun monoculture).	The shade reduces temperature and enhances TR&SS by improving the aromatic profile, species diversity, biotic processes like pest control and pollination, and abiotic processes like soil nutrition and evapotranspiration (Arcila et al., 2007)). Nevertheless, it reduces productivity.
Cultivation	Soil management	Weeds compete with coffee trees for space, light, water, and nutrients in different proportion depending on the species. But their eradication is costly and can produce soil erosion, contamination, and toxicity.	Physical control on selected weeds increase TR&SS by improving soil protection and evapotranspiration, but it is more labor and know-how intensive than spraying them all with herbicides.

Coffee borer beetle management	Pest and diseases affect coffee trees health, reducing both qualities of the bean and production of the tree. Farmers implement actions to prevent and mitigate its effects.	Pests and diseases reduce both taste related services and productivity: The antesia bug produce a <i>potato cup</i> (earthy flavor); the coffee berry borer produce <i>insect damaged beans</i> (loss of aroma, flavors, and acidity); coffee leaf rust produce a one-fifth decrease in production.
Pest and disease management		Preventive measures and cultural or biological control enhance symbolic services, whereas chemical and genetic control (use of artificial pest-resistant varieties) diminish them.
Nutrition	The coffee tree needs three essential elements (C, H, O) that are provided by air and water. And thirteen others that are naturally provided by the soil or artificially through fertilization practices: six macronutrients are required in big quantities (N, P, K, Ca, Mg, S) and seven micronutrients in low quantities (Fe, Zn, Mn, B, Cu, Cl, Mo) (Arcila et al., 2007, p. 202).	Nutrition practices based on either organic or synthetic fertilizers produce a tradeoff between taste related services/productivity at one hand, and symbolic services at the other. Some taste related services are diminished because of poor nutrition explained by the environment. Like <i>withered beans</i> (grassy flavor) and <i>coated beans</i> (greenish flavor) caused by lack of water. But other like <i>amber beans</i> (grassy flavor) and <i>flaky beans</i> (woody flavor) are due to avoidable nutritional deficiencies.
Hedgerow	Hedgerows are lines of trees from other species than coffee, within the coffee plantation.	Hedgerows enhance TR&SS by stabilizing soil on steep slopes, protecting coffee trees from strong winds, protecting biodiversity and increasing quality by reducing temperature and metabolism. On the other hand, productivity is reduced.
Picking	Coffee cherries are picked from the coffee tree once they are ripe. In Colombia, picking is done by hand due to mountainous relief in coffee regions.	A very selective picking is crucial for taste-related services because only well ripe coffee cherries can provide the full aromatic profile. Under-ripe or overripe produce major defaults in the coffee cup, an <i>immature bean</i> the former (astringency) and a <i>full black bean</i> the latter (dirty flavor). As it implies several rounds over the same tree to select only the well ripe, it is labor and know-how intensive. On the other hand, a strip picking in which all beans in the branch are picked, reduce labor costs.
Farm management	The group of actions and decision to organize and operate the coffee farm.	Certain practices like keeping records on farm management; implementing waste, water and biodiversity protection good practices; fulfilling Labor laws; and improving relations with the community, enhance symbolic services while increase farms costs.

	Hulling	To separate the two beans of the <i>coffee cherry</i> from the pulp and the skin to obtain beans known as <i>wet parchment coffee</i> .	Firstly, a costly labor-intense second selection before hulling is the last opportunity to leave out under ripe or overripe beans. Secondly, investments in equipment also are necessary because both delays (if the equipment is not in the farm) produce a <i>full sour bean</i> (vinegar flavor) and poor equipment produce <i>broken beans</i> (earthy flavor).
	Fermentation	Even though hulling is “the” common practice in Colombia, some farmers decide to dry the coffee cherry (without hulling) to have a long fermentation (a microbial reaction of yeast and bacteria to obtain energy by breaking down the sugars in the mucilage and pulp). For those who decide hulling, mucilage remains attached to <i>wet parchment coffee</i> , some can decide to dry the bean with the mucilage to have a medium fermentation, others decide to remove it through either a low fermentation before drying or using mechanical equipment (avoiding fermentation).	Controlled fermentation enhances taste related services by modifying the composition of aroma precursors of a coffee cup (Lee et al., 2015) but reduce symbolic services (water contamination) and productivity. Depending on temperature and humidity, a timely low-washed fermentation enhances terroir-driven flavors. A timely medium-semi-washed fermentation enriches sweetness and body. A timely high-natural fermentation develops wild characteristics provided by the pulp. On the other hand, fermentation is responsible for some of the major defects in coffee. Over fermentation and poor practices produce <i>full black beans</i> (dirty flavor) and <i>full sour beans</i> (vinegar flavor), under fermentation promote the growth of undesirable microorganism producing <i>fungus damage beans</i> (musty flavor).
Post-Harvesting	Drying	Depending on the fermentation method, <i>coffee cherries</i> or <i>wet parchment coffee</i> (either with mucilage or without it) are mechanically – or sun-dried to a moisture content of 10-12% aiming to achieve microbial stability. So they can be transported and stored without deterioration as <i>dry parchment coffee</i> .	Sun-dried coffee enhance symbolic services but reduce efficiency and could reduce taste related services if rainy/cloudy weather is experienced. Equipment to dry coffee allows proper control and can enhance taste related services by introducing drying curves under 40° Celsius and resting periods. On the other hand, by increasing temperature, times and cost could be economized, but it risks some defaults like <i>over-dried or discolored</i> (woody flavor) and <i>crystallized bean</i> (death of the embryo, lack of flavor, aroma and acidity).
	Waste management	The pulp after hulling and the water after washing fermented coffee are extremely pollutants if discharged directly to water sources.	Waste management to enhance symbolic services is expensive in both equipment and labor.
	Reselection	To select only the well ripe coffee cherries	Only well ripe coffee cherries produce the full aromatic profile. To enhance taste related services, farmers must introduce

			<p>this expensive labor-intensive activity. The tradeoff is that even the best selection cannot guarantee that coffee will be well paid.</p> <p>A costly labor-intense selection of <i>parchment coffee</i> to remove foreign matter and unacceptable beans due to their physical (color, integrity) and their sensory features (odor and cup) and leave only the beans that enhance taste related services.</p>
	Purchasing	<p>To classify <i>parchment coffee</i>. depending on its physical and sensorial characteristics</p>	
	Threshing and sorting	<p>To separate the last layer of the <i>parchment coffee</i> and obtain <i>green coffee</i>, which is then graded in terms of size (using screens of various sizes) and weight (using an air jet to separate heavy from light beans).</p>	<p>A costly labor or capital intense selection of green coffee (using either labor or color sorting machines) to remove all unacceptable beans is performed to enhance taste related services.</p>
Trading			<p>Costly investments in packing equipment guarantee taste related services that are threatened by efficiency (more quantity trade at the minimum cost) and its consequences like poor control over moisture and sanitation that produce <i>spotted beans</i> (medicinal flavor); <i>mouldy beans</i> (musty flavor); <i>faded old beans</i> (woody flavor); <i>spongy beans</i> (cereal flavor) and <i>fungus damage beans</i> (musty flavor).</p>
	Bulking and export	<p>As a result of quality uncertainty, traders take advantage of buying numerous lots to bulk the amount of <i>green coffee</i> of certain quality needed by a particular client. Dealing with several clients, they managed to place on the market different qualities of <i>green coffee</i>.</p>	<p>Symbolic services are enhanced through costly traceability systems that allow interested actors to track down the origin of the coffee, and transparency in both environmental and social practices, particularly prices paid.</p>
	Blending	<p>Blending <i>green coffee</i> from different origins and different qualities to produce a particular taste related service. For example, a roaster blends coffee <i>Geisha</i> variety which has citrus tones but not body, with a <i>Bourbon</i> variety that has the body to produce a coffee with both body and citrus tones.</p>	<p>Blending transparency enhance TRSS of coffee, because it allows consumer' mental relationships between origins of coffees in the blend and sensory memories. Nevertheless, it implies a higher investment not only on traceability systems but also on coffee procurement because those systems are developed only for high quality (and more expensive) coffee.</p>
Roasting			
	Roasting	<p>Aroma precursors in <i>green coffee</i> produce coffee aroma via a complex series of Maillard reactions (chemical reaction between amino acids and reducing sugars that creates</p>	<p>A roaster can enhance TR&amp;SS by using only high-quality coffee, even though it is costly and its continuous supply is unsecured. (As roasters need to provide a consistent taste related services for consumers, high-quality coffee can only</p>

		flavors) induced by heat during the coffee roasting.	be considered if the quality is guaranteed in time). On the other hand, efficiency motivates the use of sophisticated techniques (some not so much like adding sugar to the roasting) to use the maximum quantity of cheap-low quality coffee with the minimum effect on taste related services. Finally, taste related services are diminished by improper roasting producing either <i>under roast beans</i> (unsweet peas/grain flavor) or <i>over roast beans</i> (ash and fishy flavor).
	Packaging and retailing	To produce <i>packaged coffee</i> as end-products ready to be sold for consumers, like <i>roasted coffee, soluble coffee, single-serve coffee, coffee pods</i> , etc. to sell <i>packaged coffee</i> to consumers	Due to oxidation, <i>roasted coffee</i> gets deteriorated much faster than <i>green coffee</i> so costly packaging and retailing control will maintain taste related services.
Communication Strategy	Communication	Marketing strategies or communication strategies to influence consumers' minds and enhance TR&SS.	All actors within the DCVC want to influence consumers' minds in a way that meaning could be activated once the coffee is drunk. But the property over the instrument to share that meaning produce a major rivalry between actors. A tradeoff between taste related services could produce some incoherencies; as fine grind enhances body whereas coarse grind enhance aromatic profile, it could be that coffee produced to enhance aromatic profile ends with a very fine grinding, vanishing the Taste Related Services of that particular coffee. As for grinding, the full potential of a coffee could be vanished by an improper brewing. But the main tradeoff is between TR&SS and profitability. Enhancing TR&SS implies investments not only in a high-quality coffee but in equipment, infrastructures, and know-how (qualified baristas).
	Grinding	Grinding roasted coffee implies milling coffee beans in smaller pieces. To obtain the most flavor in a cup of coffee, the higher the grind the longer the time water should be in contact with the coffee.	
Brewing	Brewing	Different brewing methods produce different cup profiles.	

## V.2. Evolution of the Resguardos and Haciendas Regime

This contextual annex acts as an extension of chapter five in the sense that tries to provide the historical support to understand the development of the main institutions that governed property rights on the productive factors for the coffee culture: land and labor.

This annex pretends to present a dynamic process in which changes have been progressive, more or less drastic but always reactive to the regime in force at the time at both, the national level and the local contexts of Riosucio and Buesaco. So, this annex is divided into three sections, each one divided into the same two historical frames.

So we privileged a chronological description since the Spanish conquest of the land today known as Colombia. Even though coffee is post-colonial crop in Colombia, the colonial IR is crucial to understand the institution of the Resguardos Indígenas, as a collective property right to protect labor force, and its stifling regulation that produced a demographic change that attached labor to land through the sharecropper system that worked the Haciendas, as it would be presented in the first historical frame in each section. International geopolitics would empower a coffee farmers' elite who, through the coffee public policy described in chapter 4, would shape the IR in order to disintegrate the ancient structures of Resguardos and Haciendas to encourage the commercial coffee farming, as would be presented in the second historical frame in each section.

#### V.2.1. At the national level - Colombia

- An export-oriented feudal regime to expulse people from Resguardos to attach them into Haciendas (1510 – 1927).

The history of agriculture is a story of land and people. In today's Colombia when the Spanish arrived there was plenty of both, but after several decades, hands were just not enough to support an efficient economic activity. According to Colmenares (1987), the conquest and colonization processes changed the whole indigenous world; from the food diet to the spiritual life; from socio-economic relations to the epidemiological profile, resulting in the annihilation of the 90% of natives in Colombia<sup>1034</sup>. This generalized demographic decline that put economic exploitation at risk, resulted in the recognition of the Resguardo as a form of communal ownership of the land so indigenes could produce both goods for their consumption and taxes for both the Habsburg Crown (that would be collected by an official known as the *visitador* according to the first *Cédula Pardo* in 1591 (Castillo, 2007, p. 96)) and the *Encomendero*. Indeed, for Colmenares (1987), the Spanish conquest was funded by private initiatives, so after the initial looting of gold and gems, they obtained both land through *Mercedes de Tierras* and tributes through the *Encomienda* from indigenous communities. At the beginning the later was their main return on investment because land was not harvested.

As the population declined, *Encomenderos* demanded personal work to compensate for the decreasing of taxes. Firstly it was a few men working a few hours in their houses, then it was the

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<sup>1034</sup> “Al momento del arribo de los españoles, una cifra de cerca de tres millones de indígenas para el territorio de lo que hoy es Colombia... A finales del siglo XVI, regiones que a mediados del siglo, cuando se hicieron los primeros recuentos, contaban con medio millón de habitantes, como en el caso del área chibcha, ahora mostraban solamente la tercera parte de esa cifra. El ciclo de la pauperización demográfica alcanzó el nivel mínimo a mediados del siglo XVII, cuando en muchas partes apenas sobrevivía el diez por ciento de la población indígena original” (Colmenares, 1987, p. 27).

whole community working on their land <sup>1035</sup> creating a particular socio-economic unit of production known as *Haciendas*<sup>1036</sup>. As the indigenous population continued to decrease more unexploited land was available to be appropriated by the Spaniards and more pressure over the workforce<sup>1037</sup> which resulted in a new institution the *Concertaje*. This rule mandated indigenes to work in different Haciendas to obtain payment in order to pay their tribute, but in practice, the money received was never enough to cover the tax. Thus their debt increased and more work was demanded (Colmenares, 1987, p. 41).

According to Melo (1990), the natives' decline was not traduced in more land per indigene to compensate the demographic crisis of the indigenous population. But in some way, the potential for indigenous growth was channeled into the generation of a group of descendants, who were not fully indigenes, which repopulated the country at the end of the XVIII century<sup>1038</sup>. To explain this "some way", Gutiérrez Ramos (2012, pp. 83-84) argued that the Bourbon Reforms<sup>1039</sup> tried to transform indigenous peoples in peasant communities through two strategies: property rights and education. From a liberal perspective, the first would give them property over the land to incentivize its efforts for their individual prosperity. The second one would focus on both practical knowledge like agriculture and, Spanish habits and culture. By possessing land and knowledge, indigenes would be able to produce a profit that, in turn, would increase the market for Spanish exports<sup>1040</sup>. Even though in the practice these reforms focused on tax and bureaucratic reforms that quadruplicated tax revenues<sup>1041</sup> and multiplied social revolt<sup>1042</sup>. In the end, they indirectly sparked off the dilution of indigenous communities: trying to avoid the unpayable taxes,

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<sup>1035</sup> After some generations *Encomenderos* gained control over *Cabildos*; which allow them to obtain lands near their *Encomiendas*.

<sup>1036</sup> "Por eso en las haciendas debe verse una prolongación del dominio político urbano. No sólo tenían una función económica sino que, de una manera similar a las encomiendas, eran todo un complejo social y político. Estas unidades de producción ... han sido uno de los rasgos más peculiares y permanentes de las sociedades hispanoamericanas." (Colmenares, 1987, p. 39)

<sup>1037</sup> Even within the same family of *encomenderos*: Spanish succession laws allowed land distribution between several sons, but the *Encomienda* was indivisible, therefore there was a conflicting situation of new landowners without hands to work the land.

<sup>1038</sup> "Si en 1650 la población indígena apenas llegaba a los cuatrocientos mil habitantes, y la mestiza no podía superar los veinte mil, 130 años después sólo figuraban ciento cincuenta mil indios al lado de unos trescientos ochenta mil mestizos, sesenta mil esclavos negros y doscientos mil supuestos blancos." (Melo, 1990, p. 3)

<sup>1039</sup> There were a set of economic and political legislation promulgated by the Spanish Crown under Bourbon kings that, inspired in the Illustration, could be synthetized in the idea that indigenes must be useful vassals which produce wealth and security to the Crown by integrating them to society, not by excluding them as it was the practice in the whole reign of Habsburgs (Gutiérrez Ramos, 2012, p. 84).

<sup>1040</sup> "Lo que importa es, que nuestros Indios tengan medio de ganar, que después por la contribución voluntaria del consumo y por el comercio, sacaremos de sus manos sin violencia más de la mitad de todo el fruto de su trabajo". Gutiérrez Ramos (2012, p. 85) quoting Joseph del Campillo's proposal reform "Nuevo sistema de gobierno económico para América" from 1743.

<sup>1041</sup> "Estas innovaciones produjeron un crecimiento dramático en las tasas tributarias que pesaban sobre los indios de la región, donde el monto de lo recaudado por la Dirección General de Tributos de Quito se incrementó de 51.050 pesos en 1778 a 195.596 pesos en 1801, a pesar del avance de la depresión económica." (Gutiérrez Ramos, 2012, p. 93)

<sup>1042</sup> The failed Revolt of the Comuneros in 1781 against these measures is seen in Colombian history as a precursor to independence.

indigenes abandoned their communities and joined the *Haciendas*, in which they had to pay in labor, kind or cash to the owner of the land, the *Hacendado*, but at least enough were left to make ends meet. At the same time, for those staying in the Resguardo, they have to rent their land to whites and mestizos to pay the taxes. In both cases, communities were socially and ethnically reshaped.

In brief, the institutional regimen during the colonization resulted in a particular pre-capitalist organization unit, *La Hacienda*, which according to Jaramillo Uribe (1987), produced for local markets, specifically for urban centers, gold mines and their own consumption (contrary to the export-oriented Plantations in the Antilles or Brazil) because of two main causes: the productive policies of the Spanish crown within their Empire, in which Colombia was to export only gold, and the non-capitalist mentality of proprietaries<sup>1043</sup>.

During the civil wars for independence, *Haciendas* were at the heart of the conflict. A few survived the process perpetuating colonial structure, but many of them were unable to overcome several years of conflict and pillage (Tovar Pinzón, 1987, pp. 105-110). Expropriations to the “enemies” of the new Republic and unclaimed property created a kind of an enormous land bank in the hands of the State equivalent to the 80% of the total land area in Colombia<sup>1044</sup>. This land was used by political leaders for both increasing their political support (from peasants and landowners) and funding the new State. They passed laws to protect people to settle in a peasant economy<sup>1045</sup> and rules for selling Colombian land bonds to finance its apparatus<sup>1046</sup>.

*Colonos* (settlers that used to work in Haciendas) started a colonization process as a group in which they moved into unexploited zones, normally *baldíos* or vacant lots, to establish towns and

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<sup>1043</sup> “La política española que especializó la producción de las colonias, asignando a Nueva Granada la producción de oro y reservando la producción de géneros agrícolas como el azúcar a Cuba y Puerto Rico, el cacao a Venezuela, el cuero y la carne al Río de la Plata, el trigo a Chile, la plata a México y el Perú” and “la debilidad de los capitales de los propietarios neogranadinos, su mentalidad rutinaria y el poco desarrollo de una actitud capitalista frente a los negocios.” (Jaramillo Uribe, 1987, p. 81).

<sup>1044</sup> “Quedaba en manos del Estado una inmensa reserva de tierras públicas, que podía abarcar más del 80% de la extensión territorial del país. Entre la década de 1820 y finales de siglo, los dirigentes colombianos vieron en estos baldíos una inmensa riqueza que podía servir para estimular el desarrollo económico del país; podían ofrecerse como señuelo a grupos de colonos europeos, brindarse como incentivo para la construcción de vías de comunicación y otras obras de progreso, entregarse a los campesinos que carecieran de tierra, o venderse para obtener recursos para el fisco” (Melo González, 1987, p. 150).

<sup>1045</sup> “En 1870 la Ley 14 reguló las asignaciones colectivas a poblaciones... señalando para ellas un tope de 12.000 hectáreas y determinando que cada colono recibiría un lote de 32 hectáreas ... La Ley 48 de 1882, trató de proteger aún más a los colonos, al determinar que sólo podrían ser expulsados del área que ocupaban si se demostraba un título previo legítimo y que, incluso en ese caso, si el colono había entrado en la tierra de buena fe, era preciso pagar las mejoras” (Melo González, 1987, p. 150).

<sup>1046</sup> “Durante el período de 1820 a 1870 se puso el acento en la utilización fiscal de los baldíos, y pronto se regularizó un sistema por el cual se emitían bonos territoriales que podían redimirse por baldíos... Por tanto, durante esos años la mayor cantidad de tierras fue adquirida por especuladores que habían acumulado títulos de baldíos” (Melo González, 1987, p. 152).

obtain property rights from the State<sup>1047</sup>. But in the end, 73% percent of the distributed-land was concentrated by capitalists, especially merchants who had accumulated capital in the previous bonanzas<sup>1048</sup>. Workforce shortage was aggravated nonetheless; it was not caused by decreases in population (like during the Colonial period) but because of contradictory policies that encouraged peasant migration while concentrating land in a few hands. At the end of the nineteenth century, a third of the rural population could have been smallholders whereas two-thirds could have worked in the Haciendas in a very complex system of relationships characterized by commercial and workforce linkages between peasants and landowners (Melo González, 1987, p. 155).

In any case, patriots urgently needed a source of revenue to improve the material wellbeing of Colombians to be able to survive as a ruling class<sup>1049</sup>. For the New Elite, the production of the land and its exportation was not only a matter of economic rationality but also a political one. They prioritized to harvest tropical products under 2.000 m.a.s.l., that could not be harvested in temperate zones maintaining the colonial *Hacienda* system (Cerón Solarte & Ramos, 1997, p. 165) through public policies of transport aiming to link the regions associated with the patriotic effort to the oceans.

Looking into the synthesis of infrastructure legislation from 1823 to 1905 made by Pérez-Mejía (1997, pp. 293-297), regions aligned with Patriots were benefited with the projects to be linked with the ports and the construction itself that enriched local elites whereas non-aligned regions were penalized. An example is the numerous pieces of legislation to build roads that connected the patriotic cities of Cali and Popayán with the Pacific Ocean <sup>1050</sup>. In those cases selected contractors were renamed Patriots (like Tomas Cipriano Mosquera who defeated in 1824 Agustín Agualongo's contra insurgent army composed by indigenes from Nariño, and José María Obando who defeated the last focus of Nariño's resistance in 1825) and the payment was with lands possessed by the Republic (in part as a result of confiscations) in south departments like Nariño. Whereas the unpatriotic region of Nariño, even though it had (still has<sup>1051</sup>) fertile low lands to

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<sup>1047</sup> Particularly intense in the region of Antioquia, twenty towns were founded and each one obtained between ten to twelve thousand hectares which in turn were redistributed among settlers in properties between 50 and 100 hectares each (Melo González, 1987, p. 150).

<sup>1048</sup> "De los casi dos millones de hectáreas entregadas en el siglo XIX... el 73% de la tierra quedó en manos de beneficiarios de concesiones de más de 1.000 hectáreas. Los títulos de menos de 100 hectáreas representaron apenas el 11% de las tierras concedidas, y las repartidas en parcelas de 100 y 1.000 hectáreas el 16% del total" (Melo González, 1987, p. 152).

<sup>1049</sup> "Participar en el mercado mundial encarnaba la posibilidad efectiva de sobrevivir como clase al mando de una nación en el camino de la civilización" (Palacios, 2009, p. 86).

<sup>1050</sup> In the Colombian transport legislation from 1850 to 1870 listed by Pérez-Mejía (1997, pp. 292-297). Through the *Ley del 1 de junio de 1850* to build a wagon road between Cali and Buenaventura (the Pacific Ocean), Vicente Borrero from Cali obtained 38 thousand ha in the pacific coast of Nariño, Cauca, Valle and Choco; through the *Decreto del 20 de mayo de 1851* to build a bridlepath between Popayan and the Pacific Ocean, José María Obando from Popayan obtained 32 thousand ha in the north of Nariño ; through the *Decreto del 12 de abril de 1854* to build a wagon road between Cali and Buenaventura, Tomas Cipriano Mosquera from Popayán obtained 128 thousand ha in Cauca and Nariño; through the *Decreto de 30 de abril de 1855* to build a bridlepath between Cali and Buenaventura, Juan Neponuceno Nuñez from Cali obtained 64 thousand ha in the Pacific Coast in Nariño, Valle and Choco

<sup>1051</sup> When writing these lines, there is 20 thousand hectares of coca cultivated in the Nariño low lands.

crop tropical products like tobacco, anise, rubber, tagua, among others; had a settlement over the coast (Tumaco<sup>1052</sup>) and its potential communication being equally defiant than any other route to the Pacific Ocean<sup>1053</sup>, have a few pieces of legislation to link Nariño to Popayán rather than to the Ocean<sup>1054</sup>. So, for these regions, Colombians from the interior replaced Spanish *hacendados*.

During a period of radical liberalism (from 1863 to 1886), the focus on exportation did not mean production specialization; on the contrary, money flowed from activity to activity, taking advantage of higher prices and bonanzas. Tobacco was the first commercial product to be exported and it made a considerable contribution, duplicating the amount of Colombian exports to 10 million *pesos oro* in 1875 until the invention of the cigarette machine in the United States in 1881 that spurred its tobacco industry and plumped international prices. In Colombia, capitalists interchanged tobacco crops for *chincona* trees. The exports of this tree's bark, which was used to extract quinine for medical uses, reached its maximum in 1883 when the Dutch (after smuggling the seed from Andean republics) succeeded in establishing huge plantations in Indonesia and coffee began to be the principal source of foreign exchange.

Is in this period that coffee started to be part of the exporting portfolio until it reached half of the total exports at the end of the nineteenth century. Consequently, demand over indigenous land increased and legislators, which were closely related to *hacendados*, started a legal fight to make indigenes owners of their land. Appelbaum (2007) provide convincing evidence on how legislators in Cauca in the second half of the XIX century used the liberal argument that individual property brings about progress, while heir associates were getting money from land grabbing of indigenous communities. In fact, the laws were delivered in such a way in which *hacendados* were able to overpass them<sup>1055</sup>.

Eventually a new Conservative Government (from 1886 to 1930), inspired by the growing threat of Liberalism according to the Catholic Church (that was going to produce their first social encyclical *Rerum Novarum* promulgated by Pope Leon XIII on May 15, 1891) that was incorporated locally through the Concordat between the Vatican and the Republic of Colombia signed in 1887, took a half-way decision about the indigenous issue: protect them while they were "civilized" before giving individual ownership over their land. Indeed, *la Ley 89 del 25 de*

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<sup>1052</sup> This port was settled by the Spanish in 1610 to resupply ships traveling from Guayaquil to Panama. It enjoyed a brief prosperity time at the beginning of the XX century when exports of tagua nut (the vegetable ivory as it was known the seeds of the tagua palm tree) boomed to make buttons until it was replace by plastic ones at the beginning of the twentieth century.

<sup>1053</sup> Known as the Choco Biogeographic region, the whole Pacific Coast from Panama to Equator is a dense humid tropical forest.

<sup>1054</sup> From almost 180 pieces of legislation from 1823 to 1905, it could be counted with one hand the number of them that order to build projects in Nariño. There is one to build the bridge over the Juanambu River (Ley del 4 de junio de 1851) to improve communication between Pasto and Popayan and a few other to improve the route between the alluvial gold mining town of Barbacons in the pacific plain and Tuquerres in the plateau.

<sup>1055</sup> An example is a Law that gave indigenes property over the land with the condition that it could not be sold in ten years (a period that was believed enough to trigger prosperity) but before the law passed, *hacendados* had already bought the properties<sup>1055</sup>.

noviembre de 1890 “por la cual se determina la manera como deben ser gobernados los salvajes que vayan reduciéndose a la vida civilizada” was approved. In its first article, it subordinates the government inside the Resguardos to the ecclesiastical authority to civilize the indigenous communities<sup>1056</sup>. To this end, this Law regulates the Resguardo<sup>1057</sup>, the government of the Resguardo<sup>1058</sup> and the administration of justice<sup>1059</sup> that would operate for a period of fifty years. At the end of this period, all these indigenous institutions<sup>1060</sup> must be dismantled to integrate the indigenes into the Colombian society.

- An agricultural regime that disintegrated Resguardos and Haciendas to consolidate commercial farming (1927-1990)

In parallel to the evolution of the coffee regime described in chapter 4, a few words should be written to continue the previous narrative about the land and the people.

Bejarano (1980) argued that coffee commercialization allowed capital accumulation that brought about the industrialization in Colombian urban areas and some sort of humble accumulation in the free peasant economy at the end of the twenties. According to Kalmanovitz (1996), the pre-capitalist Haciendas and the colonial Resguardos immobilized labor and land sparking contradiction with the new capitalist model that needed both, workers that can move freely from plantations to industries<sup>1061</sup> and land to produce the food and raw materials demanded by urban activity<sup>1062</sup>.

The Liberal party was against the pre-capitalist *haciendas* and when obtained the majorities in the Congress (after being minorities from the end of the nineteenth century), they approved *la Ley 200 de diciembre 16 de 1936, sobre régimen de tierras* (Land Law), which gave ownership to possessors who exploited the land. It was so heavily contested that liberals were divided among them, the moderate faction paused the reform in 1938 and afterward, approved *La ley 100 del 31 de diciembre de 1944, sobre régimen de tierras*, which declared of public interest the sharecroppers contracts, a middle solution that maintained ownership structure in favor of *hacendados* and improved their relations with sharecroppers through a legal capitalist contract.

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<sup>1056</sup> “Art 1. La legislación general de la República no regirá entre los salvajes que vayan reduciéndose a la vida civilizada por medio de Misiones. En consecuencia, el Gobierno, de acuerdo con la Autoridad eclesiástica, determinará la manera como esas incipientes sociedades deban ser gobernadas” Ley 89 del 25 de noviembre de 1890 (C. d. I. R. d. C. CC, 1890)

<sup>1057</sup> Third chapter: “De los resguardos”. *Ibíd.*

<sup>1058</sup> Second chapter “Organización de los Cabildos Indígenas”. *Ibíd.*

<sup>1059</sup> Second chapter “Protectores de Indígenas”. *Ibíd.*

<sup>1060</sup> Fifth chapter “División de terrenos de resguardos”. *Ibíd.*

<sup>1061</sup> At the end of the thirties, salaries increased considerably motivated by public works. Haciendas imposed all kinds of restrictions to their sharecroppers to limit their mobility (by creating rigged debts that local authorities, in which they had huge influence, enforced by menacing jail). As independent farmers and workers were already occupied, the FNC solicited the government to stop public works (Kalmanovitz, 1996, p. 212) .

<sup>1062</sup> *Hacendados* did not produce neither efficiently nor sufficiently (foodstuff and raw materials to industries and inhabitants had to be imported for a long period), in addition they were not disposed to sell the land at any price because their power was sustain on it (Kalmanovitz, 1996, p. 213).

In parallel as the fifty years protection provided by the *Ley 89/1890* had passed, hungry entrepreneurs mobilized this legislation before the *Ministerio de Economía Nacional* to dissolve the *Resguardos* (Eraso, 2002).

According to Kalmanovitz (1996), local industries profited the internal market when the international one was closed due to the global confrontation, but when it was over, imports arrived again reducing the prices of manufactures. They reduced wages because their industrial supplies went up (as well as the cost of living) due to inefficiencies in the Haciendas, thus tension increased with unions.

Preventive action (known as "*la política de la violencia*") of the new conservator government (that took advantage of liberals division to won the election in 1946) to contain radical factions from both, workers and peasant, included illegalization of syndicates; expropriation of electoral certificates from liberal citizens and the recruitment of bandits to harass liberal towns and to force liberals to vote for the Conservative party. Liberals opposed firstly through democratic means like manifestations<sup>1063</sup>, but after the murder of their leader<sup>1064</sup>, the civil war busted out producing between 200-300 thousand deaths in one decade and displacement of 2 million people (nearly one-fifth of the almost 11 million Colombians in that period (Rueda Bedoya, 2000, p. 4))

For Kalmanovitz (1996) the violence, not the reforms, was responsible for the dissolution of the ancient system by unchaining land and labor. The land changed hands because violence decreased land prices and aggressive entrepreneurs (including armed leaders, peasants, and agrarian bourgeoisie) took advantage of the situation and offered any money to *hacendados*, which aligned to the opposite party in the regional power, had no other option than to sell. Also some *hacendados* "well aligned" would prefer little money than a devastated land. Labor also got mobility because the personal links between *hacendados* and sharecroppers were completely destroyed, peasants fled their land to settle in cities or in other rural areas with no more than their workforce to survive, decreasing both urban and rural wages.

An undemocratic peace process between the two parties <sup>1065</sup> included a land reform to redistribute land between dispossessed peasants, through collective land to peasant cooperatives, by creating the *Instituto Colombiano de la Reforma Agraria* - INCORA through the *Ley 135 del 13 de diciembre de 1961*. According to Velásquez Torres (2013), this Land Law 135/61 never came into practice because it vaguely defined "unexploited land" as a condition for expropriation, making it inapplicable due to the strong opposition of landowners. Hence a liberal President encouraged dispossessed peasants to organize themselves to advocate for applicable land reform and created la *Asociación Nacional de Usuarios Campesinos* (ANUC onwards) through

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<sup>1063</sup> One iconic manifestation of one hundred thousand citizens in Bogotá (that had four hundred thousand) was "*la marcha del silencio*" led by Jorge Eliecer Gaitan on the 7<sup>th</sup> of February 1948, in which all marched in silence to mourning the victims of the bandits recruited by the police of the conservative party..

<sup>1064</sup> Jorge Eliecer Gaitan was murdered two months afterwards, on the 9<sup>th</sup> of April 1948

<sup>1065</sup> Known as the national front. The Liberal and the Conservative Party decided to end the conflict by intercalating the power, starting with liberals, each party was going to govern alternatively for one period during four terms (from 1958 to 1974 in which bureaucracy would be divided by half for both parties).

the *decreto 755 del 2 de Mayo de 1.967*<sup>1066</sup> which allowed the political support to make the corrections through a new Law Land a couple of years after. Indeed, the *ley 1 del 26 de enero de 1968* provided applicable instruments to expropriate the properties that were being exploited under the lease and sharecropping. Nevertheless, it opened a door that was used by organized peasants to invade properties and make government paid the indemnification for the nonconsensual expropriation

According to Kalmanovitz (1996), this threat to the landowners, led them to negotiate with the new conservative President an agreement known as the “*Pacto de Chicora*” with both the Liberal and Conservative Parties to redirect agricultural policy from land redistribution through two strategies: colonization of the agricultural frontier for dispossessed peasants, and intensification and economic development for agro-entrepreneurs. Two pieces of legislation were agreed: the *Ley 4 del 29 de marzo de 1973* that dispels the phantom of expropriation and allows the landlord to use force to suppress peasant appropriation attempt. The *ley 5 del 29 de marzo de 1973* that completely vanished land democratization laying down the legislative framework for incentivizing commercial farming. Then a new agricultural public policy was launched known as *Plan de Desarrollo Rural Integrado* that focused in farms with more than 3 hectares and the land titling to dispossessed peasants of vacant lots at the end of the agricultural frontier: inaccessible jungles and forest that make incredibly uncompetitive legal harvests welcoming the much more profitable illegal crops.

#### V.2.2. At the local level: Caldas - Riosucio

This contextual it describes the effects of the evolving IR in Riosucio. In this case, the Resguardo as a colonial institution featured by the collective ownership and self-governance is the main institution that shapes the Resource coffee in Riosucio.

It is divided into two sections. In the first one, we briefly describe the effects of the colonial IR that creates the Resguardos in Riosucio, but we focus in the post-colonial institutions that trying to protect them in order to dissolve them later, brought about the coffee farming in Riosucio. In the second one, we focus on the indigenous narrative, in the sense that the IR created by a coffee-related elite encouraged the commercial coffee farming at the expense of the indigenous culture. Even if in reality it was different, this narrative is crucial to understand the perceived threat to the services provided by the Resource in Riosucio that would contextualize the second part.

- [Resguardos and Haciendas in Riosucio \(1510 – 1927\): The Coffee to civilize the savages](#)

Riosucio is a coffee land since the late nineteenth century. References to coffee began to be reported in Riosucio by public officials since 1890 according to Appelbaum (2007, p. 181). However its consolidation is notorious a few decades later: according to the Coffee Census

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<sup>1066</sup> “Durante la inauguración de la ANUC el Presidente Liberal Carlos Lleras Restrepo (1966-1970) dijo no habrá reforma agraria si el campesinado, sus organizaciones y asociaciones de usuarios no la imponen. Sin la presión campesina organizada no habrá reforma agraria” (Pardo, 2008)

conducted in 1932, Riosucio had 3,492 farms which cultivate 1,747 hectares in coffee (FNC, 1933, p. 129). Enough coffee crops to be placed in the middle among the municipalities of Caldas, which in turn was the first Department in Colombia in the total coffee area.

Vallecilla Gordillo (2001) said that the consolidation of the crop in this region was the result of the acceptable conditions of transport and communications infrastructure, and the international commercial relations produced by gold-silver mining in the area known as the *Alto Occidente* (the northwestern region of Caldas that in addition to Riosucio, includes the municipalities of Quinchía, Supía, and Marmato). Gordillo developed this influential study on coffee and development in Caldas using his economist glasses. For our study, we consider that his hypothesis could be enriched using an institutional lens that allows us to dig into one particular institution: *Los Resguardos Indígenas* in Riosucio (Resguardos hereafter).

In this section we will defend the claim that in addition to the previous two conditions, the Resguardos in Riosucio that during the XVII and XVIII centuries protected the access to labor and supplied food and tools for the mines in this region, were important to explain not only the expansion of the coffee crop in the region but also the shape of the local narrative.

Indeed, Castillo (2007) argues that once the process of Spanish Conquest of the territories that are now Riosucio in 1539 was completed, two authorizations were given for the mining activity: the *Real de Minas de Quiebralomo* and the *Real de Minas de la Montaña*. To supply them with labor, the indigenous people of the region were gathered in an agricultural village known as *Nuestra Señora de la Candelaria de la Montaña* so they would be evangelized while working in these mines. In 1627 the *Resguardo de la Montaña* was founded with the inhabitants of the agricultural village, and in the same year, the *Resguardo de San Lorenzo* was founded with natives brought from other territories. In 1722 the *Resguardo de Cañamomo-Lomoprieta* was created with indigenous people coming from both local and foreign zones.

Resguardos survived the Colonial period because they sustained the mining activity. Once the Republic arrived, a slow process of foreign appropriation of their land took place before *la Ley 89 del 25 de noviembre de 1890* was approved to protect their integrity. Corrales-Roa (2011) argued that land in higher zones of the Resguardos for dairy farming and lower zones for beef-cattle farming, additionally to divers polygons for mines were granted to foreigners (non-indigenes) as a reward for the services to the Republic, or appropriated by them. As coffee was not yet a valuable commodity, the Resguardos keep the “unprofitable” remaining land in an altitudinal fringe (1200 - 2000 m.a.s.l.) that happens to be the one in which coffee thrives.

Once the *Ley 89-1890* passed, the shared temporal authority between the Colombian government and the Catholic Church, gave the authority to priest to influence the indigenes’ use rights over the communally owned land to cultivate coffee, so they could become modern Colombians through the generation of income to afford goods and services that would change their savage behavior according to interviews conducted by the sociologist Ángela María Gómez

in 1991 with the eldest (indigenes who lived during the first decades of the 20th century)<sup>1067</sup>. Coffee provided the cash needed to buy in the markets the food that was previously produced in collective higher/lower lands of the Resguardo<sup>1068</sup>.

So the merchant was the link between the cultivation and the civilization of indigenous communities, in fact, Appelbaum (2007, p. 284) argues that the priest José Gonzalo Uribe assigned to the parish of San Lorenzo, with authority over the Resguardo de San Lorenzo, invited the merchant Santiago González to Riosucio during the first decades of the 20th century.

Merchants take advantage of this almost patriotic mission<sup>1069</sup> to increase their market power and reduce profit margins for the coffee grower. Palacios (2009, p. 393) uncovered an illicit pact in the *Plaza de Medellín*, which was the intermediary destination of coffee from Riosucio, among Antioquia merchants (who managed to trade 65% of the total coffee exported from this Plaza in 1913) to pushed the purchase price down through a combination of price agreements; monopoly over the threshing facilities; monopoly over the bags to pack coffee; and commercial strategies to influence transport cost in their benefit<sup>1070</sup>.

These merchants had accumulated the capital needed to settle in New York as importers and traders in the twenties (Palacios, 2009, p. 396; Ukers, 1922, p. 340). They offered to roasters a portfolio of aromatic profiles dependent on the region and its physical classification (grain size and a certain number of defective beans in a sample). The Colombian bean was described as “is rich and mild in the cup. The fancy grades compare favorably with the world's best growths. They produce one-quarter more liquor of given strength than Santos coffees and possess much finer flavor and aroma” (Ukers, 1922, p. 363). And the bean Medellín ( coffee exported from this *Plaza* including coffee from Riosucio) was featured as “*best of Colombians; fine flavor and body*” (Ukers, 1922, p. 363).

While merchants were succeeding, indigenous coffee farming was featured by smallholdings and little cash: from the 41 municipalities in Caldas in the mentioned Coffee Census of 1932, only

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<sup>1067</sup> One of the eldest remembered “*el café llegó, después vino un padre Uribe y les dijo que sembraran café, se confesaban, la penitencia era que sembraran café porque más tarde la daría para mantenerse*” (Appelbaum, 2007, p. 283).

<sup>1068</sup> Corrales-Roa (2011) citing interviews with the eldest indigenes (Franco, 2004) in which they remembered the first half of the 20th century “*Todo se sembraba en pedacitos dentro del monte. En la montaña había guamos, higueros y mestizos cedros, tambor, guadua y cañabrava. No tenían ganado, pero sí gallinas y marranos... los marranos, las bestias y el ganado eran tenidos libremente en un criadero, en tierra de comunidad. Los cultivos eran retirados hacia las laderas y los planes más abajo... En Cañamomo lo más plano estaba sembrado con caña... tenían corrales de plátano, maíz y frijol... tenía un cosechadero en mata de guineo en la tierra caliente, pero los ricos se adueñaron, los ricos largaron animales y la gente le perdió el deseo cosechar por allá*” (Corrales-Roa, 2011, p. 165)

<sup>1069</sup> This perception is still widespread in rural areas in Colombia. When we interviewed an entrepreneurial coffee farmer in October 2015, he claimed that the Government should pay him for providing employment.

<sup>1070</sup> Merchants from Antioquia had “*mecanismos rudimentario pero eficaces: a) Fijación del precio de compra en las plazas cafeteras. b) Compra y administración de trilladoras. c) Alquiler de sacos de empaque a los socios (muy caros y escasos por entonces). d) Diseño de tácticas comerciales para manipular los fletes terrestres (mulas)*” Palacios (2009, p. 393).

Riosucio, Quinchía and Marmato had a higher number of coffee farms than fanegadas cultivated in coffee<sup>1071</sup>. Riosucio had farms of 0.78 fanegadas (0.5 hectares) on average, equivalent to a quarter of the three fanegadas (2 hectares) per farm on average in Caldas<sup>1072</sup>. Calculating 426 kilos of coffee per farm on average in Riosucio<sup>1073</sup> and taking as a reference the prices and costs of coffee production in Antioquia in 1932<sup>1074</sup> identified by Palacios (2009, p. 383). The average income on coffee per farm in Riosucio amounted to COP 99.4 (USD 99.4) per year or COP 8 (USD 8) per month. It means that the coffee-related cash in one month by farms on average in Riosucio, was barely equivalent to the transportation cost of four bags of coffee.

Hence, the Resguardo and its government were instrumental to expand coffee culture in Riosucio, which thanks to infrastructures and networking was attractive to merchants who were successful in trading coffee. For indigenous farmers, coffee was a cash crop cultivated among other staple crops which provided a little cash, the amount of which is going to be crucial in the construction of the local narrative that will be developed in the third section.

- [Commercial farming in Riosucio \(1927-1990\): Coffee to deprive the Indigenes](#)

Five years after the foundation of the FNC in 1927, the *Comité Departamental de Caldas*, had registered 36.5 thousand farms in the department, including the 3.5 thousand of them in Riosucio. And it was organized with a chief and four extension agents to transfer the available technology to improve coffee farmers' production. It is plausible to assume that only a small percentage benefited from the service.

With the increase in revenues from coffee, according to Caicedo (2011, p. 21), the Resguardos were attacked for their resistance to allow indigenous to take advantage over their property rights on the land. He quoted the Congressman Guillermo Valencia during the discussions of the Ley 19 del 23 de septiembre de 1927 "*sobre división de resguardos indígenas*" (Resguardos dissolution) demanding a liberation quest for both indigenes victims of a slaving regime and neighboring white colonizers<sup>1075</sup>, not without showing his more material interests when arguing

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<sup>1071</sup> A fanegada is a measure of land equivalent to 6,400 square meters, or 0.64 hectares whose Arab origin goes back to what a pair of oxen was capable of plowing in a single day.

<sup>1072</sup> It was far from the averages of four fanegadas per farm in Manizales, Chinchiná and Pereira and very far from the seven fanegadas per farm in Armenia and Palestina.

<sup>1073</sup> Using the same data from the 1932 Census (FNC, 1933, p. 121). Given the 2 million coffee trees in the 2730 fanegadas reported in Riosucio, there were on average 743 coffee trees per fanegada. Given the 60 million kilos of coffee produced by 82 million of coffee trees Caldas, there was an average production of 734 grams of coffee per tree on in Caldas. Hence, in Riosucio, on average, each farm could have had 580 plants of *coffea arabica Typica* which multiplied for the 734 grams could have produced 426 kilos of coffee.

<sup>1074</sup> (the cost of a bag of coffee (we assume 60k) was COP 14 (USD 14) and the cost of transportation per bag of COP 1.92 (USD 1.92))

<sup>1075</sup> "*esta obra de liberación ofrece un doble aspecto: el de provecho para los indígenas, víctimas involuntarias de un régimen sedicente protector, y de emancipación para los desdichados blancos que han tenido la desventura y mal acierto de levantar vivienda, cerca de tan agresivos y desapacibles propietarios*" Guillermo Valencia quoted by Caicedo (2011, p. 21)

indigenes had the best lands in the Andes<sup>1076</sup>. For Appelbaum (2007) the discourse that blamed the collective ownership of being responsible for poverty in the indigenous community was, in fact, a cunning strategy to individualize ownership so land grabbing could be legal.

The Law 19/1927 in its first article transferred the competence for dissolving the Resguardos from the judges according to the Law 89/1890<sup>1077</sup> to the central government<sup>1078</sup>. According to Caicedo (2011, pp. 22-24) Jorge Gartner de la Cuesta, Minister of the National Economy and native from Riosucio, used this legal basis to, initially, issue the *Decreto 2454 del 27 de diciembre de 1939*, by which it was decided to dissolve the *Resguardo Indígena de San Lorenzo* and distribute the land in small plots among its inhabitants. Given that the Law 19/1927 ordered a distribution in equal aliquots, considered an impossible task due to the complexity of a collective territory with multiple rights of use over forests, pastures and crops, they decided to declare its inexistence. Indeed, Gartner himself as Minister of Government issued the *Decreto-ley 1421 del 18 de julio de 1940* with the objective of giving to the Ministry of National Economy the competence to declare the (in)existence of a Resguardo. Based on this, the Ministry of National Economy declared the San Lorenzo Indigenous Reservation non-existent through the *Resolución 1 del 20 de mayo de 1943*.

According to Appelbaum (2007), the weakening of the Resguardos in Riosucio because of both its dissolution as in the case of *el Resguardo de San Lorenzo* and for colonization in the case of *el Resguardo de la Montaña* and *el Resguardo de Cañamomo-Lomapieta*, opened the door for a process of dispossession that is anchored in the collective memory of the indigenous movement: The narrative claims that once Resguardos lost their force, the indigenes owners of a small piece of land, were encouraged to take credit for planting coffee and buying merchandise that, given an insufficient income when selling the product, had to be paid with his plot of land. In the already mentioned interviews of Gómez (1991) some eldest described their memories linking Santiago González, a merchant of coffee with the dispossession<sup>1079</sup>, which was going to be escalated afterward. Indeed, as described in annex 2, the period known as *La Violencia* from the forties to the sixties erased the ancient structures of both the Resguardos and Haciendas to make way for commercial farming.

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<sup>1076</sup> “La República se sorprenderá cuándo sepa de qué es dueña en las mejores tierras del macizo andino, sobre todo en la Cordillera Central” Guillermo Valencia quoted by Caicedo (2011, p. 21)

<sup>1077</sup> “Para efectuar la división de los terrenos de que aquí se trata (...) que se solicite ante el juez del Circuito por todos los miembros del Cabildo (...) y tenga el apoyo o voluntad de la mayoría absoluta de los indígenas” Art. 30 de la Ley 89 de 1890.

<sup>1078</sup> “la división de terrenos de resguardos de indígenas se efectuará por comisiones especiales a cargo de la Nación” Art. 1 Ley 19 de 1927.

<sup>1079</sup> “estableció un tren de mulas entre Medellín y San Lorenzo (...) Compraba café a bajos precios, vendía mercancías y, luego de la partición del resguardo, daba crédito a los nuevos propietarios de las tierras indígenas. Junto con sus hermanos y otros comerciantes e inversionistas de Riosucio y Antioquia obtuvo derechos de tierra en San Lorenzo comprando títulos, redimiendo hipotecas y embargando cosechas. (Otra indígena recordaba) los primeros en llegar fueron los González, cogían un pobre y por unas arrobas de café les quitaban las tierras; en ese tiempo les prestaban con que hacer una rocería, una siembra... así les quitaban las tierras.” (Appelbaum, 2007, p. 284).

It is plausible that the 4,346 hectares planted in coffee in Riosucio in 1970<sup>1080</sup> (two times the 1932 area), was featured by a few large coffee farms and great atomization of small smallholdings<sup>1081</sup>. As it happened in other Colombian regions, entrepreneurial coffee farming could have started to be dominant in the zone and the various instruments of the coffee public policy reached the larger-than-10-ha coffee farms. Indeed, according to (Asprocafé, 2007), the *Jefe de Fomento Cooperativo del Comité Departamental de Cafeteros de Caldas* encouraged the leaders of a small cooperative in a village near Riosucio that wanted to establish themselves as *Cooperativa de Caficultores*, to associate with coffee farmers in the municipalities of Riosucio, Supía, Quinchía and Marmato. Indeed, in June 1963, 255 coffee growers met at the purchase point of the FNC in Riosucio and contributed the \$ 13,500 that made possible the constitution of the Cooperative. The FNC played a major role contributing with the 49% of the capital subscribed and making the whole paperwork to obtain the legal personality through *resolución N° 0019 del 28 de Septiembre de 1963 de la Superintendencia Nacional de Cooperativas*. The cooperative initiated its purchases on March 4, 1964, as the *Cooperativa de Caficultores del Alto Occidente* (La Cooperativa onwards). During the eighties, La Cooperativa was already buying 70% of the coffee produced in the municipality (Calvo & Dorado, 2010, p. 42)

The indigenous narrative claims that without Resguardos the indigenous culture vanished through miscegenation and mixed marriages<sup>1082</sup> but mainly because of impoverishment<sup>1083</sup> that produced emigration: people from Riosucio in productive age remained most of the year outside their municipality, men as *jornaleros* or *recolectores* (people who sell their workforce to commercial farms in exchange of a payment either on a daily basis or by kilos harvested) throughout the country, and women as domestic employees in the houses of the capital cities (Appelbaum, 2003, p. 199). The narrative from people in the urban area of Riosucio, following Benítez (1984), was that a new race of mestizos people was created in this municipality. There were neither indigenes nor white people, but just one mestizo race. An understandable narrative in times in which violence had declined and the first round of (unsuccessful) processes of peace with guerrillas had started.

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<sup>1080</sup> Fuente: SICA/Censo cafetero 1970

<sup>1081</sup> In the fieldwork the interviewees remembered some few large commercial coffee farms. In a few cases they had a family inheritance (after being divided among two/three generations) from those large farms, in several other interviewees used to work in those farms. The interviewees remembered indigenes owners of large farms (not only mestizos or white people), an observation that would support the hypothesis that the dispossession was the result of an accumulation of land regardless of whether the owner was white, mestizo or indigene.

<sup>1082</sup> “una de estas normas (del Resguardo) consistía en prohibir el matrimonio entre una indígena y un mestizo, si una mujer deseaba iniciar una relación de pareja con una persona externa a la comunidad debía renunciar a sus derechos de propiedad de la tierra. Esto se hacía con el fin de evitar que los mestizos se apropiaran de porciones del territorio indígena” (González Henao, 2013, p. 139).

<sup>1083</sup> “Ver familias que no tenían nada que comer y niños por ahí tirados en el piso, eso era lo que más me mortificaba a mí. Ver a las señoras que salían y a los hombres que se tenían que quedar en la casa cuidando los niños, pasando como mi Dios les ayudara, y las señoras se iban a ganar el jornal con su fuerza en la finca de los terratenientes, les pagaban treinta pesos y con ese sueldo sacaban las familias adelante.” Otilia Aricapa León interviewed in Riosucio by González Henao (2013, p. 144)

The fact is that in the late sixties peasants from Riosucio (not indigenes) joined the organization of landless peasants that would result in the already mentioned ANUC (annex 2). For Caicedo (2011) it was this association that provides the scenario to create the indigenous movement<sup>1084</sup>. Indeed, within the ANUC a group of indigenous people from Cauca<sup>1085</sup> was involved in a legal-political struggle to recover the indigenous lands by demanding instruments to implement the “indigenous and tribal population” Convention 107 signed the 26<sup>th</sup> of June, 1957 of the International Labour Organization, which established the right of ownership over the traditional lands of the indigenes<sup>1086</sup> and which was part of the Colombian legal system once was approved the *Ley 19 de 1958 “sobre fomento agropecuario de las parcialidades indígenas”*.

According to (Appelbaum, 2007), this message to recuperate ancestral land was disseminated throughout the territory through the ANUC, and some populations in which there was no consensus on their current status as indigenous as Riosucio, enrolled in the struggle because it could better suit their interest for land than the one as peasants. A decade after, the *Organización Nacional Indígena de Colombia (ONIC)* held its first *Congreso Nacional Indígena* in 1982. One thousand and a half delegates from indigenous peoples throughout the country adopted the principles of Unity, Land, Culture, and Autonomy and prioritized actions to incorporate them into the governmental agenda. One of them was Silvio Tapasco, a Riosuceño who joined the ANUC in the 1970s as a landless peasant until he was elected as an indigenous representative of the Executive Committee of the ANUC in 1981 (Dajer, 1981, p. 75). According to Lopera-Mesa (2010), Tapasco began a crusade to recover the identity of the Embera people in Caldas by reviving the Cabildos (the authority of a Resguardo) of the legally existent but practically vanished *Resguardos de Cañamomo-Lomapieta and el Resguardo de la Montaña* and the legally inexistent *Resguardo de San Lorenzo* during the eighties. Moreover, he led indigenous peoples of the department to be organized into the *Consejo Regional Indígena de Caldas* (CRIDEC onwards) in 1985 with the aim of gaining critical mass to support the demands of its members and share experiences and specialized advice to increase the probability of success<sup>1087</sup>. Over time, through a very difficult path to convince the population of their indigenous origins<sup>1088</sup>, people began to identify with the Cabildos and their institutions.

Once the *Decreto 2001 de 1988* passed to regulate the INCORA’s titling process of collective lands to the Resguardos (not only to the Cooperatives of peasants) land started to be recovered. Followed by a national consensus that recognized the ONIC's proposals as its own: Colombia as a multi-ethnic and pluricultural nation, which was written down in the *Constitución Política de*

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<sup>1084</sup> “En medio de este movimiento agrario, un sector rural hasta ese momento invisible toma conciencia de sí mismo y empieza un proceso propio y diferenciado de organización. Son los indígenas de Colombia” (Caicedo, 2011, p. 29).

<sup>1085</sup> El Consejo Regional Indígena del Cauca – CRIC was founded in 1971.

<sup>1086</sup> “The right of ownership, collective or individual, of the members of the populations concerned over the lands which these populations traditionally occupy shall be recognised”. Art. 11 Convention 107/1957

<sup>1087</sup> “Cuando iniciamos la reconstrucción de Bonafont como parcialidad (el primer paso para el reconocimiento del Resguardo es la parcialidad), tuvimos asesoría del CRIDEC” Interview with the indigenous leader Martha Lucía Gapacha quoted by González Henao (2013, p. 146).

<sup>1088</sup> “Desde entonces los Cabildos comienzan un proceso muy difícil de convencimiento casa por casa para reconstruir la parcialidad; pero había pasado una generación y las familias se mostraban reticentes a volver a identificarse como indígenas, por lo que los líderes debieron aguantar reclamos e insultos” (CRIDEC, 2012, p. 48)

Colombia of 1991 and that recognized the Resguardo as a Territorial Entity<sup>1089</sup>. The Riosuceños began to feel again indigenous<sup>1090</sup>. Partly thanks to the fact that the renewed legal protection allowed indigenes to unearth the benefits of existing laws such as the exemption from both military service and land taxes and, to produce new benefits with the new post-constitution legislative package such as a special health social security regime for the indigenous, exclusive quotas in public universities, subsidized public services, among others. The Cabildos strategically used these benefits to convince owners of land titles located in their area of influence (unrelated to their indigenous heritage) to give them to the Cabildo in exchange for a right of use on the same land, and of course, be registered as indigenous to access to these benefits.

### V.2.3. At the local level: Nariño - Buesaco

This contextual it describes the effects of the evolving IR in Buesaco. In this case, the Hacienda as a colonial institution featured by the sharecropper system and political exclusion is the main institution, from a negative point of view, that shaped the Resource coffee in Buesaco.

It is divided into two sections. In the first one, we focus on the change produced by both the colonial and republican IR from a thriving indigenous community to an impoverished Haciendas. In the second one, we conjecture that the IR created by a coffee-related elite did not encourage the commercial coffee farming but indirectly, sparked violence that disintegrated the Haciendas and encouraged both non-coffee commercial farming in the best land and, small coffee (and illegal crops) farming for the displaced peasants at the agricultural frontier.

- [Resguardos and haciendas in Nariño \(1510 – 1927\): From the indigenous microverticalidad system to the peripheral republican granary](#)

Before the Spanish Conquest of today's Nariño, Uribe Alarcón (1986) using archaeological evidence, claim that indigenous population neither lived in autarky nor in a market-based economy. Two main indigenous groups applied an economic system called *microverticalidad* in which they were self-sufficient and at the same time, they were supplied by neighbor communities in different altitudinal zones<sup>1091</sup>: The Quillacingas that cultivated maize, cotton, coca, chili, peanut, fique<sup>1092</sup>, indigo, yucca and salt on the northern part of the plateau and its inter-Andean valleys between 1.000 m.a.s.l and 2.000 m.a.s.l., and the more numerous, and

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<sup>1089</sup> *La Constitución Política de Colombia de 1991 reconoce la diversidad étnica (art. 7), su protección (art. 8, 10, 68, 70, 72), su derecho al territorio (art. 63), la jurisdicción propia (art. 246), al gobierno según sus usos y costumbres (art. 330), a la participación en los ingresos de la nación (art. 357) y a la "conformación de entidades territoriales indígenas (...)* los resguardos son propiedad colectiva y no enajenable" Art. 329 de la Constitución Política de Colombia de 1991.

<sup>1090</sup> "Mientras que en el censo de 1993, el 41% de los 43.511 habitantes de Riosucio se identificó como indígena, en 2005 el porcentaje aumentó al 75.4% de una población total de 54.537 personas" (Lopera-Mesa, 2010, p. 71)

<sup>1091</sup> "No existen comunidades andinas económicamente autosuficientes, sino más bien, regiones económicas conformadas por comunidades que se autoabastecen y son abastecidas por otras" Definition proposed by Oberem (1974) cited by (Uribe Alarcón, 1986, p. 39).

<sup>1092</sup> "A though natural fibre made from the leaves of *furcraea andina*, similar to hemp" Collins English Dictionary. It was used to as an input to craft articles, from tissues and espadrilles to ropes and kitchen tools.

Quechua speakers, the Pastos, which harvested tubers like potatoes, mashua, ullucos, oxalis, quinoa and maize in the southern biggest portion of the plateau above 2.700 m.a.s.l. They traded both through the *mindaloes* (or indigenous merchants) and permanent colonies on other tribes in the West (the Pacific plains), East (the Amazon forest) and South (Equator).

Cerón Solarte and Ramos (1997, p. 90) using colonial documents, said that the Spanish took advantage of this well-organized society to establish its regional center: a high population density; a high potential tributes; ideal conditions for agricultural development of European crops like wheat, barley and pasture for cattle; nearby alluvial gold mining (in both the Pacific and Amazon) and its geographical position, equidistant to the northern Popayán and the southern Quito in the path Cartagena-Lima, was well enough to settle and so they founded Pasto in 1537. In 1559 it was recorded that 23.734 tributaries (this amount of tributaries could have meant 100 thousand indigenes<sup>1093</sup>) organized in 66 communities (each one governed by one *Cacique* in a non-saleable communal land that was going to be known as *Resguardo*) had to pay 17 thousand tissues and 55 tons of wheat, maize, barley and kidney beans as a tribute<sup>1094</sup> to 28 Spanish *Encomenderos*<sup>1095</sup> Even though that *Tunja* and *Santa Fe* in the *Cundiboyacense* plateau had more tributaries than Pasto (52.647; 36.552 and 23.734 respectively), on average *Encomiendas* were more attractive in the later (721; 664 and 844 respectively).

Pasto was center of a greedy Spanish elite that enriched themselves through excessive vassalage that changed the whole indigenous word resulting in the annihilation of the 90% of natives in Colombia (Colmenares, 1987, p. 27). In fact, Pastos and Quillancingas were reduced in this same proportion: only 2.741 tributaries (equivalent to probably 10 thousand indigenes<sup>1096</sup>) were listed by Spanish officials in 1691 (Cerón Solarte & Ramos, 1997, p. 109). The population decrease caused a spatial repopulation in which authorities aggregated neighboring communities in a single *Resguardo* and take advantage to grab the land indigenes left behind to auction it to Landowners. Bolaños Martínez (2015) provide evidence that, in this context, the *Resguardo* of Buesaco was founded in 1677 by the *Corregidor* of Pasto with the assistance of the local most important *Cacique*. They regrouped<sup>1097</sup> native survivors that were sparsely distributed near the chosen new settlement at the north edge of the Plateau, just above the only passage over the

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<sup>1093</sup> (Gutiérrez Ramos, 2012, p. 74)

<sup>1094</sup> “*tasados en diez y siete mil y cuatrocientos cincuenta mantas y novecientos y ochenta y siete hanegas de trigo y maíz y cebada y frijoles, sembrado y beneficiando y cogido*” (Cerón Solarte & Ramos, 1997, p. 94)

<sup>1095</sup> As a reward for their services, the Spanish Crown conferred to Conquistadores the right to demand tribute to the indigenous population. This institution called *Encomienda* gives the name of *Encomendero* to the owner of one. It was restricted to collect taxes in gold or goods, so it did not mean control over land, work or other resources. The Spanish Crown, trying to avoid a feudal system in America, obliged Spaniards to live in urban centers separated from natives and instructed the *Cabildo* and its *Corregidor* (authority of those urban centers) to distribute the land, work and other resources (using other institutions) excluding the land of indigenous communities (from where the taxes were obtained) between the newcomers.

<sup>1096</sup> (Gutiérrez Ramos, 2012, p. 74)

<sup>1097</sup> Using a mixture of measures: After ordering authorities to burn indigenous homes, they mandated *Encomenderos* not to collect the tribute for one year and penalized with 200 lashes and the cut of the hair to any indigene that in one year had not built their homes in the new Buesaco (Bolaños Martínez, 2015, p. 82)

Juanambú River that communicates, by land, the *Audiencia* of Santa Fe with the Viceroyalty of Peru.

In the rest of the second half of the XVII Century, the mismanaged Imperial Spanish Crown suffocated its colonies with an unpayable tax burden to fight Europeans wars and fed its malfunctioning bureaucratic apparatus. After snatch everything from cows to clothes, Caciques were jailed because its communities were not able to pay<sup>1098</sup>, *Encomenderos* were imprisoned for evading tax and even *Corregidores* (the local authority) were penalized with prison for incompetence in collecting taxes (Cerón Solarte & Ramos, 1997, p. 111).

In a few generations, the community was ruined. The *microverticalidad* system described above that provided supplies to cover needs was replaced by an extractive system that was not able to cover them, nor even to the Spanish population. The local elite was so impoverished that their unattractive *Encomiendas*<sup>1099</sup> had to be returned to the crown or to elites in Popayán and Quito (Cerón Solarte & Ramos, 1997, p. 113) and their commercial activity were ruined off<sup>1100</sup>. The ancient communication between indigenous nations was broken because natives were also annihilated in the Pacific plain, the Amazon forest, and the Equator. The route to Popayán was infested with bandits, mainly slaves which, after fleeing from gold mines and sugar cane plantations in Cauca, made a living stealing travelers (Uribe, 1995, p. 66).

Cerón Solarte and Ramos (1997) depicted Pasto as a poor and ruinous village at the end of the XVIII century, but they also affirmed: “there is abundant food that makes life cheap, but there are not the benefits of the commercial development”<sup>1101</sup>. One can assume that isolation was bad business for colonialist that used to live in Pasto, but it might be not the case for natives mainly living in rural areas. If there were not any profitable economic activity, businessmen would have been attracted by other regions, letting the diminished indigenous population recover. The

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<sup>1098</sup> “Los indios han quedado destruidos y perdidos de 30 años a esta parte. Si algo se recoge es de fuerza de las diligencias que en ellos se pone en ropa pastusa, bestias, mulares, caballos y cabezas de ganado que les quedan a los indios (...). Hay pobreza y acabamiento en esta tierra y no valen las ordenanzas y no se puede cobrar siquiera en las dichas ropas. Aunque se prenden en las cárceles a los indios, gobernadores y mandones, no se saca ningún fruto. Están presos por dos o tres años y se les suelta para no dejarlos morir en la cárcel” (Cerón Solarte & Ramos, 1997, p. 112)

<sup>1099</sup> “Esta ciudad está muy pobre y los deudores tanto que no se les da nada que los ejecuten y tengan presos en la cárcel de esta dicha ciudad como lo están el Corregidor Rodrigo Muñoz de Ayala y Diego de Benavides. No hay de que echarles mano para ejecutar sus bienes y aunque tengan haciendas no hay quienes las compren por la pobreza de esta tierra. No valen diligencias para negociar ni cobrar alcabalas, ni para mi sustento y gastos (Cerón Solarte & Ramos, 1997, p. 113)

<sup>1100</sup> “si era verdad que los vecinos estaban pobres, sus casas caídas y haciendas arruinadas, por la cantidad de censos que no alcanzaban a mantener sus familias y han cerrado sus tiendas de comercio. Que si desde 1696 cayó el tizón del frío hasta la fecha...; sí las harinas no tenían ningún mercado...” (Cerón Solarte & Ramos, 1997, p. 116).

<sup>1101</sup> “hay alimento abundante que hace la vida barata, pero no se cuenta con los beneficios del desarrollo comercial” (Cerón Solarte & Ramos, 1997, p. 121).

increase in land conflicts<sup>1102</sup> that has to be solved mainly through justice<sup>1103</sup> and in some cases through violence, depicts a more nuanced situation.

On the one hand, not only this impoverish elite remained, but also they changed their desire for *Encomiendas* towards an appetite for land for their Haciendas. On the other hand, its power in relation to indigenous communities diminished. Gutiérrez Ramos (2012, pp. 129-138) provide evidence on how indigenes took advantage to protect their lands by creating “foundational titles” on their lands<sup>1104</sup> : they brought about property rights by legalizing their possession before colonial authorities. As a consequence, they created a symbolic vector towards its identity, a symbolic frontier between the indigenes and Spanish “republics” that was the medullar spine of their economic activity by annually redistributing arable land between community members. That is why they fought successfully in the courts of the *Audiencia* in Quito for its defense against Spanish or mestizos “invasions”. As a result, Indigenous communities felt the Spanish Crown and their officials were protecting them against the more menacing local rivals<sup>1105</sup>.

During the XVIII century, the local population (indigenous, whites, mestizos and slaves) recovered. Gutiérrez Ramos (2012, pp. 113-114) using information from the Governor of Popayán in 1797 (to which today’s Nariño was part), claim that almost 30 thousand people were living in the district of the *Cabildo de Pasto* (divided in two *provincias*: *Pasto* with 12.461 (To the north, ancient territory of Quillacingas) and *Los Pastos* with 17.887 (to the south, ancient territory of the Pastos). Luna Zarama (2014, p. 191) using different primary and secondary sources showed that the composition changed at the expense of indigenes: slightly more than half of the 23.340<sup>1106</sup> inhabitants of *la provincial de Pasto* were indigenes in 1809, an acceptable recovery when comparing with the 21.964 dwellers in Bogotá at the end of the year 1800<sup>1107</sup>.

The demographic change evolved in parallel with an economic transformation. From the extractive economy that characterized the first period, an apparent autarky sustained in a growing population gave way to rural-urban trade in agricultural products like wheat and cattle,

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<sup>1102</sup> There were seven revolts in different towns in Nariño between 1781 and 1803 mainly against the new taxes on local trade. Their resolution, by hanging indigenes elites that were part of revolts, worked also as a mechanism to vanish ethnic memory.

<sup>1103</sup> “A lo largo de los siglos XVII Y XVIII el recurso de los indios ante la audiencia aumentó considerablemente y con frecuencia lograron que los fallos fuesen a su favor. El motivo principal de sus demandas siguió siendo la protección de sus tierras y cultivos (...)” (Gutiérrez Ramos, 2012, pp. 78-79)

<sup>1104</sup> See “Tabla 8, títulos primordiales de algunos resguardos de Pasto, siglos XVII x XVIII” (Gutiérrez Ramos, 2012, p. 133)

<sup>1105</sup> “La conclusión salta a la vista: en la región de Pasto mal podría decirse que el rey y sus funcionarios hubiesen actuado en los años previos a la Independencia como un elemento disolvente o amenazante de las condiciones materiales de existencia de las comunidades y pueblos de campesinos indios encarnadas en los resguardos. Más bien, estos se erigieron como sus protectores frente a las invasiones y agresiones de sus vecinos.” (Gutiérrez Ramos, 2012, pp. 134-135)

<sup>1106</sup> “2.600 Nobles (both legal and blood nobility); 7.700 Montañeses (descendants of Spanish and indigenes); 12.300 Indios (indigenes); 740 pardos y otros (Africans slaves and its descendants with indigenes)”. (Luna Zarama, 2014, p. 191)

<sup>1107</sup> Padrón General de 1800, Instituto de Estudios Urbanos en [www.institutodeestudiosorganos.info](http://www.institutodeestudiosorganos.info). Last visited 10-23-2017.

for milled grain and leather products or services like construction or entertainment among others, described by Luna Zarama (2014)<sup>1108</sup> with a humble trading of its surplus grain with Popayán and cattle with Quito.

This isolation could have played a major role during the independence wars. For Gutiérrez Ramos (2012, pp. 158-164) being aligned with the Crown interest and against revolutionaries, could have been a strategy to gain prevalence at the expense of the rebellious Quito and Popayán<sup>1109</sup>. In addition to the, already mentioned, effective protection of communal lands and the fact that royal authorities reduced and afterward eliminated the tax burden. It was not surprising that *Pastosos* had preferred this Statu Quo under the Spanish Rule that bet for the Patriots (rebels in favor of the independence from the Spanish Crown).

As it happened, they lost the bet and the *Province of Pasto* was placed on the wrong side of history. They suffered the ravages of the war of independence as it was in other regions, but whereas the latter benefited from land retribution and public investments once the war was over, Nariño's provinces suffered punishments and Patriots confiscated their money and properties<sup>1110</sup>. This region was dispossessed from the position that it should have obtained in the early republic because of its demographics. Instead of trying to insert itself in the liberal economy as the efforts of others regions in Colombia, Nariño was pushed towards the periphery of the new nation, playing the role of supplying raw materials needed by those export-oriented regions. So wheat and maize were cultivated in *Haciendas* in both the plateau and the valleys of the Andes in Nariño and then milled in Pasto to be transported to Popayán and from there, to other parts of the country<sup>1111</sup>. Also, livestock was getting attractive: mules for transport, cattle for food and leather for saddleries and crafts (Cerón Solarte & Ramos, 1997, p. 174).

- Commercial farming in Nariño (1927-1990): The FNC must be present in Nariño... even if there is not coffee

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<sup>1108</sup> "En Pasto los sectores populares estuvieron constituidos por las agrupaciones de capa media, denominados plebeyos: artesanos (plateros, albañiles, alarifes), pulperos, tenderos, truqueros e indios, es decir, aquellos que con su fuerza de trabajo convertían a la ciudad en un espacio dinámico, tangible e inquietante". (Luna Zarama, 2014, p. 207)

<sup>1109</sup> "al salir de los conflictos, a costa de nuestra sangre, se nos hacían promesas magníficas de poner en esta ciudad la Capital del Gobierno, el Obispado, la Real Casa de Moneda y otras" (Gutiérrez Ramos, 2012, p. 161)

<sup>1110</sup> "Boves en noviembre de 1822 recolecta 11.400 pesos que impone como contribución a unos pocos ricos que no acolitan sus aventuras, so pena de ser acusados de traición al rey y embargados sus bienes. En enero de 1823 Bolívar y Salom basados en los decretos sobre la expropiación de bienes" que dicta el congreso de Cúcuta en 1821, confiscan grandes haciendas a propietarios de Pasto y del sur que han apoyado el levantamiento de A. Agualongo y se han declarado fieles al rey. Impone además como sanción a la ciudad 30.000 pesos y obliga a reunir más de mil reses y trescientos caballos para llevarlos a Quito. Se añaden otras contribuciones individuales y 13.700 pesos recolectados únicamente entre doce ciudadanos" (Cerón Solarte & Ramos, 1997, p. 164)

<sup>1111</sup> As an example of this dynamic activity, a traveler arriving in Pasto from Popayán in 1830 quoted by Cerón Solarte and Ramos (1997, p. 169) said that they lost one hour waiting for a convoy of mules transporting wheat and maize flour to pass.

In this context, coffee landed in the south at the end of the nineteenth century<sup>1112</sup>. Nariño was both, a peripheral region feebly linked with national markets through inadequate roads<sup>1113</sup> (relatively to other regions) supplying wheat and cattle mainly produced by (foreign-owned) *haciendas*. And an isolated region with little competition, in which indigenes in their tight *Resguardos* and mestizos in the smallholdings managed to make ends meet in the local economy, producing staple food to exchange against artisanal products and services<sup>1114</sup>.

These two features: poor infrastructure and smallholdings are blamed responsible for the slow development of coffee culture in Nariño compared with other regions<sup>1115</sup>, as it can be inferred from the very little work about this issue<sup>1116</sup>.

In the first case, Rodríguez Guerrero (1961) blamed infrastructures the responsible for this unequal development<sup>1117</sup>. Cerón Solarte and Ramos (1997); (FNC, 1933, p. 152) claim that it was a consequence of local politics, more interested in preserving privileges produced by the Statuo

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<sup>1112</sup> A register of 277 bags of coffee exported from Nariño in October in 1893 is the oldest evidence of this activity presented by Rodríguez Guerrero (1961, p. 303)

<sup>1113</sup> 40 days took the travel from Pasto to Bogotá in a mule. It was so dangerous that many travelers left behind their testament. "*De Pasto a Bogotá se emplean 40 días a lomo de mula y exponiéndose a muchos peligros, al punto que algunos viajeros dejan hecho su testamento por temor a morir en el viaje*" (Cerón Solarte & Ramos, 1997, p. 236).

<sup>1114</sup> In Pasto, in 1906 there were 6 mills, 30 bakeries, 20 blacksmiths, 20 carpentry, 25 saddleries, 36 shoes stores, 25 tailors, among others. Showing that it has a dynamic local market that dressed, fits and feed by itself. "El número tan elevado de carpinterías; panaderías, sastrerías, zapaterías, talabarterías, etc., reafirma la continuidad de las descripciones del siglo pasado, cuando se dice que Pasto se viste, calza y alimenta sola" (Cerón Solarte & Ramos, 1997, p. 241)

<sup>1115</sup> Nariño's coffee culture expanded in the first three decades of the twentieth century planting five million coffee trees in 3,5 thousand hectares (FNC, 1933, p. 139) in Nariño's central region near Pasto, the capital city and exporting through its port in the Pacific Ocean, Tumaco, 8 thousand coffee bags in 1932 (FNC, 1933, p. 119). In that time, Buesaco had 130 thousand coffee trees cultivated in 43 ha in 40 farms, more than half cultivated in one farm while 36 farms had less than 5 thousand coffee trees (FNC, 1933, pp. 139-140) and produced 450 coffee bags per year (Rodríguez Guerrero, 1961, p. 307). However it was far behind other Colombian departments which started roughly at the same time, Caldas for example exported 960 thousand coffee bags produced in 79 thousand hectares cultivated in coffee, and Antioquia exported 550 thousand produced in 64 thousand hectares (FNC, 1933, p. 119).

<sup>1116</sup> The author spent several days in both the *Biblioteca del Banco de la República en Pasto*, and the *Biblioteca de la Academia Nariñense de Historia en la Universidad de Nariño* and it could be said that the evolution of coffee in Nariño in the twentieth century has been poorly studied. The invisibility of the coffee crop is so notorious, than even in 2007 in which coffee in Nariño had almost 30 thousand ha, a study of the economy in Nariño produced by *el Banco de la República* did not mention coffee in its chapter about agriculture in Nariño! (Viloria De la Hoz, 2007)

<sup>1117</sup> In fact, in 1932, whereas the 454 kilometers that separated Manizales (Capital city of Caldas) from Buenaventura (main port on the Colombian Pacific coast) where linked by a railway, the 301 kilometers that separated Pasto (Capital city of Nariño) from Tumaco (Main port on the South Colombian Pacific coast) had to be transited using all manner of conveyances including trucks for the first 142 km, mules for 50 km, trains for 92 km, and little boats for the last 17 km. Not only means of transport like mules are extremely uncompetitive in big numbers (two coffee bags per mule against a few hundred of coffee bags by wagon), but also each change implied loading-unloading costs. It is not surprising that, for a ton of coffee, freight rates Pasto-Tumaco where 5 times higher than Tumaco-London (\$32.79 pesos versus \$6 pesos), making coffee from Nariño one of the most expensive to export in Colombia (Rodríguez Guerrero, 1961, p. 304).

Quo than in inserting Nariño into the world economy<sup>1118</sup> whereas Zarama Rincón (2016) argued that local politicians did their work to link Nariño with both, the country and the world<sup>1119</sup> but there were national and international constraints that created obstacles and opportunities. Eventually, Pasto was linked by train (at least one-third) to the Pacific Ocean in 1930<sup>1120</sup> and by a roadway with the interior of Colombia a few years after<sup>1121</sup>.

In the second case, Eraso (2002) argued that thanks to the *Ley 89/1890*, eighty-eight *Resguardos* with a total area of 69 thousand ha<sup>1122</sup> had survived from land grabbing (from the 3.2 million hectares total extension of the department<sup>1123</sup>). But, with the roadway built in 1932, staple crops for national consumption was seen as a great opportunity in the fertile lands of Nariño. Wright (1922, p. 26) calculated roughly 400 thousand hectares cultivated in 1922. Cerón Solarte and Ramos (1997, p. 212) said that at the end of the thirties, there were crops of potatoes (8.214 ha), maize (7.690 ha), barley (420 ha), beans (85ha) and especially wheat (6.670 ha)<sup>1124</sup>, in addition

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<sup>1118</sup> The Amazon Rubber Boom that enriched Manaus in Brazil and Iquitos in Peru, triggered Colombian Congress to pass the *Ley 65 del 6 de noviembre de 1912* to build a Railway from Tumaco, passing through Pasto, to the eastern amazon forest in Putumayo, and then, potential oil exploitation sparked the the *Ley 110 de 27 de diciembre de 1922* adding to the previous trace another line to connect the Equator border with Popayán through Pasto, but local politicians were too busy discussing the alcohol monopoly to mobilized the political support needed in the subsequent phases to make it real "*Es irónico observar que mientras otras regiones del país discuten su inserción en el mercado mundial y nacional, en Pasto el centro de la polémica se desarrolla alrededor del monopolio de aguardiente, única fuente importante como recurso del erario público*" Cerón Solarte and Ramos (1997, p. 244)

<sup>1119</sup> Julian Buchelli, the first Governor of Nariño (In 1904 Nariño became a Department with its capital in Pasto), who founded the University of Nariño in 1904 and its faculty of Engineering, signed in 1920 the first contract to elaborate the technical studies needed for a Railway that connected in the axis west-east Tumaco with Pasto, and in the axis South-North Ipiales (in the very border with Equator) – Pasto – Popayan. He was so committed that he even said that Nariño should paid for it if the central government was not able (Zarama Rincón, 2016, p. 93).

<sup>1120</sup> For example, the First World War made impossible implementing the *Ley 65/1912*, which had passed with the money needed to build the railway, and the illusion to build all the lines proposed by the *Ley 110/1922* vanished with the Great Depression in 1929 that closed funding sources. In the end, and as a result of a compensation paid by the United States Government for its instigator role in the independence of Panama, of the three hundred kilometers railway between Tumaco and Pasto, only the first one hundred segment between Tumaco and El Diviso (in the Pacific Plain) was opened to traffic in 1930 reducing travel time from one week to two days and, cost and discomfort when voyaging.

<sup>1121</sup> Rubber ambition, Peruvian politics, and discontents about a previous border treaty with Colombia turned out in a Peruvian civilian takeover in 1932 of two Colombia towns (Leticia and Tarrapaca) in the Amazon basin, which infuriated Colombians, especially because there was not a single way to reach those villages from Colombian territory (when eventually troops arrived three month afterwards, they had travelled from the Caribbean coast to the mouth of the Amazon in Brazil, and then, navigated all the way upstream to Leticia). As the only feasible way to reach the Amazon by land was through Pasto, the central government realized they need a passable roadway that communicates this city with the rest of the country (Álvarez Hoyos, 2012, p. 210).

<sup>1122</sup> 29 *Resguardos Quillacingas* with 39.313ha; 57 *Resguardos Pastos* with 28.833ha; 2 *otros Resguardos* with 889ha. (Eraso, 2002, p. 261)

<sup>1123</sup> Nariño had 30.220 square kilometers (equivalent to 3,2 million hectares) as it was rappoint in 1922 (Wright, 1922, p. 26). It would be continue like that until 1991 in which the Department of Putumayo was created.

<sup>1124</sup> They did not mention the 3.500ha cultivated in coffee that were reported in the Censo Cafetero in 1932 (FNC, 1933)

to the plausibly 200 thousand hectares dedicated to cattle<sup>1125</sup>. 189 trucks affiliated to a dozen companies stationed in Pasto in 1940 connect this production with national markets (Cerón Solarte & Ramos, 1997, p. 212)

As the fifty years protection provided by the *Ley 89/1890* had passed, hungry entrepreneurs mobilized the element of the legislation before the *Ministerio de Economía Nacional* to dissolve the *Resguardos*, mainly those from the *Quillacingas* to the north of the plateau (Eraso, 2002). As their protected lands had been dismembered before, when the *Resguardos* were dissolved, the land distributed within the community was insufficient for a family to survive<sup>1126</sup>. The case in Buesaco was not so extreme, in 1950 the *Resguardo de Buesaco* had 3 thousand hectares and its population was 780 indigenes (Gutiérrez Ramos, 2012, p. 131), so if divided equally each one could have obtained 3.8 hectares. Bolaños Martínez (2015) by contrasting the number of electors and its names in the archives claims that its dissolution in 1950 happened in parallel of the weakening of the indigenous movement. He argued that mestizos penetrated this governance mechanism and implanted the idea of progress through capitalism that made strong roots over the antiquated communal system<sup>1127</sup>.

This particular land tenure is blamed responsible for the slow development of coffee culture in the south. One article about the history of Coffee in Nariño published in the very influential *La Revista Cafetera* (FNC, 1958), highlighted that the partitions of the *Resguardos* resulted in such smallholdings that it was common to see a family of 7 members with ownership of one-eighth of a hectare. Indeed, Nariño was featured by the *minifundio*<sup>1128</sup>: In the Census of 1932 (FNC, 1933, p. 140), the 3.811 farms in Nariño listed, 3.681 (96.6%) had less than 5 thousand coffee trees. A small number of coffee trees that reflected the small plot of land they possessed. If we divided the 3.517 hectares cultivated in coffee in Nariño, on average each farm had 0.92 hectares, it was lower than the average of 2.23 ha per farm in Antioquia or 1.95 ha in Caldas.

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<sup>1125</sup> In the Railway rapport in 1920, the contractor said that in the municipality of Pasto in 1920 (the only one with disaggregated data) there were less than 2 thousand hectares of crops and 15 thousand hectares of pastures (Wright, 1922, p. 30). I used this relation 1 – 8 to generalize to the whole department.

<sup>1126</sup> Eraso (2002, p. 262) quoting Fals Borda, say that this distribution produced on average smallholdings of 0.5 to 3 hectares per family, triggering conflicts between the members of the same community: The 84 hectares of the *Resguardo de Jongovito* were distributed between one hundred families; the 70 hectares of the *Resguardo de Obonuco* were distributed between 200 families; and when the *Resguardo de Anganoy* was dissolved, land was so scarce that families received between 500 and 700 square meters.

<sup>1127</sup> In 1945 there were 163 indigenes that voted for the *Cabildo* (indigenous authority) whereas 89 (some of whom, after reviewing other sources, had been part of the military forces of Colombia – to which indigenes were dispensed) elected the last *Cabildo* of Buesaco in 1950. (Bolaños Martínez, 2015, pp. 200-201)

<sup>1128</sup> M. Arango (1977) highlighted that coffee dissemination in the first decades of the twentieth century happened in Colombia thanks to smallholdings (a farm managed by the owner and his family, in which coffee as a cash crop was integrated with staple crops), but when dividing such farms in two categories: *minifundios* below 5.000 coffee trees and *propiedad parcelaria* between 5.000 and 20.000 coffee trees, he affirmed that the first ones must be accompanied with complementary income off-farm, mainly selling workforce.

If we take another regard, by looking at the causal mechanism that is considered key to understand why coffee prospered (so its absence in Nariño can explain its slow development), we can add a third condition. The commercial capital (Bejarano, 1980, p. 124).

Because of Nariño's pro-crown position during the independence wars, it is plausible to assume that vacant lots were used more to pay for public services than to distribute between independent peasants (as shown before, Nariño was particularly subject of this kind of concessions for funding infrastructures projects to link the Cauca Valley with the Pacific ocean). Clearly land did not go to the Resguardos, which when dissolved left behind indigenes without enough land to make a living. So, it did not have that peasant army that harvested the Andes in Antioquia. On the other hand, because of its similitudes with the plateau Cundiboyacense (in which *Tunja* and *Santa Fe* were settled) both over the 2.500 m.a.s.l., populated by numerous indigenes before the Spanish Conquest and with the same agricultural crops, it is plausible to assume the same pre-capitalist relation between haciendas and their sharecroppers, therefore the absence of commercial capital accumulation (and its derived product, the merchant-*hacendado*).

In the end, due to infrastructures and land tenure possibly featured by a few enormous Haciendas and numerous *minifundios* linked by pre-capitalist relation, that made impossible commercial capital accumulation, it is plausible to assume that the best option for Nariños' *hacendados* was to supply the domestic demand for grains, potatoes and cattle and, as a second alternative, to supply the international demand for coffee. Therefore, a marginal 0.5% participation in the Colombian coffee harvest of 1932 was produced in Nariño (FNC, 1933, p. 116). It reinforced its isolation in a country increasingly dependent on coffee exports.

However, the FNC needed to project the idea that they represented all Colombian coffee farmers, including those in Nariño, to obtain a nationwide political influence. In the Colombian collective memory, the FNC was founded by *delegados* to the *II Congreso Cafetero* in 1927 from the fourteen departments in which coffee was harvested<sup>1129</sup>. Saether (1999) checked the list of the 33 attendants to this Congress and traced the background of each of them. From the 25 he actually was able to trace, 16 were either from Antioquia or have strong ties with this department but 11 of them were "representatives" of other regions. For example, the two delegates from Nariño, Alejandro Munera was a congressman from Medellín, and José Luis López was a merchant from Medellín (Saether, 1999, p. 148). It was predictable that the decision-making process was institutionalized in a way in which the biggest producers would maintain political power by conditioning the number of delegates to the *Congreso Cafetero* to the number of coffee bags exported by the Department the previous year<sup>1130</sup>. So, in the *IX Congreso Cafetero* in 1938,

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<sup>1129</sup> Nariño, Cauca, Valle del Cauca, Huila, Tolima, Cundinamarca, Boyacá, Santander del Sur, Santander del Norte, Magdalena, Bolívar, Choco, Antioquia y Caldas. On that time, covering the whole Colombian Andes (were *coffea arabica* grows), or in other words, all the Colombian coffee harvest.

<sup>1130</sup> "Los departamentos que exporten hasta 25.000 sacos, tendrán derecho a un Delegado; de 25.001 a 250.000 dos Delegados; de 250.001 a 600.000 tres Delegados; de 600.001 a 1.000.000 cuatro Delegados, y de 1.000.000 en adelante, cinco Delegados. Por ningún motivo los Departamentos podrán tener más de cinco Delegados en el Congreso". Art. 3, Capítulo II, Estatutos de la Federación Nacional de Cafeteros del 14 de diciembre de 1930.

there were 30 delegates from ten Departments, 11 from Antioquia and Caldas, and no one from Nariño (Bates, 1998, p. 59).

In spite of its little influence, Nariño was part of the FNC and its coffee farmers received its support. For example, it was voted in the *IV Congreso Nacional Cafetero* “to request the national government to pay special attention to the construction of the Pasto-Popayán roadway”<sup>1131</sup> in 1930, because Nariño was “in very favorable conditions for the intensification of coffee culture”<sup>1132</sup>. And then, when the road was built, they decided to celebrate in Pasto the *VI Congreso Cafetero* that started in June 1934. At the local level, they were proactive when they founded the *Comité Departamental de Cafeteros de Nariño* in 1928 (the third one to be established).

Using data from the Census in 1932, in which Nariño exported 8 thousand coffee bags and produced 18 thousand and, data from the FNC presented by Rodríguez Guerrero (1961, p. 310), coffee culture augmented significantly, it almost tripled to produce 48 thousand coffee bags<sup>1133</sup> in 1948. But, even though it increased faster than the average in Colombia, it represented less than one percent of all coffee produced in the country at that time. In the case of Buesaco, coffee culture doubled in fifteen years to produce 950 coffee bags in 1948 (450 coffee bags exported and 500 locally consumed (Rodríguez Guerrero, 1961, p. 309)) placing it in the middle between the 31 municipalities that were producing coffee in Nariño.

We believe that the coffee crop in Nariño was featured rather by the precapitalist hacienda system (in which one *hacendado* use their sharecroppers to diversify by cultivating different products) than by the dynamic relation between capitalist haciendas and an independent peasant economy. Three pieces of evidence allow us to believe that: Firstly, a national agricultural sample conducted by the statistical body of the Colombian government (DANE, 1954), claimed that there was 39.887 ha that had at least a few coffee trees, including 5.207 ha cultivated only in coffee<sup>1134</sup>. Secondly, two of the three members of the *Comité Departamental de Cafeteros de Nariño* in 1930, Medardo Bucheli y Rafael Eraso Navarrete (FNC, 1931, p. 775) had won several awards for agricultural products like wheat, maize, barley and cattle (none one because of their

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<sup>1131</sup> *Resolución número 5 del IV Congreso Nacional de Cafeteros del 13 de diciembre de 1930.*

<sup>1132</sup> *Ibid.*

<sup>1133</sup> Rodríguez Guerrero (1961, p. 310) showed a contradiction between figures because the Ministry of Agriculture claimed less than 15 thousand coffee bags produced in Nariño in 1948. Nevertheless if we assume that the figure of 8,2 million coffee trees provided by the *Comité de Cafeteros de Nariño* was true (and actually it is highly possible that crops had been increased from 5 million to 8 million in Nariño because of good prices of coffee, as it was in the rest of Colombia) and we use the figure of 1.470 hectares cultivated in coffee provided by the Ministry of Agriculture, we have to say that there was 5.585 coffee tree per hectare. That figure is unrealistic taking into account that on those days they cultivated *coffea typica* that, as they leave it untouched for decades, it reached 3 meters high and width, with that density it would have been impossible to enter to the field to harvest the coffee cherries. So, we feel more comfortable with the data provided by the FNC (registered by its personal in Nariño and discriminated by municipality), that implies a completely acceptable figure that each coffee tree produced 330 grams of beans.

<sup>1134</sup> “*en la muestra nacional se tomaron todos los cultivos de café, por pequeños que éstos fueran (es decir unas pocas matas se tomaron como cultivo intercalado) sin tener en cuenta si era cafetal o no*”. (DANE, 1954, p. 37)

coffee) in an agricultural fair in 1919<sup>1135</sup>. A third one was productivity: as the main economic rationality of *haciendas* was to reduce the risk, not only by crops diversification but also placing all the risk in hand of the sharecroppers<sup>1136</sup>, there were not technical advances once the crop was established. The production increase was explained by adding land or labor, not productivity. In Nariño it looked that productivity remained with small changes: from the 314 kg of coffee/ha that could be calculated from the Census 1932, productivity decreased to 250 kg/ha in 1955 to return again towards 350 kg/ha in 1970 (Vallecilla Gordillo, 2001, p. 176).

Assuming that Nariño was characterized by the pre-capitalist hacienda, according to Kalmanovitz (1996) this structures disintegrated by the violence during the forties and fifties to consolidate commercial farming afterward (annex 2).

In Nariño neither the violence nor the commercial farming was so intense in comparison with other regions, but both were present producing migration and land concentration. Gómez Zea (2014) described episodes of harassment by bandits affiliated to the conservative police and the dispossession that followed <sup>1137</sup>. Cerón Solarte and Ramos (1997, p. 53) highlighted the commercial farming by comparing the \$3.067 that cost on average a hectare in Nariño 1944 when the violence started with the \$40.096 that cost in 1962 when it was over. As it happened in other regions, 107.888 people from the 705.611 reported in Nariño in the National Census of 1964 (DANE, 1964), migrated to other departments, in addition, to internal migration towards the main urban centers like Pasto and Ipiales that reduced the rural population proportion in the department from 77% in 1938 to 61% in 1980 (Cerón Solarte & Ramos, 1997, p. 247).

Industrialization and urbanization boomed demand for agricultural products produced on the highlands of Nariño, increasing attractiveness for that kind of commercial crops, and the surface devoted to them <sup>1138</sup>. These pieces of evidence, allow us to consider that the precapitalist

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<sup>1135</sup> They won awards because of their wheat, maize, barley and cattle, (none one because of their coffee) “*Medalla de plata y diploma de primera clase para las seis muestras de trigos distintos que se producen en Funes, presentadas por el señor Medardo Bucheli A (...) Mención honorífica para las muestras de maíz blanco, amarillo y maicena de la Sección de Funes, presentadas por el señor Medardo Bucheli A (...) Medalla de plata y diploma de primera clase para la cebada pelada de la Sección de Funes, presentada por el señor Medardo Bucheli A. (...) Medalla de plata y diploma de primera clase para el toro negro de raza Holstein, importado del Ecuador y presentado por el señor Medardo Bucheli A (...) Mención honorífica para (...) Un grupo de ganado de raza Holstein, Normanda y Durham, presentado por el señor Medardo Bucheli A.*” (Nariño, 1919, pp. 33-35). “*Medalla de plata y diploma de primera clase para el grupo de toros, raza Holstein, presentado por el seJ10r Rafael Eraso Navarrete*” (Nariño, 1919, p. 35)

<sup>1136</sup> Sharecroppers had to cultivated with their own resources and their production would be sell by the Hacienda, giving back a 50% profit to the sharecropper once land and capital cost were subtracted. (Bejarano, 1980, p. 129)

<sup>1137</sup> Gómez Zea (2014) following the story of Abel Sena, a Policeman during the “*política de la violencia*” in Nariño and Valle del Cauca, interviewed some *nariñenses* elders who had memories from that period. Mariela Toro remembered that his father, a Liberal, was expelled from his land in 1947. And Otoniel Vega that his family was harassed by people with machetes because of their liberal affiliation, and some of them were banished (Gómez Zea, 2014, p. 31).

<sup>1138</sup> From those areas mentioned by Cerón Solarte and Ramos (1997, p. 212) at the end of the thirties, projections from the *Segundo Censo Nacional Agropecuario* (DANE, 1974, pp. 437-443) estimated a significantly expansion in 1972: The area had multiplied for all major crops in that period: potatoes (from 8.214 ha to 26.000 ha), maize (from 7.690 ha to 48.000 ha), barley (from 420 ha to 10.000 ha), beans (from 85 ha to 6.000 ha) and wheat (from 6.670 ha

*haciendas* transformed into capitalist farms specialized in the national urban market (especially when the Panamericana replaced in 1975, through another route, the ancient road to the north and linked quicker and safer Pasto with Popayán). By buying (or stripping) the fertile and arable land from the plateau and the valleys in Nariño, agro-entrepreneurs pushed towards the agricultural frontier<sup>1139</sup> the dispossessed peasants<sup>1140</sup> (those who did not emigrate to other departments). They were pressed towards the edge of the plateau, to the East – the Pacific plain and its impenetrable rainforests; to the west - The Amazonian jungle; to the north - the steep slopes that descend rapidly from the 2.500 m.a.s.l. to 1.000 m.a.s.l.

Our conjecture is that coffee culture in Nariño migrated from the precapitalist coffee *hacendado* towards the pushed coffee peasant, skipping the commercial coffee farm that characterized coffee farming in other regions during the quota regime.

In our regard, it is plausible that the new entrepreneurial landowners decided to specialize its culture to local markets because, either it was profitable in a context of high devaluation and high tariffs to protect local production, or it was politically motivated because the Colombian coffee quota was taken by more powerful regions<sup>1141</sup>: Using data produced by the Colombian statistical office – DANE, from almost 40 thousand hectares with some coffee reported in Nariño in the *muestra agropecuaria nacional* 1954 (DANE, 1954, p. 18) the area decreased to 11.330 ha in the *muestra agropecuaria nacional* 1968 (DANE, 1974, p. 403). Using the data from the FNC, from 17 thousand hectares in coffee reported by a coffee census conducted by the FNC in 1970<sup>1142</sup>, it decreased to 13 thousand hectares one decade afterward when a new coffee census was conducted by the FNC in 1980<sup>1143</sup>.

On the other hand, we suspect that coffee started to be cropped at the agricultural frontier featured by worst land but near major roads. Indeed, coffee is known because it is not very

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to 35.000 ha). As it was reported a total livestock of 383 thousand cattle, the pasture land should have doubled from the 200 thousand hectares to more than 400 thousand because the ratio has always been less than one head per hectare. Cerón Solarte and Ramos (1997, p. 51), comparing data from the National Agricultural Census in 1960 and in 1970, showed a change in land structure reducing both the average size (-3.2%) and the number of farms (-1.8) with less than 5 hectares, while increasing both the average size (60%) and the number of farms (44%) with more than 50 hectares.

<sup>1139</sup> Land titling by The Colombian Institute for Agrarian Reform (INCORA) was not sustained on expropriations (of unexploited fertile land) but on vacancy lots that should look attractive to motivate migration. That is why “*Por razones estratégicas INCORA y la clase política encargada de resolver el conflicto, hacen percibir las selvas pluviales como "espacios vacíos" que pueden albergar población con la garantía de adquirir tierra suficiente*” (Cerón Solarte & Ramos, 1997, p. 51)

<sup>1140</sup> Almost 3 hundred thousand hectares of vacant lots were given to peasants in Nariño from 1960 to 2012. “*Con respecto a los campesinos, entre 1960 y 2012 se les titularon 281.696 hectáreas de predios baldíos*” (Conpes, 2014, p. 6)

<sup>1141</sup> The boom of coffee prices in 1975-77 (a devastating frost that hit Brazil in July 1975 (not only affected that harvest but also two thirds of the two following ones killing the coffee trees in the main regions) doubled prices in 1976 and 1977) that must have made coffee a very profitable business did not increase the number of hectares cultivated in coffee in Nariño.

<sup>1142</sup> SICA/FNC. “*Censo Cafetero*”. 1970.

<sup>1143</sup> SICA/FNC. “*Censo Cafetero*”. 1980.

demanding, is easy to crop and to maintain, it grows very well with other crops and it would be bought because of the purchase guarantee described before. It could have been the case of Buesaco, which had jurisdiction at the very edge of the plateau, including highlands at more than 3 thousand m.a.s.l. and all the way down the slopes until its base at one thousand m.a.s.l. (a gorge known as “*El Cañon del Juanambu*”)<sup>1144</sup>. On the canyon, Buesaco has the fertile volcanic soils and good road connection with Pasto and Popayan, but the steep slopes and the lack of water made it unattractive for entrepreneurs, so it was an “agricultural frontier” that was reachable for the dispossessed peasants. From the 43ha reported in the coffee census in 1932, Buesaco had multiplied for four times its coffee area to reach 189 ha in 1970<sup>1145</sup>, and more than tripled it in one decade to 689 ha <sup>1146</sup> in 1980 to become one the main coffee producer in Nariño<sup>1147</sup>.

At the beginning of the nineties, Nariño had enjoyed an acceptable growth explained by the commercial policy known as *sustitución de importaciones* <sup>1148</sup>. In Colombia it was not only oriented to protect the industry (as it was the case in other Latinamerican countries) but also the agriculture (by both high tariffs and creating the IDEMA to regulate the local agricultural market<sup>1149</sup>), at the expense of the industry which had to pay more for their agricultural supplies and resources that would be better allocated in other activities (Kalmanovitz & López, 2003, p. 16). Nevertheless, a new institutional framework founded with the new Constitution in 1991, came alongside a new commercial policy inspired in trade liberalization that reduced tariffs and eliminated public intervention in agricultural markets<sup>1150</sup>. As a consequence, artificial profitability vanished and resources moved towards markets were signaling at least, some return on investment. As a result, land use started to change<sup>1151</sup> and coffee started its ascending trend: 27

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<sup>1144</sup> The total area of 62 thousand ha is divided in three main tropical climates: Temperate climate from 1.000 to 2.000 m.a.s.l. accounts for 21% of the total area. Cold climate from 2.000 to 3.000 m.a.s.l. accounts for 57% and very cold climate over 3.000 m.a.s.l accounts for 22%. Alcaldía de Buesaco. Official Webpage.

<sup>1145</sup> SICA/FNC. “*Censo Cafetero*”. 1970.

<sup>1146</sup> SICA/FNC. “*Censo Cafetero*”. 1980.

<sup>1147</sup> In a press report in February 1983 quoted by Bolaños Martínez (2015, p. 213) it was highlighted that Buesaco escalated to the third position of coffee production in the department with 13 thousand coffee bags from the 238 thousand produced in Nariño in the coffee year 1980-1981 (less than 3% of the 8 million coffee bags exported in Colombia in the same period).

<sup>1148</sup> Its signals artificially increased both agricultural profitability and land value. “*Las señales dadas por la protección del modelo corporativo conservador tienden un manto que aumenta artificialmente tanto la renta del suelo como las utilidades de los empresarios agrícolas*” (Kalmanovitz & López, 2003, p. 21)).

<sup>1149</sup> To promote agricultural production, *El Instituto de Mercadeo Agropecuario – IDEMA* was created through *el decreto-ley 133 de 26 de enero de 1976*. Its main function was to regulate the internal market (purchasing, selling, storage, import-export any agricultural product (at exception of coffee). It monopolized foodstuff imports to resell them locally at higher prices, which in turn gave IDEMA a profit that was used to guarantee a minimum price for local products

<sup>1150</sup> In that year tariffs for all main crops in Nariño were as follows: barley 15.47, maize 30, wheat 47.14 and milk 42.14. But in 1992 they were reduced: maize 19.73, wheat 15.53 and milk 23.91. And in 1996: barley 3.33, maize 3.50, wheat 2.08 and milk 15.96. (Kalmanovitz & López, 2003, p. 24)). In addition by eliminating imports monopoly in the hand of the IDEMA, this institution was not able to sustain a minimum price and had to be liquidated (Mendoza Villalobos, 1999, p. 143)

<sup>1151</sup> Comparing the previous figures from 1972 with those from la *Secretaría Departamental de Agricultura* de Nariño at mid-nineties (Nariño, 1996), it was notorious the changing trend. Whereas cereals and livestock started to

thousand hectares crop in coffee were reported alongside other more profitable agricultural products <sup>1152</sup>. Legal ones reported in that document like kidney beans, peas, sugar cane and banana, palm oil and cacao mainly in the Pacific plain. And illegal ones that started to be noticed: coca in the eastern and western edge of the plateau, and poppy on the highest lands like Buesaco<sup>1153</sup> (1.700 – 3.000 m.a.s.l.)<sup>1154</sup>. In Buesaco, at the beginning of the nineties, the steep canyon was cultivated in coffee by a peasant economy whereas the more soft highlands had other crops. Coffee was a complimentary cash crop for farmers accounting for roughly one-tenth of the 10.420ha devoted to agricultural products in the municipality: kidney beans, peas, maize, wheat and barley in addition to 32.420ha in pasture lands (Burbano & Patiño, 1992, pp. 162-165). But after the liberalization, cereals crops started to decline to leave room to the more profitable crops: The *Censo Cafetero* in 1997 reported 1.346 ha cultivated in coffee (doubling the 689 ha reported in 1980).

Nevertheless, the change in land use was more abandonment of unprofitable crops than an entrepreneurial opportunity. Coffee, for example, suffered from an all-time low price after one decade of a free global market. In Nariño the only profitable crops were the illegals ones, in Buesaco illegal poppy crops started to be a menace because more than half of the area had the proper condition (climate, soils, isolation) for its culture (UNODC, 2005).

### V.3. Support for the “closed lists of services” table in both context

#### V.3.1. Both contexts

The LRA Discount concretized the *Resolución 5/2002 del CNC* in its negative form. I.e. the Resource coffee that has not the minimum qualities to produce the services sought by this institution is going to join this LRA. If it was useless it would be thrown away, but it is not the case: These beans that are both under/overripe, badly developed, or have a higher proportion of defects (*pasilla*) will produce an unpleasant almost undrinkable beverage, that roasters can overcome by over-roasting (higher temperature or/and more time in the roasting machine) the

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decrease: maize (from 48.000 ha to 32.768 ha), wheat (from 35.000 ha to 30.015), and livestock (from 383.000 to 338.486 cattle)

<sup>1152</sup> Figures from the FNC differed, but the trend was similar. The *Censo Cafetero* in 1997, reported 20.489 hectares cultivated in coffee in Nariño (from the 13.000 ha reported in the previous *Censo Cafetero* in 1980). Trend that got even more notorious in 2004, in which a report from the Central Bank documented only 15.224 ha cultivated in maize and 12.451 ha in wheat (Viloria De la Hoz, 2007, p. 49). The lower land (1.800-2.300 m.a.s.l.) that these crops left was conquered by coffee (which had increased to 25 thousand hectares in 2005 (FNC, 2004, p. 69)) and the higher land (2600 – 3.400 m.a.s.l.) by potatoes (12.672 ha (Viloria De la Hoz, 2007, p. 49)) whereas overall it was replaced by unproductive pastures: there were 350 thousand cattle in 500 thousand hectares (Viloria De la Hoz, 2007, p. 45).

<sup>1153</sup> Quoting a local newspaper of the 24<sup>th</sup> of September 1983, Bolaños Martínez (2015, p. 214) showed coca crops existence since the eighties in Buesaco. “*La policía descubrió un plantío de coca en la vereda Ijagui, municipio de Buesaco. Las matas de coca 2.200 en total*”

<sup>1154</sup> “*La llamada flor maldita, o amapola, se está dando silvestre en las montañas de Nariño (...) Estadísticamente, siete mil hectáreas cultivadas de amapola han sido descubiertas y se cree que muchas más son explotadas en asociación de los grupos de narcoguerrilleros que operan en esta sección del país*”. El Tiempo, “*Nariño: inundado de flor maldita*”. 27th of April 1992.

coffee in order to eliminate all unpleasant (and if any pleasant) aromatic profile. As a result, a taste related service known as **baked coffee** is produced, an uninteresting, flat and oaty as it is commonly described. This coffee will be sold to be blended (or not) with coffee of different qualities to a certain point in which the beverage would not reject by a commercially attractive group of consumers, which are demanding mainly the **energy dose** symbolic service: a sensation of readiness or activeness to start any daily life activity. This service that is prompted by caffeine, is not less shaped by companies' advertisement since coffee was packed and commoditized in the second half of the nineteenth century<sup>1155</sup>. **Monetary services** depend on the price published by the FNC for Standard Coffee minus the discount for quality. In general, it can be expected lower monetary services for coffee producers because this kind of lower quality does not mean higher quantity or lower cost in general (labor cost for picking untimely or timely coffee beans are exactly the same, but in the first case the ratio income/labor cost is lower).

The LRA Standard concretized the *Resolución 5/2002 del CNC* in its positive form. Minimum acceptable tolerance that would guarantee a consistent taste related services known as a **clean cup** in which different aromas than the ones expected from a typical well-developed bean in Colombia, must be absent. Indeed, as caffeine produces a bitter taste that is unpleasant, its concentration of 1.5% in a *Coffea Arabica* could be hidden behind other aromatic precursors in a well-ripe and well-processed bean. So, taking into account soils and climate in Colombia, the FNC had encouraged some agronomic practices from the second half of the twentieth century to guarantee a coffee described as "mild, of a clean cup, with a medium to high acidity and body, and a pronounced and complete aroma"<sup>1156</sup>. This coffee produced in Colombia Coffee Lands<sup>1157</sup> can be exported invested by the IGP Café de Colombia <sup>1158</sup>, transmitting to consumers the symbolic service of **reputation of the appellation** that was shaped firstly by roasters at the beginning of the past century<sup>1159</sup>, and since 1960 by a well-known marketing campaign, heavily funded by the FNC, featured by the iconic character of Juan Valdez and its mule Conchita (Fernández et al., 2007). The basis of this LRA are the **monetary services** for producers by increasing productivity as it was widely described since the foundation of the FNC in 1927. These

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<sup>1155</sup> "Prior to the sixties (he refers to 1860), coffee was not generally sold roasted nor ground, ready for the coffee pot. Except in the big cities, most housewives bought their coffee green, and roasted it in their kitchen stoves as needed... the plan of selling roasted coffee in little paper bags like peanuts" was launched in 1873 and then Ariosa packaged coffee became the first successful national brand of packaged coffee in US (Ukers, 1922, p. 523).

<sup>1156</sup> Art. 31 del título III del Reglamento de Uso de uso de la Indicación Geográfica Protegida Café de Colombia (F. N. d. C. FNC, 2010).

<sup>1157</sup> "latitud norte 1° a 11°15', longitud oeste de 72° a 78° y altitud de 400 a 2.500 metros sobre el nivel del mar (M.S.N.M.)" Art. 29, *ibid.* (F. N. d. C. FNC, 2010).

<sup>1158</sup> It applied for coffee produced in Colombia that fullfill the minimum quality requirments. "que cumple con los requisitos de calidad del café de exportación establecidos por el Comité Nacional de Cafeteros de Colombia" Art. 29 del título III del Reglamento de Uso de uso de la Indicación Geográfica Protegida Café de Colombia (F. N. d. C. FNC, 2010).

<sup>1159</sup> An example of the well reputation of Colombian coffee was the higher prices paid in 1922 for a blend with more coffee from Bogotá that other with less. "The prime requisite for success in any package coffee is the composition of the blend (...) In March, 1922, (...) a blend of Bogota and Bourbon Santos (...) was being sold at retail in New York, at the same period for the same price (42 cents). Simultaneously, in the retail stores of a well-known chain system, a bulk blend composed of sixty percent Bourbon Santos and forty percent Bogota was to be had loose for 29 cents" (Ukers, 1922, p. 409).

ones are dependent on the price fixed by the FNC, which in turn, as it was said before, is established from a calculus obtained from the international coffee price, the premium from Colombia coffee, the exchange rate, and FNC's trading expenses. In the context chapter, it was shown that monetary services are not only relevant for profiling actors but for the government itself, whose monetary policy and access to exchange currency was dependent on coffee exports. Later on, it was relevant for political stability and poverty reduction.

### V.3.2. Riosucio

The LRA Regional/Starbucks is built on the *Resolución 5/2002 del CNC*, but it also can concretize the CAFE Practices <sup>1160</sup>. The higher demands in terms of tolerance allow to maximize the organoleptic potential, but unlike an expression of the exclusive terroir of a territory, it is an aromatic profile identifiable in different batches of coffee coming from different terroir, namely the **citric acid aroma**, an intense and pleasant flavor that gives life to the coffee with a retronasal sensation of ripe citrus aromas such as orange or lemon and the **clean cup**. Both of them are demanded by Starbucks in Riosucio. Also, it produces a bundled of symbolic services: Given the lower tolerance of defects, the coffee sold as Regional reflects the **typical coffee** from Caldas coffee (although there is no legal protection to appeal it). Also, because of the CAFE Practices program was developed in collaboration with the non-profit group Conservation International, it tries to coordinate the whole chain by enforcing as a prerequisite for suppliers product quality and economic accountability (traceability) and then evaluating its social and environmental impact aiming to produce two complementary symbolic services: **ethically traded** and **environmentally responsible** in order to enhance its **brand reputation** as a “responsible company”<sup>1161</sup>. Indeed, five aromatic profiles are sought by Starbucks in their supplier regions, three of them in Colombia: high citric acidity; herbal, and a clean cup<sup>1162</sup>, from which two in Riosucio. Similarly than the previous LRA by increasing **monetary services** received by coffee producers thanks to the implementation of the CAFÉ Practices program, which could increase productivity (because they are paying a very similar price for a Regional coffee as the price paid by the FNC).

The LRA Fairtrade concretized both the *Resolución 5/2002 del CNC* and the *Normas Asprocafé*. It highlights the demand for the **clean cup** taste related service by accepting 6.33% of grains with defects. As *Normas de Asprocafé* is the local application of the “standards for small producer organization” developed by FLOCERT to evaluate verifiable control points in the Fairtrade certification process<sup>1163</sup>, it evidences the demand for the **Fairtrade** symbolic service: a more balanced distribution of income within the coffee value chain by using certification as an instrument to compensate power in favor of producers. The **monetary services** are expected to be higher than the standard LRA because they paid COP\$ 120 (USD 0.05) additionally per kilo

<sup>1160</sup> Starbucks Coffee Company & SCS Global Services, *C.A.F.E. Practices Smallholder Scorecard*. Its 3.4 version January 2016 can be consulted in <https://www.scsglobalservices.com/starbucks-cafe-practices>. Last visited 01-27-2017.

<sup>1161</sup> Starbucks' official webpage.

<sup>1162</sup> Interview with Valentina Duque, ex-employee of the quality team of Starbucks in Colombia.

<sup>1163</sup> To consult this standard and the additional criteria for those that produce coffee see Fairtrade official webpage. <https://www.fairtrade.net/standards/our-standards/small-producer-standards.html>.

during for the whole harvest 2015, and an additional re-settlement that was later paid as a social premium of COP 150 (USD 0.06) per kilo<sup>1164</sup>.

The LRA Organic concretized the previous two profiling institutions, and two additional, the USDA Organic that highlights consumer concerns about food products that, given the use of synthetic pesticides, antibiotics, or other toxic products, could potentially put health at risk. And the Q system of the SCAA. It implies that coffee samples that meet the standards for green, roasted and cup quality are “among the highest quality in the world”<sup>1165</sup>. Thus, this LRA highlights two types of taste-related services demanded which are materialized at the time of purchase through the selection in two stages: First, a sample of coffee that accepts a maximum of 6.33% the grains with defects would produce a **clean cup** by which most of the organic coffee is procured. A percentage of this coffee (which in 2015 was closer to 70%) is tasted in the laboratory according to the SCAA protocols and classified into four groups according to the score: less than 83 (almost 55% of the total reflects the average cup of Colombian coffee that is considered between 80-82); equal to 83; equal to 84; equal to or greater than 85. These lots that were paid with additional premiums are used to produce the **exceptional coffee** taste related service that reflects the demand for an unusual and exclusive coffee<sup>1166</sup>. By activating the Fairtrade and the USDA organic, these actors claim both the **fairtrade** symbolic service and the **natural coffee** symbolic service that involves a coffee produced avoiding prohibited products. The **monetary services** offered by this LRA included an additional premium when buying of COP 560 (USD 0.24) per kilo and several additional re-assessments that were subsequently paid: The first is the social premium (SP) of Fairtrade of COP 150 (USD 0.06) per kilo; the second is the Small Producers Symbol premium (SPP) for the commitment to acquire coffee for a minimum of USD 1.60 per pound and that, in addition, if organic it is added 40 cents, the sum of both they denominate the organic premium (SO) that equaled approximately COP 1300 (USD 0.55) per kilo<sup>1167</sup>; the third is the organic plus premium (SOP) awarded to coffee with higher than 83 cupping score: 45% of the total provision obtained between 83-85 cupping score with SOP between \$ 800 and \$ 1500 per kilo<sup>1168</sup> (For simplifying the analysis we calculate the SOP as an average of COP 517 (USD 0.22) per kilo).

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<sup>1164</sup> The fair trade premium of 20 cents per pound of coffee exported totaled 491 million pesos in 2015 (*Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma. Págs. 9*). The investment of the social premium is decided in the asamblea general de delegados de Asprocafé, who in 2015 decided to distribute a portion of these resources as a social bonus of COP \$ 150 (USD 0.06) for associates of Asprocafé that do not sell through the LRA Nespresso and COP \$ 75 (USD 0.03) for associates of Asprocafé that sell through the LRA Nespresso.

<sup>1165</sup> The Coffee Institute, “Q grader, the Q coffee system”. Official webpage.

<sup>1166</sup> Equal Exchange presented in the spring season 2015 “Los Cuernos del Diablo” for which “(they) we recommend brewing *Los Cuernos* up on a Chemex to highlight the sweetness and bright acidity (Exchange, 2015)

<sup>1167</sup> The SPP premium plus the SO totaled 349 million pesos in 2015, equivalent to \$ 2,600 pesos per kilo of coffee sold as excelso (*Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma. Págs. 9*). COP 1,000 (USD 0.42) per kilo were paid after buying during the first five months and COP 1,500 (USD 0.64) per kilo during the following seven months of the year according to an interview with the coordinator of the Internal Control System of Asprocafé.

<sup>1168</sup> *Informe de administración y gestión 2015, presentada a la XIII Asamblea General de Delegados de la Asociación de pequeños productores de café ingruma. Págs. 9-16.*

The LRA La Vereda / Rainforest Alliance accepts up to 4.5% of grains with defects, thus it reflects the demands for a **terroir expression** taste related service derived from: cultivation practices, soil characteristics and the particular mountain-valley winds system which stabilizes the temperature in relatively high altitude for growing coffee, to produce a coffee with “intense fragrance and floral notes, distinctive fruity and citric overtones”(Keurig, 2017c). Also through the SACEV agreement, it is highlighted the demand for the **indigenous coffee** symbolic service that Keurig describes as “La Vereda coffee and taste the love, care and passion that can only come from the Embera-Chami tribe of San Lorenzo” (Keurig, 2017c). In addition, currently, some farms are certified (or in the process) in the Rainforest Alliance VSS, thus showing the demands for the **environmentally responsible** symbolic service. The **monetary services** offered by this LRA included a premium when buying of COP 360 (USD 0.15) per kilo.

The LRA Nespresso is built over the minimum tolerances of the *Resolución 5/2002 del CNC* but only for those coffee farmers in the Nespresso’s list selected mainly for being located in an altitudinal fringe above 1.500 m.a.s.l. because the probability is higher for finding the **winy** taste related service, an aromatic profile similar to that of the fermented grape that tends to develop after the grain is mature and begins its over-ripening process. So, in a two-step process, they accept a maximum of 4.5% of grains with defects, and then they cup the lots to select those with the vinous profile. This selection is due to the concretization of the AAA Program which is sustained on the Tool for the Assessment of Sustainable Quality – TASQ<sup>1169</sup>, a methodology developed in collaboration with the Sustainable Agriculture Network (SAN) that aims to maximize productivity in the coffee farm while guaranteeing ecosystems and biodiversity protection and, natural resources conservation. They seek two complementary symbolic services: **shared value** and **environmentally responsible** because by “creating greater value for both society and the environment”<sup>1170</sup>, they enhance their **brand reputation** in order to attract aspirational consumers, Nespresso’s target group<sup>1171</sup>. That is why they sought for higher **monetary services** for producers, which expect a higher yield as a result of the TASQ implementation. In addition, they paid a premium when buying of COP\$ 560 (USD\$ 0.24) per kilo and an additional SP premium after buying of COP 75 (USD 0.03) per kilo for the 387 coffee growers associated also with Asprocafé. Additionally, the one certificated in the Rainforest Alliance VSS received an additional premium when buying of COP 125 (USD 0.05) per kilo. (To simplify we distribute among the total of the coffee purchased by the LRA Nespresso the 30% that was paid with the Rainforest Alliance premium so an average COP 40 (USD 0.02) per kilo for the total purchases).

### V.3.3. Buesaco

The LRA Nespresso is built over the minimum tolerances of the *Resolución 5/2002 del CNC* but only for those coffee farmers in the Nespresso’s list selected mainly for being located in an

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<sup>1169</sup> There are both, a Generic TASQ and local version known as TASQ “*Módulo Colombia*”. For both of them, we have the version 1009 of 2009.

<sup>1170</sup> Nespresso’s official webpage.

<sup>1171</sup> “We want to be the kind of Company you admire, the Company of choice for discerning coffee drinkers and talented people who share our goal of being the highest quality and most sustainable coffee brand. How should we leverage our sustainability commitments to be your company of choice?” (Nespresso. et al., 2017)

altitudinal fringe with the help of the *Comité Departamental de Cafeteros de Nariño*. These minimum tolerances on high altitude coffee in Buesaco allows Nespresso to gather a coffee bean that potentially would produce their demanded taste related service: **citric acid aroma and sweet flavor**<sup>1172</sup>. This selection is due to the concretization of the AAA Program which is sustained on the Tool for the Assessment of Sustainable Quality – TASQ<sup>1173</sup>, a methodology developed in collaboration with the Sustainable Agriculture Network (SAN) that aims to maximize productivity in the coffee farm while guaranteeing ecosystems and biodiversity protection and, natural resources conservation. They seek two complementary symbolic services: **shared value** and **environmentally responsible** because by “creating greater value for both society and the environment”<sup>1174</sup>, they enhance their **brand reputation** in order to attract aspirational consumers, Nespresso’s target group<sup>1175</sup>. That is why they sought for higher **monetary services** for producers, which expect a higher yield as a result of the TASQ implementation. In addition, they paid an additionally COP\$ 420 (USD\$ 0.18) per kilo during the harvest 2015/2016 over the minimum price offered by the FNC for a factor 93.

The LRA CCEsp/Starbucks is built on the *Resolución 5/2002 del CNC*, but it also can concretize the “Coffee and Farmer Equity Practices” (CAFE Practices hereafter)<sup>1176</sup>, which is restricted to the geographical area in which its Census-2004 was conducted encouraging the **terroir expression** taste related service. This area covers the whole municipality of Buesaco, including the **citric acid aroma** of high altitude farms and the **clean cup** of the low altitude ones that are demanded by the main client of Nariño’s coffee, Starbucks. Indeed, five aromatic profiles are sought by Starbucks in their supplier regions, three of them in Colombia: high citric acidity; herbal, and a clean cup<sup>1177</sup>, from which two from Nariño. In addition, the CAFE Practices program which was developed in collaboration with the non-profit group Conservation International, tries to coordinate the whole chain by enforcing as a prerequisite for suppliers product quality and economic accountability (traceability) and then evaluating its social and environmental impact aiming to produce two complementary symbolic services: **ethically traded** and **environmentally responsible** in order to enhance its **brand reputation** as a “responsible company”<sup>1178</sup>. Similarly than the previous LRA by increasing **monetary services** received by coffee producers thanks to the implementation of the CAFÉ Practices program, which could increase productivity (because they are paying a very similar price for a factor 93 than the price paid by the FNC).

In this LRA there is a third selling option through Caravela as Specialty Coffee, it concretized the Q system of the Specialty Coffee Association of America. It implies that coffee samples that meet

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<sup>1172</sup> Interview with Hernando Delgado, executive director of the *Comité departamental de Cafeteros de Nariño*.

<sup>1173</sup> There are both, a Generic TASQ and local version known as TASQ “*Módulo Colombia*”. For both of them, we have the version 1009 of 2009.

<sup>1174</sup> Nespresso’s official webpage.

<sup>1175</sup> “We want to be the kind of Company you admire, the Company of choice for discerning coffee drinkers and talented people who share our goal of being the highest quality and most sustainable coffee brand. How should we leverage our sustainability commitments to be your company of choice?” (Nespresso. et al., 2017)

<sup>1176</sup> Starbucks Coffee Company & SCS Global Services, *C.A.F.E. Practices Smallholder Scorecard*. Its 3.4 version January 2016 can be consulted in <https://www.scsglobalservices.com/starbucks-cafe-practices>. Last visited 01-27-2017.

<sup>1177</sup> Interview with Valentina Duque, ex-employee of the quality team of Starbucks in Colombia.

<sup>1178</sup> Starbucks’ official webpage.

the standards for green, roasted and cup quality are “among the highest quality in the world”<sup>1179</sup>. As a wide range of aromatic profiles can be produced, we propose to categorize them all as an **exceptional coffee** taste related service. By activating this institution, passionate coffee farmers<sup>1180</sup> are selected to join a coffee value chain that fosters “economic empowerment by promoting quality coffee and rewarding farmers for it”<sup>1181</sup>. A model offered to satisfy consumers that wanted more connection with the producers whose coffee they were drinking<sup>1182</sup>, a symbolic service we call **transparent coffee**. As a result, it is expected higher monetary services than the ones offered by the LRA Standard that increase alongside quality in the coffee cup. In fact, firstly the farmer will receive the price depending on the factor, but then, a cupping test will be conducted and depending on the score, it will be offered. Only when the coffee is bought (and paid) as Specialty, the trader will give additional value for kilo to the farmer that in Veracruz was a range between COP\$ 500-1000 (USD\$ 0.17 - 0.33) per kilo.

The LRA Caltura concretized both, the *Resolución 5/2002 del CNC* and the Q System of the SCAA, producing both the **terroir expression** and the **exceptional coffee** taste related services. This LRA was developed and funded by the *Fundación Social* to contribute to tackling down the structural causes of poverty<sup>1183</sup>, so, in addition to the **transparent coffee** that is sought through the direct trade value chain, a **poverty reduction** symbolic service is also demanded. Monetary services are expected to be higher than the standard LRA because they paid COP\$ 100 (USD\$ 0.03) in addition per kilo during for the whole harvest 2015/2016, and a reassessment for the specialty coffee in a range between COP\$ 500-1600 (USD\$ 0.17 - 0.53) per kilo.

Similar to the previous two, the LRA CNilson concretized both the *Resolución 5/2002 del CNC* and the Q System of the SCAA, producing the **terroir expression** and the **exceptional coffee** taste related services. In the same line, they implement a direct-trade purchase model aiming to produce **transparent coffee**. As the LRA Caltura, the direct trade is a mean, in the case to produce the symbolic service **shared value**: “to create significant and measurable value alongside with the communities that converge with the business”<sup>1184</sup>. Monetary services are expected to be higher than the standard LRA because they paid COP\$ 200 (USD\$ 0.07) in addition per kilo during for the whole harvest 2015/2016, and a reassessment for the specialty coffee in a range between COP\$ 2000-7500 (USD\$ 0.67 - 2.50) per kilo.

It must be clarified that in the last three cases, monetary services are not dependent on productivity but on the production of the exceptional coffee taste related service. So, we will distinguish between the two groups. The first group refers exclusively to uses oriented to increase productivity, the second group refers to uses to trigger the “exceptional coffee taste related service”. In any case, when we measure the “monetary services” at the end of this section, we

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<sup>1179</sup> The Coffee Institute, “Q grader, the Q coffee system”. Official webpage.

<sup>1180</sup> Interview with Alejandro Cadena, founder and CEO of Caravela.

<sup>1181</sup> Caravela, “impact report”. 2016.

<sup>1182</sup> Caravela, official webpage.

<sup>1183</sup> “Contribuir a superar las causas estructurales de la Pobreza para construir una sociedad justa, solidaria, productiva y en paz”. *Fundación Social*. Official webpage.

<sup>1184</sup> InConexus’ official webpage.

refer to the income of the coffee farmer that are the result of all uses including those oriented towards the productivity and/or those oriented towards the production of the “exceptional coffee” service.

#### V.4. Support for the “regulated uses” table in both context

##### V.4.1. Both contexts

- Monetary services production

As defined in this document, monetary services are the result of multiplying the number of kilos of coffee produced by the price per kilo.

Implementation projects conducted by actors aiming to concretize the first five profiling institutions (*Resolución 5/2002 del CNC*; the IGP Café de Colombia; DO Café de Nariño; the AAA Program; the CAFE Practices) focus mainly on the first part of the equation, increasing quantities, whereas the last one, the Q system focus on obtaining better prices. Indeed, in the first case, the key question is how can be closed the gap between the potential production in a piece of land and the actual yield? The answer will be oriented towards scientifically proven uses of resource constituents that increase productivity. Whereas in the second, the key question is how can be closed the gap between the most complex and extraordinary aromatic profile that will be well paid on the markets, and the actual aromatic profile produced? As prices are associated with scarcity, the answer will be oriented towards unusual agricultural practices dissociated from the standard ones, in several cases costly/risky enough to maintain the exclusivity.

For the first group of profiling institutions, *infrastructures* and *know how* must be used to maximize productivity, i.e. increasing the kilos of coffee with the less use of factors of production, mainly land.

*Infrastructures* are affected in the five activities of the planting process: **Diversification** must be eliminated because to maximize coffee production all the land, water, solar irradiation, and fertilizers must be used exclusively by coffee trees; **Variety planted** must be selected from varieties featured by high yield and pest resistant, as the variety *Castillo*<sup>1185</sup> produced through artificial selection by CENICAFÉ; **Renovation of Coffee trees** in order to maximize production and stabilize income in time: cultivation is planned in accordance with rains, and pruning is done to the 20% - 15% of the coffee trees each 5-7 years once the main harvest is over to maintain young and productive coffee trees; **Planting density** or the number of coffee tree per unity of land must be as high as climate and soils allow: due to competence between coffee trees for light, water and nutrients, the higher the number of them, the lower the individual production. The optimal number is the one that maximizes production per unit of land (under the best conditions this number is around 9.500 coffee tree per hectare)<sup>1186</sup>; **Shade** must be controlled (because is

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<sup>1185</sup> “Las investigaciones de la última década han permitido la selección de nuevas progenies de porte bajo con resistencia a la roya y con mejores características de tamaño de grano y productividad. La mezcla de estas progenies es lo que hoy se denomina como Variedad Castillo®.” (Arcila et al., 2007, p. 73)

<sup>1186</sup> “Las investigaciones han demostrado que en cafetales a plena exposición solar y bajo condiciones ambientales y

beneficial in hot and dry climates, and soils with low moisture retention and low fertility) or eliminated because solar irradiation, as the main input for photosynthesis for transforming inorganic matter into coffee cherries, is the determinant factor of productivity<sup>1187</sup>.

*Know how* is affected in five activities in the cultivation process: **Soil management** must focus on soil conservation at the lower cost: By controlling the size of noble weeds (that protect and nurture the soil) with cultural methods like machete and scythe<sup>1188</sup>, and eliminating the other weeds, which compete for water, light and nutrients with the coffee tree, using effective synthetic weed killers; **Pest and disease management** must prioritize prevention like the planting of pest resistant varieties to avoid the coffee leaf rust or implement the RERE to control the coffee borer beetle<sup>1189</sup>. If prevention was not enough, an early detection is a must, as it is the pertinence and precision in the use of pesticides and other agrochemicals; **Nutrition** must be conducted under a compensation approach in which nutrients demanded by the plant that are not produced naturally (demands identified by soil or leaves analysis), must be added in exact doses when the plant demands it and the weather permits (too little water won't allow filtration and too much will drain it further down where roots cannot reach them) in order to maximize production and avoid any loss; **Picking** must be done on time when coffee cherries are completely ripe, on the one hand, to reduce penalization and obtain the full price, on the other, as they are full-grown they are heavier and valuable. So, after registering flowering the picking of coffee cherries is scheduled for the 240<sup>th</sup> day afterward; **Farm management** must be conducted as an enterprise, registering all inputs (costs) and outputs (income) on a daily basis.

For the second group (the Q System), monetary services are derived from the taste related services. So, it will be developed in the section devoted to this kind of services.

- Symbolic services production

**Energy dose:** consumption of any kind of coffee will produce a sensation of being ready and active because of caffeine. So, if the final beverage was produced using coffee, no matter the profile of the Resource, this service will be produced. From a negative concretization of institutions, the Resource that is profiled to not produce the other services is by default producing the energy dose. In this order of ideas, the *know-how* is affected in the three activities in the trading process; **Purchasing** with a discount coffee that has a factor higher than 94 and bulking it separately; **Threshing and sorting** the residual coffee when a 70 kilos bag of *Excelso* is produced.

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*manejo agronómico adecuados, la densidad de siembra óptima tanto para la variedad Caturra como la Castillo® está alrededor de 9.500 plantas por hectárea.*" (Arcila et al., 2007, p. 136)

<sup>1187</sup> "Diferentes investigaciones en Colombia y otros países cafeteros sugieren que el sombrío presenta una serie de ventajas principalmente en climas cálidos y secos, y en suelos con baja retención de humedad y baja fertilidad. (Pero) registra desventajas asociadas especialmente con la restricción de la incidencia de la radiación solar que es el principal factor determinante de la productividad" (Arcila et al., 2007, p. 171)

<sup>1188</sup> Its complete elimination is extremely costly in terms of both products and labor (Arcila et al., 2007, p. 123)

<sup>1189</sup> *Recolección- Repase* after picking up all the harvest, a new tour to pick up the coffee beans leave behind in both the branches and the soil to avoid the coffee borer beetle (as it was said before it thrives inside overripe fruits that fell down).

In addition, *Know-to-appreciate* is affected in one activity during the roasting process and the communication strategy: **Packaging** and the **communication strategy** enhance this quality associating it to breakfast time or to mental demanding activities.

**Reputation of the appellation Café Colombia:** This service is produced when the origin, is associated with positive sensations that enhance its attractiveness to consumers. A positive expectation on an aromatic profile due to soils, climate and agronomic practices, embedded in an imaginary landscape, people and culture. The process to “encapsulate” (using the terminology of Acampora and Fonte (2009)) this meaning into the product is both developed autonomously by the successive commercial transaction throughout long periods of time and direct intervention of interested actors. In the case of Café de Colombia it is a result of more the second process, by encouraging some agronomic practices; investing in a more attractive image and legally protecting it <sup>1190</sup>. So all the *infrastructures*, the *know-how*, and the *know-to-appreciate* are affected to eliminate the gap between the promised value and the produced one and to enhance its transmission power of positive feelings.

*Infrastructures* are affected in one activity in the planting process: **Variety** must absolutely be one variety of the species *Coffea arabica*<sup>1191</sup>, to guarantee that both the coffee farmer and their coffee crop must be registered in the Coffee information System - SICA<sup>1192</sup>. *Know-how* is affected in one activity in the cultivation process: **Picking** of ripe cherries to fulfill the promised aromatic profile<sup>1193</sup>.

*Infrastructures* and *know-how* are affected in three activities in the post-harvesting process: **Hulling** must be done the same day in which coffee cherries were picked to interrupt the long fermentation<sup>1194</sup>; **Fermentation** must be a short one<sup>1195</sup>, for a few hours (depending on weather conditions) the sweet mucilage (a last layer irremovable using the hulling machine) will be naturally detached (fermentation takes place during this time) until it is washed and then completely removed using water to clean the bean and lay it down to dry; **Drying** using either sun-exposure or heating machines to reduce bean moisture until a range between 10% - 12%

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<sup>1190</sup> In Colombia, this protection is regulated through the *Título XII de la Decisión 486 de la Comunidad Andina*: producers can obtain the *registro administrativo* as a prerequisite to constitute the property right over the geographical indication before the *Superintendencia de Industria y Comercio de Colombia - SIC*. The FNC, requested this *registro administrativo* to obtain the Denomination of Origin Café de Colombia. It was granted through the *Resolución* No. 4819 in March 2005. Afterwards, they requested legal protection for Café de Colombia in Europe using their legal framework, the Council *Regulation (EEC) No 2081/92*, granted two years after through the Commission regulation (EC) No 1050/2007 of 12 September 2007. This document registered *Café de Colombia* as a Protected Geographical Indication

<sup>1191</sup> Art. 32 “*especies y variedades*” del título III del Reglamento de Uso de uso de la Indicación Geográfica Protegida *Café de Colombia* (F. N. d. C. FNC, 2010).

<sup>1192</sup> Art. 34 “*zona de producción*” y 39 “*SICA – registro de plantaciones o unidades de producción*”, *ibid.*

<sup>1193</sup> Numeral 2-a, Art. 35 “*prácticas de producción*”, *ibid.*

<sup>1194</sup> Known as natural coffee, pulp is not removed and the coffee cherries are laid down on patios for a few weeks until is completely dry. As the fermentation takes so long, the fruity flavor of the pulp is predominant in the cup.

<sup>1195</sup> Numeral 2-b, Art. 35 “*prácticas de producción*”, *ibid.*

<sup>1196</sup>. Also in three activities in the trading process: **Purchasing** using recommended methods to buy (as buying depending on the *factor*, the number of kilos needed to produce a 70 kilos bag of *Excelso* coffee) in order to sort the coffee that fulfills quality requirements to start a *trazabilidad documental* <sup>1197</sup> of a coffee lot; **Threshing and sorting** only can be done in threshing mills authorized by the FNC because of their proven capability to sort and manage differently, Colombian *Excelso* from other origin and quality coffee<sup>1198</sup>, they must maintain the *trazabilidad documental* and fulfill requirements of the sanitary authority<sup>1199</sup>; **Bulking and export** must be proven through the *trazabilidad documental* of a particular lot that guarantees its origin and quality<sup>1200</sup>.

*Know-how* and *Know-to-appreciate* are affected in two activities in the roasting process: **Blending** or not Colombian coffee with other origins, if the roaster wants to produce this service, it has to register both the company and all the marks that are going to use the brand<sup>1201</sup>. If blended, it can inform that Colombia Coffee is used only if all origins are informed in the exact same way, without highlight anyone and without using any authorized Colombian Coffee seals<sup>1202</sup>. If it is not blended **Packaging** could include the words “Café de Colombia” or “IGP Café de Colombia” and the European Union seal for IGP according to the Commission Regulation CE 628/2008 of the 2nd July 2008<sup>1203</sup>.

*Know-to-appreciate* is affected in the only activity of the communication strategy process: **Communication** must be done to enhance the romantic image of the small Colombian coffee farmer (sustained on the Iconic Juan Valdez, an antioqueño coffee farmer dressed as it was in the first half of the twentieth century) and its effort to produce a soft-clean cup coffee (Fernández et al., 2007).

**Brand reputation:** Similar to the appellations, this service triggers sensations associated to the brand, which are triggered by the perceived effect of the brand on consumers, farmers, and their community, the environment among others. Positive ones that are reinforced and negative ones that are fought back by the owners of the property rights on the brand. Essentially by encouraging symbolic and taste related services (next paragraphs) and attaching them to the brand. In this regard, the *Know-to-appreciate* is affected in the activity of **communication strategy** that is different for each company, and we are going to develop further in the section devoted to closure.

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<sup>1196</sup> Numeral 1, Art. 33 “*características*”, *ibid*.

<sup>1197</sup> A coffee bought from a farmer A is registered (kilos per farmer/farm) and it is added to a lot composed of previous registered coffee from other farmers. So, when the coffee lot (and its documentation) reach the threshing mill, coffee from farmer B cannot be individualized but it can be known that it is part of that lot.

<sup>1198</sup> Art. 36 “*trilla y acondicionamiento del café verde*”, *ibid*.

<sup>1199</sup> Art. 47 “*derechos y obligaciones específicas de los trilladores de Café de Colombia*”, *ibid*.

<sup>1200</sup> Art. 45 “*derechos en la presentación y publicidad de los productos*” *ibid*.

<sup>1201</sup> Numeral c-d, Art. 38 “*inscripciones y registros ante la FNC*”; Art. 41 “*registro de las empresas y/o plantas procesadoras de café industrializado*” and Art. 42 “*registro de marcas autorizadas para incluir la IGP*”. *Ibid*.

<sup>1202</sup> Art. 37.4 “*Mezclas*”, *ibid*.

<sup>1203</sup> Art. 48 “*Derechos y obligaciones específicas de las Empresas procesadoras de café industrializado*”. *ibid*

**Environmentally responsible:** A neutral or a positive relationship between the coffee crop and its ecosystem generates this service. I.e. agronomic practices that produce the human demanded coffee bean without putting in peril the biodiversity and natural resources. We will use the SAN Standard for Sustainable Agriculture (SAN, 2017) as the profiling institution to produce this service<sup>1204</sup> because, with the exception of water treatment, it goes further than both the AAA Program and the CAFE Practices profiling institution. In this regards, *Infrastructures* and *Know-how* are used to both increase productivity (an income) in the already cultivated area in order to avoid crop expansion to natural forest, and to tackle down pollution in order to neutralize damaging effects on natural resources, and *Know-to-appreciate* are used to accept the idea that it is compatible to produce more coffee and to protect the environment at the same time.

*Infrastructures* are used in three activities in the planting and one in the cultivation process: **Diversification** could decrease because the farmer must refrain himself to plant all farm area to conserve natural ecosystems<sup>1205</sup>, has to eliminate crops to establish ecological corridors<sup>1206</sup> and to protect aquatic ecosystems<sup>1207</sup>; **Variety** cannot include genetically modified organism<sup>1208</sup> and it must be prioritized pest-resistant varieties that diminish the use of pesticides<sup>1209</sup>; **Shade** that must include a minimum percentage of canopy within the crop, with a minimum number of different species of trees per ha<sup>1210</sup>; **Hedge rowing** must be implemented between crop areas in which agrochemicals are used and, natural ecosystems and human activity<sup>1211</sup>.

*Know how* is affected in five activities in the cultivation and one activity in the post-harvesting processes: **Soil management** must control weeds, minimizing herbicide, to cover the soil and diminish both erosion and evapotranspiration, planting nitrogen-fixing ground covers, and nurture the soil using also compost<sup>1212</sup>; **Nutrition** must be based on the assessment of crop needs (through regular monitoring) and fertilization is precise in terms of dosage and time to minimize loss and avoid eutrophication<sup>1213</sup>; **Pest management** must be done through an Integrated Pest Management that prioritizes prevention over mitigation, and if there is no other option, only pesticides authorized are applied as it is permitted<sup>1214</sup>; **Picking** must be done timely to maximize income; **Farm management** must take advantage of managerial techniques to maximize income

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<sup>1204</sup> SAN was absorbed by Rainforest Alliance in 2017, which in turn helped to put in place the AAA Program. On the other hand, Conservation International which worked in the CAFÉ Practices is allied with SAN and RF in the Tropical Forest Alliance 2020. TFA Official webpage <https://www.tfa2020.org/en/about-tfa/partners/> . Last visited 11-29-2017.

<sup>1205</sup> Critical Criteria 2.2, Sustainable Agriculture Network Standard. July 2017.

<sup>1206</sup> Continuous improvement criteria 2.13, *ibid*.

<sup>1207</sup> Continuous improvement criteria 2.5, 2.7 y 2.8, *ibid*.

<sup>1208</sup> Critical Criteria 3.6, *ibid*.

<sup>1209</sup> Critical Criteria 3.3, *ibid*.

<sup>1210</sup> Continuous improvement criteria 2.5, 2.6 and 2.9, *ibid*.

<sup>1211</sup> Continuous improvement criteria 3.27 and 3.28, *ibid*.

<sup>1212</sup> Continuous improvement criteria 3.8, 3.10 and 3.27, *ibid*.

<sup>1213</sup> Continuous improvement criteria 3.11, 3.12 y 3.14, *ibid*.

<sup>1214</sup> Critical Criteria 3.3 and 3.4; Continuous improvement criteria 3.23, 3.24, 3.25, 3.26, 3.27, 3.29, 3.30, 3.31, 3.32,

3.33, 3.34 and 3.36 *ibid.*

while minimizing costs like planning the activities in the farm<sup>1215</sup> and accounting records<sup>1216</sup>; **Waste management** implies keeping records of all waste flows and producing implementation plans for each one. Waste is separated: organic waste is composted<sup>1217</sup>, recyclable waste is recycled and the other waste is properly disposed without posing risk to people and the ecosystem<sup>1218</sup>. Wastewater from processing operations must be treated before being discharged into aquatic ecosystems<sup>1219</sup>. Water is a big issue in coffee, so both the AAA program and the CAFE Practices go further than the SAN Standard. In the first case, it allows a maximum of 30 liters of water for each kilo of dry parchment coffee<sup>1220</sup> (but encourages a 10 liters threshold) and demands fulfilling local legislation<sup>1221</sup>. In Colombia, it allows wastewater disposal through a “*permiso de vertimiento*”<sup>1222</sup> that is conditioned to the water quality in terms maximum values permit of BOD (biochemical oxygen demand) and COD (Chemical oxygen demand) depending on the activity<sup>1223</sup> and the payment of tax known as “*tasa retributiva*”<sup>1224</sup>. For the coffee post-harvesting process, these maximum values are 400 mg/L for BOD and 650 mg/L for COD<sup>1225</sup>. CAFE Practices is more permissive with maximum values at 1.000 mg/L for BOD and 1.500 mg/LO<sub>2</sub> for COD<sup>1226</sup>.

*Infrastructures* and *Know-how* are affected in the three activities in the trading process and two in the roasting process: **Purchasing, Threshing and sorting, Bulking and export, Blending and Roasting** must be done through a Chain of Custody Management System that guarantee both, the integrality of the product (by control procedures<sup>1227</sup>, trained personnel<sup>1228</sup> and internal inspections<sup>1229</sup>) and its traceability from the certified farms (by any system that can identify certified products<sup>1230</sup> and its transactions<sup>1231</sup> from each segment of the value chain from the farm to the customer<sup>1232</sup> including the “*trazabilidad documental*”).

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<sup>1215</sup> For example to take advantage of the weather and avoid unforeseen costs, nurseries must begin eight months before the rainy season, so when coffee trees are planted in the field, they will have the water they need for its development. If planted during the dry season, several trees won't survive and not only the money invested will be lost, but also the farmer has to uproot the dying tree assuming extra costs.

<sup>1216</sup> Critical criteria 1.2, and Continuous improvement criteria 1.7, 1.8, 1.9 y 1.10, *ibid*.

<sup>1217</sup> Continuous improvement criteria 3.40, *ibid*.

<sup>1218</sup> Continuous improvement criteria 3.20, 3.21, 3.22, 3.37, 3.38, 3.39, 3.41, *ibid*.

<sup>1219</sup> Critical criteria 3.1, 3.2, *ibid*.

<sup>1220</sup> Criterio 9a. *Herramienta TASQ Módulo Colombia. Versión 1009 del 2009*.

<sup>1221</sup> Criterio 9e. *Ibid*.

<sup>1222</sup> *Decreto 3030 de 2010 del Ministerio de Ambiente, Vivienda y Desarrollo Territorial*.

<sup>1223</sup> *Resolución 631 del 17 de marzo de 2015 del Ministerio de Ambiente y Desarrollo Sostenible*

<sup>1224</sup> *Decreto 2667 del 21 de diciembre del 2012 del Ministerio de Ambiente y Desarrollo Sostenible*.

<sup>1225</sup> *Art. 9. Resolución 631 del 17 de marzo de 2015 del Ministerio de Ambiente y Desarrollo Sostenible*.

<sup>1226</sup> Criterio WC2. CAFE Practices Smallholder Scorecard. Version 3.4. January 2016.

<sup>1227</sup> Criterio 1.1, Chain of Custody Standard, Version 3. July 2015.

<sup>1228</sup> Criterio 1.2. *Ibid*.

<sup>1229</sup> Criterio 1.4. *Ibid*.

<sup>1230</sup> Criterio 2.2 *Ibid*.

<sup>1231</sup> Criterio 2.3 *Ibid*.

<sup>1232</sup> Criterio 2.4, 2.5, 2.6 and 2.7 *Ibid*.

In addition, *Know-to-appreciate* is affected in one activity during the roasting process and the communication strategy: **Packaging** and the **communication strategy** only can include the Rainforest Alliance trademark by signing a license agreement directly with the Rainforest Alliance<sup>1233</sup> and only in those products that it can be proved that meet the minimum percentage of certified content<sup>1234</sup>.

**Ethically traded:** This service is produced when the price received by farmers for a pound of dry parchment coffee, is close enough to the international price to consider that merchants are charging market prices for their services. *Know-how* is affected in the three activities in the trading process: **Purchasing, Threshing and sorting, Bulking and export**, must be done through a system to track the movement of CAFÉ practices coffee from initial purchase through point of export<sup>1235</sup>, that can also demonstrate the price paid to the coffee farmer (each producer must receive a receipt for coffee purchased<sup>1236</sup>) for all producers participating in the CAFÉ Practices program (an annually updated list of them is mandatory<sup>1237</sup>). *Know-to-appreciate* is affected in the one activity in the communication strategy: the **communication strategy** revealed prices paid “We paid an average of \$1.47 per pound (0.5 kilograms) for green coffee in the 2009 financial year”<sup>1238</sup> and how they control it reached farmers: “Suppliers must submit evidence of payments made throughout the coffee supply chain to demonstrate how much of the price Starbucks pays for green (unroasted) coffee gets to the farmer”<sup>1239</sup>.

**Shared value:** This service is produced when coffee production triggers positive value for coffee communities at the lower cost for the environment: By increasing the income, the measures to diminish environmental damaged can be funded. It goes further than the ethically traded coffee in a sense in which not only market price is paid, but also farmers are benefited by other kinds of investments that help them increase their income while reducing environmental damage (Nespresso. et al., 2017, p. 26). In general terms *Infrastructures* and *Know-how* are affected as it was described for the processes of planting, cultivation, and post-harvesting to produce the service “environmentally responsible”, but this service is developed, no when the farmer implements changes by himself, but when it is helped both financially and technically by other actors along the coffee value chain. As a consequence, *Know-how* is affected in the three activities in the trading process. **Purchasing, Threshing and sorting, Bulking and export** not only to guarantee the integrity of the product and traceability to the farm level as the “environmentally responsible” service but also to invest directly in the farm through collaborative schemes that do not modify ownership. From the share value perspective, this is neither

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<sup>1233</sup> Criteria 3.1 Ibid.

<sup>1234</sup> Criteria 3.3 Ibid.

<sup>1235</sup> Zero tolerance Criteria PS-MT 1.1 CAFÉ Practices Smallholder Scorecard. Version 3.4. January 2016.

<sup>1236</sup> Zero tolerance Criteria PS-MT 1.3 CAFÉ Practices Smallholder Scorecard. Version 3.4. January 2016.

<sup>1237</sup> Zero tolerance Criteria PS-MT 1.2 CAFÉ Practices Smallholder Scorecard. Version 3.4. January 2016.

<sup>1238</sup> Starbucks “Responsible Grown Coffee”. Official webpage. <http://en.starbucks.ch/responsibility/sourcing/coffee>. Last visited. 12-01-2017. In perspective this price was very close to the international price for mild Arabica coffee. It was much higher than the “ICO composite indicator” that on average in 2009 (USD\$ 1.15), slightly higher than “other milds” (USD\$ 1.77) but lower than the “Colombian milds” (USD\$ 1.77). Source. International Coffee Organization. “Indicator prices”. Official webpage.

<sup>1239</sup> Ibid.

philanthropy nor social responsibility is an investment to increase the value of the final product (M. Porter, 2011) if it is well communicated. Indeed, *Know-to-appreciate* is affected in the one activity in the communication strategy: the **communication strategy** that has to leverage the collaborative schemes to create value associated with the final product.

- Taste-related services production

**Clean cup:** Described as mild coffee, with a medium to high acidity and body, and a pronounced and complete aroma<sup>1240</sup> this is the taste related service that goes together with the “reputation of the appellation Café de Colombia” symbolic service. So, in addition to uses described in that section, *Know-how* is affected in two activities in the trading process: **Threshing and sorting, Bulking and export** have to include an aleatory cupping test of representative samples from each lot of coffee to confirm the absence of defects and inconsistencies<sup>1241</sup>. Nevertheless, there is a difference in the use of *Know-to-appreciate* with the symbolic service: whereas to use the legend “Café de Colombia” the roaster has to agree to certain conditions mentioned, the use of this taste related service does not have any restriction and Roasters can use it (the taste related service of the Colombian coffee) to produce whatever profile they desire, either to improve a poor quality coffee, or to reduce the final price of an exotic blend<sup>1242</sup>.

**Exceptional coffee:** This taste related service is by definition a rare and fortunately combination of soils, climate, and culture that develop the aromatic precursor inside the coffee bean that, once roasted and brewed, would spark an aromatic profile that would score high on the SCAA cupping test. It is not produced by following regulates uses on a particular institution, but on unconventional practices (from the ones to produce standard coffee) that have worked before to achieve high SCAA scores. So, more than the scientific approach followed by the previous LRAs in which a certain set of practices will produce an anticipated combination of services, this LRA is based on a probability approach in which a particular practice would increase the probability to obtain high SCAA scores<sup>1243</sup>.

*Infrastructures* are affected in all activities in the planting process<sup>1244</sup>: **Diversification** with other crops and different plant species triggers a complex ecosystem with several microorganisms that could affect the final beverage by enriching the soils or during the fermentation process. **Variety planted** must avoid the pest-resistant ones (highly recommended on the other LRAs) because this resistance was obtained through artificial selection of one natural hybridization between two

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<sup>1240</sup> “suave, de taza limpia, con acidez y cuerpo medio/alto, aroma pronunciado y completo”. Art. 31 “Definición” del título III del Reglamento de Uso de uso de la Indicación Geográfica Protegida Café de Colombia (F. N. d. C. FNC, 2010).

<sup>1241</sup> E.g. phenolic flavor cause by contamination with chemical products; earthy flavor caused by dirty storage facilities or over-fermentation for defective beans unidentified during purchasing.

<sup>1242</sup> In any case, the higher the demand for Colombian coffee (either with or without the IGP), the higher the differential (price differential between Colombian Coffee and the market price for Arabica coffee), increasing the income for coffee producers.

<sup>1243</sup> Interviews with different

<sup>1244</sup> These paragraphs use information collected from interviews with people involved in the Specialty coffee business.

coffee species: arabica (*Coffea arabica*) and robusta (*Coffea canephora*), the hybrid of Timor. For some<sup>1245</sup> it can be perceived in the cupping test that not only the pest-resistant genes were transmitted, but also some unpleasant aromatic traits of the robusta<sup>1246</sup>; **Renovation of Coffee trees** must be lengthening because older trees produce fewer grains but individually more complex in terms of aromatic precursors<sup>1247</sup>, nevertheless it is not a widespread practices; in similar terms **Planting density** should be low enough to diminish the competence between trees and allow each one to fulfill the aromatic potential of each of its beans but it is not wide use; **Shade** must provide the cover needed to diminish crops temperature and therefore its metabolism to enrich the coffee bean.

*Infrastructures* and *Know-how*<sup>1248</sup> are not particularly different in the cultivation process<sup>1249</sup> with the exception of **picking**, which goes further than the repeated recommendation of harvesting ripe beans: on the one hand this selective picking must be incentivized with premiums to gatherers<sup>1250</sup>, on the other, bags must be marked to start the traceability from the various coffee crops in one farm<sup>1251</sup> (because farms, small ones included, usually have different crops of coffee trees in terms of variety, age and altitude). But both resource constituents are particularly regulated in four activities in the post-harvesting process; **Hulling** must be done maximum 6 hours after the picking (as fermentation takes longer, at least two fermentation tanks are needed)<sup>1252</sup>, and only ripe cherries must be use (before hulling, other material than the ripe cherries must be separated using firstly flotation (increasing the demand for water) and then for the slightly unripe beans, hand selection<sup>1253</sup>. After each hulling the machine must be completely cleaned<sup>1254</sup> and a calibration must be done ideally each two weeks or at least 3 times during the harvest (once in a month)<sup>1255</sup>. Finally an evaluation of the good condition of the machine must

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<sup>1245</sup> Interview with Alejandro Cadena, CEO and founder of Caravela.

<sup>1246</sup> Even though a blind test between Caturra (arabica 100%) and Castillo (pest resistant) conducted in 2014-2015 with well-known cuppers in the Specialty coffee business, concluded they were not statistical differences between SCAA cupping scores between both varieties. Sheridan, M. 2015. "More precision on Castillo v Caturra". CRS Coffelands Blog. Baltimore. MD. In interview with Alejandro Cadena, the results only reflects that standard practices for both Castillo and Caturra will produce a similar SCAA score. For him, if specialty practices are applied for both, the results would show a wide gap in favor of Caturra.

<sup>1247</sup> Interview with Juan Carlos Caicedo, one of the first professional cuppers in Nariño certified by the Q system. It has to be said that there is not clear evidence to sustain this claim.

<sup>1248</sup> For this paragraph we describe the regulated uses written down in the Café con Altura's handbook for technical assistance in specialty coffee: Café con Altura, "*Cosecha y beneficio del café especial*," 2014.

<sup>1249</sup> Even though during the cultivation there is not any particular recommendation, it can be considered that a health coffee crop that profit from eco-systemic services minimizing the use of chemicals (even though non-pest resistant varieties demands the use of toxic pesticides) could increase the probability of a high SCAA score. So, it could be much closer to the uses described to produce the "environmentally responsible" than the ones to produce the "appellation of the reputation" symbolic service.

<sup>1250</sup> Recommendation 3-16 in Café con Altura, "*Cosecha y beneficio del café especial*," 2014.

<sup>1251</sup> Recommendation 3-17. Ibid.

<sup>1252</sup> Recommendation 4-6. Ibid.

<sup>1253</sup> Recommendation 4-2. Ibid.

<sup>1254</sup> Recommendation 4-10. Ibid.

<sup>1255</sup> Recommendation 4-9. Ibid.

be done regularly<sup>1256</sup>; **Fermentation** are not restricted to the short one, but it is recommended that before experiment with naturals (long fermentation in which the coffee cherries are drying directly after picking) or honeys (medium fermentation in which coffee cherries are drying after hulled) the sale is guaranteed (usually to high end domestic markets). For the short one, as said before, it must be at least two fermentation tanks to avoid blending coffee from different hulling times<sup>1257</sup>, wood or corrosive metal is forbidden<sup>1258</sup>, water quality and availability must be checked in advance<sup>1259</sup> and it must be stopped only when the mucilage slips off the coffee bean<sup>1260</sup>. When it is ready, the fermentation tank must be filled with water until all the mass is covered and, using a paddle, it must be shaken strongly to completely remove the mucilage<sup>1261</sup>, then all floating material must be hand removed<sup>1262</sup> just before drain all water (and the highly polluting mucilage dissolved in it). This process must be repeated four times to assure coffee would not be dried with any remaining mucilage material<sup>1263</sup>; **Drying** must start immediately after drying (maximum 3 hours after <sup>1264</sup>, avoiding contact with earth <sup>1265</sup> (plastic or impermeable tissues is not sufficient<sup>1266</sup>) in concrete or wood structures isolated from polluting agents<sup>1267</sup> (like animals or smoke) and protected from rain<sup>1268</sup> (to avoid rewet that cause fungi proliferation) with at least one square meter space for each 12.5 kilos of coffee<sup>1269</sup>. Inside the facility, temperature must never overcome 45 degrees Celsius, so a thermometer is indispensable<sup>1270</sup> and currents of air must be controlled<sup>1271</sup>. Coffee must be spread without overpassing a 3cm - 5cm of thickness depending on the facility<sup>1272</sup>. During the first two days must be softly removed<sup>1273</sup> on an hourly basis, afterwards, three or four times daily using a plastic rake<sup>1274</sup>. And evaluation known as *graviment*<sup>1275</sup> must be used to identify the proper time to stop the drying, when the bean has reach a moisture level between 10-11.5%<sup>1276</sup>. Once dried, coffee must be packed in clean bags<sup>1277</sup>

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<sup>1256</sup> A random sample of one liter of coffee hull must be taken, if there are more than 8 beans milled or dented, the machine must be checked.

<sup>1257</sup> Recommendation 5-3. Ibid.

<sup>1258</sup> Recommendation 5-1. Ibid.

<sup>1259</sup> Recommendation 5-2. Ibid.

<sup>1260</sup> Recommendation 5-4. Ibid.

<sup>1261</sup> Recommendation 6-2. Ibid.

<sup>1262</sup> Recommendation 6-4. Ibid.

<sup>1263</sup> Recommendation 6-1. Ibid.

<sup>1264</sup> Recommendation 7-10. Ibid.

<sup>1265</sup> Recommendation 7-1. Ibid.

<sup>1266</sup> Recommendation 7-2. Ibid.

<sup>1267</sup> Recommendation 7-3. Ibid.

<sup>1268</sup> Recommendation 7-4. Ibid.

<sup>1269</sup> Recommendation 7-6. Ibid.

<sup>1270</sup> Recommendation 7-7. Ibid.

<sup>1271</sup> Recommendation 7-8. Ibid.

<sup>1272</sup> Recommendation 7-11 and 7-12. Ibid.

<sup>1273</sup> Recommendation 7-14. Ibid.

<sup>1274</sup> Recommendation 7-13. Ibid.

<sup>1275</sup> A sample of 200 grams is set aside in a basket that is dry alongside the whole lot. Two times a day the basket is weighted. When it has fallen to 104-105 grams it is properly dry.

<sup>1276</sup> Recommendation 7-23. Ibid.

<sup>1277</sup> Recommendation 8-4. Ibid.

and stored separately different lots of coffee<sup>1278</sup> (to continuing the traceability to the crop level) in isolated facilities<sup>1279</sup> separated from floors<sup>1280</sup> and walls<sup>1281</sup>, controlling at least once in a week<sup>1282</sup> for maximum three months<sup>1283</sup>; **Reselection** implies a labor intensive activity in which each bag of parchment coffee will be slowly emptied with a small basket, in which all defective beans are discarded manually and the remaining will be packed in the bags that are going to be sold as specialty coffee.

In the same way, *Infrastructures* and *Know-how* are affected in the three activities of the trading process: **Purchasing** must continue the *trazabilidad documental* by farm and crop (or just by farm if there is just one lot) adding the cupping score, so traders must have the information of each producer and its coffee farm; the labs and qualified cupping professionals in the Q System; and the space and logistics needed to separate lots and carry on the traceability process; **Threshing and sorting** implies the milling in facilities that clean the tubes after each lot of coffee is milled, (so remaining grains of previous mills are not mixed with the lot being milled) and packed it in special bags that isolate moisture and oxygen from coffee to maintain its aromatic profile; **Bulking and export** must be done in such a way that coffee arrive at the roaster facilities without losing its aromatic profile and traceability. Also, they are affected in the tree activities of the roasting process and the communication strategy (and when sold directly to the consumer in the brewing process): **Blending** and **roasting** (and **grinding and brewing**) is done tailor-made to enhance uniqueness and memorability of the experience. Exceptional coffee usually does not blend and S-curves are adapted specifically to the features of that particular coffee and the style of the roaster, but also it could be blended with other either exceptional or high-quality coffee and roasted to enhance the final aromatic profile the roaster is looking for. **Packaging** is done to avoid any risk on the aromatic profile, using material that allows gases expulsion (once roasted, coffee emits CO<sub>2</sub> for a few weeks) while preventing the entry of oxygen.

*Know-to-appreciate* is affected in one activity during the roasting process and on in the communication strategy: **Packaging** and the **communication strategy** prioritize the aesthetic pleasure of drinking that particular beverage, describing in detail perception of aromas in the nose, flavor, textures, and feeling in the mouth, retronasal olfaction, aftertaste, etc., aiming to enhance the drinking experience. The experience that is magnified by adding a story that usually merges both the farmer and the roaster experience, highlighting their uniqueness practices that give the exceptional taste related service that consumers are experiencing.

#### V.4.2. Riosucio

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<sup>1278</sup> Recommendation 8-7. Ibid.

<sup>1279</sup> Recommendation 8-1. Ibid.

<sup>1280</sup> Recommendation 8-5. Ibid.

<sup>1281</sup> Recommendation 8-6. Ibid.

<sup>1282</sup> Recommendation 8-9. Ibid.

<sup>1283</sup> Recommendation 8-4. Ibid.

- Symbolic services production

**Typical coffee:** The service is provided by the relationship between the coffee and the department of origin, hence there are two differences with the previous “Reputation of the appellation Café Colombia” service. The first is that uses of *infrastructures* and *know-how* during the planting and cultivation must be localized within the departmental territorial district. The second is that uses of *know-how* in the first activity of the trading process: the purchase that requires more strict tolerances in terms of qualities to bring coffee closer to the expression of the territory (4.5% of *broca* and *pasilla* instead of 6.5%).

**Natural coffee:** The natural coffee service requires a system of agricultural production<sup>1284</sup> that transforms abiotic components (CO<sub>2</sub>, water, energy, minerals) through biotic components (the coffee tree) into coffee cherries as if it was an autonomous dynamic ecosystem that provides with the nutrients needed to feed the plants and the protection against pests and diseases. By removing the coffee cherries (to sell in the market) this autonomy of the system is altered, so it must be compensated by the farmer by restoring the balance with animal or vegetable fertilizers produced on the farm. Consequently, *infrastructures* and *know-how* should be used in such a way that the diversity of plant and animal species in the crop is increased to optimize the interactions between organisms and the environment, and the *know-to-appreciate* should be used in such a way that message can be transmitted.

*Infrastructures* are affected in three activities of the planting and one in the cultivation processes: **diversification** implies using the land for other (than coffee) agricultural activities<sup>1285</sup>; **Density** implies leaving space for other vegetal species<sup>1286</sup>; **Shade** implies the planting and the maintenance of trees that provide cover to the crop<sup>1287</sup>; **Hedge rowing** must be implemented at the boundaries of the crop to contain chemical agents used by neighbors<sup>1288</sup>.

*Know how* should be used to restore balance so it is affected in one activity in the post-harvesting and four activities during the cultivation process: **Waste management** involves recycling all organic waste to produce biomass, including the pulp of coffee or other fruits, domestic waste and water resulting from the washing of coffee and/or stables and pigsties<sup>1289</sup>; **Nutrition** involves preparing fertilizers with recycled biomass<sup>1290</sup> to compensate for the elements demanded by the

<sup>1284</sup> We use Arcila et al. (2007, p. 18) definition of a system of agricultural production.

<sup>1285</sup> Numeral 2.15 sobre las condiciones ambientales de las “Normas y sanciones que rigen a los asociados de Asprocafé Ingruma” desarrollado por la acción de mejoramiento del tercer tema del cuatro resumen de los criterios de mercado justo FLO del mismo texto.

<sup>1286</sup> Numeral 2.01, *ibid.*

<sup>1287</sup> Numeral 2.13, *ibid.*

<sup>1288</sup> Numeral 2.13, *ibid.*

<sup>1289</sup> Numeral 2.04, *ibid.*

<sup>1290</sup> Numeral 2.19, *ibid.*

coffee plant <sup>1291</sup> that the soil does not contribute naturally <sup>1292</sup> ; **Soil management** implies maintaining weed coverings that, when pruned periodically, contribute with organic matter and nitrogen to the soil while avoiding erosion by runoff<sup>1293</sup>; **Pest control** implies carrying out cultural practices to avoid the use of pesticides, insecticides, fungicides and herbicides (even though some products are authorized under certain conditions)<sup>1294</sup>.

*Infrastructures* and *Know-how* are affected in the three activities in the trading process: **Purchasing** starts with the documentary traceability for each lot of coffee cultivated under the conditions previously described; **threshing and sorting** should be done carefully to guarantee its integrality, meaning for example that the whole equipment has to be cleaned before/after each coffee lot is threshed; **bulking and export** must continue with the traceability using the logistic services exclusively for this type of coffee, sacrificing available space in warehouses or containers.

*Know-to-appreciate* is affected in two activities, one in the roasting, the other in the communication strategy: **packaging and distribution** requires the incorporation of the "organic" seal under pre-established conditions; **communication strategy** implies to convince consumers of the positive relation between all activities performed by the profilers and the health of the people, the environment and the communities. In this way, the private investment increases not only the value of the private asset (the brand coffee) but also collective assets (the organic coffee stamp).

**Indigenous coffee:** This service originates in the positive influence of the coffee production system in the "*buen vivir*" of the indigenous communities<sup>1295</sup>. That is, the cultivation of coffee improves material well-being without affecting the indigenous world view (avoids cultural homogenization), nor its relations within the community (avoids income inequality) nor its relationship with mother earth (avoids environmental degradation). At the same time, it reinforces indigenous institutions such as collective lands and self-government and places value on the historical memory, language and identity of the indigenous people (Del Popolo, Jaspers, & CEPAL, 2014, pp. 33-34). Consequently, *infrastructures* and *know-how* should be used prioritizing ancestral techniques and indigenous cosmovision.

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<sup>1291</sup> The coffee plant needs three essential elements (C, H, and O) that are provided by air and water. And thirteen others that are naturally provided by the soil or artificially provided by man through fertilization. There are six macronutrients required in abundant quantities (N, P, K, Ca, Mg, S) and seven micronutrients in low quantities (Fe, Zn, Mn, B, Cu, Cl, Mo) (Arcila et al., 2007, p. 202).

<sup>1292</sup> Given the need to transform coffee cherries into sufficient income for the wellbeing of the household, the definition of the "autonomous system" is flexible and it allows the entry of external components like "authorized" fertilizers that the coffee grower can acquire in the market.

<sup>1293</sup> Numeral 2.13, *ibid.*

<sup>1294</sup> Numeral 2.03, *ibid.*

<sup>1295</sup> Uses are regulated by informal institutions transmitted orally, consequently this section is carried out based on field interviews, in particular with member of the Cabildo of the Resguardo de San Lorenzo, and other entities that support the indigenous organization such as Asprocafé and Asproinca (Association of indigenous and peasant producers of Riosucio).

*Infrastructures* are affected in four activities of the planting: **Diversification** of the farm is a vector of identity and autonomy: the land has to be used to produce food consumed by their ancestors<sup>1296</sup> such as corn, beans, and cassava, reducing indigenes dependence on coffee and therefore the vulnerability to its monoculture, which in periods of low prices or poor harvests had produced dispossession and malnutrition; **Planted variety** is a vector of the indigenous worldview that admires, respects and submits to the wisdom of nature, for which it rejects "human arrogance" when wanting to adapt it for its own benefit. It implies a complete abstention to the planting of genetically modified varieties and to a lesser extent, those products of artificial selection; **Renovation** implies selecting the seed, carrying out the storage and planting in the field according to the phases of the moon and the lunar calendar and not intervening in the natural cycle of the tree, that is, not renovating by pruning once the cycle of greater productivity has elapsed; **Shade** implies the maintenance of covers, but more than the protection and nutrition of the soil and the crop, it reflects the respect for the trees, the older brothers in the indigenous discourse.

*Know-how* is affected in four activities during cultivation and one during the post-harvesting: **Soil management; Nutrition; Pest control; Picking and waste management** that given the scarcity of traditional techniques (because coffee was a relatively recent or an invasive crop for indigenous discourse) implies limiting the use of chemical products that "poison" the soil, water and living beings.

*Infrastructures* and *Know-how* are affected in the three activities in the trading process similarly to the natural coffee symbolic services. However, in the activities of the roasting processes and the communication strategy, the uses are not regulated allowing the other profiling actors to invest in their own assets (in particular the brands) without necessarily contributing to the collective asset (coffee's reputation) indigenous of Riosucio.

**Fairtrade coffee:** This service originates in the redistribution of power within the coffee value chain in favor of coffee communities so they could earn higher participation in the monetary services. By strengthening associative skills among producers and regulating their business practices with the other profilers, the producers' organization could increase its capacity to capture greater value and provide greater benefits to its members. Consequently, the Resources constitutive of the association and of the other profilers must be used to increase the welfare of the coffee-growing communities.

*Infrastructures* and *Know-how* are affected in the three activities of trading and one of the roasting: **Purchasing** must be carried on by a producers' organization, meaning that the *infrastructures* must belong to an association own by producers<sup>1297</sup>. The *know-how* implies both the correct documentation<sup>1298</sup>, selection and treatment of the product to separate it from other

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<sup>1296</sup> The actions of past generations legitimize the actions of the present generations in the indigenous discourse.

<sup>1297</sup> Numeral 1 General Requirements, Fairtrade Standard for Small Producer Organizations. Version 1.5, 2011.

<sup>1298</sup> Numeral 2.12 ; 2.1.3 ; 2.1.4 ; 2.1.5 ; 2.1.6 ; 2.1.7. Ibid.

grains<sup>1299</sup> and, democratic and participative governance<sup>1300</sup> with identified members, own rules, control mechanisms<sup>1301</sup> and executive organs with the ability to influence their partners<sup>1302</sup>. This governance produces the service through the effort for its partners to improve environmental practices<sup>1303</sup> (in particular in terms of integrated pest and weed management that protects and nourishes the soil and the protection of water and biodiversity which in the case of Riosucio is the already mentioned profiling institution *Normas Aprocafé*) and labor practices<sup>1304</sup> that protect the environment and the family members from risky activities such as the application of agrochemicals<sup>1305</sup>.

Other profilers also have to use their *infrastructures* and *know how* in four activities during the trading and one during the roasting: **Threshing; Sorting; Bulking; Export and Blending** have to guarantee both a documentary traceability (records of volumes purchased, processed and sold as fair trade by producer) and physical traceability (differentiated logistic treatment by type of coffee). Additionally, they have to follow rules of business behavior<sup>1306</sup> among participants in the Fairtrade coffee value chain.

*Know-to-appreciate* affects two activities, one in roasting and the other in the communication strategy: **packaging and distribution** requires the use of the FairTrade seal under a contract with Fairtrade International (after the Flocert certification)<sup>1307</sup>; **Communication strategy** transmits the message of a solidarity trade that limits the abuse of the weakest links in the chain, increasing the attractiveness of the private asset (the coffee brand) at the same time as the collective asset (the FairTrade seal).

- Taste-related services production

**Terroir expression:** It is the taste related service resulting from the production of the “typical coffee” symbolic service but further narrowing the jurisdiction to territories not necessarily limited by departmental administrative borders, but a territory whose soil and climate conditions allow to produce a coffee with similar organoleptic characteristics. In consequence, *infrastructures* and *know-how* within that territory should be used to highlight these characteristics. As the case of “clean cup” taste related service, during the cupping of

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<sup>1299</sup> Numeral 2.1. Traceability

<sup>1300</sup> Numeral 4.2 Democracy, participation and Transparency.

<sup>1301</sup> Numeral 3.1.5. Ibid.

<sup>1302</sup> Numeral 3.1.4. Ibid.

<sup>1303</sup> Numeral 4.1 Development potential

<sup>1304</sup> Numeral 3.3 Labour conditions

<sup>1305</sup> Numeral 3.2 Environmental Development

<sup>1306</sup> Including the contractual documentation to impose clauses that minimize the risks for the producer according to the type of contract; the definition of minimum prices, premiums and periodicity of payments that make it impossible to deceive the producer through the accounting language; the provision of supply plans from the buyers and, to the extent possible, direct financing (or through third parties) to the producer organization for the purchase of the harvest from its members; and fair commercial practices of the buyers that strengthen the capacities of the producing organization. Fairtrade trader Standard. Version 1.4, 2015.

<sup>1307</sup> Numeral 1.1 Fairtrade trader Standard. Version 1.4, 2015.

representative samples, batches with defects are eliminated, but in addition, the cupping also allows the elimination of batches that do not have the organoleptic characteristics of this terroir.

**Citric acid aroma:** It is the sensory service resulting from the production of the sensory service expression of the terroir in the Resguardo de San Lorenzo and eventually in other high-altitude farms in Riosucio. Therefore all the uses described for producing the “terroir expression” are promoted but once the sampling of representative samples has been carried out, all the lots that do not show citric acidity are eliminated.

**Winy:** It is the sensory service resulting from the adequate benefit of ripe cherries and even little overruns collected in the high levels of the municipality of Riosucio profiled by the AAA Program. Thus, *Infrastructures* and *Know-how* are affected in one activity in the planting process, one activity in the cultivation process, and the four activities in the post harvesting process: **Planted variety** must prioritize Castillo® variety whose beans, after ripe, remains attached to the branches a little longer allowing an extra development of aroma precursors<sup>1308</sup>; **Farm management** implies that all equipment (hulling machine, fermentation tank) and places (including drying and storage surfaces) must be completely clean from beans or other rare material before its utilization<sup>1309</sup>, and all supplies like fertilizers, agrochemicals, or tillage tools must be properly stored separated from coffee beans<sup>1310</sup>; **Picking** must be done so selectively that neither ripe beans should remain in the tree nor unripe beans in the collection hoppers<sup>1311</sup>; **Hulling** must be done as quickly as possible<sup>1312</sup> in good condition machines<sup>1313</sup> (desirable two-times a day, at midday to hull coffee picked during morning, and at dusk for the afternoon one); **Fermentation** must be a short one: it must start immediately after the hulling<sup>1314</sup> and it must finish by washing the coffee precisely<sup>1315</sup> when the mucilage naturally slide off the bean (avoiding mechanical methods)<sup>1316</sup> depending on the temperature, microbial flora, ripeness, etc., with

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<sup>1308</sup> This “late harvest” is encouraged by Alexis Rodriguez, Green Coffee Quality and Development Manager at Nestlé Nespresso SA, because “harvesting the crop a few weeks later than usual at a specific point in time, allowed specific aromas to develop, creating a unique coffee taste”. Nespresso “*Naora*: the fruit of a long-term collaboration in Colombia between coffee farmers and Nespresso”. Nespresso official webpage. On the other hand, in interviews with coffee farmers, are beans are firmly attached, for them is more difficult when picking.

<sup>1309</sup> Criteria 8c, *herramienta TASQ Módulo Colombia. Versión 1009 del 2009*.

<sup>1310</sup> Criteria 7c. Ibid.

<sup>1311</sup> Criteria 1a and 1b. Ibid.

<sup>1312</sup> Criteria 1c. Ibid.

<sup>1313</sup> Criteria 2<sup>a</sup>, 2b and 2c. Ibid.

<sup>1314</sup> Criteria 3c and 3d. Ibid. It implies that coffee that was hulled in different times cannot be fermented together, because as fermentation started differently, once finish, necessarily, some beans are going to be either over or under fermented.

<sup>1315</sup> Criteria 3b. Ibid. They are some tools like the Fermaestro® produced by CENICAFÉ that tell coffee growers the precise moment, but actually experimented growers know the proper time just by touch. The issue is not to know the proper time but to be present when it is ready (from eight to twelve hours after the hulling).

<sup>1316</sup> “Nespresso recomienda procesar 100% del café por el método de fermentación natural. Excepcionalmente un 10% de la producción del sub-cluster podrá ser realizado utilizando desmucilaginosos mecánicos, siempre y cuando el perfil de taza no sea alterado.” *TASQ Módulo Colombia. Versión 1009 del 2009*. Pag. 6.

clean water<sup>1317</sup>; **Drying** must start immediately after washing<sup>1318</sup> and mostly under the sun<sup>1319</sup> until it reaches a 10-12% moisture, in permitted surfaces like concrete floor, wooden floor and raised beds<sup>1320</sup> (to avoid earth and asphalt contact that can cause cancer<sup>1321</sup>) with enough space to evenly spread coffee on the surface<sup>1322</sup> without overpassing a 5cm of thickness<sup>1323</sup>. Once dried, coffee must be stored avoiding any contact with walls, floor, and roof.<sup>1324</sup>

*Know how* is affected in the three activities in the trading process<sup>1325</sup>: **Purchasing** must start the *trazabilidad documental* by separating coffee bought from farmers included in the AAA Program lists and storage it avoiding any contact with the surrounding surfaces, chemicals or any other agent that could alter the cupping profile. **Threshing and sorting** imply the verification through cupping test of randomly selected samples, and the continuation of the *trazabilidad documental* on the 70 kilos of Excelso coffee bags produced; **Bulking and export** must be done in such a way that coffee arrives at the roaster facilities without losing its aromatic profile. Also it is affected in the tree activities of the roasting process and the communication strategy: **Blending** due to the high volumes demanded by roaster's clients, the Roaster cannot depend on one origin, it has to maintain a stable and consistent supply of coffee from diverse regions to reproduce a blend with the same potential aromatic precursor; **Roasting** must guarantee consistency in the final product by standardizing S-curves through specialized software in their high-tech roasting facilities; **Packaging** is done to avoid any risk on the aromatic profile and control at maximum characteristics of the final beverage<sup>1326</sup>. *Know-to-appreciate* is affected in one activity during the roasting process and on in the communication strategy: **Packaging** and the **communication strategy** focus on enhancing the aromatic profile by signaling the unique portfolio of supplier regions without going too far in losing brand attractiveness in favor of region reputation<sup>1327</sup>.

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<sup>1317</sup> Criteria 9b. Ibid.

<sup>1318</sup> Criteria 4a. Ibid.

<sup>1319</sup> Nespresso recommends 100% solar drying but allows at maximum of 40% mechanical drying if meteorological conditions are adverse (e.g. rainy season), but it is hardly the case in Buesaco in which harvesting happens to be during the dry season. Criteria 4c. Ibid.

<sup>1320</sup> "Patio de concreto, piso de madera o tamiz en camas suspendidas". Criterio 5c. Ibid.

<sup>1321</sup> "Nespresso considera que el café pergamino secado en contacto directo con la tierra puede traer contaminaciones por hongos que pueden conllevar a la producción de toxinas carcinogénicas (OTA). De igual forma el café pergamino secado en contacto directo con el asfalto puede traer contaminaciones por hidrocarburos que pueden causar desarrollo de cáncer". TASQ Módulo Colombia. Versión 1009 del 2009. Pág. 7.

<sup>1322</sup> 12.5 kilos of parchment coffee per square meter. Criteria 5e. Ibid.

<sup>1323</sup> Criteria 5f. Ibid.

<sup>1324</sup> Criteria 7a and 7b. Ibid.

<sup>1325</sup> Interview with Felipe Jaramillo, logistics director of the FNC (which bulks and exports coffee for Nespresso).

<sup>1326</sup> For example, Nespresso uses controversial aluminum capsules that are recyclable but depending on the customer could end in the garbage. Nevertheless, "Nespresso chose aluminum as the best material to protect the aroma and flavor profiles of its quality coffees. Aluminum provides perfect protection from oxygen, light and moisture.". (Nespresso, INCAE, & CIMS, 2015, p. 21)

<sup>1327</sup> Regional single origin capsules, in which the name of the region and the country is presented alone without any joined bra, are offered as "limited edition" for a few months (Colombia Aguadas; Ethiopia Yirgacheffe). The pure origin capsules that are permanently offered displays the name of the country after the Nespresso brand: Indriya from India, Rosabaya de Colombia, Dulsão do Brasil; Bukeela ka Ethiopia. Nespresso. Official Webpage. Last visited. 12-06-2017.

### V.4.3. Buesaco

- Symbolic services production

**Reputation of the appellation Café Nariño:** Like the previous one, this service triggers images, memories, and sensations encapsulated in the coffee due to its origin, which in this case is the department of Nariño in Colombia. The reputation developed through commercial transactions<sup>1328</sup> was protected by the FNC in 2011<sup>1329</sup>: In practice a coffee that fulfills the conditions of the IGP Café de Colombia and was produced in the department of Nariño<sup>1330</sup>. Indeed, *infrastructures* and *know-how* must be used exactly as said previously in all the activities mentioned, the exception is that coffee must be harvesting in this department<sup>1331</sup>. *Know-to-appreciate* is affected in two activities in the roasting and one in the communication strategy processes: **Blending** with coffee from another region that Nariño is forbidden<sup>1332</sup>. **Packaging** can use the DO Nariño seals only when 100% of the coffee comes from Nariño. **Communication** is done to enhance the geographical features of being cultivated on the Andes at the equatorial line, which allows coffee crops at 2.300 m.a.s.l. In addition to climate and soils, it focuses on terroir characteristics that are responsible for this reputation<sup>1333</sup>.

**Transparent coffee:** This service is produced when consumers can clearly identify the farmer whose coffee they are drinking, thus a wide range of pieces of information become available depending on what it is prioritized by the actors: from the variety that was cropped to the education of farmers' sons<sup>1334</sup>. By revealing the farmer's identity, consumers' anxiety caused by incertitude decreases, especially the one related to farmers' wellbeing. To produce this service, it is not important how farmers are using their resource constituents as long as they are producing exceptional taste related services (next section) and mainly how the other actors are behaving to guarantee transparency. In this order of ideas, *Infrastructures* and *Know-how* are affected in the three activities in the trading process. **Purchasing, Threshing and sorting, Bulking**

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<sup>1328</sup> As an example, Howard Schultz, CEO of Starbucks, said in an interview that Coffee from Nariño was the Colombian Coffee he prefers. Caracol Radio. [http://caracol.com.co/programa/2014/07/17/audios/1405576620\\_325399.html](http://caracol.com.co/programa/2014/07/17/audios/1405576620_325399.html), 17th of July 2014. Last visited 11-29-2017. In Colombia it was registered in different blogs and local media as if he had said that “Nariño produce el mejor café del mundo”.

<sup>1329</sup> Through the *Resolución 06093 de 11 de febrero de 2011* by the SIC, the FNC obtained the property rights over the denomination of origin *Café de Nariño*.

<sup>1330</sup> “El CAFÉ DE NARIÑO es un producto que cumple con los requisitos y definición de la Denominación de Origen Protegida CAFÉ DE COLOMBIA y es además el producto concreto protegido por la Denominación de Origen Protegida CAFÉ DE NARIÑO” Art. 1.3 “definiciones” del Reglamento de Uso de uso de la Indicación Geográfica Protegida *Café de Nariño* (F. N. d. C. FNC, 2012)

<sup>1331</sup> Art. 11.3 “mezclas”. *Ibid.*

<sup>1332</sup> Art. 8 “zona de producción”. *Ibid.*

<sup>1333</sup> FNC, “Nariño denominación de origen”. Official webpage [http://narino.cafedecolombia.com/es/narino/marcas\\_de\\_cafe\\_de\\_narino/](http://narino.cafedecolombia.com/es/narino/marcas_de_cafe_de_narino/). Last visited 12-04-2017.

<sup>1334</sup> Interviews with Raphael Studer, Cofounder and, finance and sales director of Algrano. A platform that meets transparently farmers with roasters.

**and export** have to be able to guaranteeing product integrity and traceability for nanolots (from 3 to 10 bags) and microlots (from 10 to 65 bags), a hardly profitable activity when dealing with huge quantities because storage space is sacrificed (mainstream traders need every inch of space bulking coffee bags in towers that reach the ceiling), so companies tend to specialize in this business model adding value through the exceptional coffee taste related services<sup>1335</sup> (following section). *Know-to-appreciate* is affected in the one activity in the communication strategy: the **communication strategy** enhances this trust feeling by sharing stories of the coffee farmers in which they describe their hard work to produce an extraordinary product and how being part of this transparent value chain had increased wellbeing for their families and their communities.

**Poverty reduction:** This service is produced when a community has improved their wellbeing, mainly by increasing their income and their purchase power. Coffee could have a positive impact in Veracruz due to land features (soil and climate) and ownership (mainly smallholdings), if it is individually produced prioritizing taste related services and it is associatively commercialized desirably until the final consumer<sup>1336</sup>. So, *Infrastructures* and *Know-how* must be affected in throughout all processes (from planting to roasting and brewing) to produce the “exceptional coffee” taste related services (following section) and the *Know-to-appreciate* must be affected in the communication strategy process to produce the “reputation of the appellation Café Nariño” symbolic service. From purchasing onwards, it should desirably be vertically integrated by a company owned by coffee producers to capture the maximum percentage of money paid by consumers.

- [Taste-related services production](#)

**Baked Coffee:** This is the taste related service when the “energy dose” symbolic service is sought for. It is both a flavor and a financial equilibrium in which roasters try to optimize the use of poor quality (and cheapest coffee) with good quality to enhance flavor as much as they can until a drinkable beverage is offered. So, *Know-how* is affected in the trading process to select poor quality coffee that cannot be exported (so must be sold to domestic markets). Then both resource constituents are affected in two in the Roasting process: **Blending** with the less possible higher qualities (more expensive) coffee to maintain low final prices; **Roasting** using a S-Curve<sup>1337</sup> short in time and high in temperature, which will both neutralize unpleasant (also pleasant) flavors from defect beans and reduce energy costs in larger volumes. Lyophilization is highly convenient to hinder these unpleasant flavors<sup>1338</sup>. *Know-to-appreciate* is affected in one activity during the

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<sup>1335</sup> Interview with Steven Martinez, barista from Inconexus.

<sup>1336</sup> Interview with Guillermo Torres, *Director Regional Nariño de la Fundación Social*

<sup>1337</sup> When measuring the roaster machine temperature on the Y-axis, and time in the X-axis, it graphs and S because it starts at the top (high temperature) and goes down once the coffee grain is introduced into the machine, it goes up slowly for few minutes until the first crack in which it stabilized for a few seconds before you open it to discharge the roasted coffee.

<sup>1338</sup> A process in which coffee is firstly brewed and frozen, then, through a lyophilization procedure in which water pass from the solid phase to the gas one without passing through the liquid phase, it leaves behind a mass of dehydrated coffee that is cut in little pieces and packaged to be sold as soluble coffee. It allows the addition of other flavors (e.g. vanilla extract, and so on) that makes easier for the roaster to hinder the poor quality of coffee.

roasting process and the communication strategy: **Packaging** and the **communication strategy** are oriented to attach symbolic services (like the energy dose and brand reputation) to the taste related one.

**Terroir expression:** This is the taste related service of the clean cup in Nariño, which due to its particularities of climate, soil and culture produce a coffee, which aromatic profile is described as high acidity, medium bodied, sweet notes, and a clean, mild cup with a very pronounced aroma<sup>1339</sup>. In practice, resource constituents are used similarly than the clean cup, including the cupping test in traders' facilities, with one main difference: jurisdiction is restricted to the administrative borders of the department of Nariño.

**Sweet flavor and citric acid aroma:** This is the taste related service of the coffee highlands of Buesaco (above 1.700 m.a.s.l.) when the AAA Program profiles the resource. Thus, *Infrastructures* and *Know-how* are affected in one activity in the planting process, one activity in the cultivation process, and the four activities in the post harvesting process: **Planted variety** must prioritize Castillo® variety whose beans, after ripe, remains attached to the branches a little longer allowing an extra development of aroma precursors<sup>1340</sup>; **Farm management** implies that all equipment (hulling machine, fermentation tank) and places (including drying and storage surfaces) must be completely clean from beans or other rare material before its utilization<sup>1341</sup>, and all supplies like fertilizers, agrochemicals, or tillage tools must be properly stored separated from coffee beans<sup>1342</sup>; **Picking** must be done so selectively that neither ripe beans should remain in the tree nor unripe beans in the collection hoppers<sup>1343</sup>; **Hulling** must be done as quickly as possible<sup>1344</sup> in good condition machines<sup>1345</sup> (desirable two-times a day, at midday to hull coffee picked during morning, and at dusk for the afternoon one); **Fermentation** must be a short one: it must start immediately after the hulling<sup>1346</sup> and it must finish by washing the coffee precisely<sup>1347</sup> when the

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<sup>1339</sup> “de alta acidez, cuerpo medio, notas dulces, limpio, suave y aroma muy pronunciado” Art.3.1 “Alcance de la autorización de uso de la Denominación de origen Café de Nariño” del Reglamento de Uso de uso de la Indicación Geográfica Protegida Café de Nariño (F. N. d. C. FNC, 2012)

<sup>1340</sup> This “late harvest” is encouraged by Alexis Rodriguez, Green Coffee Quality and Development Manager at Nestlé Nespresso SA, because “harvesting the crop a few weeks later than usual at a specific point in time, allowed specific aromas to develop, creating a unique coffee taste”. Nespresso “*Naora*: the fruit of a long-term collaboration in Colombia between coffee farmers and Nespresso”. Nespresso official webpage. On the other hand, in interviews with coffee farmers, are beans are firmly attached, for them is more difficult when picking.

<sup>1341</sup> Criteria 8c, *herramienta TASQ Módulo Colombia. Versión 1009 del 2009*.

<sup>1342</sup> Criteria 7c. Ibid.

<sup>1343</sup> Criteria 1a and 1b. Ibid.

<sup>1344</sup> Criteria 1c. Ibid.

<sup>1345</sup> Criteria 2ª, 2b and 2c. Ibid.

<sup>1346</sup> Criteria 3c and 3d. Ibid. It implies that coffee that was hulled in different times cannot be fermented together, because as fermentation started differently, once finish, necessarily, some beans are going to be either over or under fermented.

<sup>1347</sup> Criteria 3b. Ibid. They are some tools like the Fermaestro® produced by CENICAFÉ that tell coffee growers the precise moment, but actually experimented growers know the proper time just by touch. The issue is not to know the proper time but to be present when it is ready (from eight to twelve hours after the hulling).

mucilage naturally slide off the bean (avoiding mechanical methods)<sup>1348</sup> depending on the temperature, microbial flora, ripeness, etc., with clean water<sup>1349</sup>; **Drying** must start immediately after washing<sup>1350</sup> and mostly under the sun<sup>1351</sup> until it reaches a 10-12% moisture, in permitted surfaces like concrete floor, wooden floor and raised beds<sup>1352</sup> (to avoid earth and asphalt contact that can cause cancer<sup>1353</sup>) with enough space to evenly spread coffee on the surface<sup>1354</sup> without overpassing a 5cm of thickness<sup>1355</sup>. Once dried, coffee must be stored avoiding any contact with walls, floor, and roof.<sup>1356</sup>

*Know how* is affected in the three activities in the trading process<sup>1357</sup>: **Purchasing** must start the *trazabilidad documental* by separating coffee bought from farmers included in the AAA Program lists and storage it avoiding any contact with the surrounding surfaces, chemicals or any other agent that could alter the cupping profile. **Threshing and sorting** imply the verification through cupping test of randomly selected samples, and the continuation of the *trazabilidad documental* on the 70 kilos of Excelso coffee bags produced; **Bulking and export** must be done in such a way that coffee arrives at the roaster facilities without losing its aromatic profile. Also it is affected in the tree activities of the roasting process and the communication strategy: **Blending** due to the high volumes demanded by roaster's clients, the Roaster cannot depend on one origin, it has to maintain a stable and consistent supply of coffee from diverse regions to reproduce a blend with the same potential aromatic precursor; **Roasting** must guarantee consistency in the final product by standardizing S-curves through specialized software in their high-tech roasting facilities; **Packaging** is done to avoid any risk on the aromatic profile and control at maximum characteristics of the final beverage<sup>1358</sup>. *Know-to-appreciate* is affected in one activity during the roasting process and on in the communication strategy: **Packaging** and the **communication**

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<sup>1348</sup> "Nespresso recomienda procesar 100% del café por el método de fermentación natural. Excepcionalmente un 10% de la producción del sub-cluster podrá ser realizado utilizando desmucilagadores mecánicos, siempre y cuando el perfil de taza no sea alterado." TASQ Módulo Colombia. Versión 1009 del 2009. Pág. 6.

<sup>1349</sup> Criterio 9b. Ibid.

<sup>1350</sup> Criterio 4a. Ibid.

<sup>1351</sup> Nespresso recommends 100% solar drying but allows at maximum of 40% mechanical drying if meteorological conditions are adverse (e.g. rainy season), but it is hardly the case in Buesaco in which harvesting happens to be during the dry season. Criterio 4c. Ibid.

<sup>1352</sup> "Patio de concreto, piso de madera o tamiz en camas suspendidas". Criterio 5c. Ibid.

<sup>1353</sup> "Nespresso considera que el café pergamino secado en contacto directo con la tierra puede traer contaminaciones por hongos que pueden conllevar a la producción de toxinas carcinogénicas (OTA). De igual forma el café pergamino secado en contacto directo con el asfalto puede traer contaminaciones por hidrocarburos que pueden causar desarrollo de cáncer". TASQ Módulo Colombia. Versión 1009 del 2009. Pág. 7.

<sup>1354</sup> 12.5 kilos of parchment coffee per square meter. Criterio 5e. Ibid.

<sup>1355</sup> Criterio 5f. Ibid.

<sup>1356</sup> Criterio 7a and 7b. Ibid.

<sup>1357</sup> Interview with Felipe Jaramillo, logistics director of the FNC (which bulks and exports coffee for Nespresso).

<sup>1358</sup> For example, Nespresso uses controversial aluminum capsules that are recyclable but depending on the customer could end in the garbage. Nevertheless, "Nespresso chose aluminum as the best material to protect the aroma and flavor profiles of its quality coffees. Aluminum provides perfect protection from oxygen, light and moisture." (Nespresso et al., 2015, p. 21)

**strategy** focus on enhancing the aromatic profile by signaling the unique portfolio of supplier regions without going too far in losing brand attractiveness in favor of region reputation<sup>1359</sup>.

#### V.4.4. In short: Regulated uses in Riosucio and Buesaco

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<sup>1359</sup> Regional single origin capsules, in which the name of the region and the country is presented alone without any joined bra, are offered as “limited edition” for a few months (Colombia Aguadas; Ethiopia Yirgacheffe). The pure origin capsules that are permanently offered displays the name of the country after the Nespresso brand: Indriya from India, Rosabaya de Colombia, Dulsão do Brasil; Bukeela ka Ethiopia. Nespresso. Official Webpage. Last visited. 12-06-2017.

- Riosucio

Table 36 Synthesis of the uses regulated to produce the seventeen demanded services in Riosucio in 2015. Source: the author.

Processes	Uses	Monetary	Energy dose	Appellation Café de Colombia	Typical coffee	Brand reputation	Environmentally responsible	Ethically traded	Shared value	Natural Coffee	Indigenous coffee	Fairtrade coffee	Clean cup	Terroir expression	Citric acid	Winy	Exceptional coffee
Planting	Diversification	Monoculture	N/A	N/A	N/A	N/A	Specialization	N/A	Specialization	Diversification	Diversification	Diversification	N/A	N/A	N/A	N/A	Diversification
	Variety	High yield and pest resistant	N/A	<i>Coffea arabica</i>	<i>Coffea arabica</i>	N/A	Pest resistant	N/A	Pest resistant	NA	Traditional and exotic varieties	NA	<i>Coffea arabica</i>	<i>Coffea arabica</i>	<i>Coffea arabica</i>	<i>Coffea arabica</i> variety Castillo®	Traditional and exotic varieties
	Renovation of Coffee trees	Younger coffee trees	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	Older coffee trees	NA	N/A	N/A	N/A	N/A	Older coffee trees
	Planting density	Higher density	N/A	N/A	N/A	N/A	N/A	N/A	NA	Lower density	N/A	Lower density	N/A	N/A	N/A	N/A	Lower density
	Shade	Less canopy	N/A	N/A	N/A	N/A	N/A	Minimum shade	N/A	Minimum shade	More canopy	More canopy	More canopy	N/A	N/A	N/A	N/A
Cultivation	Soil management	Integrated plan	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	Integrated plan	No chemicals	Integrated plan	N/A	N/A	N/A	N/A	N/A
	Pest and disease management	Integrated plan	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	Integrated plan	No chemicals	Integrated plan	N/A	N/A	N/A	N/A	N/A
	Nutrition	Exact compensation	N/A	N/A	N/A	N/A	Based on crop needs	N/A	Based on crop needs	Organic	No chemicals	Based on crop needs	N/A	N/A	N/A	N/A	N/A

	Hedge row	N/A	N/A	N/A	N/A	N/A	Between crops and natural ecosystems	N/A	Between crops and natural ecosystems	Between crops and natural ecosystems	N/A	Between crops and natural ecosystems	N/A	N/A	N/A	N/A	N/A
	Picking	Timely	N/A	Ripe cherries	Ripe cherries	N/A	Timely	N/A	Timely	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries
	Farm management	Planning	N/A	N/A	N/A	N/A	Planning	N/A	Planning	Planning	N/A	Planning	N/A	N/A	N/A	Planning, including hygienic procedures	Planning, including hygienic procedures
Post - Harvesting	Hulling	N/A	N/A	Immediately	Immediately	N/A	N/A	N/A	N/A	NA	NA	NA	Immediately	Immediately	Immediately	Immediately	Immediately
	Fermentation	N/A	N/A	Short	Short	N/A	N/A	N/A	N/A	Short	NA	NA	Short	Short	Short	Short	Short-medium-long but fermentation has to be mastered.
	Drying	N/A	N/A	No matter how has to reach 10-12%	No matter how has to reach 10-12%	N/A	N/A	N/A	N/A	No matter how has to reach 10-12%	NA	NA	No matter how has to reach 10-12%	No matter how has to reach 10-12%	No matter how has to reach 10-12%	Sundry until 10-12%	Controlled sundry until 10-12%
	Waste management	N/A	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	Integrated plan	No chemicals waste	Integrated plan	N/A	N/A	N/A	N/A	N/A
	Rejection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	NA	NA	NA	N/A	N/A	N/A	N/A	Discard manually all defective beans

Trading	Purchasing	N/A	Quality sorting inferior to the minimum demanded by the Res 02/05	Quality sorting by Res 02/05 and documentary traceability per lot	Quality sorting by Res 02/05 and documentary traceability per lot	N/A	Quality sorting by Res 02/05 and documentary traceability per certified farm	Tracking of purchase records	Quality sorting by Res 02/05 and documentary traceability per certified farm	Quality sorting by Res 02/05 and documentary traceability per certified farm	Quality sorting by Res 02/05; documentary traceability per lot.	Quality sorting by Res 02/05; documentary traceability per lot.	Quality sorting by Res 02/05; documentary traceability per lot.	Quality sorting by Res 02/05; documentary traceability per lot.	Quality sorting by Res 02/05; documentary traceability per lot.	Quality sorting by Res 02/05; documentary traceability per lot.	Physical traceability and cupping taste per farm
	Threshing and sorting	N/A	Low quality coffee bags	Excelso quality coffee bags - documentary traceability	Excelso quality coffee bags - documentary traceability	N/A	Excelso quality coffee bags - Documentary traceability per certified farm	Tracking of purchase records	Excelso quality coffee bags - Documentary traceability per certified farm	Excelso quality coffee bags - Documentary traceability per certified farm	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; cupping test per lots.	Milling small lots to be packed in special coffee bags that maintain the aromatic profile.
	Bulking and export	N/A	N/A	Documentary traceability	Documentary traceability	N/A	Documentary traceability per certified farm	Tracking of purchase records	Documentary traceability per certified farm	Documentary traceability per certified farm	Documentary traceability; aleatory cupping test.	Documentary traceability; cupping test per lots.	Physical traceability				

Roasting	Blending	N/A	N/A	Must contain Colombian coffee	N/A	N/A	N/A	N/A	N/A	100% organic coffee	N/A	100% Fairtrade coffee	N/A	N/A	N/A	Strategically to maintain the profile without losing control at the expense of providers	Tailor-made by the roaster (either blended or not)
	Roasting	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Standardized S-curves	S-curves adapted specifically to the coffee
	Packaging and retailing	N/A	High investment in the private pack	Could use the IGP "Café de Colombia"	N/A	N/A	Could use the trademark "Rainforest Alliance"	N/A	Could use the trademark "Rainforest Alliance"	Could use the organic label	N/A	Could use the Fairtrade label	N/A	N/A	N/A	Maintain control of the final aromatic profile	Maintain the aromatic profile
Communication Strategy	Communication	N/A	Private investment in private brands	Collective investment in the appellation to add value to private brands	Collective investment in the appellation to add value to private brands	Private investment over the private brand	Private investment in the private RA trademark to add value to private brands	Price paid on average to producers can be revealed	Private investment to communicate the "shared value commitment" to add value to private brands.	Private investment in the collective mark, adding value to both private and collective brands.	Private investment over the private brand	Private investment in the collective mark, adding value to both private and collective brands.	Collective investment in the reputation of the "clean cup".	Collective investment in the reputation of the "Café from Caldas"	Collective investment in the reputation of the "Café La Vereda"	Private investment in the private brand linking it to the region reputation.	Private investment in the private brand linking it to the aromatic profile.
Brewing	Grinding	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Brewing	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

- Buesaco

Table 37 Synthesis of the uses regulated to produce the fifteen demanded services in Veracruz in 2015/2016. Source: the author.

Processes	Uses	Monetary	Energy dose	Appellation Café de Colombia	Appellation Café de Nariño	Brand reputation	Environmentally responsible	Ethically traded	Shared value	Transparent coffee	Poverty reduction	Baked coffee	Clean cup	Terroir expression	Sweet flavor and citric acid aroma	Exceptional coffee
Planting	Diversification	Monoculture	N/A	N/A	N/A	N/A	Specialization	N/A	Specialization	Diversification	Diversification	N/A	N/A	N/A	N/A	Diversification
	Variety	High yield and pest resistant	N/A	<i>Coffea arabica</i>	<i>Coffea arabica</i>	N/A	Pest resistant	N/A	Pest resistant	Traditional and exotic varieties	Traditional and exotic varieties	N/A	<i>Coffea arabica</i>	<i>Coffea arabica</i>	<i>Coffea arabica</i> variety Castillo®	Traditional and exotic varieties
	Renovation of Coffee trees	Younger coffee trees	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Planting density	Higher density	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Shade	Less canopy	N/A	N/A	N/A	N/A	Minimum shade	N/A	Minimum shade	More canopy	More canopy	N/A	N/A	N/A	N/A	More canopy
Cultivation	Soil management	Integrated plan	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Pest and disease management	Integrated plan	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Nutrition	Exact compensation	N/A	N/A	N/A	N/A	Based on crop needs	N/A	Based on crop needs	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hedge rowing	N/A	N/A	N/A	N/A	N/A	Between crops and natural ecosystems	N/A	Between crops and natural ecosystems	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Picking	Timely	N/A	Ripe cherries	Ripe cherries	N/A	Timely	N/A	Timely	Ripe cherries	Ripe cherries	N/A	Ripe cherries	Ripe cherries	Ripe cherries	Ripe cherries
	Farm management	Planning	N/A	N/A	N/A	N/A	Planning	N/A	Planning	Planning, including hygienic procedures	Planning, including hygienic procedures	N/A	N/A	N/A	Planning, including hygienic procedures	Planning, including hygienic procedures
Post-Harvesting	Hulling	N/A	N/A	Immediately	Immediately	N/A	N/A	N/A	N/A	Immediately	Immediately	N/A	Immediately	Immediately	Immediately	Immediately
	Fermentation	N/A	N/A	Short	Short	N/A	N/A	N/A	N/A	Short-medium-long but fermentation has to be mastered.	Short-medium-long but fermentation has to be mastered.	N/A	Short	Short	Short	Short-medium-long but fermentation has to be mastered.
	Drying	N/A	N/A	No matter how has to reach 10-12%	No matter how has to reach 10-12%	N/A	N/A	N/A	N/A	Controlled sundry until 10-12%	Controlled sundry until 10-12%	N/A	No matter how has to reach 10-12%	No matter how has to reach 10-12%	Sundry until 10-12%	Controlled sundry until 10-12%

	Waste management	N/A	N/A	N/A	N/A	N/A	Integrated plan	N/A	Integrated plan	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reselection	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Discard manually all defective beans	Discard manually all defective beans	N/A	N/A	N/A	N/A	Discard manually all defective beans
Trading	Purchasing	N/A	Quality sorting inferior to the minimum demanded by the Res 02/05	Quality sorted by Res 02/05 and documentary traceability per lot	Quality sorted by Res 02/05 and documentary traceability per lot	N/A	Quality sorted by Res 02/05 and documentary traceability per certified farm	Quality sorted by Res 02/0. Tracking of purchase records	Quality sorted by Res 02/05 and documentary traceability per certified farm	Quality sorting by cupping test. Physical traceability per farm	Quality sorted by cupping test conducted by the association of coffee farmers	N/A	Quality sorted by Res 02/05; documentary traceability per lot.	Quality sorted by Res 02/05; documentary traceability per lot.	Quality sorted by Res 02/05; documentary traceability per farm.	Quality sorted by cupping test. Physical traceability.
	Threshing and sorting	N/A	Low quality coffee bags	Excelso quality coffee bags - documentary traceability	Excelso quality coffee bags - documentary traceability	N/A	Excelso quality coffee bags - Documentary traceability per certified farm	Excelso quality coffee bags. Tracking of purchase records	Excelso quality coffee bags - Documentary traceability per certified farm	Specialty quality. Physical traceability per farm	Specialty quality milled in behalf of the association of coffee farmers	N/A	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; aleatory cupping test.	Excelso quality coffee bags; documentary traceability; cupping test per lots.	Specialty quality milled in small lots to be packed in special coffee bags that maintain the aromatic profile.
	Bulking and export	N/A	N/A	Documentary traceability	Documentary traceability	N/A	Documentary traceability per certified farm	Documentary traceability. Tracking of purchase	Documentary traceability per certified farm	Physical traceability per farm	Physical traceability per farm. Exported by the association	N/A	Documentary traceability; aleatory	Documentary traceability; aleatory	Documentary traceability; cupping test per lots.	Physical traceability

								e records			on of coffee farmers		cupping test.	cupping test.		
Roasting	Blending	N/A	N/A	Must contain Colombian coffee	100% Café de Nariño	N/A	N/A	N/A	N/A	N/A	N/A	Diminish at maximum raw material costs	N/A	100% Café de Nariño	Strategically to maintain the profile without losing control at the expense of providers	Tailor-made by the roaster (either blended or not)
	Roasting	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Roasted by the association of coffee farmers	A short time/high-temperature S-Curve.	N/A	N/A	Standardized S-curves	S-curves adapted specifically to the coffee
	Packaging and retailing	N/A	High investment in the private packs	Could use the IGP "Café de Colombia"	Could use the IGP "Café de Nariño"	N/A	Could use the trademark "Rainforest Alliance"	N/A	Could use the trademark "Rainforest Alliance"	N/A	Packed by the association of coffee farmers	N/A	N/A	N/A	Maintain control of the final aromatic profile	Maintain the aromatic profile
Communication Strategy	Communication	N/A	Private investment in private brands	Collective investment in the appellation to add value to private brands	Collective investment in the appellation to add value to private brands	Private investment over the private brand	Private investment in the private RA trademark to add value to private brands.	Price paid on average to producers can be reveal	Private investment to communicate the "shared value commitment" to add value to private brands.	Private investment in the image of the coffee household to add value to the private brand.	Collective investment in the appellation.	Private investment over the private brand	Collective investment in the reputation of the "clean cup".	Collective investment in the reputation of the "Nariño terroir".	Private investment in the private brand linking it to the region reputation.	Private investment in the private brand linking it to the aromatic profile.

Brewing	Grinding	N/A														
	Brewing	N/A														

## V.5. Statistical annex

### V.5.1. Riosucio

#### Diversification

##### 1- Coffee area/total area

#### Tests of Between-Subjects Effects

Dependent Variable: Especialización

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	4.440 <sup>a</sup>	9	.493	8.266	.000	.024	74.396	1.000
Intercept	19.324	1	19.324	323.777	.000	.096	323.777	1.000
Resistencia	.039	1	.039	.648	.421	.000	.648	.127
Edad	1.317	1	1.317	22.065	.000	.007	22.065	.997
NDENSIDAD2	.016	1	.016	.262	.609	.000	.262	.080
NPLANTAS	.127	1	.127	2.126	.145	.001	2.126	.308
ARL	1.647	5	.329	5.520	.000	.009	27.602	.992
Error	181.796	3046	.060					
Total	1771.142	3056						
Corrected Total	186.236	3055						

a. R Squared = .024 (Adjusted R Squared = .021)

b. Computed using alpha = .05

#### Estimates

Dependent Variable: Especialización

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	.698 <sup>a</sup>	.008	.683	.714
1	.694 <sup>a</sup>	.016	.662	.725
3	.741 <sup>a</sup>	.019	.705	.778
4	.755 <sup>a</sup>	.009	.738	.772
5	.718 <sup>a</sup>	.009	.700	.737
6	.713 <sup>a</sup>	.020	.673	.753

a. Covariates appearing in the model are evaluated at the following values:

Resistencia = 1.29, Edad = 8.39, NDENSIDAD2 = 5120.68, NPLANTAS = 4581.14.

## Variety

1- Pest-resistant coffee trees planted / total coffee trees planted in the farm.

### Tests of Between-Subjects Effects

Dependent Variable: Resistencia

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	156.594 <sup>a</sup>	8	19.574	252.147	.000	.398	2017.179	1.000
Intercept	80.297	1	80.297	1034.349	.000	.253	1034.349	1.000
Edad	109.073	1	109.073	1405.040	.000	.316	1405.040	1.000
NDENSIDAD2	2.431	1	2.431	31.317	.000	.010	31.317	1.000
NPLANTAS	.029	1	.029	.376	.540	.000	.376	.094
ARL	6.347	5	1.269	16.352	.000	.026	81.760	1.000
Error	236.539	3047	.078					
Total	5493.268	3056						
Corrected Total	393.132	3055						

a. R Squared = .398 (Adjusted R Squared = .397)

b. Computed using alpha = .05

### Estimates

Dependent Variable: Resistencia

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	1.242 <sup>a</sup>	.009	1.225	1.259
1	1.268 <sup>a</sup>	.018	1.232	1.303
3	1.245 <sup>a</sup>	.021	1.204	1.287
4	1.353 <sup>a</sup>	.010	1.334	1.373
5	1.309 <sup>a</sup>	.011	1.288	1.330
6	1.322 <sup>a</sup>	.023	1.276	1.367

a. Covariates appearing in the model are evaluated at the following values:

Edad = 8.39, NDENSIDAD2 = 5120.68, NPLANTAS = 4581.14.

## Renovation

1- Average age of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: Edad

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
Corrected Model	54978.615 <sup>a</sup>	8	6872.327	315.006	.000	.453	2520.051	1.000
Intercept	1073.454	1	1073.454	49.204	.000	.016	49.204	1.000
NDENSIDAD2	5118.979	1	5118.979	234.638	.000	.072	234.638	1.000
NPLANTAS	900.969	1	900.969	41.298	.000	.013	41.298	1.000
Resistencia	30653.000	1	30653.000	1405.040	.000	.316	1405.040	1.000
ARL	2159.245	5	431.849	19.795	.000	.031	98.973	1.000
Error	66474.778	3047	21.816					
Total	336589.054	3056						
Corrected Total	121453.393	3055						

a. R Squared = .453 (Adjusted R Squared = .451)

b. Computed using alpha = .05

### Estimates

Dependent Variable: Edad

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	9.287 <sup>a</sup>	.147	8.999	9.574
1	9.158 <sup>a</sup>	.303	8.564	9.752
3	8.910 <sup>a</sup>	.357	8.209	9.611
4	7.744 <sup>a</sup>	.169	7.413	8.074
5	7.312 <sup>a</sup>	.179	6.962	7.663
6	8.892 <sup>a</sup>	.386	8.135	9.649

a. Covariates appearing in the model are evaluated at the following values: NDENSIDAD2 = 5120.68, NPLANTAS = 4581.14, Resistencia = 1.29.

### Density

1- Average density of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: NDENSIDAD2

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
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Corrected Model	446167395.100 <sup>a</sup>	8	55770924.380	90.837	.000	.193	726.695	1.000
Intercept	5875486574.000	1	5875486574.000	9569.698	.000	.758	9569.698	1.000
Resistencia	19227354.860	1	19227354.860	31.317	.000	.010	31.317	1.000
Edad	144060371.100	1	144060371.100	234.638	.000	.072	234.638	1.000
NPLANTAS	12507609.210	1	12507609.210	20.372	.000	.007	20.372	.995
ARL	36641059.880	5	7328211.976	11.936	.000	.019	59.679	1.000
Error	1870759923.000	3047	613967.812					
Total	82449544000.000	3056						
Corrected Total	2316927318.000	3055						

a. R Squared = .193 (Adjusted R Squared = .190)

b. Computed using alpha = .05

### Estimates

Dependent Variable: NDENSIDAD2

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	5155.345 <sup>a</sup>	24.745	5106.826	5203.864
1	5040.711 <sup>a</sup>	50.851	4941.005	5140.417
3	5157.734 <sup>a</sup>	59.985	5040.119	5275.348
4	5255.532 <sup>a</sup>	28.232	5200.177	5310.887
5	4957.289 <sup>a</sup>	30.045	4898.378	5016.199
6	5025.154 <sup>a</sup>	64.785	4898.128	5152.181

a. Covariates appearing in the model are evaluated at the following values: Resistencia = 1.29, Edad = 8.39, NPLANTAS = 4581.14.

### Shade

1- Average shade of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: LUMINOSIDCat%

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power <sup>b</sup>
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Corrected Model	301.752 <sup>a</sup>	10	30.175	152.270	.000	.333	1522.697	1.000
Intercept	86.276	1	86.276	435.365	.000	.125	435.365	1.000
Resistencia	1.716	1	1.716	8.662	.003	.003	8.662	.837
Edad	94.067	1	94.067	474.678	.000	.135	474.678	1.000
NPLANTAS	4.628	1	4.628	23.351	.000	.008	23.351	.998
NDENSIDAD2	9.613	1	9.613	48.507	.000	.016	48.507	1.000
ASNM	15.671	1	15.671	79.078	.000	.025	79.078	1.000
ARL	15.387	5	3.077	15.529	.000	.025	77.644	1.000
Error	603.425	3045	.198					
Total	7839.278	3056						
Corrected Total	905.177	3055						

a. R Squared = .333 (Adjusted R Squared = .331)

b. Computed using alpha = .05

### Estimates

Dependent Variable: LUMINOSIDCat%

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
0	1.445 <sup>a</sup>	.015	1.415	1.474
1	1.520 <sup>a</sup>	.029	1.463	1.576
3	1.511 <sup>a</sup>	.034	1.444	1.578
4	1.519 <sup>a</sup>	.017	1.486	1.551
5	1.516 <sup>a</sup>	.017	1.482	1.551
6	1.793 <sup>a</sup>	.037	1.721	1.865

a. Covariates appearing in the model are evaluated at the following values:  
Resistencia = 1.29, Edad = 8.39, NPLANTAS = 4581.14, NDENSIDAD2 = 5120.68, ASNM = 1677.77.

#### V.5.2. Buesaco

### Diversification

2- Coffee area/total area

#### Tests of Between-Subjects Effects

Dependent Variable: %Especi

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.777 <sup>a</sup>	6	.130	1.563	.173	.130
Intercept	15.741	1	15.741	189.917	.000	.751
NplantasPro	.014	1	.014	.169	.682	.003
ARL	.761	5	.152	1.835	.119	.127
Error	5.222	63	.083			
Total	33.367	70				
Corrected Total	5.999	69				

a. R Squared = .130 (Adjusted R Squared = .047)

### Estimates

Dependent Variable: %Especi

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.459 <sup>a</sup>	.093	.274	.644
2	.468 <sup>a</sup>	.098	.273	.663
3	.728 <sup>a</sup>	.078	.572	.883
4	.690 <sup>a</sup>	.068	.554	.825
5	.560 <sup>a</sup>	.109	.343	.778
6	.704 <sup>a</sup>	.084	.536	.871

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

1- Percentage of the household income derived from coffee

### Tests of Between-Subjects Effects

Dependent Variable: %Ingresocafé

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.328 <sup>a</sup>	6	.055	1.151	.344	.099
Intercept	10.877	1	10.877	229.110	.000	.784
NplantasPro	.005	1	.005	.107	.745	.002
ARL	.321	5	.064	1.353	.254	.097
Error	2.991	63	.047			
Total	19.688	70				
Corrected Total	3.319	69				

a. R Squared = .099 (Adjusted R Squared = .013)

### Estimates

Dependent Variable: %Ingresocafé

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.486 <sup>a</sup>	.070	.346	.626
2	.540 <sup>a</sup>	.074	.392	.688
3	.485 <sup>a</sup>	.059	.367	.602
4	.384 <sup>a</sup>	.051	.281	.486
5	.601 <sup>a</sup>	.082	.437	.766
6	.519 <sup>a</sup>	.063	.393	.646

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Variety

2- Pest-resistant coffee trees planted / total coffee trees planted in the farm.

### Tests of Between-Subjects Effects

Dependent Variable: %resistencia

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.476 <sup>a</sup>	6	.079	.743	.617	.066
Intercept	27.005	1	27.005	252.782	.000	.800
NplantasPro	.004	1	.004	.035	.852	.001
ARL	.432	5	.086	.809	.548	.060
Error	6.730	63	.107			
Total	51.893	70				
Corrected Total	7.206	69				

a. R Squared = .066 (Adjusted R Squared = -.023)

### Estimates

Dependent Variable: %resistencia

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.839 <sup>a</sup>	.105	.629	1.049
2	.959 <sup>a</sup>	.111	.738	1.181
3	.803 <sup>a</sup>	.088	.627	.980

4	.790 <sup>a</sup>	.077	.636	.944
5	.644 <sup>a</sup>	.124	.396	.891
6	.744 <sup>a</sup>	.095	.555	.934

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## Renovation

2- Average age of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: %edad

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	34.101 <sup>a</sup>	6	5.683	1.183	.327	.101
Intercept	791.616	1	791.616	164.707	.000	.723
NplantasPro	3.060	1	3.060	.637	.428	.010
ARL	28.344	5	5.669	1.179	.329	.086
Error	302.791	63	4.806			
Total	1768.339	70				
Corrected Total	336.892	69				

a. R Squared = .101 (Adjusted R Squared = .016)

### Estimates

Dependent Variable: %edad

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	4.286 <sup>a</sup>	.705	2.878	5.695
2	4.714 <sup>a</sup>	.743	3.229	6.199
3	5.532 <sup>a</sup>	.592	4.349	6.715
4	3.808 <sup>a</sup>	.517	2.775	4.841
5	3.865 <sup>a</sup>	.830	2.207	5.523
6	4.850 <sup>a</sup>	.638	3.576	6.125

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## Density

2- Average density of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: Densidad

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10663565.140 <sup>a</sup>	6	1777260.857	1.711	.133	.140
Intercept	1695150122.000	1	1695150122.000	1632.173	.000	.963
NplantasPro	459843.058	1	459843.058	.443	.508	.007
ARL	9402620.906	5	1880524.181	1.811	.124	.126
Error	65430834.830	63	1038584.680			
Total	2862989105.000	70				
Corrected Total	76094399.970	69				

a. R Squared = .140 (Adjusted R Squared = .058)

### Estimates

Dependent Variable: Densidad

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	6008.830 <sup>a</sup>	327.633	5354.108	6663.553
2	7108.787 <sup>a</sup>	345.447	6418.466	7799.108
3	6103.178 <sup>a</sup>	275.093	5553.449	6652.907
4	6431.633 <sup>a</sup>	240.221	5951.590	6911.676
5	5769.025 <sup>a</sup>	385.641	4998.383	6539.666
6	6334.763 <sup>a</sup>	296.426	5742.403	6927.122

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Shade

2- Average shade of the coffee crop.

### Tests of Between-Subjects Effects

Dependent Variable: %Sombrío

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
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Corrected Model	.690 <sup>a</sup>	6	.115	1.777	.118	.145
Intercept	29.576	1	29.576	456.871	.000	.879
NplantasPro	.417	1	.417	6.443	.014	.093
ARL	.250	5	.050	.772	.573	.058
Error	4.078	63	.065			
Total	47.952	70				
Corrected Total	4.769	69				

a. R Squared = .145 (Adjusted R Squared = .063)

### Estimates

Dependent Variable: %Sombrio

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.851 <sup>a</sup>	.082	.687	1.014
2	.738 <sup>a</sup>	.086	.566	.910
3	.865 <sup>a</sup>	.069	.728	1.002
4	.751 <sup>a</sup>	.060	.631	.871
5	.680 <sup>a</sup>	.096	.488	.873
6	.786 <sup>a</sup>	.074	.638	.934

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Weed/soil management

1- Percentage of respondents who are using integrated soil management.

### Tests of Between-Subjects Effects

Dependent Variable: SuelosDuo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.961 <sup>a</sup>	6	.327	1.432	.217	.120
Intercept	6.290	1	6.290	27.555	.000	.304
NplantasPro	.039	1	.039	.172	.679	.003
ARL	1.899	5	.380	1.663	.157	.117
Error	14.382	63	.228			
Total	26.000	70				
Corrected Total	16.343	69				

a. R Squared = .120 (Adjusted R Squared = .036)

### Estimates

Dependent Variable: SuelosDuo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.311 <sup>a</sup>	.154	.005	.618
2	.346 <sup>a</sup>	.162	.022	.669
3	.350 <sup>a</sup>	.129	.092	.607
4	.333 <sup>a</sup>	.113	.108	.558
5	.854 <sup>a</sup>	.181	.492	1.215
6	.243 <sup>a</sup>	.139	-.035	.521

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Pest and disease management

- 1- Percentage of respondents who are implementing the RERE (A cultural practice to control the coffee borer beetle).

### Tests of Between-Subjects Effects

Dependent Variable: Brocaduo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.375 <sup>a</sup>	6	.063	1.159	.339	.099
Intercept	.150	1	.150	2.790	.100	.042
NplantasPro	.005	1	.005	.097	.757	.002
ARL	.375	5	.075	1.390	.240	.099
Error	3.396	63	.054			
Total	4.000	70				
Corrected Total	3.771	69				

a. R Squared = .099 (Adjusted R Squared = .014)

### Estimates

Dependent Variable: Brocaduo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.204 <sup>a</sup>	.075	.055	.353
2	.004 <sup>a</sup>	.079	-.153	.162
3	-.003 <sup>a</sup>	.063	-.128	.123
4	.055 <sup>a</sup>	.055	-.054	.165

5	.142 <sup>a</sup>	.088	-.034	.317
6	-.003 <sup>a</sup>	.068	-.138	.132

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

2- Percentage of respondents who are using pesticides (for controlling pest and diseases).

### Tests of Between-Subjects Effects

Dependent Variable: PlagyEnfe

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.902 <sup>a</sup>	6	.317	1.560	.174	.129
Intercept	5.131	1	5.131	25.255	.000	.286
NplantasPro	.258	1	.258	1.270	.264	.020
ARL	1.876	5	.375	1.846	.117	.128
Error	12.798	63	.203			
Total	21.000	70				
Corrected Total	14.700	69				

a. R Squared = .129 (Adjusted R Squared = .046)

### Estimates

Dependent Variable: PlagyEnfe

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.171 <sup>a</sup>	.145	-.119	.460
2	-.031 <sup>a</sup>	.153	-.337	.274
3	.376 <sup>a</sup>	.122	.133	.620
4	.279 <sup>a</sup>	.106	.067	.491
5	.581 <sup>a</sup>	.171	.240	.922
6	.435 <sup>a</sup>	.131	.173	.697

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Nutrition

1- Doses of fertilizer per coffee tree

### Tests of Between-Subjects Effects

Dependent Variable: Gramospalo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	10650.146 <sup>a</sup>	6	1775.024	.186	.980	.017
Intercept	484319.540	1	484319.540	50.816	.000	.446
NplantasPro	625.224	1	625.224	.066	.799	.001
ARL	10542.612	5	2108.522	.221	.952	.017
Error	600445.697	63	9530.884			
Total	1423477.000	70				
Corrected Total	611095.843	69				

a. R Squared = .017 (Adjusted R Squared = -.076)

### Estimates

Dependent Variable: Gramospalo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	122.948 <sup>a</sup>	31.386	60.229	185.668
2	119.539 <sup>a</sup>	33.092	53.409	185.669
3	96.195 <sup>a</sup>	26.353	43.534	148.857
4	94.657 <sup>a</sup>	23.012	48.671	140.644
5	104.256 <sup>a</sup>	36.943	30.431	178.080
6	121.275 <sup>a</sup>	28.396	64.530	178.021

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

2- Percentage of respondents who are using the pulp as organic fertilizer

### Tests of Between-Subjects Effects

Dependent Variable: Reutilización

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.743 <sup>a</sup>	6	.124	.480	.821	.044
Intercept	12.598	1	12.598	48.861	.000	.437
NplantasPro	.289	1	.289	1.121	.294	.017
ARL	.323	5	.065	.251	.938	.019
Error	16.243	63	.258			
Total	41.000	70				
Corrected Total	16.986	69				

a. R Squared = .044 (Adjusted R Squared = -.047)

### Estimates

Dependent Variable: Reutilización

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.531 <sup>a</sup>	.163	.205	.857
2	.589 <sup>a</sup>	.172	.245	.933
3	.622 <sup>a</sup>	.137	.349	.896
4	.499 <sup>a</sup>	.120	.259	.738
5	.704 <sup>a</sup>	.192	.320	1.088
6	.648 <sup>a</sup>	.148	.352	.943

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Picking

1- Percentage of respondents who are manually selecting defective beans before hulling

### Tests of Between-Subjects Effects

Dependent Variable: Recolección

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.324 <sup>a</sup>	6	.054	.312	.928	.029
Intercept	1.314	1	1.314	7.609	.008	.108
NplantasPro	.073	1	.073	.421	.519	.007
ARL	.305	5	.061	.353	.879	.027
Error	10.876	63	.173			
Total	14.000	70				
Corrected Total	11.200	69				

a. R Squared = .029 (Adjusted R Squared = -.064)

### Estimates

Dependent Variable: Recolección

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.216 <sup>a</sup>	.134	-.051	.483
2	.350 <sup>a</sup>	.141	.068	.631

3	.133 <sup>a</sup>	.112	-.091	.357
4	.222 <sup>a</sup>	.098	.026	.417
5	.138 <sup>a</sup>	.157	-.176	.452
6	.157 <sup>a</sup>	.121	-.084	.399

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## Farm management

1- Percentage of respondents who are using accounting records

### Tests of Between-Subjects Effects

Dependent Variable: Registros

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2.120 <sup>a</sup>	6	.353	2.629	.024	.200
Intercept	.527	1	.527	3.924	.052	.059
NplantasPro	.165	1	.165	1.227	.272	.019
ARL	1.964	5	.393	2.923	.020	.188
Error	8.466	63	.134			
Total	13.000	70				
Corrected Total	10.586	69				

a. R Squared = .200 (Adjusted R Squared = .124)

### Estimates

Dependent Variable: Registros

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.024 <sup>a</sup>	.118	-.212	.259
2	.247 <sup>a</sup>	.124	-.001	.496
3	.127 <sup>a</sup>	.099	-.070	.325
4	.443 <sup>a</sup>	.086	.271	.616
5	-.007 <sup>a</sup>	.139	-.285	.270
6	.069 <sup>a</sup>	.107	-.144	.282

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## Hulling

1- Percentage of respondents who have appropriate equipment

**Tests of Between-Subjects Effects**

Dependent Variable: Despupadoraduo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	2.370 <sup>a</sup>	6	.395	2.495	.031	.192
Intercept	21.326	1	21.326	134.720	.000	.681
NplantasPro	.301	1	.301	1.901	.173	.029
ARL	1.650	5	.330	2.085	.079	.142
Error	9.973	63	.158			
Total	54.000	70				
Corrected Total	12.343	69				

a. R Squared = .192 (Adjusted R Squared = .115)

**Estimates**

Dependent Variable: Despupadoraduo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.532 <sup>a</sup>	.128	.276	.787
2	.589 <sup>a</sup>	.135	.320	.859
3	.693 <sup>a</sup>	.107	.479	.908
4	.887 <sup>a</sup>	.094	.700	1.075
5	.990 <sup>a</sup>	.151	.689	1.291
6	.897 <sup>a</sup>	.116	.666	1.128

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

**Fermentation**

1- Percentage of respondents who have the appropriate equipment

**Tests of Between-Subjects Effects**

Dependent Variable: Fermentaciónduo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3.742 <sup>a</sup>	6	.624	3.358	.006	.242

Intercept	14.422	1	14.422	77.651	.000	.552
NplantasPro	.663	1	.663	3.571	.063	.054
ARL	2.380	5	.476	2.562	.036	.169
Error	11.701	63	.186			
Total	47.000	70				
Corrected Total	15.443	69				

a. R Squared = .242 (Adjusted R Squared = .170)

### Estimates

Dependent Variable: Fermentaciónduo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.447 <sup>a</sup>	.139	.170	.724
2	.383 <sup>a</sup>	.146	.092	.675
3	.612 <sup>a</sup>	.116	.380	.844
4	.831 <sup>a</sup>	.102	.628	1.034
5	.985 <sup>a</sup>	.163	.659	1.311
6	.721 <sup>a</sup>	.125	.470	.971

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Drying

1- Percentage of respondents who have appropriate equipment

### Tests of Between-Subjects Effects

Dependent Variable: Secadoduo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	1.656 <sup>a</sup>	6	.276	1.206	.315	.103
Intercept	13.721	1	13.721	59.966	.000	.488
NplantasPro	.628	1	.628	2.744	.103	.042
ARL	.640	5	.128	.560	.731	.043
Error	14.416	63	.229			
Total	45.000	70				
Corrected Total	16.071	69				

a. R Squared = .103 (Adjusted R Squared = .018)

### Estimates

Dependent Variable: Secadoduo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.546 <sup>a</sup>	.154	.239	.853
2	.493 <sup>a</sup>	.162	.169	.817
3	.613 <sup>a</sup>	.129	.355	.871
4	.665 <sup>a</sup>	.113	.439	.890
5	.843 <sup>a</sup>	.181	.481	1.204
6	.722 <sup>a</sup>	.139	.444	1.000

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

### Waste management

1- Percentage of respondents who have compost equipment

### Tests of Between-Subjects Effects

Dependent Variable: Pulpaduo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.938 <sup>a</sup>	6	.156	.630	.706	.057
Intercept	14.318	1	14.318	57.646	.000	.478
NplantasPro	.245	1	.245	.988	.324	.015
ARL	.598	5	.120	.482	.789	.037
Error	15.647	63	.248			
Total	43.000	70				
Corrected Total	16.586	69				

a. R Squared = .057 (Adjusted R Squared = -.033)

### Estimates

Dependent Variable: Pulpaduo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.529 <sup>a</sup>	.160	.209	.849
2	.697 <sup>a</sup>	.169	.360	1.035
3	.624 <sup>a</sup>	.135	.355	.893

4	.499 <sup>a</sup>	.117	.264	.733
5	.705 <sup>a</sup>	.189	.328	1.082
6	.732 <sup>a</sup>	.145	.443	1.022

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## Reselection

1- Percentage of respondents who reselected during the previous harvest

### Tests of Between-Subjects Effects

Dependent Variable: ReselecciónDuo

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	.511 <sup>a</sup>	6	.085	1.078	.385	.093
Intercept	33.174	1	33.174	420.107	.000	.870
NplantasPro	.026	1	.026	.329	.568	.005
ARL	.414	5	.083	1.050	.397	.077
Error	4.975	63	.079			
Total	64.000	70				
Corrected Total	5.486	69				

a. R Squared = .093 (Adjusted R Squared = .007)

### Estimates

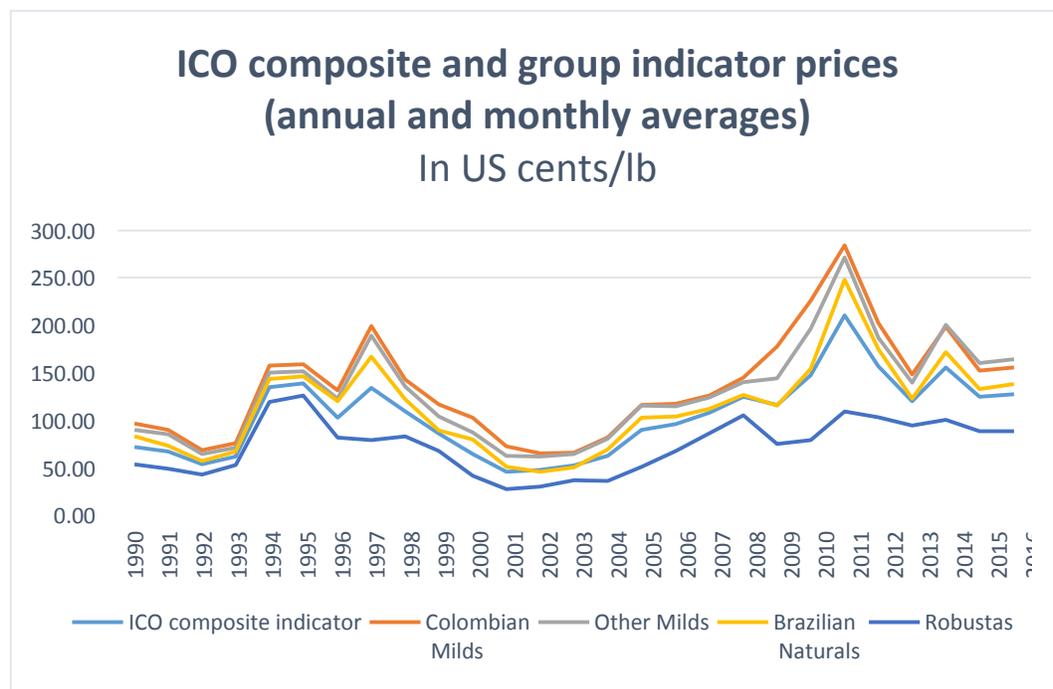
Dependent Variable: ReselecciónDuo

ARL	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
1	.809 <sup>a</sup>	.090	.629	.990
2	.788 <sup>a</sup>	.095	.597	.978
3	.922 <sup>a</sup>	.076	.771	1.074
4	1.000 <sup>a</sup>	.066	.867	1.132
5	.997 <sup>a</sup>	.106	.785	1.210
6	.911 <sup>a</sup>	.082	.748	1.074

a. Covariates appearing in the model are evaluated at the following values: NplantasPro = 6251.00.

## V.6. Coffee indicator prices

Figure 14 Coffee Indicator prices. Source: International Coffee Organization, 2017.



### Prices paid to growers in exporting countries

Colombian milds: Colombia; Kenya (until 2004); Tanzania (until 2008).

Other Milds: Bolivia, Burundi, Cameroon, Dem. Rep. Of Congo, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, India, Jamaica, Madagascar, Malawi, Mexico, Nicaragua, Panama, Papua New Guinea, Peru, Rwanda, Sri Lanka, Uganda, Venezuela, Zambia, Zimbabwe.

Brazilian Naturals: Angola, Brazil, Ethiopia, Indonesia, Philippines, Thailand, Vietnam.

Robustas: Angola, Benin, Brazil, Burundi, Cameroon, Central African Republic, Dem. Rep. of Congo, Rep. of Congo, Côte d'Ivoire, Ecuador, Gabon, Ghana, Guinea, India, Indonesia, Liberia, Madagascar, Nigeria, Papua New Guinea, Philippines, Sierra Leone, Sri Lanka, Tanzania, Thailand, Togo, Trinidad & Tobago, Uganda, Vietnam.

## V.7. Extent, Coherence and Closure evaluation

### V.7.1. Riosucio

Table 38 Conditions' evaluation for each LRA in Riosucio from 1990 until 2015. Source: the author.

Extent <sup>1360</sup>														
Uses		LRA Standard	LRA MH	LRA Natural	LRA Fairtrade	LRA Organic	LRA La Vereda	LRA Nespresso	LRA Standard	LRA Reg/Starbucks	LRA CS-La Vereda	LRA CS Fairtrade	LRA CS Organic	LRA CS Nespresso
Synthesis	Concentration	17%	22%	47%	34%	47%	69%	30%	62%	62%	38%	48%	48%	40%
	Regulated/observed uses	17%	36%	69%	57%	69%	43%	80%	37%	37%	93%	74%	83%	95%
	Regulated uses	4.5	9.4	18.0	14.9	18.0	11.2	20.9	9.7	9.7	24.2	19.2	21.5	24.7
Planting	Diversification		1	1		1	1		1	1	1	1	1	1
	Variety	1	1	1	1	1	1	1	1	1	1	1	1	1
	Renovation of Coffee trees			1	1	1	1	1	1	1	1	1	1	1
	Planting density								1	1	1	1	1	1
	Shade			1		1	1		1	1	1	1	1	1
Cultivation	Soil management			1		1	1				1	1	1	1
	Coffee borer beetle management										1	1	1	1

<sup>1360</sup> Each activity observed/regulated is coded as 1, in all other cases it is coded as 0.

	Pest and disease management										1	1	1	1
	Nutrition		1	1		1	1	1					1	1
	Hedgerowing			1		1							1	
	Picking			1	1	1	1	1			1	1	1	1
	Farm management							1			1	1	1	1
Post-Harvesting	Hulling			1	1	1	1	1	1	1	1	1	1	1
	Fermentation			1	1	1	1	1	1	1	1	1	1	1
	Drying			1	1	1	1	1	1	1	1	1	1	1
	Waste management			1	1	1	1	1			1	1	1	1
	Reselection													
Trading	Purchasing	1	1	1	1	1	1	1	1	1	1	1	1	1
	Threshing and sorting	1	1	1	1	1	1	1	1	1	1	1	1	1
	Bulking and export	1	1	1	1	1	1	1	1	1	1	1	1	1
Roasting	Blending			1	1	1		1			1	1	1	1
	Roasting							1			1		1	1
	Packaging and retailing			1	1	1		1			1	1	1	1
Communication Strategy	Communication		1	1	1	1		1			1	1	1	1
Brewing	Grinding							1			1			1
	Brewing							1			1			1
Coherence														

	LRA Standard	LRA MH	LRA Natural	LRA Fairtrade	LRA Organic	LRA La Vereda	LRA Nespresso	LRA CS Standard	LRA Reg/Starbucks	LRA CS-La Vereda	LRA CS Fairtrade	LRA CS Organic	LRA CS Nespresso
<b>Services</b>	Appellation Café de Colombia; Monetary services	Fairtrade + indigenous + monetary services	Natural = indigenous+ Fairtrade + Environmentally Responsible + clean cup + citric acid; monetary services	Fairtrade symbolic service.	Natural coffee symbolic service	Indigenous coffee; citric acid; monetary services	Environmentally responsible + winy; and monetary services		Environmentally responsible; ethical traded and terroir expression.	indigenous coffee + environmentally responsible and the citric acid, monetary services	Fairtrade symbolic service.	Natural coffee symbolic service; Exceptional coffee	environmentally responsible + winy; and monetary services
<b>Aligned actors</b>	Producers and the FNC	CRIDEC (SHP); Cooperative (PT); FNC (SHP) and MH (SHC)	Asprocafé (PF), Indigenous Movement (SHP), FNC/Comité (SHP), Cooperative (PT), Equal Exchange (PT) and MH (SHC)	Asprocafé (PF), Cooperative (PT) and MH (SHC)	Asprocafé (PF), Cooperative (PT), MH (SHC), and Equal Exchange (PR)	FNC (SHP)	Cooperative (PT), FNC/Comité (SHP), Nespresso (PR); Technoserve and Fundanatura (SHC)	Local authority (SHP) FNC (SHP). All other actors.	Cooperative (PT) Starbucks (PR)	FNC/Comité (SHP); cooperative (PT); Keurig (PR).	Asprocafé (PF), Cooperative (PT) and MH (SHC)	Asprocafé (PF), Cooperative (PT), MH (SHC), and Equal Exchange (PR)	Cooperative (PT), FNC/Comité (SHP), Nespresso (PR); SAN (SHC)
<b>Profiling institution</b>	Minimum quality regulations	Minimum quality regulations	Organic certification	Fairtrade certification	Organic certification	NA	TASQ® / Rainforest Alliance	Minimum quality regulations	CAFE Practices	RSSG/ Rainforest Alliance	Fairtrade certification; Normas asprocafé	Organic certification; Normas asprocafé	TASQ® / Rainforest Alliance
<b>Governance mechanism</b>	FNC/Comité/Coffee farmers cooperatives/ Extension service	Convenio MH/Junta Administradora/Promoters	Asprocafé/Internal Control System/SAC EV/Comité asesor CLV/Escuela y Café	Asprocafé /Internal Control System	Asprocafé /Internal Control System/Alliance Asprocafé -Equal	Fractured SACEV	Clúster Expocafé/ AAA Program/ Premiums	Mesas de Concertación	Commercial agreement conditioning quality; economic accountability and external audit	SACEV	Asprocafé /Internal Control System	Asprocafé /Internal Control System/Alliance Asprocafé -Equal	Clúster Expocafé/AAA Program

<b>Output</b>	Coffee public policy	Loans and assistance to Associative groups	Asprocafé outputs; Sacev outputs shaped by the Inter-institutional committee	Subsidies for renovation and equipment with the Fairtrade Social premium	Subsidies for diversification, soil management; and organic farming through both premiums and the Small Farmer Fund	NA	"Implementación AAA" project	PSF - PMC	PSF - PMC; Improvement plans	PSF - PMC; Alianzas productivas and Procompite	PSF - PMC	PSF - PMC; Cooperación in quality project.	PSF - PMC; "Arbol de vida, fertilización, Rainforest Alliance certificación" projects; and the SCP field level project.
<b>Closure</b>													
	<b>LRA Standard</b>	<b>LRA MH</b>	<b>LRA Natural</b>	<b>LRA Fairtrade</b>	<b>LRA Organic</b>	<b>LRA La Vereda</b>	<b>LRA Nespresso</b>	<b>LRA Standard</b>	<b>LRA Reg/Starbucks</b>	<b>LRA CS-La Vereda</b>	<b>LRA CS Fairtrade</b>	<b>LRA CS Organic</b>	<b>LRA CS Nespresso</b>
<b>Barriers of entry</b>	Product differentiation at the traders level	Product differentiation at the producers level	Double product differentiation (origin and organic) at the producers level	Product differentiation at the retailing level	Double product differentiation (origin and organic) at the producers level	Any	Product differentiation at the roasting level	Any	Product differentiation at the roasting level	Double product differentiation (origin and indigeno us coffee) at the producers level	Product differentiation at the retailing level	Triple product differentiation (origin, organic, specialty coffee) at the producers level	Product differentiation at the roasting level

## V.7.2. Buesaco

Table 39 Conditions' evaluation for each LRA in Riosucio from 1990 until 2015. Source: the author.

Extent <sup>1361</sup>											
Uses		LRA Standard	LRA Standard-plus	LRA EdN	LRA ACDI/VOCA N	LRA ACDI/VOC A S	LRA Specialty	LRA Nespresso	LRA CCEsp/Starbucks	LRA Cultura	LRA Cnilson
Synthesis	Concentration	17%	9%	5%	34%	34%	11%	33%	37%	27%	12%
	Regulated/observed uses	17%	31%	60%	88%	88%	48%	85%	60%	52%	64%
	Regulated uses	4.5	8.2	15.6	22.9	22.9	12.4	22.1	15.6	13.4	16.7
Planting	Diversification				1	1		1			
	Variety	1	1	1	1	1		1	1		
	Renovation of Coffee trees				1	1		1	1		
	Planting density				1	1		1	1		
	Shade							1			
Cultivation	Soil management				1	1					1
	Coffee borer beetle management				1	1					
	Pest and disease management				1	1					
	Nutrition										
	Hedgerowing										
	Picking				1	1	1	1	1	1	1

<sup>1361</sup> Each activity observed/regulated is coded as 1, in all other cases it is coded as 0.

	Farm management										
Post-Harvesting	Hulling				1	1		1	1	1	
	Fermentation				1	1		1	1	1	
	Drying				1	1		1	1	1	
	Waste management				1	1					
	Reselection						1	1	1	1	1
Trading	Purchasing	1	1	1	1	1	1	1	1	1	1
	Threshing and sorting	1	1	1	1	1	1	1	1	1	1
	Bulking and export	1	1	1	1	1	1	1	1	1	1
Roasting	Blending			1	1	1	1	1	1	1	1
	Roasting			1	1	1	1	1			1
	Packaging and retailing			1	1	1	1	1	1	1	1
Communication Strategy	Communication		1	1	1	1	1	1	1	1	1
Brewing	Grinding			1	1	1		1			1
	Brewing			1	1	1		1			1
Coherence											
		LRA Standard	LRA Standard-plus	LRA EdN	LRA ACDI/VOCA N	LRA ACDI/VOCA S	LRA Specialty	LRA Nespresso	LRA CCEsp/Starbucks	LRA Cultura	LRA Cnilson

Services	Appellation Café de Colombia; Monetary services	Terroir expression; Monetary services	Terroir expression	Drugs substitution = Terroir expression; Ethically traded+ Environmentally responsible + Brand reputation; Monetary services	Drugs substitution = Terroir expression ; Ethically traded+ Environmentally responsible + Brand reputation; Monetary services	Exceptional coffee; Poverty reduction; Monetary services	Environmentally responsible + Brand reputation; Monetary services	Exceptional coffee; Transparent coffee; Monetary services	Poverty reduction; Exceptional coffee; Transparent coffee; Monetary services	Shared value; Exceptional coffee; Transparent coffee; Monetary services
Aligned actors	Producers and the FNC	Cooperatives (PT) and the FNC (SHP)	EdN (PT) and Starbucks (PR)	Asoveracruz (PF), Cooperativas (PT), FNC/Comité (SHP), Nespresso (PR); ACDI/VOCA (SHC)	Producers associations (PF); EdN (PT) Starbucks (PR); ACDI/VOCA (SHC)	Producers mobilized through the political party (PT); FS (SHP); Gobernación (SHP)	Asoveracruz (PF), Cooperativas (PT), FNC/Comité (SHP), Nespresso (PR).	CCespeciales (PT); Caravela (PR). Also Carcafé (PT) ; Starbucks (PR).	Asoveracruz (PF); Café con Altura (PT); FS (SHP).	Nilson's producers network (PF); Nilson (PT); Inconexus (PT); Royal Coffee (PT) Specialty roasters (PR)
Profiling institution	Minimum quality regulations	Minimum quality regulations	Minimum quality regulations	TASQ®	CAFE Practices	Q System	TASQ®	Q System	Q System	Q System
Governance mechanism	FNC/Comité/ Coffee farmers cooperatives / Extension service	FNC/Comité/ Coffee farmers cooperatives / Extension service	Purchase agreement	Clúster FNC/Extension service replicated by Asoveracruz/Pr emiums	Commercial agreement conditioning quality; economic accountability and external audit	Comisión/A lianza Café	Clúster FNC/Extension service replicated by Asoveracruz/Pr emiums	Informal Agreement with Caravela/ Commercial agreement with Carcafé conditioning quality; economic accountability and external audit	Café con Altura Buesaco SAS/Café con Altura's handbook/Premiums	Contract Nilson-Inconexus/ Coffee Auction/ Premiums

Output	Coffee public policy	Specialty coffee registration and promotion program	NA	Familias en Acción; proyectos productivos; Strategic Specialty Coffee Plan; SCP 1; Implementation project; SCP 2	DGIS' call of ideas; SCP 1; SCP 2; SENA's technical assistance project.	Laboratorio de Paz; Action Plan 2011; Corseagrocol's Technical assistance	PSF		Extension service by FS	NA
Closure										
	LRA Standard	LRA Standard-plus	LRA EdN	LRA ACDI/VOCA N	LRA ACDI/VOCAS	LRA Specialty	LRA Nespresso	LRA CCEsp/Starbucks	LRA Cultura	LRA Cnilson
Barriers of entry	Product differentiation at the traders level	Product differentiation potentially at the producers level	Product differentiation at the roaster level	Product differentiation at the roaster level	Product differentiation at the roaster level	Product differentiation potentially at the producers level	Product differentiation at the roaster level	Product differentiation potentially at the producers level	Product differentiation potentially at the producers level	Product differentiation potentially at the producers level

### V.7.3. Synthesis of both Riosucio and Buesaco

Table 40 Synthesis of conditions' evaluation. Source: the author.

Riosucio						
LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Standard	NA	NA	NA	Baseline: 17 pp evenly distributed	Baseline: Failed: two-way coordination among producers	Baseline: Barriers at the traders level
LRA MH	SHP+SHC	Cooperative	Presence	Plus 19 pp evenly distributed (over the incumbent LRA Standard)	Successful two-way coordination among all profilers	Product differentiation (origin)
LRA Natural	PT+SHP+SHC	Selfishly-Cooperative	Presence	Plus 33 pp evenly distributed (over the incumbent LRA MH)	Successful two-way coordination among all profilers	Product differentiation (origin and organic)
LRA Fairtrade	FP+FT+SHC	Selfishly	Presence	Less 12 pp evenly distributed (over the incumbent LRA Natural)	Failed one-way coordination among all profilers	Barriers at the traders level

LRA Organic	FP+FT+FR+SHC	Selfishly	Presence	Plus 12 pp evenly distributed (over the incumbent LRA Natural)	Successful two-way coordination among all profilers	Product differentiation (origin and organic)
LRA La Vereda	SHP	Selfishly	Absence	Less 26 pp concentrated (over the incumbent LRA Natural)	Failed, any coordination.	Any barrier
LRA Nespresso	PT+PR+SHP+SHC	Strategically	Presence	Plus 37 pp evenly distributed (over the incumbent LRA Natural)	Successful two-way coordination among all profilers	Barriers at the roaster level
LRA Standard Climate Smart	PT+PR+SHP+SHC	Cooperative	Presence	Plus 20 pp concentrated (over the incumbent LRA Standard for the whole set of LRAs)	Successful two-way coordination among all profilers	Barriers at the traders level
LRA Reg/Starbucks	PT+PR+SHP+SHC	Cooperative	Presence	Plus 20 pp concentrated (over the incumbent LRA Standard)	Successful two-way coordination among all profilers	Barriers at the roaster level
<b>Buesaco</b>						
LRA	Coalition	Mobilization of AR	Institutional Creativity	Extent	Coherence	Closure
LRA Standard	NA	NA	NA	Baseline: 17 pp evenly distributed	Baseline: Failed: two-way coordination among producers	Baseline: Barriers at the traders level
LRA Standard-plus	PF+SHP	Selfishly	Absence	Plus 14 pp evenly distributed (over the incumbent LRA Standard)	Failed: two-way coordination among producers	Product differentiation (potentially origin)
LRA EdN	PT+PR	Strategically	Absence	Plus 43 pp evenly distributed (over the incumbent LRA Standard)	Failed: one-way coordination among profilers	Barriers at the roaster level
LRA ACDI/VOCA N	PF+PT+PR+SHP	Strategically / Cooperative	Presence	Plus 57 pp evenly distributed (over the incumbent LRA Standard-Plus)	Successful: two-way coordination among profilers	Barriers at the roaster level
LRA ACDI/VOCA S	PF+PT+PR+SHC	Strategically / Cooperative	Presence	Plus 28 pp evenly distributed (over the incumbent LRA EdN)	Successful: two-way coordination among profilers	Barriers at the roaster level
LRA Specialty	PF+SHP	Cooperative / Selfishly	Presence	Less 40 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: two-way coordination among producers	Product differentiation (potentially origin)
LRA Nespresso	PF+PT+PR+SHP	Strategically / Cooperative	Presence	Less 3 pp evenly distributed (over LRAs ACDI/VOCA N&S)	Failed: one-way coordination among traders	Barriers at the roaster level
LRA CCEsp/Starbucks	PF+PT	Strategically	Absence	Less 28 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: one-way coordination among traders	Product differentiation (potentially origin, specialty)
LRA Cultura	PF+PT+SHP	Strategically	Absence	Less 36 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Failed: one-way coordination among producers	Product differentiation (potentially origin, specialty)

LRA Nilson	PF+PT+PR	Strategically	Presence	Less 26 pp evenly distributed (over both incumbents LRA ACDI/VOCA N&S)	Successful two-way coordination among all profilers	Product differentiation (origin and specialty)
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\*SHP = Stakeholders in production; SHC = Stakeholders in consumption; PF = Profilers farmers; PT = Profilers traders; PR = Profilers roasters

## V.8. Supporting tables for analyzing the second hypothesis

### V.8.1. Riosucio

- Incumbent LRA Standard; new born LRA MH (1989-1996)

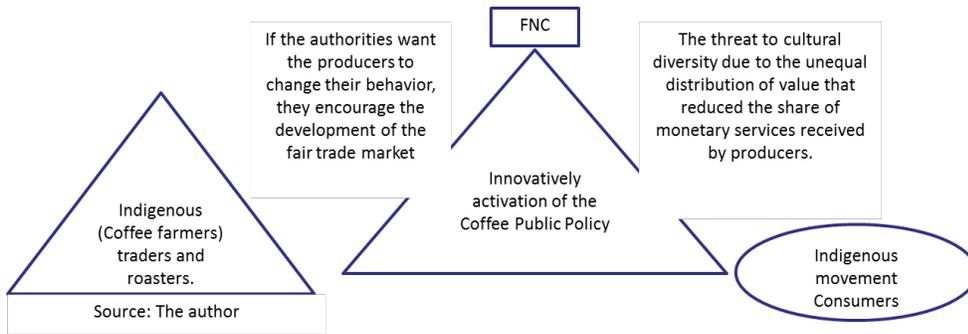
Table 41 Mobilization of resources of action LRA MH. Source: the author

	Mobilization of Action Resources	Changes in the AR endowment	Mobilization typology
(Coffee growers) indigenes			Cooperative mobilization of the MH's <i>organization</i> , FNC's <i>law</i> and Cooperative's <i>property</i> to produce <i>money</i> for the indigenous movement that resulted in <i>political support</i> to move forward their demanded services.
SH production (Indigenous movement)	AR <i>consensus</i>	Obtained AR <i>money</i> and AR <i>political support</i>	
SH production (Asproinca)			
Cooperative	AR <i>property</i>		
FNC	AR <i>law</i>		
SH Consumption (Max Havelaar)	AR <i>organization</i>		

Table 42 Institutional creativity LRA MH. Source: the author

Institutional Creativity	Description
Deliberative scenario	Ad-hoc coordination mechanism at the beginning of the sequence. Formalized in the Junta Administradora of the Convenio since 1993.
Uses of Resource constituents agreed on	Use of <i>infrastructures</i> to diversify crops; <i>know-how</i> to fertilize coffee crops with synthetic fertilizers and during the whole activities of the trading process to trace the Fairtrade coffee; and <i>know-to-appreciate</i> during the communication strategy to share the meaning of the Fairtrade market.
Borders	Inclusive with all indigenous (farmers) of the radius of action of the cooperative owners of properties up to 2ha, and traders and roasters associated to the Fairtrade movement. Excluding for coffee growers with higher properties.
Profile	A combined provision of the merged Fairtrade-indigenous coffee symbolic services and monetary services (a premium when buying and higher productivity)

Figure 15 Actors' coalitions LRA MH. Source: the author



- Incumbent LRA MH, Newborn LRA Natural (1997-2003):

Table 43 Mobilization of Resources LRA Natural. Source: the author

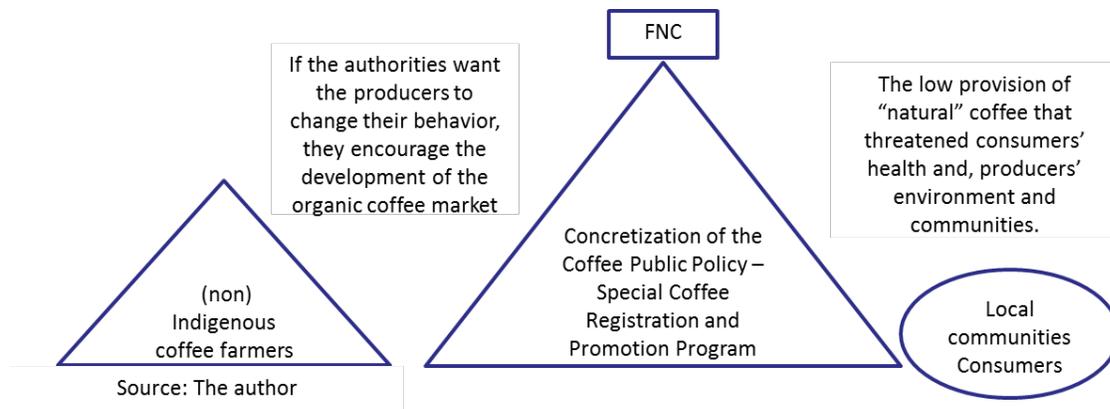
	Mobilization of Action Resources	Changes in the AR endowment	Mobilization typology
(Non) Indigenous small coffee farmers (Asprocafé)	AR personal information	AR Obtained personal Obtained information	Failed strategic mobilization of the AR consensus of the indigenous movement.
SH production (Indigenous movement)		Lost AR consensus Lost AR political support Obtained AR information	Selfishly mobilization of the AR organization of MH over the Cooperative and the CRIDEC.  Strategic mobilization of the AR personal of the Comité and AR property of the Cooperative to counterbalance the AR organization of MH and the AR personal of Asprocafé.
SH production (Asproinca)	AR information		
Cooperative	AR property	Obtained AR political support	
FNC - Comité	AR personal	Obtained AR information	Cooperative mobilization of the AR information of Asproinca and Asprocafé to endow with it both the indigenous movement and the Comité-FNC.
SH Consumption (MH)	AR organization	Obtained AR law	

Table 44 Institutional Creativity LRA Natural. Source: the author.

Institutional Creativity	Description
Deliberative scenario	Inter-institutional Committee

<b>Uses of Resources</b>	Use <i>infrastructures</i> to establish integrated “mestizo” production systems, affecting three activities in the planting process (diversification, renovation, and shade); <i>know-how</i> to implement “mestizo” agroecology practices, affecting four activities in the cultivation process (soil management, nutrition, hedgerows, picking) and four activities in the post-harvesting (hulling, fermentation, drying, waste management), and all activities in the trading and one in the roasting (blinding); <i>know-to-appreciate</i> through the organic certification and the Café la Vereda trademark, affecting two activities during roasting and communication strategy (packaging and communication).
<b>Borders</b>	Inclusive with all (non) indigenous coffee growers located in the cooperative's radius of action, owners of farms up to 5 hectares, and traders and roasters that accept organic agriculture. Excluding for coffee growers who did not accept the organic farming; those with larger crops, and all other cultivating outside Riosucio.
<b>Profile</b>	Provision of both the merged symbolic services around “Café Natural” (namely “Fairtrade coffee”; “Indigenous coffee”; “Environmentally responsible”). Also the “citrus acid” and “clean cup” taste related services and the “monetary” services in terms of premium (Fairtrade premium, organic premium, and SACEV premium).

Figure 16 Actors' coalitions LRA Natural. Source: the author



- Incumbent LRA Natural; newborn LRA Fairtrade; LRA Organic; LRA La Vereda and LRA Nespresso (2004-2011)

Figure 17 Actors coalitions LRA Fairtrade (and LRA Organic): Source the author.

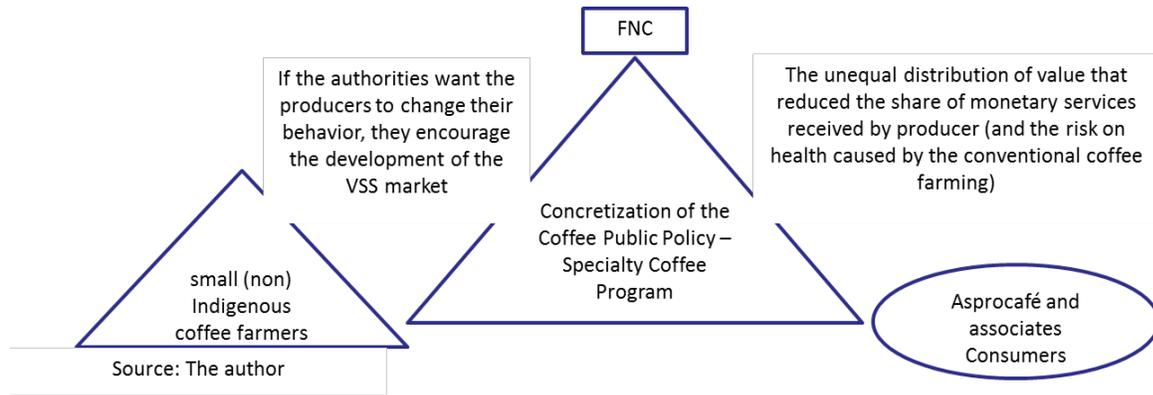


Figure 18 Actor' coalitions LRA La Vereda. Source: the author

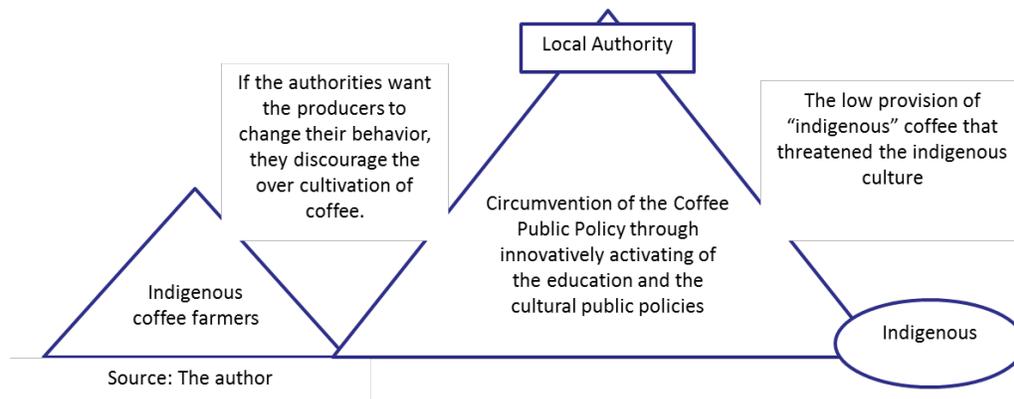
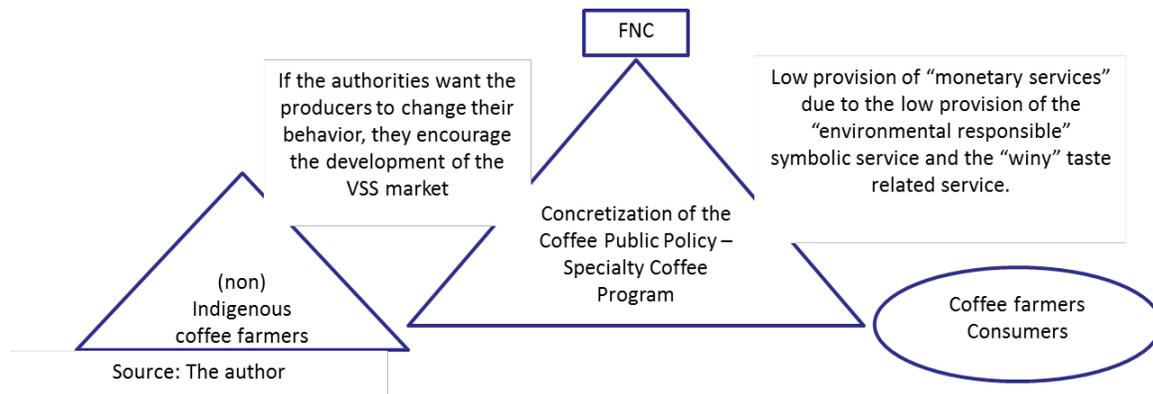


Figure 19 Actors' coalitions LRA Nespresso. Source: the author



- A newborn LRA Standard Climate-Smart shared by all the incumbent LRAs and a newborn LRA Starbucks (2012-2016)

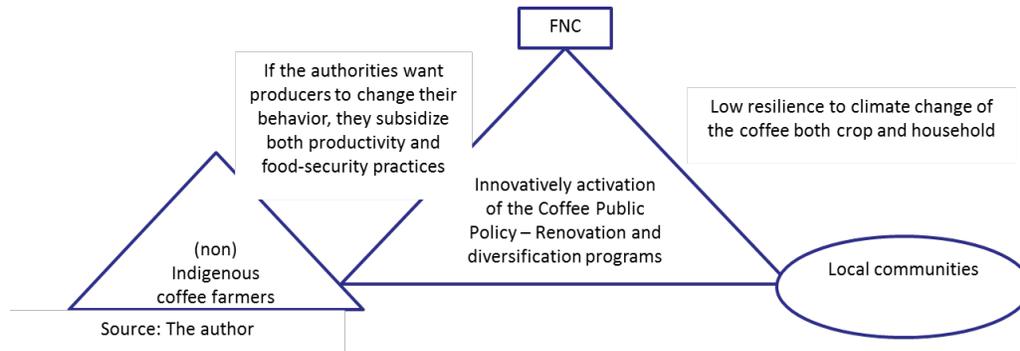
Table 45 Mobilization of resources for the LRA CS. Source: the author

	Mobilization of Action Resources	Changes in the AR endowment	Mobilization typology
(Non) Indigenous small coffee farmers (Asprocafé)			Cooperative mobilization of the AR political support of the indigenous movement to generate deliberative scenarios.
SH production (Indigenous movement)	AR political support AR money AR time	Obtained consensus	
SH production (Asproinca)			Cooperative mobilization of the AR information of the Committee to gain AR consensus.
Cooperative			
FNC - Comité	AR information AR personal AR time	Obtained consensus	Strategic mobilization of the AR money of the indigenous movement and the AR of the Comité, alongside the AR time of both, to strengthen the bonds of trust.
SH Consumption (MH)			

Table 46 Institutional Creativity for the LRA CS. Source: the author

Institutional Creativity	Description
Deliberative scenario	<i>Mesas de concertación</i> promoted by the Alcaldía
Uses of Resource constituents agreed on	Agreement on uses of the Resource constituents to adapt to climate change in the five activities of the planting process (diversification, variety, renovation, density, shade) in all LRAs.
Borders	Uses of the Resource constituents inclusive to all coffee farmers in Riosucio to adapt to climate change. Uses of the Resource constituents exclusively for the participants in each LRA.
Profile	Each LRA profiles the Resources to produce a combination of services, but all are built on a profile adapted to climate change.

Figure 20 Actors' coalition for the LRA CS. Source: the author



### V.8.2. Buesaco

- Incumbent LRA Standard, newborn LRA EdN (1989-2000)

Table 47 Mobilization of RA LRA Standard plus and LRA EdN. Source: The Author.

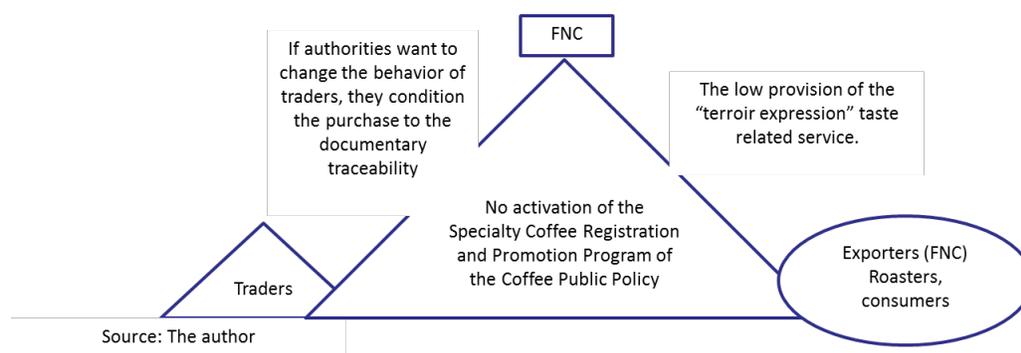
	Mobilization	RA exchange	Type of mobilization
<b>FNC</b>	AR organization AR personal	Lost AR law Maintained AR political support Obtained AR information	The FNC strategically mobilized their AR personal, to produce the AR information and maintain the AR political support, which was selfishly mobilized to neutralize the Comité's mobilization of the AR information.  Starbucks strategically mobilized the AR law and Information to obtain the AR consensus.
<b>Starbucks</b>	AR law		
<b>Starbucks / SCCAA</b>	AR information	Obtained AR consensus	
<b>Comité de Nariño</b>	AR information	Failed to obtain AR consensus	

Table 48 Institutional Creativity LRA EdN. Source: The Author.

Institutional Creativity	Description
<b>Deliberative Scenario</b>	There was not a deliberative scenario
<b>Uses of Resource constituents agreed</b>	There was not any collective agreement on the uses of Resource Constituents. Starbucks contractually demanded EdN changes in the use of <i>infrastructures</i> and <i>know-how</i> throughout all activities in the trading process to implement the documentary traceability, and internally assume the use of <i>know-to-appreciate</i> in the communication strategy process.

<b>Borders</b>	It affected exclusively traders belonging to each LRA.
<b>Profile</b>	It sought to provide a combination of the “terroir expression” and the “clean cup” taste related services; the “brand reputation” and the “appellation Café de Colombia” symbolic services. It did not change the monetary services received by farmers.

Figure 21 Actors' coalitions LRA EdN. Source: the author



- Newborn LRA ACDI/VOCA Nespresso and Starbucks (2001-2007)

Table 49 Mobilization of AR LRA ACDI/VOCA N&S. Source: The Author.

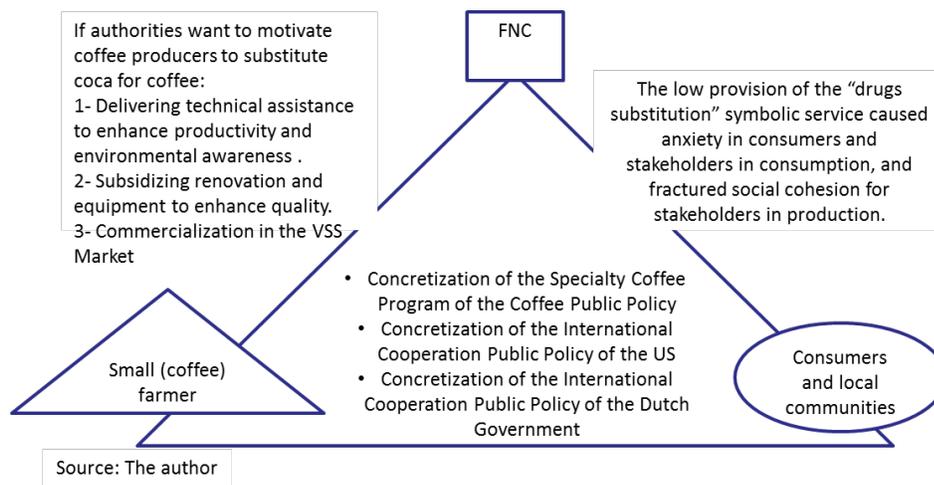
First group	Mobilization	RA exchange	Type of mobilization
<b>FNC - Comité de Nariño - Corponariño</b>	AR personal AR law	Obtained AR money	The FNC/Comité strategically mobilized in coalition with Corponariño their AR <i>personal, law</i> to obtain the AR <i>money</i> from USAID and fund their own operations to profile the Resource.
<b>Starbucks – Conservation International – EdN - OIM</b>	AR money AR consensus AR property AR organization	Obtained AR consensus	Starbucks/EdN strategically mobilized in coalition with Conservation International and the OIM their AR <i>money, consensus, infrastructure, and organization</i> to obtain the AR <i>consensus</i> around the symbolic services provided by the LRA Starbucks.
<b>Asoveracruz</b>		Obtained AR organization	Asoveracruz obtain the AR <i>organization</i>
Second group	Mobilization	RA exchange	Type of mobilization
<b>ACDI/VOCA</b>	AR organization	Obtained AR money	The ACDI/VOCA cooperatively mobilized their AR organization to encourage mobilization of the AR information and personal from both the FNC and the SCAA, to profile the Resource as demanded by specialty markets.
<b>FNC</b>	AR information AR personal		

SCAA	AR information		Asoveracruz among other farmers' associations strategically mobilized its AR organization to facilitate the implementation and obtained the AR information.
Starbucks and Nespresso		Obtained AR organization	
Farmers in Nariño (including Asoveracruz)	AR organization	Obtained AR information	

Table 50 Institutional creativity ACDI/VOCA N&S. Source: The Author

Institutional Creativity	Description
Deliberative Scenario	Indirect deliberative scenario
Uses of Resource constituents agreed	Uses of <i>infrastructures</i> and <i>know-how</i> in the planting (diversification and renovation with pest-resistant varieties); cultivation (integral pest and soil management avoiding chemicals when possible and picking); post-harvesting (proper equipment in the whole activities); and the whole activities during the trading, roasting, and brewing. Use of <i>know-how</i> during the communication strategy to enhance brand reputation.
Borders	Inclusively for all farmers in Nariño and participant traders and roasters (Starbucks and Nespresso).
Profile	It sought to provide a combination of the "terroir expression" taste related services; the "environmentally responsible" and the "ethical traded" symbolic services; in order to increase the monetary services for farmers and produce the "drug substitution" symbolic service.

Figure 22 Actors' coalition LRA ACDI/VOCA N&S. Source: the author



- Newborn LRA Specialty (2008-2011)

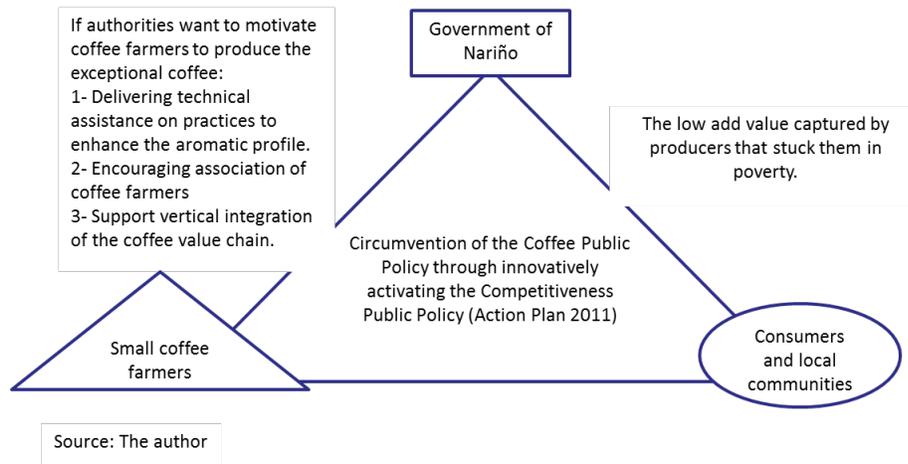
Table 51 Mobilization of AR LRA Specialty. Source: The Author.

	Mobilization	RA exchange	Type of mobilization
FS	AR organization AR information		The FS cooperatively mobilized their AR organization and information to transfer the AR information and organization to farmers. They mobilized it in coalition with the AR infrastructure of Caravela and produced the AR Consensus around the need for an LRA Specialty Coffee.
Caravela	AR property		
Farmers		Obtained AR information Obtained AR organization	
Government of Nariño	AR political support AR consensus AR law	Obtained AR consensus Obtained AR political support	The Government of Nariño cooperatively mobilized their AR law and consensus to empower with the AR organization and consensus the Comisión to produce the LRA Specialty Coffee avoiding the FNC, but it failed.
Comisión	AR organization AR information	Obtained AR organization Obtained AR consensus	The Government of Nariño selfishly mobilized their AR political support and consensus to obtain the AR law and be invested as the coffee public policy local authority.
FNC	AR personal	Lost AR political support Obtained AR property	

Table 52 Institutional Creativity LRA Specialty. Source: The Author.

Institutional Creativity	Description
Deliberative Scenario	The <i>Comisión Regional de Competitividad</i>
Uses of Resource constituents agreed	Uses of <i>infrastructures</i> and <i>know-how</i> in the planting, cultivation and post-harvesting (depending on the environmental offer to enhance the aromatic profile); trading and roasting (through associative enterprises that enhance the aromatic profile depending on the coffee lot); and <i>know-to-appreciate</i> in the Communication Strategy (enhancing Nariño reputation as the best of Colombia).
Borders	Inclusively for all farmers in Nariño.
Profile	To profile the “exceptional coffee” taste related service, vertically integrated into a company own by small farmers, to allow them to capture the whole value and produce the “poverty reduction” symbolic service.

Figure 23 Actors' coalitions LRA Specialty. Source: The Author.



- Incumbent LRA Specialty, newborn LRA Nespresso, LRA CAItura, LRA CCEsp/Starbucks and LRA CNilson (2012-2016)

Table 53 Mobilization of RA Incumbent LRA Specialty. Source: The Author.

First Group	Mobilization	RA exchange	Type of mobilization
<b>FNC - AFC</b>	AR property AR organization	Lost AR consensus	Starbucks strategically mobilized in coalition with the CRS and HGBF their AR <i>organization, consensus</i> and <i>money</i> . Also, the FNC strategically mobilized in coalition with Alliance For Coffee their AR <i>property</i> and <i>organization</i> . In both cases to produce the AR <i>consensus</i> (to access to the resource), but instead, in both cases, they lost it.
<b>Asoveracruz – Local Authority - GEB</b>	AR organization AR money	Obtain AR organization and property	
<b>Comisión</b>	AR law	Obtain AR information	
<b>Starbucks – CRS – HGBF</b>	AR organization AR consensus AR money	Lost AR consensus	Asoveracruz cooperatively mobilized in coalition with the local authority their AR <i>organization</i> and <i>money</i> , to empower with the AR <i>property</i> and <i>organization</i> the GEB, so it became part of the Comisión.  The Comisión strategically mobilized its AR <i>law</i> to produce the AR <i>information</i> .

Table 54 Mobilization of AR LRA Specialty. Source: The Author.

	Mobilization	RA exchange	Type of mobilization
<b>Government of Nariño</b>	RA political support RA law	Obtained RA law	The Governors strategically mobilized their political support to obtain the RA <i>law</i> . The Government of Nariño selfishly mobilized their RA <i>law</i> to disband the action plan previously agreed.

Table 55 Institutional creativity LRA Specialty. Source: The author.

Institutional Creativity	Description
Deliberative Scenario	There was not a deliberative scenario
Uses of Resource constituents agreed	There was not any collective agreement on the uses of Resource Constituents, but individual ones affecting the use of <i>infrastructures</i> , <i>know-how</i> and <i>know-to-appreciate</i> : planting (non-pest resistant varieties when commercial opportunities available); cultivation (practices to enhance aromatic profile); post-harvesting (picking and re-selection to guarantee a well-ripe bean); trading (cupping and physical traceability); roasting (tailor-made S-curves); communication (highlight both the unique aromatic profile and the farmer' story).
Borders	It affected all farmers in Buesaco indistinctively, but exclusively traders in each LRA.
Profile	It provided the "exceptional coffee" taste related service, the "transparent coffee" symbolic service and monetary services for profiling actors (some farmers, traders, roasters). But it did not provide monetary services for the majority of farmers, and the "environmentally responsible" symbolic services for stakeholders in production and consumption.

Figure 24 Actor's coalition LRA Nespresso. Source: the author.

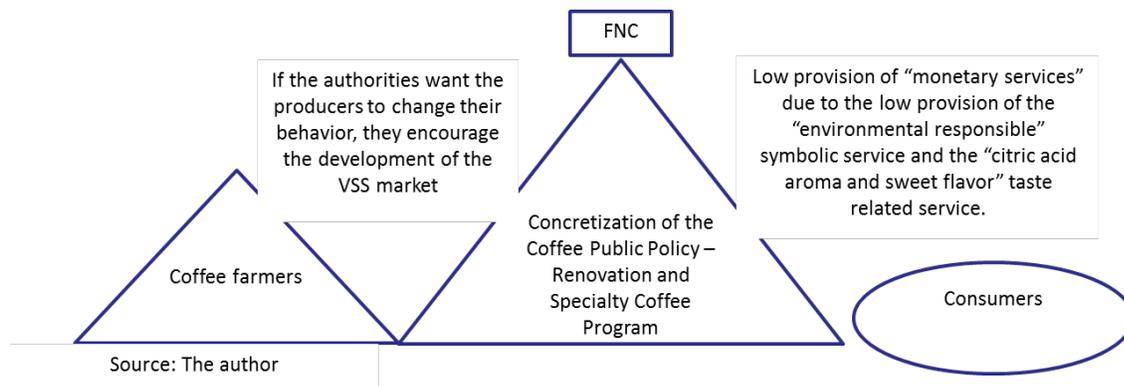


Figure 25 Actor's coalition LRA CCEsp/Starbucks. Source: the author.

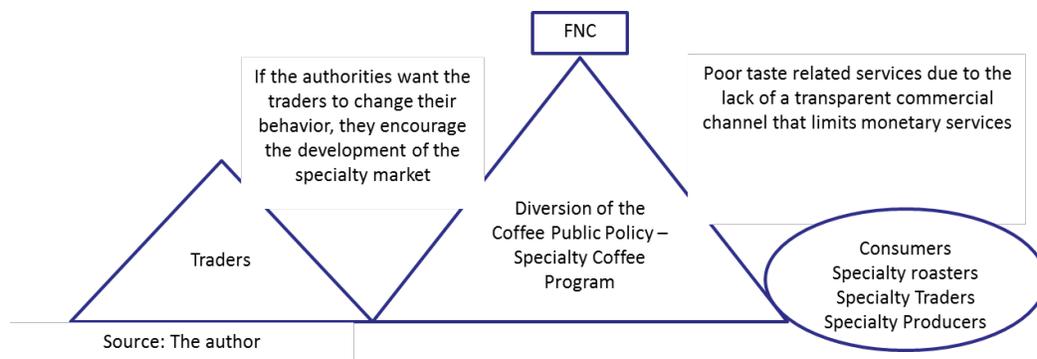


Figure 26 Actor's coalition LRA Cultura. Source: the author.

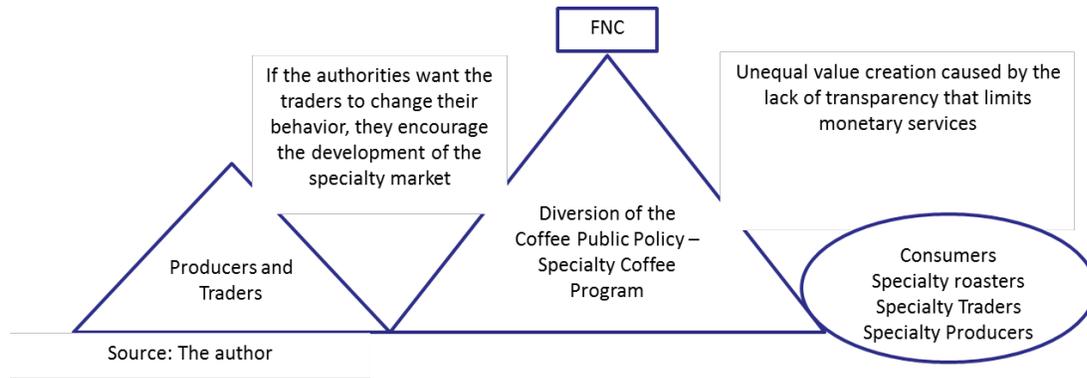
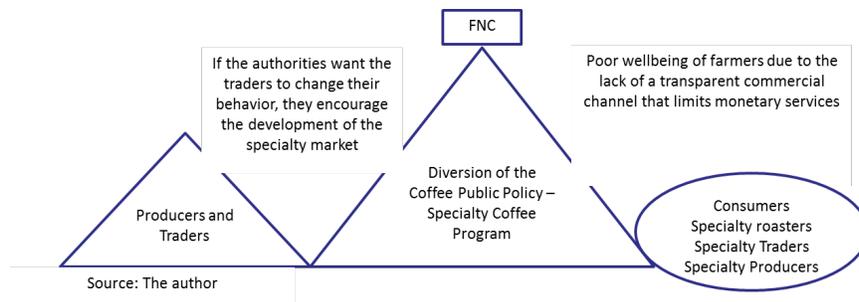


Figure 27 Actor's coalition LRA CNilson. Source: the author.



## V.9. Evaluation of LRAs according to each analytical dimension

### V.9.1. Riosucio

The following paragraphs would expand table 20 by synthetically describing the evaluation of each LRA according to each analytical dimension.

We start with the “coalition”, namely the group of actors that participate in the coalition which bring about the LRA. Then we describe the “mobilization of *action resources*” by each LRA (even though in each LRA there could be found different types of mobilization that are fully detailed throughout this chapter we classified the LRAs according to the most salient mobilization). Finally, we analyze the presence of institutional creativity in each LRA depending on both the procedural element (deliberative scenario) and the substantive element (the second negotiation dilemma), which is composed of both the distribution (uses of Resource constituents) and the production (the profile).

#### 1. Coalitions:

- LRA MH: Trader (The Cooperative), stakeholders in production (the CRIDEC and the FNC), stakeholders in consumption (MH).
- LRA Natural: Farmers, trader, and roaster (Asprocafé, the Cooperative and Equal Exchange), stakeholders in production (the Indigenous Movement and the FNC/Comité), and stakeholders in consumption (MH).
- LRA Fairtrade: Farmers, trader (Asprocafé and the Cooperative), and stakeholders in consumption (MH).
- LRA Organic: Farmers, trader, and roaster (Asprocafé, the Cooperative and Equal Exchange) and stakeholders in consumption (MH).
- LRA La Vereda: Stakeholders in production (the FNC).
- LRA Nespresso: Trader and roaster (the Cooperative and Nespresso), stakeholders in production (the FNC/Comité) and stakeholders in consumption (Technoserve and Fundanatura)
- LRA CS Standard: Farmers, trader, and roasters (Asprocafé, the Cooperative and Equal Exchange/Nespresso/Keurig/Starbucks), stakeholders in production (the local authority and the FNC/Comité), and stakeholders in consumption (MH).
- LRA Regional/Starbucks: Trader and roaster (the Cooperative and Starbucks)

#### 2. Mobilization of *action resources*

- Cooperative mobilization of *action resources* to empower other actors with the objective that they can put forward their demand for services.
  - LRA MH: The MH’s *organization*, FNC’s *law*, and Cooperative’s *property* were mobilized to endow the indigenous movement with the AR *money*, that resulted in *political support*, so they could consolidate an organization capable of exercising their constitutional right to cultural diversity. It balanced the power game so the indigenous movement could move forward their demand for services alongside the MH, the FNC

- and the Cooperative. Thus, they innovatively activated the coffee public policy to incentivize indigenous (coffee farmers) traders and roasters to profile both the “Fairtrade” and “indigenous coffee” symbolic services in order to produce “monetary services”.
- LRA Natural: MH mobilized their *organization* selfishly over the Cooperative and the indigenous movement to trigger their demands for the “Natural coffee” symbolic service, but at the same time, it increased the endowment of *personal* and *information* of the (not) indigenous coffee farmers so that they were, through the collective actor Asprocafé, able to put forward their demands, balancing the power game when including this previously unheard group into the actors’ coalition. Then, Asprocafé supported by Asproinca, mobilized their *information* to endow both the FNC and the Indigenous movement with *information*, balancing the power game in the sense that the different actors converged around the same assumptions, from which their demanded services would be provided. As a result, they concretized the Specialty coffee registration and promotion program of the coffee public policy to incentivize (non) indigenous coffee farmers profiled the “natural coffee” and both, the “environmentally responsible” symbolic service and the “citric acidity” taste related service demanded by the FNC, and the “indigenous coffee” symbolic service (defined in terms of the rescue of ancestral practices) demanded by the indigenous movement.
  - LRA CS Standard: The indigenous movement’s *political support* was mobilized to generate deliberative scenarios that endowed the FNC-Comité with the *consensus*, balancing the power game so that the latter, who had been previously excluded, was able to move forward their demand for a Climate Smart coffee culture. Hence, the whole set of actors agree on innovatively activating the two instruments of the coffee public policy: the renovation and the diversification programs in order to incentivize farmers to profile a combination of “environmentally responsible” and “indigenous coffee” symbolic services; “clean cup” taste related service to guarantee stable “monetary” services, as a base from which the other LRAs would profile their own demanded services.
  - Strategic mobilization of *action resources* to profile the demanded services.
    - LRA Organic: Equal Exchange’s *organization* was mobilized to concretize the specialty coffee program of the coffee public policy to incentivize farmers to profile their “natural coffee” symbolic service.
    - LRA Nespresso: The Cooperative’s *personal* and the Nespresso’s *money* were mobilized to concretize the specialty coffee program of the coffee public policy to incentivize farmers to produce both the “winy” taste related service and “monetary” services.
    - LRA Reg/Starbucks: The Cooperative’s *personal* was mobilized to concretize the specialty coffee program of the coffee public policy to incentivize Starbucks to produce the “monetary” services (in terms of volume for the cooperative).
  - Selfishly mobilization of *action resources* to produce the services demanded by the powerful actor.

- LRA Fairtrade: FLO's *property* was mobilized to concretize the specialty coffee program of the coffee public policy by making Asprocafé fulfill the requirement to have the use right of the certification mark to produce the "Fairtrade coffee" symbolic service. It implied the formalization of Asprocafé and the traceability of coffee that excluded the indigenous community and a portion of coffee growers, therefore diminishing provision of their "indigenous coffee" symbolic service and "monetary services".
- LRA La Vereda: Indigenous movement's *consensus* initially and, *political support* and *law* afterward, were mobilized to circumvent the coffee public policy by innovatively activating both the education and the cultural public policies to influence the behavior of the indigenous farmers and discourage the over-cultivation of coffee, clearly at the expense of the services demanded by the Cooperative and the Comité/FNC.

### 3. Institutional creativity

- Deliberative scenario: In six of the eight LRAs, different scenarios (formal and informal) are documented. In the remaining six, it is not possible to document the existence of a deliberative scenario in which the whole set of LRA's participant actors are present.
  - LRA MH: an ad-hoc coordination mechanism between contractually obligated actors produces the deliberation scenario that eventually became formalized as the Junta de Administración del Convenio among the whole set of actors interested in the Resource in that given time and space.
  - LRA Natural: the need to coordinate actions to both avoid foreseeable rivalries and to achieve economies of scale, informally produced the *Comité Interinstitucional* as a deliberative scenario among the whole set of actors interested in the Resource in that given time and space
  - LRA Organic: In order to follow the implementation of the organic project funded by the "small farmers fund", an informal deliberative scenario known as "the annual visit of Equal Exchange" provide the space in which the coalition meet (Asprocafé, the Cooperativa, Equal).
  - LRA Nespresso: Once the commercial agreements that featured the first project to start the implementation of the Nespresso AAA program lead by technoserve evolved towards the complex Expocafé cluster, the deliberative scenario *Encuentro bianual del Clúster Expocafé* was developed in which the coalition shape the final outputs.
  - LRA Reg/Starbucks: This young LRA has not produced any output, but we consider that the meeting between the Cooperative (not only as a trader but as a representative of farmers) and the Starbucks's Farmer Support Center in Manizales to produce the "improvement plans", is clearly a deliberative scenario to shape this final output according to the interest of the coalition.
  - LRA CS Standard: the participation policy implemented by the new municipal administration produced a series of formal consultation tables that opened a deliberative scenario among the whole set of actors interested in the Resource in that given time and space.
- Uses of Resource constituents: In the six LRAs in which there were deliberative scenarios, the agreements in the inclusive use of Resource constituents over the entire group of

profilers were documented and, the distribution of both the effort of the change and the benefit. In the remaining two LRAs there was not an agreement between all participant profilers on the distribution of costs and benefits, producing winners and losers.

- LRA MH: it was agreed to innovatively activate the coffee public policy by shaping the final outputs of the Convenio MH, the loans and technical assistance to groups of farmers, to encourage inclusive uses on indigenous (coffee farmers) apparently contradictory: on the one hand, to encourage diversification and, on the other, to encourage synthetic fertilization; and exclusively uses on traders and roasters associated to the Fairtrade movement to communicate the meaning of the Fairtrade market to produce an add value that would be irrigated throughout the group of profilers.
- LRA Natural: it was agreed to concretize the “specialty coffee registration and promotion program” and shape the final outputs of Asprocafé and the SACEV agreement to incentivize inclusive uses on the (non) indigenous coffee growers compatible with the “mestizo” production systems, merging “scientific” and “indigenous practices” to shape the agro-ecologic productive system in the planting and cultivation (renovation; shade; soil management, hedgerowing, and picking); in the post-harvesting process (four activities hulling, fermentation, drying and waste management); and exclusively uses on roasters in the roasting process (blending and packaging) to communicate the meaning of the organic market to produce an add value that would be irrigated throughout the group of profilers.
- LRA Organic: It was agreed to concretize the “specialty coffee program” through the “small farmer fund” output that incentivize the same uses than the LRA natural but exclusively on the members of Asprocafé’s organic group, the Cooperative/Expocafé and Equal Exchange to produce an add value that would be irrigated throughout this group of profilers.
- LRA Nespresso: It was agreed to concretize the “specialty coffee program” through the “implementation AAA project ” output that encouraged exclusive uses on coffee growers (owners of higher-than-0.5-ha farms in the target zone) to fulfill the TASQ® during the cultivation (farm management), and traders and roasters in the remaining activities of the commercialization, roasting, communication strategy and brewing processes to produce an add value that would be irrigated throughout AAA farmers, the Cooperative/Expocafé and Nespresso.
- LRA Reg/Starbucks: It was agreed to concretize the “specialty coffee program” by verifying farmers in the CAFÉ Practices profiling institution to encourage exclusive uses on the trading process for the Cooperative in order to produce an added value for the Cooperative, an indirectly to its associated farmers.
- LRA CS Standard: it was agreed to innovatively activate the two instruments of the coffee public policy: the renovation and the diversification programs by shaping their outputs (the PSF and the PMC ) to encourage inclusive uses on farmers compatible with adaptation to climate change respectful of the indigenous culture in the five activities of the planting process (diversification, variety, renovation, density, shade), as a baseline over which, actors encouraged others excluding uses to the group of delimited actors participating in each LRA. More than pretending to add value (that

- was also the case by producing the environmental responsible symbolic service), it sought to stabilize the “value flow” for the whole group of actors, so reducing their vulnerability to climate shocks.
- LRA Fairtrade: Asprocafé concretized the specialty coffee program once the FLO organization demanded a change of the use of Resource constituents on farmers (establish in the FLO certification trademark), who had to assume the cost even though the benefit was blurring due to the increase of Fairtrade certified coffee worldwide that diminished the portion being sold as Fairtrade.
  - LRA La Vereda: The non-agreement result was that the indigenous organization to circumvent the coffee public policy by innovatively activating both the education and the cultural public policies to counterbalance its activation by the FNC, so in the end, both actors demanded antagonist uses of Resource constituents to farmers that impeded provision of the demanded services (any added value to be distributed).
- Profile: In the six LRAS in which both the deliberative scenario was fulfilled and the agreement on inclusive use of Resource constituents was documented, the Resource was profiled so it could produce the services demanded by participant actors. In the remaining two, the LRAs produced an unstable profile insofar as the provision of one actor implied depriving another.
- LRA MH: The merged services demanded by stakeholders in production (“indigenous coffee” symbolic service), stakeholders in consumption (“Fairtrade coffee” symbolic service) and profilers-farmers (monetary services) were produced.
  - LRA Natural: All actors converged around the “natural coffee” symbolic service which, as it was outlined, also produced the services demanded by stakeholders in production (“indigenous coffee” symbolic service), stakeholders in consumption (“Fairtrade coffee” and “environmentally responsible coffee” symbolic services) and profilers who, to increase monetary services, produced the “clean cup” and “citrus acidity” taste related services.
  - LRA Organic: The coalition agreed to profile the services demanded by the stakeholders in consumption (“natural coffee”) and profiler-farmers (“monetary services”).
  - LRA Nespresso: The coalition agreed to profile the demanded services of profilers farmers (“monetary services”) by producing services demanded by stakeholders in consumption (the “environmentally responsible” symbolic services) and profilers-rosters (“winy” taste related service and “brand reputation” symbolic service).
  - LRA Reg/Starbucks: The coalition agreed on a profile featured by the services demanded by a stakeholders in consumption (“ethical traded” and “environmentally responsible” symbolic services), the profiler-roaster (the “terroir expression” taste related services and the “brand reputation” symbolic service) and the profiler-trader (monetary services) that reach profilers-farmers, as shareholders of the Cooperative, through either dividends or services.
  - LRA CS Standard: All actors converge around a minimum profile adapted to climate change whose service is to guarantee over time a combination of demanded services by profilers (“monetary” services); stakeholders in consumption (the

- “environmentally responsible”) and stakeholders in production (the “indigenous coffee” symbolic services; and the “clean cup” taste related service).
- LRA Fairtrade: The “fair trade” sought by this LRA was produced at the expense of the “monetary services” sought by some producers and the “indigenous coffee” sought by the indigenous movement.
  - LRA La Vereda: If the “monetary” services had been produced, it would have been at the expense of the “indigenous coffee” symbolic service, and on the other way round.

### V.9.2. Buesaco

The following paragraphs would expand table 39 by synthetically describing the evaluation of each LRA according to each analytical dimension.

We start with the “coalition”, namely the group of actors that participate in the coalition which bring about the LRA. Then we describe the “mobilization of *action resources*” by each LRA (even though in each LRA there could be found different types of mobilization that are fully detailed throughout this chapter we classified the LRAs according to the most salient mobilization). Finally, we analyze the presence of institutional creativity in each LRA depending on both the procedural element (deliberative scenario) and the substantive element (the second negotiation dilemma), which is composed of both the distribution (uses of Resource constituents) and the production (the profile).

#### 1. Coalitions:

- LRA Standard plus: Trader (The Cooperative), stakeholders in production (the FNC).
- LRA EdN: Trader and roaster (EdN and Starbucks).
- LRA ACDI/VOCA N: Farmers, traders, and roaster (Asoveracruz, *Cooperativa del Norte* and *Cooperativa del Occidente*, Nespresso), stakeholders in production (the FNC/Comité) and stakeholders in consumption (ACDI/VOCA)
- LRA ACDI/VOCA S: Farmers, traders, and roaster (Producers associations, EdN, Starbucks) and stakeholders in consumption (ACDI/VOCA)
- LRA Specialty: Farmers (Producers mobilized through the political party), stakeholders in production (FS and Gobernación de Nariño).
- LRA Nespresso: Traders and roaster (*Cooperativa del Norte* and *Cooperativa del Occidente*, Nespresso), stakeholders in production (the FNC/Comité).
- LRA CCEsp/Starbucks: Traders and roasters (Producers associations, *Cooperativa de Cafés Especiales*; Caravela and Carcafé, Starbucks).
- LRA Cultura: Farmers and traders (Asoveracruz, *Café con Altura*), stakeholders in production (FS).
- LRA CNilson: Farmers, traders, and roaster (Nilson’s producers network, Nilson (local trader), Inconexus (exporter), Royal Coffee (importer), Specialty roasters)

#### 2. Mobilization of *action resources*

- Cooperative mobilization of *action resources* to empower other actors with the objective that they can put forward their demand for services.
  - LRAs ACDI/VOCA N&S: *organization* of the ACDI/VOCA's and, *personal* and *information* of both the FNC and the SCAA were mobilized to empower coffee growers with *information* so they would be able to understand the potential services their coffee could produce, balancing the power game in the sense that farmers improved their negotiating position to move forward their demanded services. Hence, they concretized the specialty coffee program of the coffee public policy in order to profile the services demanded by the roasters Nespresso and Starbucks to provide the "monetary" services.
- Strategic mobilization of *action resources* to profile the demanded services.
  - LRA EdN: Starbucks's *law* was mobilized to concretize the civil code to incentivize *Empresas de Nariño* to produce the "terroir expression" taste related service.
  - LRA Nespresso: FNC's *personal* and *property* was unsuccessfully mobilized to activate the agricultural public policy and innovatively activated the Strategic Specialty Coffee Plan to provide both "environmentally responsible" symbolic service and "exceptional coffee" taste related service in order to gain access to the Resource.
  - LRA CCEsp/Starbucks: *property* and *organization* of both the CCEsp and Caravela were mobilized to divert the specialty coffee program of the coffee public policy to incentivize roasters produce the "exceptional coffee" and the "monetary" services.
  - LRA Cultura: FS's *money* and GEB's *organization* were mobilized to divert the specialty coffee program of the coffee public policy to incentivize farmers and roasters produce the "exceptional coffee" and the "monetary" services.
  - LRA CNilson: *organization* of both Nilson and Inconexus were mobilized to divert the specialty coffee program of the coffee public policy to incentivize farmers and roasters produce the "exceptional coffee" and the "monetary" services.
- Selfishly mobilization of *action resources* to produce the services demanded by the powerful actor.
  - LRA Standard-plus: The FNC's *information* and *political support* were mobilized to concretize the Specialty coffee registration and promotion program of the coffee public policy to incentivize traders profiled the "terroir expression" demanded by the FNC at the expense of the "terroir expression" demanded by the Comité de Nariño and the EdN.
  - LRA Specialty: The Governor of Nariño's *political support* and *consensus* initially, and *law* afterward, were mobilized to circumvent the coffee public policy by innovatively activating the Competitiveness Public Policy to put in the hands of the Government of Nariño the authority to incentivize farmers profile the "exceptional coffee" taste related service at the expense of the profile demanded by the FNC/Nespresso and Starbucks.

### 3. Institutional creativity

- Deliberative scenario: In four of the eight LRAs, different scenarios (formal and informal) are documented. In the remaining four, it is not possible to document the existence of a deliberative scenario in which the whole set of LRA's participant actors are present.

- LRAs ACIDI/VOCA N&S: An indirect deliberative scenario was developed through the “value chain approach” strategy of ACIDI/VOCA that put together farmers (through their supported by ACIDI/VOCA aggregation into collective actors) with the traders and both roasters Nespresso and Starbucks to shape the different outputs produced by both LRAs.
    - LRA Specialty: La *Comisión Regional de Competitividad* resultant of the activation of the competitiveness public policy worked as a deliberative scenario in which the coalition could shape the final outputs.
    - LRA CNilson: Being a small group of participant actors, both the frequent direct bilateral interaction between profilers and the periodical multilateral interaction among all of them during the coffee auctions, created the deliberative scenario needed to shape the final outputs by the coalition.
  - Uses of Resource constituents: In the four LRAs in which there were deliberative scenarios, the agreements in the inclusive use of Resource constituents over the entire group of profilers were documented and, the distribution of both the effort of the change and the benefit. In the remaining five LRAs there was not an agreement between all participant profilers on the distribution of costs and benefits, producing winners and losers.
    - LRAs ACIDI/VOCA N&S: It was agreed to concretize the “specialty coffee program” through three complementary outputs (DGIS' call of ideas; SCP 1; SCP 2; SENA's technical assistance project) to encourage inclusive uses on coffee farmers to enhance productivity, quality and good environmental responsible practices during the planting (diversification and renovation), cultivation (soil management; coffee borer beetle management, pest and disease management and picking), and post-harvesting (hulling; fermentation; drying; waste management), and exclusively on traders (EdN and FNC) and roasters (Nespresso and Starbucks) the whole set of activities during the last four processes to produce an add value that would be irrigated throughout the group of profilers.
    - LRA Specialty: It was agreed to circumvented the coffee public policy by innovatively activating the Competitiveness Public Policy through the output “Action Plan 2011”, aiming to encourage inclusive uses on coffee farmers to enhance the aromatic profile during planting, cultivation, and post-harvesting (depending on the environmental offer to enhance the aromatic profile); and exclusively on *Alianza Café SAS* during trading and roasting (enhance the aromatic profile depending on the coffee lot); and communication Strategy (enhancing Nariño reputation as the best of Colombia), to produce an added value that would be captured by producers (owners of *Alianza Café SAS*).
    - LRA CNilson: It was agreed to divert the Specialty Coffee Program of the Coffee Public Policy through a formal contract to encourage, via prices, exclusive uses on 160 coffee farmers to trigger experimentation to increase chances of high-scored coffee during the cultivation and post-harvesting (picking and reselection), and exclusive uses on CNilson, Inconexus, Royal Coffee and Roasters on all activities during the last four processes (trading, roasting, communication strategy and brewing) to produce an add value that would be irrigated throughout the group of profilers.

- LRA Standard-plus: The FNC innovatively activated the coffee public policy to produce the intermediary output “Specialty Coffee Registration and Promotion Program” that targeted their supply network of traders so it assumed the change of the use Resource constituents during the trading and communication strategy to add value through an exceptional aromatic profile in order to increase their commercial benefit, for a group of producers, at the expense of farmers in Nariño.
- LRA EdN: Non-activating the “Specialty Coffee Registration and Promotion Program”, Starbucks contracted with EdN the change of the use Resource constituents during the trading and assumed the change during the last three processes (roasting, communication strategy and brewing) to add value using the “terroir expression” of Nariño coffee to increase their commercial benefit. Farmers in Nariño did not receive any portion of the added value created.
- LRA Nespresso: the FNC and Nespresso concretized both the Specialty Coffee Program and the renovation program to encourage inclusive uses of on coffee farmers to enhance productivity, quality and environmentally responsible practices. Nevertheless, the loss of consensus impeded proper implementation.
- LRA CCEsp/Starbucks: Carvela alongside CCEspeciales diverted the Specialty Coffee Program of the Coffee Public Policy through an informal coffee purchase agreement to assume the change of the use Resource constituents during the trading to sort out the high-scored coffee from standard one and encourage through promised higher prices, farmers’ change in two labor-intensive activities (picking and reselection). Both traders increased their potential benefit assuring a larger supply of high-scored coffee while leaving on farmers’ hands the risk of paying the labor cost without any benefit if their coffee is not sold as high-scored coffee.
- LRA Cultura: Similarly, the FS and the GEB diverted the Specialty Coffee Program of the Coffee Public Policy by launching a company that assumed the change of the use Resource constituents during the trading to sort out the high-scored coffee from standard one and encouraged through promised higher prices, farmers’ change in two labor-intensive activities (picking and reselection). Nonetheless, without any experience with Specialty roasters, they barely sold high-scored coffee leaving farmers with the cost without any benefit.
- Profile: In the four LRAS in which both the deliberative scenario was fulfilled and the agreement on inclusive use of Resource constituents was documented, the Resource was profiled so it could produce the services demanded by participant actors. In the remaining five, the LRAs produced an unstable profile insofar as the provision of one actor implied depriving another.
  - LRAs ACIDI/VOCA N&S: All actors agreed to profile the “drug substitution” symbolic service demanded by some stakeholders in consumption and production by profiling the “environmental responsible” and the “ethical traded” demanded by other stakeholders in consumption and the “terroir expression” taste related service demanded by consumers to enhance the “brand reputation” symbolic service demanded by profiling-roasters; and monetary services for profiling farmers.
  - LRA Specialty: The coalition agreed to profile the “exceptional coffee” taste related service for consumers, through a vertically integrated company owned by profilers-

- farmers so they capture the whole portion of monetary services and produce the “poverty reduction” symbolic service sought by stakeholders in production.
- LRA CNilson: The coalition agreed to profile the “shared value” symbolic service sought by the profiler-trader through higher monetary services for profilers-farmers due to the profiling of the “exceptional coffee” taste related service and the “transparent coffee” symbolic services for profilers-roasters.
  - LRA Standard-plus: The “terroir expression” sought by this LRA was produced at the expense of the “monetary services” sought by producers.
  - LRA EdN: The “terroir expression” sought by this LRA was produced at the expense of the “monetary services” sought by producers.
  - LRA Nespresso: The “environmentally responsible” and the “shared value” symbolic services demanded by stakeholders in consumption was not produced, even though the “brand reputation” symbolic service demanded by profiler-roasters and monetary services for profilers (including participant farmers) were produced.
  - LRA CCEsp/Starbucks: The combination of the “exceptional coffee” taste related”; “transparent coffee” symbolic service and higher “monetary” services were produced at the expense of these services for 83% of the Resource.
  - LRA Cultura: The combination of the “exceptional coffee” taste related”; “transparent coffee” symbolic service and higher “monetary” services were produced at the expense of these services for 86% of the Resource.

## VI. Bibliography

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