

DÉVELOPPEMENT, SOCIÉTÉS, ENVIRONNEMENTS

Rapport de recherche

n°4en



Samir Laouadi¹,
Olivier Hymas¹,
Christy Nkollo
Kema-Kema²,
Nathalie Van Vliet³,
Gretchen Walters¹

COVID-19, PEUPLES AUTOCH- TONES, COMMUNAUTÉS LOCALES ET GOUVERNANCE DES RESSOURCES NATURELLES : RÉSULTATS FINALS

Unil

UNIL | Université de Lausanne

Institut de géographie
et durabilité

We would like to thank the following people, Indigenous individuals and organisations who contributed to the development and testing of the survey : Marina Cracco, Holly Jonas, Natividad Quillahuamán, Eleonora Fanari, Samuel Nnah, Teri Tuxson, Amy Maling, Felipe Gomez, Anna Panagiotou, Ellie Snowden, Silvel Elias, Thomas Niederberger, Nigel Dudley, Mathieu Toviehou, Apollinaire Oussou Lio, June Rubis, South Rupununi Conservation Society, North Rupununi District Development Board, South Rupununi District Council. We are also very grateful to the people who took the time to complete the questionnaire and to the University of Lausanne for funding the study. Thanks to Christian Chatelain who proof-read the report and Samantha Sithole for the page layout.

Contact : gretchen.walters@unil.ch

The Development, Societies, Environments series publishes reports resulting from research conducted at the Institute of Geography and Sustainability of the University of Lausanne. The objective is to publish and make accessible the results of projects in the following areas: (1) natural resource management and policies; (2) multi-level environmental governance; (3) urban and rural transformations.

© IGD 2022

Institut de géographie et durabilité
Faculté des géosciences et de l'environnement
Université de Lausanne
Quartier Mouline - Bâtiment Géopolis
CH-1015 Lausanne
www.unil.ch/igd

- ¹ Institut de géographie et durabilité, Université de Lausanne, Suisse
- ² Université Omar Bongo, Département de Sciences Géographiques Environnementales et Marines, Avenue Léon MBA, Libreville, Gabon
- ³ Center for International Forestry Research, Jalan CIFOR, Situ Gede, Bogor Barat, Bogor 16115, Jawa Barat, Indonesia

La série *Développement, Sociétés, Environnements* est placée sous la responsabilité du Prof. Christian Kull, coordinateur du collectif de recherche « Political ecologies ».

Contact: christian.kull@unil.ch

Site web: <https://www.unil.ch/igd/rapports-recherche-developpement-societes-environnement>

ISSN 2673-4516 (Online)

Crédit photo de la couverture : Quadad de Freitas

Covid-19, Indigenous Peoples, Local communities and natural resource governance: Final results

This publication reports on how the Covid-19 pandemic affected Indigenous Peoples and Local Communities (IPLCs) in 2020-1, particularly those who govern, manage and conserve their lands and waters. This research complements preliminary findings from a global survey conducted by a group of 16 authors from various research institutes and civil society organisations, including the University of Lausanne and the ICCA Consortium. The report presents the results of qualitative research based on the analysis of stories and online questionnaires through the use of SenseMaker® software. This tool allows for the analysis of multiple perspectives of complex situations and enables a meta-analysis of qualitative data. The objective of this report is to identify how the Covid-19 pandemic impacted Indigenous Peoples and local communities and how was being managed at that time. The report 1) reflects the importance of traditional and local knowledge to IPLCs, 2) how COVID-19 affects their rights, 3) how it impacts their access to natural resources that constitute their livelihoods, 4) increases understanding about their resilience, and 5) provides lessons for future pandemics.

Covid-19, Indigenous Peoples, Local communities and natural resource governance: Final Results



Image 2: Angling in the Ramsar site Petit Loaongo 2021. Photo credit: C. Nkollo Kema-Kema.

1. Introduction

The Covid-19 pandemic is having an unprecedented impact around the world. We often hear the views of governments, businesses and the health sector, but we know less about the impact on Indigenous Peoples and Local Communities (IPLCs). Local communities, and particularly Indigenous Peoples, are among the most vulnerable groups in the world. Indigenous Peoples number around 476 million people, but account for 19% of those living in extreme poverty¹, while they will soon represent 7%² of the world's population.

The term 'Indigenous Peoples' covers a diversity of social groups present on all continents and living in very different geographical, political, economic and social conditions (Deroche, 2005; APAC Consortium, 2019)³. However, the common denominator of this heterogeneity is the following: collectively as well as individually, autochthony is defined above all by its claim and its recognition (Verdeaux, Roussel, 2006). It is from this perspective that we will use the terminology 'Indigenous Peoples and Local Communities (IPLCs)' in this report⁴. Indeed, this approach offers the advantage of de-essentialising the subjects concerned (Bellier, 2012).

A special bond with nature

This report focuses on IPLCs who govern, manage and conserve their lands and waters. In order to better understand the impact of Covid-19 on IPLCs in the early stages of the pandemic, it is useful to discuss their relationship with nature and its conservation. IPLCs have a way of life based on a holistic view of people and the environment. They have a close relationship with nature, both in time and space. This special relationship is fundamental to their social, cultural and spiritual life. Indigenous and local knowledge, laws and principles form the basis of customary governance and management practices and are closely linked to common rights over land, sea, natural resources and more or less clearly defined territories and areas (Walters et al. 2021). These practices are also known by the generic term 'ICCA - territories of life', an abbreviation that stands for 'indigenous and community areas and territories' (APAC Consortium, 2021). Indigenous knowledge and local knowledge are thus central to the environment and human societies. IPLCs play a leading role in the governance, conservation and sustainable use of biodiversity and nature around the world. They actively protect and conserve globally important and amazingly diverse species, habitats and ecosystems that sustain clean water, air, food and healthy livelihoods for people far beyond their borders.

¹ See: <https://indigenavigator.org/indigenous-data>

² However, this figure may be underestimated, as the most recent estimate for Asia alone puts the number of indigenous people living in these countries at over 411 million (see: Asia Indigenous Peoples Pact. Overview of the State of Indigenous Peoples in Asia (2014). <https://aippnet.org/wp-content/uploads/2020/02/25.-Overview-of-the-state-of-Indigenous-Peoples-in-Asia.pdf>)

³ American Declaration of Indigenous Peoples: https://www.oas.org/en/sare/documents/DecAmIND_FRA.pdf

⁴ In this regard, the ICCA Consortium stresses that self-identification is a necessary element of indigenous identity and recommends that indigenous peoples be referred to by their self-designated nation name. It should also be noted that the differentiated term "indigenous peoples and local communities" is called for by indigenous peoples themselves who, feeling discriminated against worldwide, do not wish to see themselves "diluted" in the overly all-encompassing term "local communities".

A global spatial analysis by the ICCA Consortium shows that IPLCs are *de facto* custodians of many protected and conserved areas, both state and private, and also conserve a significant proportion of land and natural environments outside these areas. According to analysis by the ICCA Consortium, they are actively conserving at least 22% of the world's key biodiversity areas and at least 21% of the world's land (about the size of Africa) (ICCA Consortium, 2021).

Moreover, today, their roles in biodiversity conservation as well as the importance of their knowledge for global food security or adaptation and resilience to climate and environmental hazards are valued at the international level. The Convention on Biological Diversity (CBD), adopted in 1992 at the Earth Summit in Rio, brought the legal and political issues related to biodiversity conservation to the forefront of the world stage and enshrined the term sustainable development. The CBD calls on signatory countries, in the context of the exercise of their sovereignty over biological resources (Article 3), to define and recognise the rights of Indigenous and local communities over their traditional knowledge and practices (Article 8j). The CBD thus formally recognises indigenous knowledge of the environment and involves LACs in its safeguarding⁵.

Overview of the international legal framework for the protection of IPLCs

Over the past 40 years, various legal instruments of varying degrees of constraint have provided IPLCs with collective rights to the governance and management of the lands, territories and resources to which they are closely linked and on which they depend for their livelihoods:

- **The ILO Indigenous and Tribal Peoples Convention, 1989 (No. 169):** an international treaty on Indigenous peoples open to ratification. To date, it has been ratified by 23 countries⁶.
- **The International Covenant on Economic, Social and Cultural Rights of 1966** and particularly Article 11 recognising the right to food. In 1999, the UN Committee on Economic, Social and Cultural Rights (CESCR) issued General Comment No. 12 on the right to food⁷. During the First **Global Indigenous Peoples' Consultation on the Right to Food in 2002**, IPLCs signed the Atitlán Declaration⁸, stating that the content of the right to food of Indigenous Peoples is a collective right.
- **The 1992 Convention on Biological Diversity**
- **The 2007 United Nations Declaration on the Rights of Indigenous Peoples**
- **Resolution adopted by the General Assembly of the United Nations at the 2014 World Conference on Indigenous Peoples**⁹, reaffirming the commitment of States to respect, promote and protect the rights of Indigenous Peoples.

⁵ For further discussion of the issue of "traditional ecological knowledge" see in particular: Aubertin C., Pinton F., Boisvert V. (2007). Les marchés de la biodiversité, IRD Éditions Institut de Recherche pour le Développement, Paris.

⁶ See the list of signatory and non-signatory countries below: https://www.ilo.org/dyn/normlex/fr/f?p=1000:11300:0::NO:11300:P11300_INSTRUMENT_ID:312314

⁷ "The right to adequate food is realized when every man, woman and child, alone or in community with others, has access to adequate food. For more information on the right to food, see: <https://www.ohchr.org/FR/Issues/ESCR/Pages/Food.aspx>

⁸ DECLARATION OF ATITLÁN, Indigenous Peoples' Consultation on the Right to Food: A Global Consultation Atitlán, Sololá, Guatemala, April 17 - 19, 2002 https://www.iitc.org/wp-content/uploads/2013/07/FINAL_Atatlan-Declaration-Food-Security_Apr25_ENGL.pdf

⁹ <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N14/468/29/PDF/N1446829.pdf?OpenElement>

- **2015 Paris Agreement¹⁰** : concluded at the 2015 Paris Climate Change Conference (COP 21), including Article 7 recognising the importance of Indigenous Peoples' traditional knowledge in addressing climate change.
- **The American Declaration on the Rights of Indigenous Peoples adopted in 2016** by the Organization of American States (OAS)¹¹.
- **The European Parliament Resolution of 3 July 2018 on the violation of the rights of Indigenous Peoples worldwide**, including land grabbing

Pre-pandemic vulnerability, marginalisation and inequality

Despite the presence of rights protecting IPLCs and the obligation¹² for states to respect, protect and fulfil their international commitments, the situation of IPLCs remains precarious and countries are struggling to implement their promises. The many challenges and violations¹³ faced by Indigenous peoples generally include state services that neglect IPLCs, such as lack of access to social services, health care or education; deforestation that among other things diminishes their livelihoods; the appropriation, exploitation and pollution of water and ancestral lands by extractive industries or natural resource projects (Anongos, 2012); exclusion from political decision-making processes; forced displacement and violence; failure to consult IPLCs on projects affecting their lands; lack of communication and transparency in appropriate language; wage inequalities and, high unemployment (ILO, 2019) or land insecurity (Indigenous Navigator, 2020). Furthermore, Indigenous women are consistently at the bottom of all social and economic indicators (ILO, 2019). Moreover, in most countries where data exists, hunger and malnutrition are disproportionately higher among Indigenous populations than among non-indigenous populations (UN Permanent Forum on Indigenous Issues, 2012). Lastly, according to the Director-General of the World Health Organization (WHO),

Indigenous populations also tend to have more limited access to health care than other groups and suffer disproportionately from a variety of underlying health problems, including communicable and non-communicable diseases. In most countries where Indigenous populations live, they have a lower life expectancy than the general population, sometimes as much as 20 years.

United Nations - Economic and Social Council, 2021

As the issue of Indigenous peoples' data sovereignty grows¹⁴, many Indigenous peoples have not had access to data disaggregated by affiliation or indigenous identification. For

¹⁰ 2015 Paris Agreement, see: https://unfccc.int/sites/default/files/french_paris_agreement.pdf

¹¹ For more details, see: <http://www.cidh.oas.org/indigenas/chap.1.htm>

¹² "International human rights law sets out the obligations that States are bound to respect. By becoming parties to international treaties, States assume obligations and duties under international law and commit themselves to respect, protect and fulfil human rights. The obligation to respect means that the state must refrain from interfering with or restricting the enjoyment of human rights. The obligation to protect requires the State to protect individuals and groups from human rights violations. The obligation to fulfil means that the State must take positive steps to facilitate the enjoyment of basic human rights. See International Human Rights Law - <https://www.un.org/fr/about-us/udhr/foundation-of-international-human-rights-law>

¹³ For more information on all forms of human rights violations against Indigenous Peoples, visit the page of the Special Rapporteur on the Rights of Indigenous Peoples and consult the reports: <https://www.ohchr.org/FR/Issues/IPeoples/SRIndigenousPeoples/Pages/AnnualReports.aspx>

¹⁴ See : CARE Principles for Indigenous data Governance: <https://www.gida-global.org/care>

example, at the beginning of the pandemic, data on Covid-19 infection rates among IPLCs was rarely available (Carroll et al., 2021). As a result, Indigenous peoples lacked the information needed to track the size, spread and distribution of cases and deaths (within and outside Indigenous communities) for prevention, surveillance, mitigation and evaluation purposes (Carroll et al., 2021).

Therefore, the questionnaires and testimonies collected in the study by Walters et al. (2021) and in this report are a valuable source of information that provides an insight into the reality of IPLCs during the early stages of the Covid-19 pandemic.

2. Methodological framework of the research

The data for this research was collected between August 2020 and March 2021. They are the result of a global online survey (Walters et al. 2021), using a story-based method, in English, Spanish and French. 147 questionnaires were collected (**see questionnaire: Appendix 1**) in 43 countries.

The survey was developed by the University of Lausanne, ICCA Consortium members, the Secretariat and honorary members in online meetings in French, English and Spanish between May and July 2020. The questionnaire was developed in these three languages and tested, then enriched through a series of webinars organised by the University of Lausanne and ICCA Consortium members. It was promoted by email and social media, and sent to other organisations working with IPLCs, including through the IUCN Commission on Environmental, Economic and Social Policy, the World Commission on Protected Areas, and the International Land Coalition. Some of the authors also circulated the survey to communities in France, Gabon and Guyana. Where researchers lived in communities, face-to-face interviews were conducted (e.g. in Gabon) following protocols designed to protect respondents and researchers.

The survey specifically sought responses from IPLCs, including those who identified themselves as: belonging to an Indigenous people or local community; belonging to a community with close ties to its territories, lands and waters; or belonging to an organisation working with these communities. The Covid-19 pandemic has required the adoption of remote survey methods. Online surveys have become more common, but they present their own challenges, including uneven access to the internet, limited language translation, unrealistic expectations of literacy and computer skills, and low response rates.

We used SenseMaker®, a computer program that allows rapid meta-analysis of both quantitative and qualitative stories and data collected in questionnaires. SenseMaker® allows for multiple perspectives to be analysed from a variety of situations, bridging the gap between case studies and large sample survey data. As a first step, respondents were encouraged to tell their experiences through the following question (**see also Annex 1**):

Please share an experience about COVID-19 that shows how it has affected or is affecting the use and relationship of Indigenous Peoples and local communities with their territories, lands and waters. This experience can be about you, your family, your

community or a community you work with. It can be a good, bad or neutral experience. It can be long or short.

The sub-questions allowed respondents to add meaning to their story, signifying its importance and reducing the risk of imposing researcher bias. The sub-questions covered resource use and access, decision-making about Covid-19, economic, environmental and social impacts, traditional medicine, solidarity and conflict with families, communities and outsiders, community rights, community leaders and lessons learned from past epidemics. Health measures and restrictions related to Covid-19 (e.g. confinement, social distancing) were recorded, as were emotions related to the stories shared. Prior to participating in the survey, respondents were informed of its purpose and their consent was obtained. Only adults participated.

The online questionnaire then presents 6 triangle diagrams (triad) in which respondents have classified their story by placing a point representing the content of their story in relation to the labels at the ends of the triangle (see Annex 1). The closer the dot is to a corner, the stronger the statement is for the respondent's experience. A point in the centre of the triangle shows that the three elements in the corners of the triangle are equally important to the respondent. In the histograms (dyad), respondents rated their story by placing a dot along a line of opposing ideas.

In addition, as mentioned above, we proceeded to analyse the five complementary open questions (see Annex 1) which are: 1) What would you recommend to government authorities in order to deal with a future pandemic? 2) What could your community do differently in a future pandemic? 3) What new things have emerged from the Covid-19 crisis in your community? 4) How has traditional knowledge been used during the pandemic? 5) How have measures to reduce the transmission of Covid-19 been/are they being adopted in your community?

An open-ended question is one that gives the respondent the opportunity to express him or herself freely on a given topic. It is therefore non-directive and offers respondents the choice of orienting their response as they see fit. It therefore avoids reducing and pre-constructing the variety of socially possible answers. Open-ended questions thus make it possible to see which aspects stand out in the responses.

In order to carry out a systematic analysis of these questions, we grouped the responses into general sub-themes according to the recurrence of themes that emerged in the responses. We therefore carried out a coding process by first analysing the responses and then establishing a first detailed code; from the distribution of the responses thus coded, we carried out a second, less differentiated code considering the most relevant differences and the frequency of responses. This method has the advantage of allowing better control of information loss (Combessie, 2007). As a compromise between a quantitative and a qualitative approach whose advantages it aims to combine, the method of open-ended questionnaires thus makes it possible to combine an extensive analysis of social phenomena and allows in-depth understanding (Franssen et al., 2014). In this report, we extract the most significant themes from the open questions and present them in the form of a mind map. All quotations are anonymous, including place names which are replaced by 'X'.

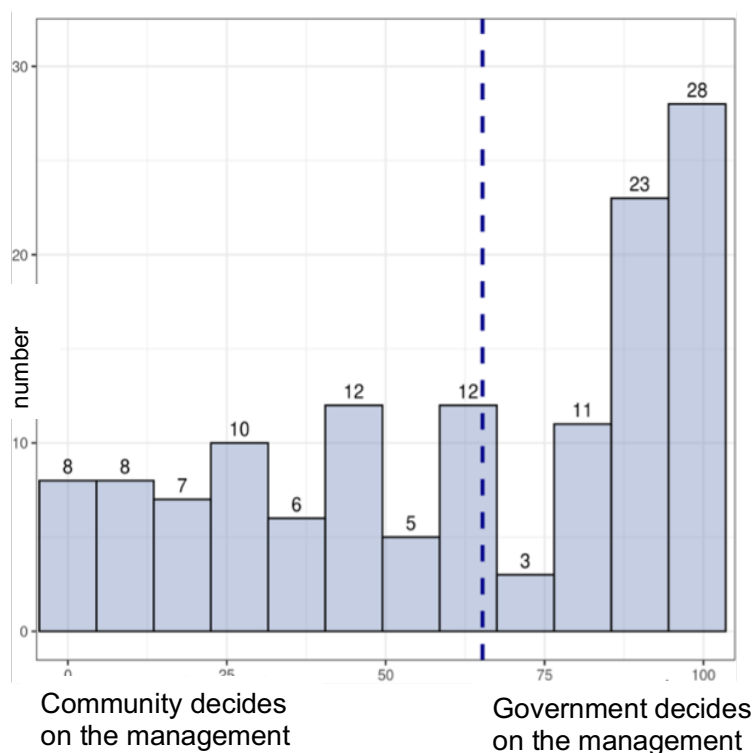
3. Thematic analysis

Here we carry out a multidimensional analysis that combines data from the narratives, triads and dyads. In some cases, we have integrated a box in the text on the open question related to the theme, further refining the results.

The analysis of the survey data shows that Covid-19 has had a distinct and significant impact on communities. The results allow us to identify several themes related to the impacts of Covid-19 on IPLCs. We have grouped them under the following themes: 1) The impact of decision-makers on community rights and access to resources; 2) The role of decision-makers on the use of traditional medicine; 3) Solidarity within the community; 4) The impact of the pandemic on the economy.

It should be noted that throughout the analysis, we will regularly find two contrasting contexts: situations where governments have taken charge of the management of the pandemic, and situations where local communities and elites are more involved. We will see that responses to the questionnaire that indicate a strong local influence on decision-making tend to be associated with a strong mobilisation of knowledge from traditional or indigenous practices. On the other hand, in situations where governments have taken the decisions related to the management of the pandemic, we observe impacts that are more related to access to resources and community rights. It is worth noting at this point that, in general, the results show a slightly higher trend in the management of the pandemic by governments (Fig. 1¹⁵) than by communities.

Figure 1: Who managed the pandemic (community/government) (N=133)



a. The impact of decision-makers on community rights and access to resources

At the global level, different measures have been put in place by governments and communities to deal with the pandemic. These measures have an impact depending on *how* they are imposed and by *whom*. In many cases, the government was absent or unable to respond quickly, and communities and their decision-makers took the lead in responding to the situation. In such situations, local chiefs and leaders were able to act quickly, despite the lack of medical facilities. Communities with strong rights were able to respond effectively and

¹⁵ Throughout the report, the dyad bar indicates the median.

quickly, deciding to quarantine themselves on their own accord, before government measures were enacted (Walters et al., 2021). As such, the data study shows that IPLCs that are able to govern and access their land and water appear to be more resilient (Walters et al., 2021). This access has enabled them to obtain food and medicine, both for themselves and for foreigners and returning emigrants in need. Through the recognition of their rights to land, they have enforced internal rules for resource use and often protected their territories from abuse by outsiders. Below is one of many testimonies on this subject.

"I am an indigenous city dweller from X, Borneo, Malaysia. I have settled in my hometown since the country was locked down in March 2020. My community in the rural areas had come together to lock down their villages from outsiders as part of their traditional laws to protect the community. The police and army were mobilised to create roadblocks to prevent people from travelling by road, at least from one district to another. From the reports and personal stories, I understand that the people who suffered most from the economic and physical blockades were the migrant workers and displaced Indigenous peoples who had lost their territories to industrialisation or plantations and had moved to the cities to find work, which is now being interrupted. Indigenous Peoples living in territories where they could plant and gather produce, etc., were faring much better and in some cases were in demand by migrant workers who had lost their jobs on plantations and were hungry."

Woman, member of an organisation and representative of a community. Malaysia.

A case study¹⁶ in India corroborates these findings. They show that when local institutions have resources and power, they can help the most vulnerable and weakest in society, including women, children and the poor.

However, analysis of the questionnaires shows that in situations where the government has played a major role in managing the pandemic, IPLCs observe a decrease in access to resources (Fig. 2) and an increase in violations of community rights (Fig. 3).

¹⁶ See the preliminary study on which this report is based: Walters G. et al. "COVID-19, Indigenous peoples, local communities and natural resource governance" PARKS VOL 27 (Special Issue) MARCH 2021, available online here: https://parksjournal.com/wp-content/uploads/2021/03/Walters_et_al_10.2305-IUCN.CH_2021.PARKS-27-SIGW.en_.pdf

Figure 2: Access to resources under government management (N=122, N filtered 26)

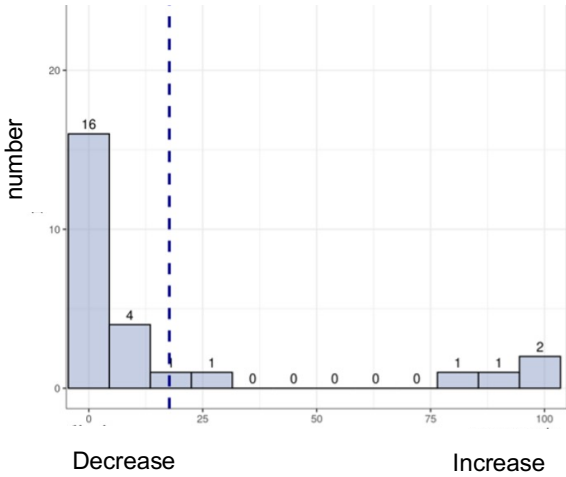
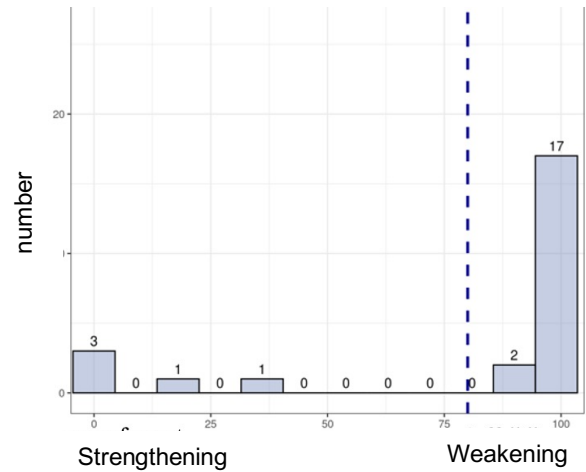


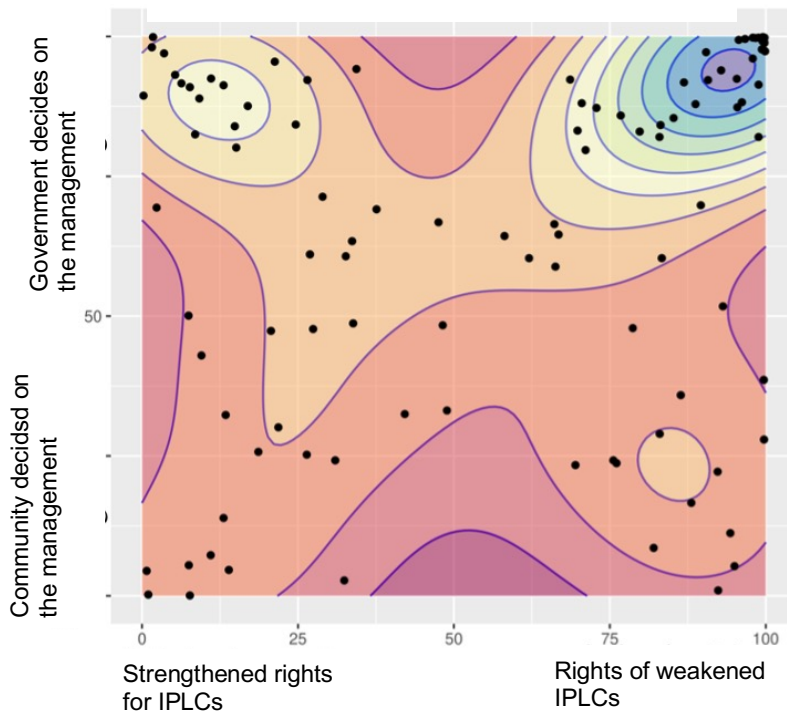
Figure 3: Community rights under government management (N=122, N filtered = 24)



Indeed, government restrictions have sometimes prevented communities from protecting their land. Some communities reported that their own movements were restricted, while private sector activities continued (Walters et al., 2021).

As many Indigenous communities depend on their lands and natural resources for their livelihoods during the Covid-19 crisis, it is important to establish mechanisms to ensure the protection of Indigenous peoples from encroachment on their traditional lands, particularly during the pandemic, when land grabbing or illegal extraction of natural resources tends to intensify (Indigenous Navigator, 2020).

Figure 4: Correlation between decision-makers and human rights (N=105)



We therefore observe a correlation between situations where the government has managed the pandemic and the reduction of the rights of communities (Fig. 4). In such situations, measures were generally imposed on IPLCs without consultation and without considering their reality and particularities.

Participation, consultation and self-determination are key demands of IPLCs. Indeed, free, prior and informed consent (FPIC) is one of the specific rights of Indigenous peoples enshrined in the United Nations

Declaration on the Rights of Indigenous Peoples. It includes that IPLCs are able to say 'yes' or 'no' to any action or proposal that will impact on a community's lands, waters, biocultural diversity or rights (ICCA, 2020). The results in Figure 4 corroborate that governance is central to IPLCs and that it is essential for them to have their own governance systems, thus to make decisions, implement their own rules of access and use of resources, achieve goals, learn, live and embody their own values and sense of identity (ICCA, 2020).

Finally, there are several accounts that restrictions have had a negative effect on the ability of IPLCs to defend their land. In some cases, as mentioned above, the private sector had freedom of movement and activity while IPLCs were confined. Research shows that the rights of communities could not be guaranteed in such situations (Walters et al., 2021).

b. The role of policy makers in the use of traditional medicine

In general, traditional medicine has often been used by IPLCs to counteract some of the symptoms of Covid-19 (Fig. 5). The pandemic has renewed interest in traditional medicine and culturally relevant approaches to treating Covid-19 symptoms. It has also highlighted the importance of local responses to the health crisis (Walters et al. 2021; Curtice & Choo, 2020; United Nations, 2020). However, the nature of the knowledge mobilised by IPLCs to respond to Covid-19 varies according to the authority or institution that was most influential in deciding and regulating the pandemic.

Overall, 40% of respondents indicated that knowledge in handling the pandemic came from government, and 23% from traditional practices (Fig. 6). When we filter out this general pattern and retain only those questionnaires that indicated that the management of the pandemic was handled by community and local decision-makers (Fig. 7), we see a clear increase in the use of traditional knowledge in dealing with the pandemic, which reaches 48%.

Figure 5: IPLC use of traditional medicine during the pandemic (N=115)

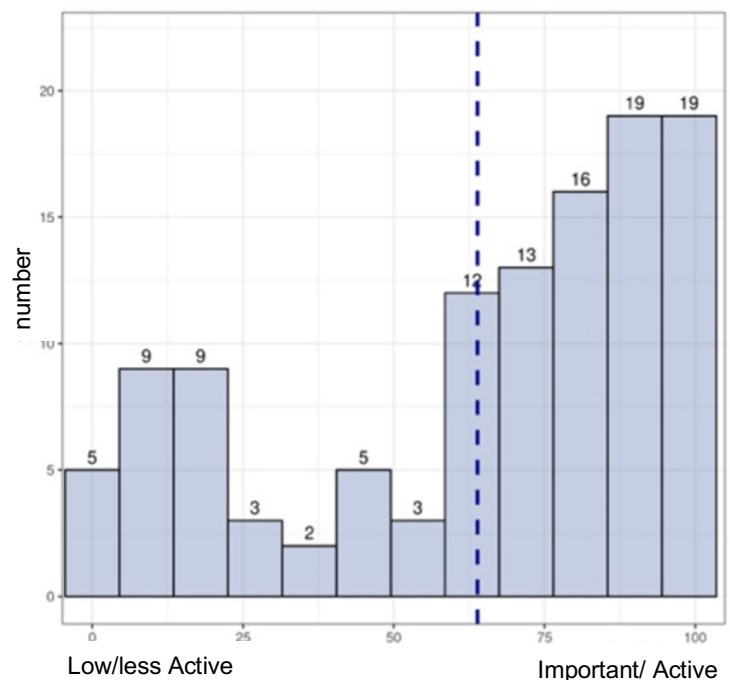


Figure 6: Source of knowledge mobilised in dealing with the pandemic for all questionnaires (N=131)

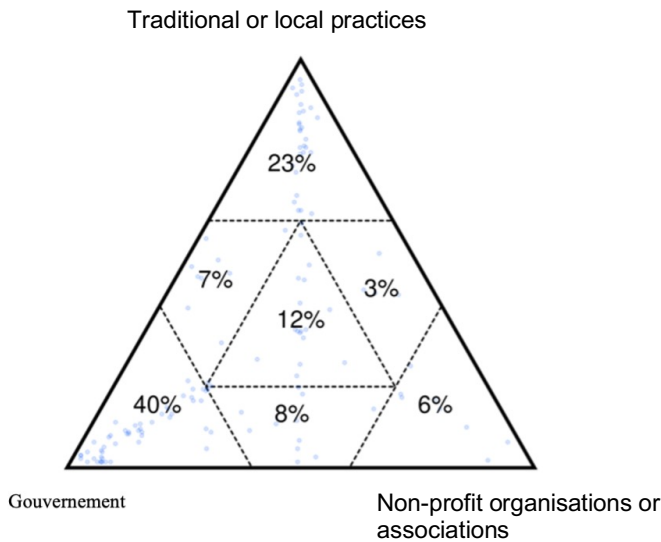
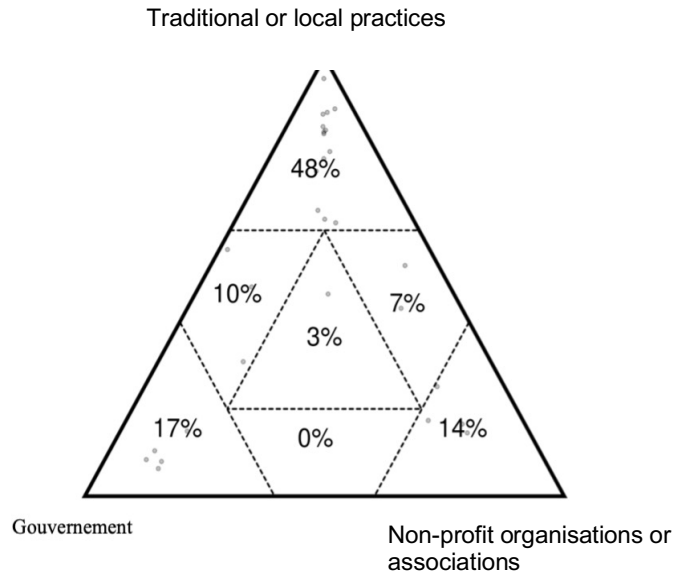


Figure 7: Source of knowledge mobilised in a community-based treatment of the pandemic (filtered N =29)



These results indicate that when the community or local elites play a dominant role in decisions related to pandemic management, knowledge from traditional practices is mobilised as a priority. This observation suggests that the less externally imposed the management of the pandemic is, the more IPLCs will spontaneously call upon their own knowledge to fight the pandemic. Sorting the data on sources of knowledge by emotion, it becomes clear that stories in which anger or frustration were prominent are more associated with government as a source of knowledge (Fig. 8). In contrast, stories where there is a sense of pride are more associated with traditional and local practices (Fig. 9).

Figure 8: Anger / frustration (N=39)

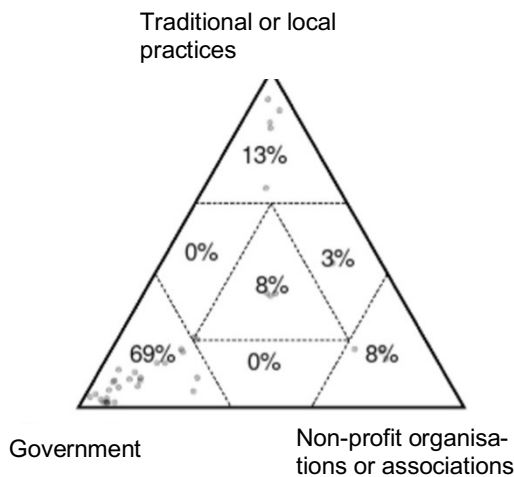
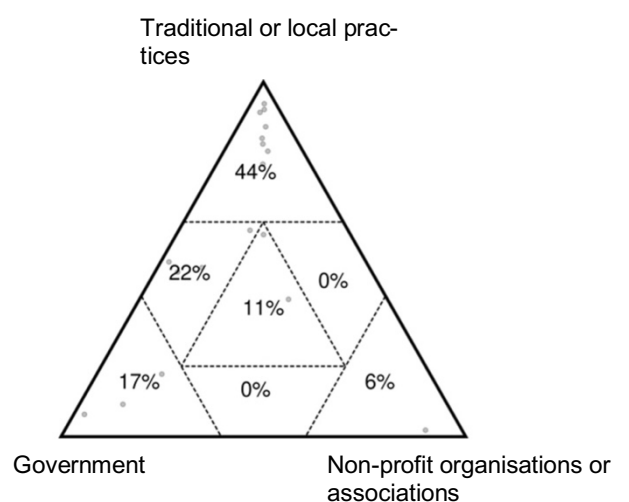


Figure 9: Pride (N=18)



Among the 44% of respondents in Figure 9, one person testifies: "[...] *To cope with this global disease, forest stewards have highlighted their endogenous knowledge, using their medicinal plants, roots, fruits, to strengthen their immune system, but also how to use medicines in case of the appearance of signs related to the Covid-19 disease. According to the statistics in our possession, indigenous and local communities have been and continue to be resilient in the face of this pandemic. These indigenous and community practices have spread not only throughout the DRC, but also to other countries in the world via the Congolese Diaspora, as have certain traditional recipes.* **Member of an organisation. Democratic Republic of Congo.**

Open question

How was traditional knowledge used during the pandemic?

In 97% of the responses to this open-ended question, respondents reported an increased use of traditional medicine. It is apparent that depending on the geographical area and culture of the community, the medicines used are varied and diverse. The following quotes are examples of how IPLCs are using traditional medicine in their communities in the context of the Covid-19 crisis.

*"With the support of wise men and women, the use of traditional medicine was activated in different ways, but the focus was on strengthening the immune and respiratory systems. Knowledge of plants and their preparation for consumption and distribution was widespread among people in the communities, including families who sent these plants to distant people. **Woman, member of an organisation, Ecuador***

or even

*"The use of traditional herbs for the treatment of runny nostrils, chest pain, sore throat, colds, catarrhs, coughs and other diseases." **Woman, member of an organisation, Cameroon***

In addition, the problems linked to the high price of medicines, the difficulties of access to health aid, and the absence of local health centers were recurrently mentioned:

*The consumption of traditional foods, the use of herbal medicine in the face of the shortage of medicines in public health centers. The prices of medicines are high. Few people can afford the cost of medical care in a modern facility." **Male, member of an organisation, Uganda/Sudan***

And:

*"Given the geographical conditions that make it difficult to access aid and medicines, this is a fundamental (traditional) knowledge, even if it is difficult to monitor its impact." **Male, member of an organisation, Colombia***

Or again:

*Traditional knowledge was used to prevent and manage suspected cases. It should be noted that the communities accompanied are very far from screening centres. With only the presentation of the signs of Covid-19, one is subjected to traditional treatments identical to those used for malaria and often, one obtains satisfaction. **Man, member of an organisation, DRC***

In Guatemala, for example, given the lack of access to conventional medicine, traditional peoples' therapies used to cope with diseases in the past, have been widely adopted to reduce the spread and impact of Covid-19 (Walters et al. 2021). Indigenous peoples are again relying on traditional medicine as government health support has historically discriminated against them, a situation that continues in the current pandemic with support being scarce and delayed (Walters et al. 2021; IACHR, 2020). The data confirms WHO's finding

that IPLCs are highly discriminated against in their access to health care and services (United Nations - Economic and Social Council, 2021).

c. Solidarity within the community

The data analysed in the open-ended question below reveal that social or organisational phenomena emerged or were strengthened within the IPLCs during the pandemic (Mind map 1). Solidarity is the most noticeable trend and that received the largest number of responses from PALCs.

Open question:

What new things have emerged from the COVID-19 crisis in your community?

```
graph LR; A[New things emerged from the Covid-19 crisis] --- B[Increased solidarity within the community]; A --- C[New hygiene practices and protocols]; A --- D[Urban-rural migration]; A --- E[Healthier nature];
```

Mindmap 1: Result of the coding of the answers to the above-mentioned open question

With regard to solidarity, the analysis of the narratives mainly shows that IPLCs observe: an awareness among some of the importance of the community; a particularly high overall level of solidarity during the crisis; an increase in the sharing of traditional medicines; a particular attention from the elites for their community; and finally an overall effort of collaboration. Despite the social distancing that IPLCs were forced to show for health reasons, solidarity mechanisms developed and especially strengthened within their community, for example,

In the case of the latter, the community has been able to provide "increased support by using mobile networks (internet) to provide services such as shopping or requesting information". **Male, community member, France**

Or

In the case of the latter, it is important to note that the project's main objective is to "strengthen solidarity between families in terms of food security and health care". **Man, community member, Guinea**

Also, IPLCs have observed migration from the city to the countryside, which has also led to supportive behaviour. A male member of the Maasai community in Tanzania reported that when young people lost their jobs in tourism, they returned home. Despite the reduction in family income, they helped the community to reclaim plots of land that had been forcibly taken by farmers after their absence. The young people who returned to their ancestral lands joined together in numbers and claimed their land (Walters et al. 2021). Additionally, IPLCs observed that nature is healthier and new hygiene protocols have emerged, such as regular hand-washing practices, elbow greetings and the wearing of masks.

The data collected in the dyads (Fig. 10) corroborate the results obtained in the analysis of the open question above. A large proportion of the responses indicate that solidarity increased with the occurrence of the Covid-19 crisis. This suggests a strong willingness on the part of IPLCs to adopt solidarity behaviours when individuals are threatened. This is partly due to the fact that in many IPLCs a holistic and supportive approach to relationships between people and with nature is dominant.

Figure 10: Solidarity (N=105)

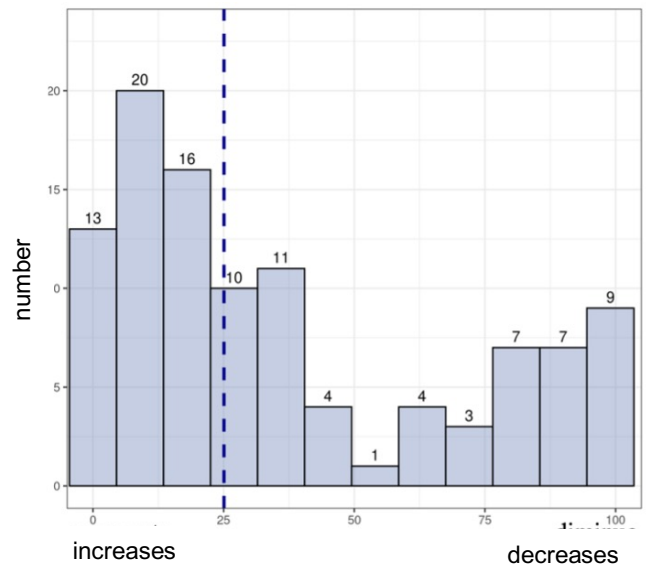
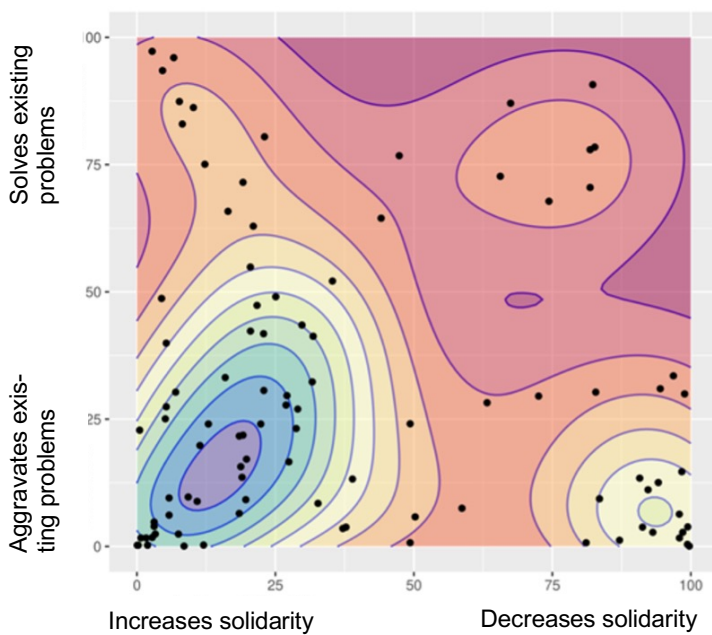


Figure 11: Correlation between increased solidarity and worsening of existing problems (N=101)



This is even more apparent when we analyse the correlations between different dyads. Indeed, we observe that when a problem (in this case a pandemic) worsens pre-existing problems, IPLCs are more likely to strengthen the bonds of solidarity that they maintain within the community, rather than generating more conflicts (Fig. 11). This trend is confirmed when the solidarity variable is crossed with other dyads, such as access to resources (Fig. 12).

Indeed, cross-analysis shows that as access to resources in and around the community decreases, solidarity within IPLCs tends to increase (Fig. 13), even if the overall level of solidarity remains high. This observation runs counter to the dominant economic theories, notably the theory of economic rationality, according to which individuals compete for access to resources and means of subsistence and, driven by their rationality, adopt individual and selfish behaviour in the face of situations where resources are becoming increasingly scarce¹⁷.

Within IPLCs, solidarity mechanisms consider both the interests of the community and those of the individuals who make up the community. The Covid-19 crisis indicates that IPLCs seem to be moving significantly towards what might be considered an 'economy of care' (as theorised by Emmanuel Petit (2013), which is overcoming the selfishness and extreme rationality of individuals in resource crises.

Figure 12: Correlation between the use of traditional and local medicine and solidarity (N=92)

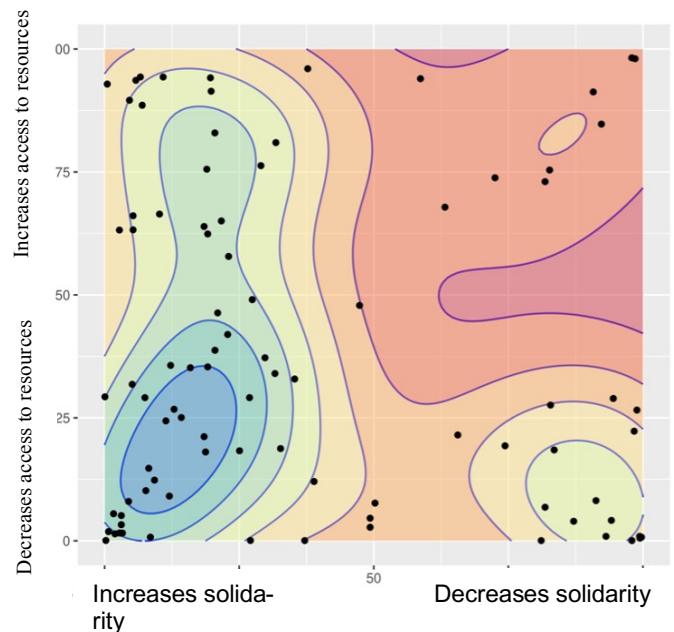
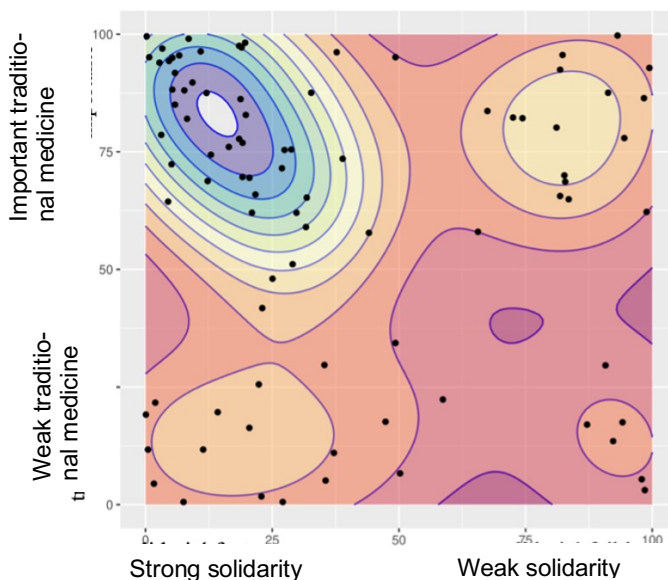


Figure 13: Correlation between access to resources and solidarity (N=93)



There is also a correlation between the increase in the use of medicine derived from local and traditional knowledge and the increase in solidarity within communities. These results suggest that knowledge, especially medical knowledge, flows smoothly and is shared without restriction within the community (Fig. 13).

In this sense, these results on solidarity and traditional knowledge are in line with scientific research on IPLCs, and in particular those of authors such as Barbosa et al:

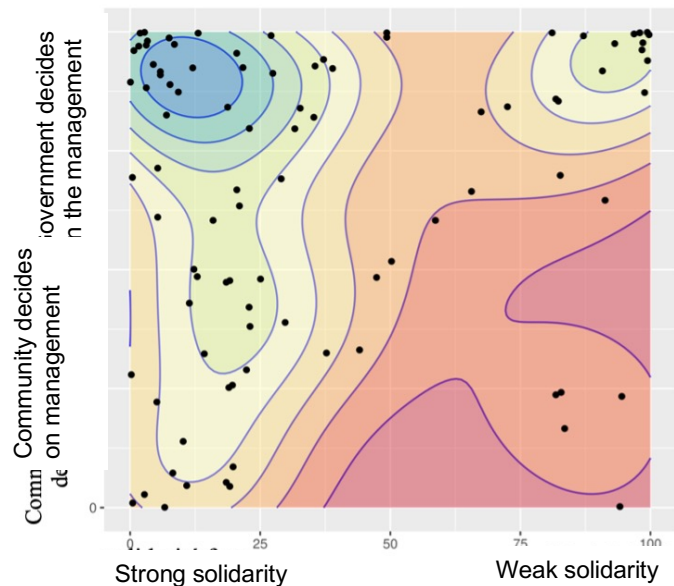
"Whether they are transmitted to the whole community or by some of them to initiates deemed capable of receiving and using them without distorting them or diverting them from their purpose, this knowledge is not 'private' in the Western sense of the word, but is shared by the community, even if in some cases

¹⁷ These founding assumptions lie at the heart of the thinking of the classical economists of the 18th and 19th centuries (Adam Smith, David Ricardo, John Stuart Mill) who attributed a maximising egoism to individuals. The evidence in this report tends to put these perceptions of *Homo oeconomicus* into perspective.

the holders are few in number. (...) Consequently, everything that has to do with life, fundamental cultural knowledge and practices seems far removed from the idea of intellectual property, which would constitute both an attack on the world (on cosmovision, on the sacred) and a threat to the destruction of the community" (2012).

Figure 14: Links between nature, decision-makers (community/government) and solidarity (N=93)

Finally, when communities take ownership of decisions related to the management of the Covid-19 crisis, solidarity mechanisms are stronger than when decisions are imposed from the outside, particularly from the government (Fig. 14).



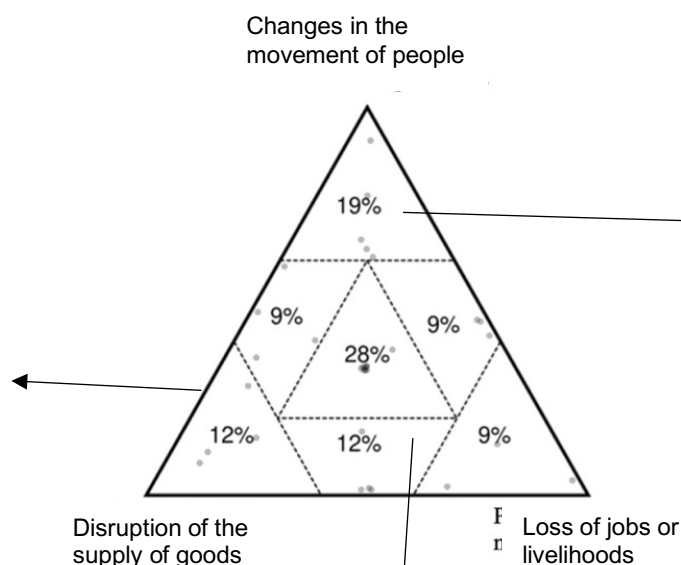
d. Outcome on the economy

In general, the Covid-19 crisis has had a considerable impact on the economy. Below are some stories associated with different types of impacts on the local economy (Fig.15) showing the range of situations, interpretations and local particularities of respondents.

"Apart from the fall in prices of products such as tomatoes, plantains, etc. due to the closure of the borders, these communities were also exposed to the risk of contamination by this virus because, during this same period, they witnessed the conversion of forest land into non-forest land, especially for the establishment of palm groves, which led to the massive arrival of employees in the communities and therefore to an increase in the number of potential virus carriers".

Woman, Member of an organization, Cameroon.

Figure 15: Impact of the pandemic on the local economy (N=132)



"The different villages have organised themselves to avoid any movement of their community members and have forbidden access to the villages to non-residents. These communities, living in almost total autonomy, have fallen back on their ancestral knowledge to meet their needs and protect themselves from the pandemic thanks to traditional medicines. While the countries of the Amazon basin are being hit hard by the pandemic, these communities have not reported any losses due to COVID-19".

Male, member of an organization, Peru, Brazil and Colombia.

However, since the Covid-19 pandemic arrived, Ivindo park managers have forbidden the inhabitants of Village X to fish in the park. This situation has persisted for several months. In view of the difficulties that the community of X has encountered without fishing, the latter has initiated an approach to the park managers without success. The inhabitants of X have taken the case to the judicial authorities and the provincial authorities. Until now, access to the part of the river in the park is forbidden to community X."

4. Gabon-Guyana analysis

Gabon and Guyana¹⁸ are the two countries in which we collected the most data. It is therefore interesting to analyse whether we observe similarities or differences between these two countries. Overall, the comparison of these two regions serves two purposes: the first is to give us a specific insight into the context of these regions, and the other (and perhaps more important) is to remind us that IPLCs are not a monolithic and uniform block, but a reality that includes an incredible diversity of contexts, practices and experiences.

In order to contextualise the analysis, it should be noted from the outset that in Gabon, it was the government that played a leading role in the management of the pandemic (Fig. 16), whereas in Guyana, it is clear from the narrative accounts that it was above all a community-based management that was conducted (Fig. 17), even if the government does not appear to have confined itself to a unique role as an observer. It should be noted in the context of this comparison that most of the stories in Gabon account a stricter confinement than that of Guyana.

Figure 16: Decision-makers in Gabon (N=15)

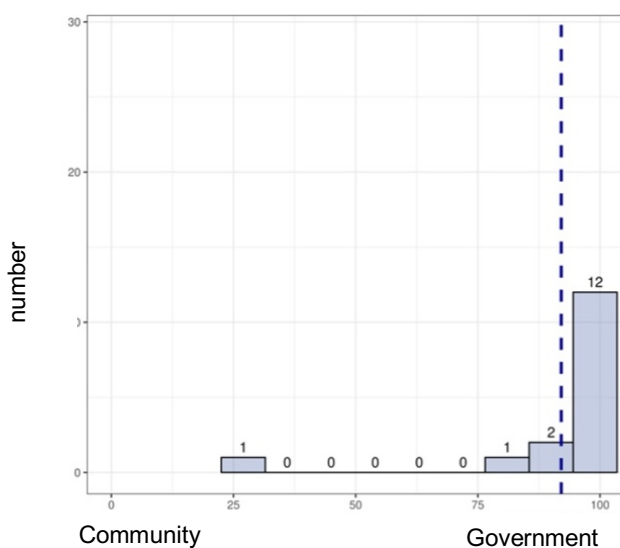
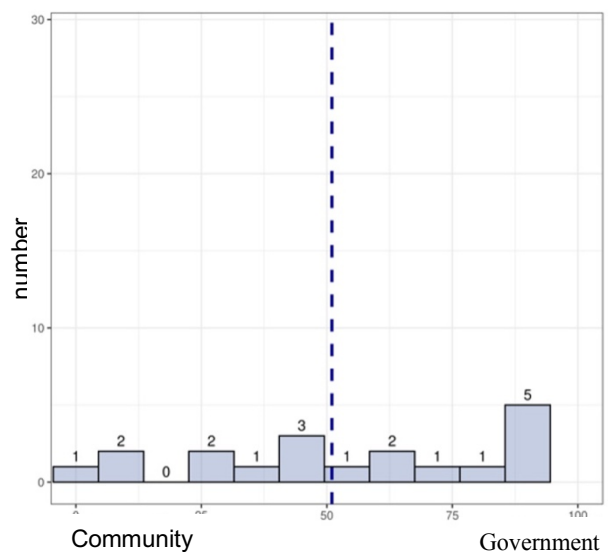


Figure 17: Decision-makers in Guyana (N=15)



The comparison data indicate that the most marked distinction is in the focus of the respondents' stories in the survey questionnaire: while the Gabonese stories place a strong emphasis on health in their narratives (Fig. 18), probably due to past pandemic experience, the Guianese stories focus primarily on social issues (Fig. 19).

¹⁸ For details on COVID-19 and indigenous peoples in Guyana see Mistry et al. 2021.

**Figure 18: Focus on health in Gabon
N=22 (19% for Guyana)**

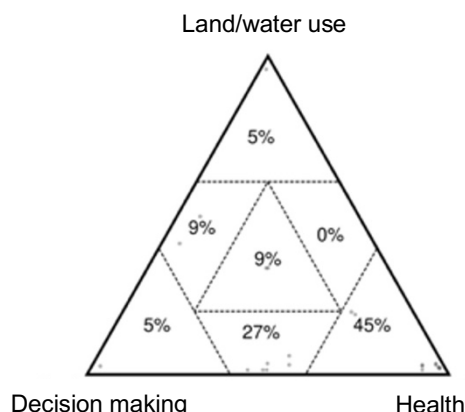
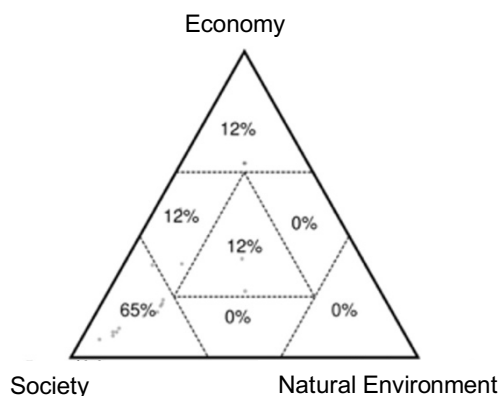


Figure 19: Importance attached to society in Guyana (n=17). 12% for Gabon



Among the 65% of people who put particular emphasis on the societal impact, one person testifies for example:

I have been living in my community for more than 14 years, the impact of the pandemic has been the separation and death of families and friends, community members who used to live together closely have had to find new ways of living together. Mutual aid and other activities that require being together were no longer accepted by the villages.

Male, under 30, Guyana.

As for Gabon, the results, as mentioned, put more emphasis on health. Although it is the government that decides on the health measures to be followed, the results show that communities are turning to traditional medicine, knowledge of medicinal plants and their practices. People with flu symptoms coupled with malaria symptoms, mobilise steam baths (Ifoula) with specific barks and bitter wood to alleviate the symptoms associated with Covid-19.

However, similarities are identified in the comparison between the two countries. These similarities relate to important concerns about the strong impact on the local economy (Fig. 20 and Fig. 21).

Figure 20: Impact on the local economy in Guyana (N=16)

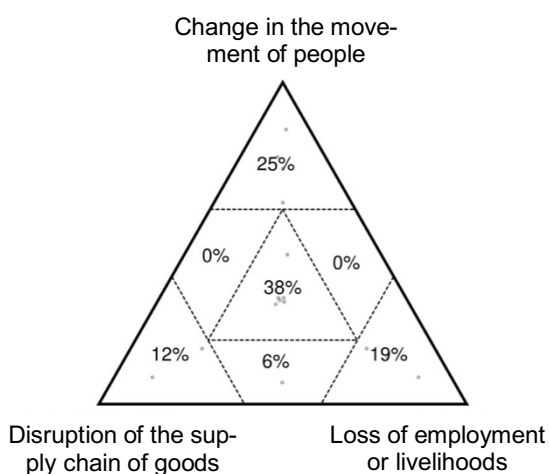
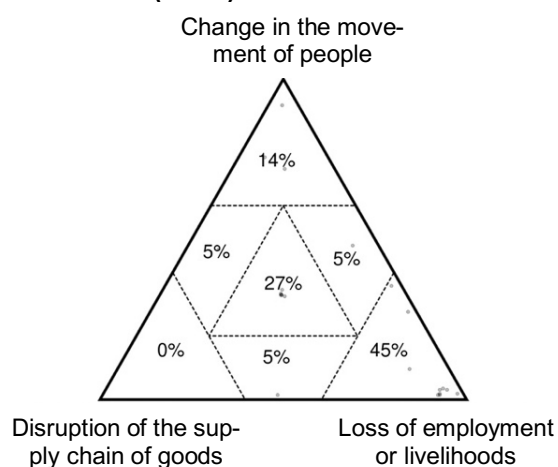


Figure 21: Impact on the local economy in Gabon (N=22)



In Gabon, the pandemic has compounded existing problems. Businesses closed during the containment, working hours were reduced, oil production slowed down and technical unemployment increased, elephant poaching increased, and fishing pressure increased.

In Guyana, the results show the same trend, notably an aggravation of existing problems linked to the lack of employment, the impossibility of selling livestock or other agricultural products, as well as the gold washing that continued during the pandemic. *One respondent said: "From one day to the next, there were no more jobs. Overnight, already in an oil sector in crisis, Covid dispossessed us of the little work we had left".*

Man, community member, Guyana

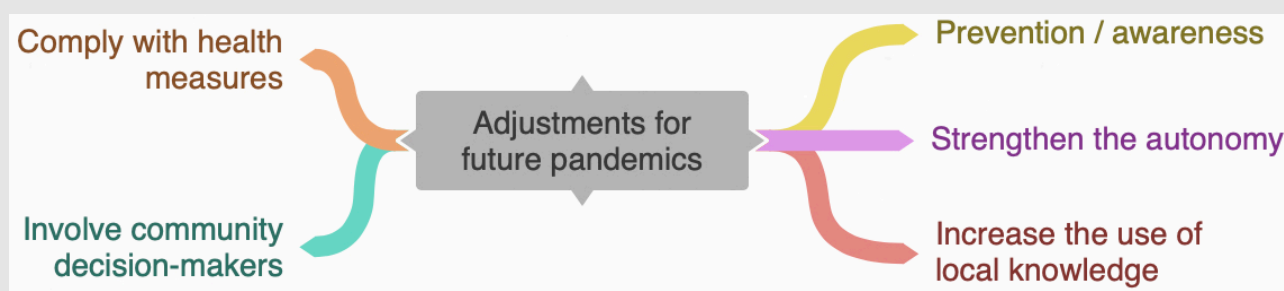
These findings indicate that despite distinct contexts and specific local realities, including divergences in the management of the pandemic, few IPLCs have not been severely affected in their local economies. This is why, as we will see in the chapters of this report on lessons learned and recommendations for governments, it is essential to guarantee the rights of IPLCs to their territories and access to natural resources, and to implement measures to protect the natural environment in which they live. These conditions make it possible to guarantee the food sovereignty of the IPLCs and to strengthen their resilience and adaptation capacities in the face of this type of crisis, where the loss of jobs and livelihoods greatly jeopardises the life of the community.

5. Lessons learned from the pandemic

Open question

What could your community do differently in a future pandemic?

The above question provides an overview of the lessons IPLCs have learned from their experiences during the Covid-19 pandemic, with a view to responding more effectively to future pandemics. The coding and analysis of the responses allows us to identify the most salient themes, which are as follows (**Mindmap 2**).



Mindmap 2: Coding of the above-mentioned open question reflecting the most significant trends

Empowerment

IPLCs repeatedly report that autonomy is a key element to be strengthened and guaranteed to prevent future pandemics. On this subject, one of the respondent's states:

The great lesson of this pandemic is that communities must think of self-sufficiency to the extent of the possibilities offered by their lands and forests. The over-reliance on the outside world (revealed by the closure of the country's borders and provinces) has caused many complications for communities during containment".

Man, member of an organisation, DRC.

In the same vein, there are many recurrences of strengthening traditional practices and livelihoods that contribute to maintaining indigenous sovereignty over lands and territories for future resilience.

Valuing, using and sharing local and traditional knowledge

The coding of the question revealed that a large number of respondents wish to give more importance to the valorisation, use and especially the sharing of local knowledge, particularly of medicinal plants. Testimonies mention in particular that:

Organising in the best way, valuing and using ancestral medicine, which has already helped a lot in this period of the Covid-19 pandemic.

Man, community member, Guatemala.

Or again:

Continue to maintain good family care practices and take advantage of the medicinal plants that nature offers us; take care of the forest, the land and the water because they are elements of our daily life that keep us healthy”.

Man, community member, Bolivia.

Involving community decision-makers

The distribution of data reflects the willingness of IPLCs to rely on community experts other than government politicians. They believe that if community leaders are involved, the confidence of community members will increase.

Improving prevention and awareness for future pandemics

Prevention and awareness-raising are significant themes when IPLCs talk about the means of adaptation they should mobilise in the event of future pandemics. For example, one of the respondents mentioned the fact that:

“We believe that this first pandemic has severely affected the community (...) because no one had a palliative experience to overcome this virus. We dare to believe that if the pandemic resurfaces, the community will observe hygiene measures because of the awareness they have received”.

Woman, member of an organisation, DRC.

The lack of information and awareness has been experienced in a very negative way and this will be discussed in the recommendations that IPLCs make to their governments.

Respecting sanitary measures

IPLCs urge their communities to practice social distancing and hand washing, to be attentive to the recommendations of medical authorities and, to apply protocols to avoid contagion and to avoid contact with strangers.

6. Recommendations

Open question

What would you recommend to government authorities to deal with a future pandemic?

The analysis and distribution of the data reveal that stakeholders attach meaning or importance to making recommendations mainly on the following topics

Better communication and awareness-raising on the part of the government. The lack of information and communication on the Covid-19 pandemic was found to be a negative experience for local communities. IPLCs want more and better communication from their governments. For example, access to information in local dialects and the creation of awareness centres, are strongly suggested.

Participation and consultation of IPLCs in decision-making processes. Survey respondents called for better protection of the rights of IPLCs and recognition of their special needs. They therefore called on their governments to involve their communities to the maximum extent possible in decision-making processes and political participation by involving local decision-makers and ensuring FPIC.

Local economic support and transparent budget management. IPLCs recommend better management of funds in times of pandemic, with a focus on local budget allocations and the creation of savings in government coffers to cover contingencies related to future pandemics.

Facilitated access to care. IPLCs want to guarantee their medical security and therefore suggest that easier access to care, recourse to public health officials, strengthening of rural health centres and restructuring of the health system be carried out by their governments.

Additional remarks on traditional and modern medicines

In terms of recommendations on the use of traditional medicine, 57% recommended that the government conduct research on infectious diseases, but above all listen to epidemiologists who have real knowledge of the field, adopt a policy based on scientific expertise and invest in laboratories.

43% of the participants called for traditional knowledge to be considered in the manufacturing of medicines. Moreover, for traditional knowledge to be recognised in health care and for synergies to be found between traditional and modern medicine.

The formulations suggest a form of conciliation rather than opposition between traditional and modern knowledge in the face of new variations of future viruses.



Image 3: Positioning shrimp traps in the Ramsar site Petit Loango. Photo credit: C. Nkollo Kema-Kema.

7. Conclusion

We have examined how the Covid-19 pandemic has affected IPLCs, through the testimony and information provided by IPLCs themselves and related organisations. The occurrence of the Covid-19 pandemic in late 2019 has exacerbated economic and social inequalities globally. People have been disproportionately affected by living standards, access to livelihoods, access to care and national measures. The report confirms that IPLCs have been particularly affected by this phenomenon.

This report found that the impact of Covid-19 on IPLCs was shaped by, among other things, the type of decision-maker, the degree of self-determination, access to resources, information flow and awareness, and the type of measures. The analysis of the open-ended questions, including those on lessons learned in order to adapt to future pandemics, and the recommendations made to government, support these findings. They indicate the short- and medium-term imperative of guaranteeing the autonomy and self-determination of IPLCs, of involving local elites more in crisis management or more generally in political participation and, the need to set up awareness-raising processes that correspond to the cultural and local requirements of IPLCs. These unpublished data, reported by IPLCs, indicate what could be done better to ensure their health and food security in the future. This information is therefore a valuable source of information for any community of decision-makers,

researchers or organisations wishing to anticipate action in the event of future health pandemics.

Furthermore, we found that the most significant impacts were on IPLCs' rights, loss of livelihoods and reduced access to resources¹⁹. The data and graphs showed that these phenomena are quite strongly associated with government management of the pandemic. For example, government-imposed confinements have affected the ability of IPLCs to defend their land. In Gabon, Guatemala, Cameroon and the Democratic Republic of Congo, confined people noted that this policy did not apply to the extractive sectors - mining, logging and palm oil - even though these continued to operate, sometimes at the expense of community lands and contributing to the transmission of Covid-19 (Walters et al., 2021). Indigenous peoples need access to natural resources and their livelihoods as they are essential to their traditional activities, such as the production of traditional medicines and culturally appropriate food (Indigenous Navigator, 2020). In this regard, the UN Declaration on the Rights of Indigenous Peoples calls on states to establish effective mechanisms to prevent and redress any actions that dispossess Indigenous peoples of their lands, territories or resources. This protection should extend to lands which, although not exclusively occupied by Indigenous Peoples, have been traditionally used by them for their subsistence (ILO Convention 169).

The report also demonstrated the importance that IPLCs attach to traditional medicine. Therefore, Member States must ensure that Indigenous peoples have the right to their traditional remedies and that they can maintain their health practices, by strengthening intercultural health services and indigenous health systems that are based on Indigenous Peoples' values, physical and spiritual health and a sustainable and respectful relationship with nature (United Nations, 2021).

On the other hand, the data noted the impressive solidarity and resilience of IPLCs, particularly when they are managing the health crisis themselves and their rights and access to their resources and land are secured. However, numerous reports (Walters et al. 2020) indicate that protected and conserved areas were less well protected, and more vulnerable to poaching, during the pandemic. This study shows that where land tenure is secure, IPLCs are resilient because they have their own food sources and can take care of their territories. These results corroborate analysis confirming the observed links between IPLCs and a high level of food sovereignty (Pimbert et al., 2019; Ferguson et al. 2022). For example, several small-scale fishing communities engaged in food sharing (Bennett et al., 2020) during the Covid-19 crisis in ICCAs.

¹⁹ Other reports cited problems such as the lack of access to the internet and adequate equipment for e-learning as a major barrier for many indigenous children (Human Rights Watch, 2021)

The resilience of IPLCs is determined by their access to and use of land and nature, as well as their ability to govern and defend their land and water. From this perspective, the long-term protection of biodiversity, agrobiodiversity and the environment are crucial issues. The natural resources and traditional knowledge of which the IPLCs are guarantors have been mobilised in the context of the Covid-19 pandemic. They are invaluable in times of crisis and will continue to be an important safety net in future pandemics.

8. Bibliography

- Anongos, A., Berezhkov, D., Boengkih, S. J., Cavanaugh-Bill, J., de Bringas, A. M., Goodland, R., Kirsch, S., Moody, R., Nettleton, G., Pyagbara, L. S., & Wyatt, B. (2012). *Pitfalls & pipelines: Indigenous peoples and extractive industries*. Tebtebba, IWGIA & PIPLinks.
- Barbosa, J., Canovas, J., & Fritz, J.-C. (2012). Les cosmovisions et pratiques autochtones face au régime de propriété intellectuelle: La confrontation de visions du monde différentes. *Éthique publique. Revue internationale d'éthique sociétale et gouvernementale*, 14(1).
- Bellier, I. (2012). Les peuples autochtones aux Nations unies: Un nouvel acteur dans la fabrication des normes internationales. *Critique internationale*, 54(1), 61–80.
- Bennett, N. J., Finkbeiner, E. M., Ban, N. C., Belhabib, D., Jupiter, S. D., Kittinger, J. N., Mangubhai, S., Scholtens, J., Gill, D., & Christie, P. (2020). The COVID-19 Pandemic, Small-Scale Fisheries and Coastal Fishing Communities. *Coastal Management*, 48(4), 336–347.
- Combessie, J.-C. (2007). *La méthode en sociologie* (2e éd.). La Découverte.
- Consortio TICCA. (2021). *Territorios de vida: Informe 2021*. <https://report.territoriosofliffe.org/es/>
- Convention sur la diversité biologique*. (1992).
- CARE Principles of Indigenous Data Governance*. (n.d.). <https://www.gida-global.org/care>
- Carroll, S. R., Akee, R., Chung, P., Cormack, D., Kukutai, T., Lovett, R., Suina, M., & Rowe, R. K. (2021). Indigenous Peoples' Data During COVID-19: From External to Internal. *Frontiers in Sociology*, 6, 617895.
- Ferguson, C. E., Tuxson, T., Mangubhai, S., Jupiter, S., Govan, H., Bonito, V., Alefaio, S., Anjiga, M., Booth, J., Boslogo, T., Boso, D., Brenier, A., Caginitoba, A., Ciriayawa, A., Fahai'ono, J. B., Fox, M., George, A., Eriksson, H., Hughes, A., ... Waide, M. (2022). Local practices and production confer resilience to rural Pacific food systems during the COVID-19 pandemic. *Marine Policy*, 137, 104954.
- Franssen, A., & Huynen, P. (2014). Le questionnaire à questions ouvertes: Une méthode qualitative. In L. Van Campenhoudt & J.-E. Charlier (Eds.), *4 méthodes de recherche en sciences sociales: Cas pratiques pour l'Afrique francophone et le Maghreb* (pp. 118–167). Dunod.
- Fritz, J.-C., Deroche, F., Fritz, G., & Porteilla, R. (2005). *La nouvelle question indigène: Peuples autochtones et ordre mondial*. Harmattan.
- Human Rights Watch. (2021).

- IACHR. (2020). *IACHR Warns of the Specific Vulnerability of Indigenous Peoples to the COVID-19 Pandemic, Calls on States to Adopt Targeted, Culturally Appropriate Measures that Respect These Peoples' Land* [Press release].
- International Labour Organization. (2019). *Implementing the ILO Indigenous and Tribal Peoples Convention No. 169: Towards an inclusive, sustainable and just future*. International Labour Organization.
- Mistry, J., Jafferally, D., Ruiz-Ramos, J., Xavier, R., Albert, G., Berardi, A., Mendonca, S., & Robertson, B. (2021). *Covid-19 impacts on Indigenous food sovereignty, livelihoods and biodiversity, Guyana*. Report published by the Traditional Knowledge in Guyana Partnership, UK.
- Nations Unies - Conseil économique et social. (2021). *Instance permanente sur les questions autochtones, Vingtième session. Réunion d'un groupe d'experts internationaux sur le thème « Les peuples autochtones et les pandémies »*.
- Petit, E. (2013a). *L'économie du care*. PUF.
- Petit, E. (2013b). L'économie du comportement et la théorie du care. Les enjeux d'une filiation. *Revue du MAUSS*, 41(1), 347–369.
- Pimbert, M. P., & Borrini-Feyerabend, G. (2019). *Nourishing life—Territories of life and food sovereignty* (Policy Brief of the ICCA Consortium No. 6). ICCA Consortium, Centre for Agroecology, Water and Resilience at Coventry University and CENESTA, Tehran.
- Sajeva, G., Borrini-Feyerabend, G., & Niederberger, T. (2019). *Meanings and more...* (Policy Brief of the ICCA Consortium No. 7). ICCA Consortium in collaboration with Cenesta.
- The International Work Group for Indigenous Affairs (IWGIA) and the International Labour Organization (ILO). (2020). *The impact of COVID-19 on indigenous communities: Insights from the Indigenous Navigator*.
- United Nations. (2012). *The Rights of Indigenous Peoples to Food and Food Sovereignty. Eleventh session of the UN Permanent Forum on Indigenous Issues*.
- United Nations. (2020). *The Impact of COVID-19 on Indigenous Peoples* (Policy Brief No. 70). Department of Economic and Social Affairs.
- Verdeaux, F., & Roussel, B. (2006). Y a-t-il un autochtone dans l'avion ? Des ethnies locales à l'autochtonie globale en passant par la gestion durable de la biodiversité. *Autrepart*, 38(2), 15–37.
- Walters, G., Pathak Broome, N., Cracco, M., Dash, T., Dudley, N., Elías, S., Hymas, O., Mangubhai, S., Mohan, V., Niederberger, T., Achtone Achtone Nkollo Kema Kema, C., Oussou Lio, A., Raveloson, N., Rubis, J., Mathieu Toviehou, S. A. R., & Van Vliet, N. (2021). COVID-19, Indigenous peoples, local communities and natural resource governance. *PARKS*, 27, 57–72.
- Zancanaro, B. (2016). *La rationalité d'Homo Oeconomicus* [Mémoire de master en philosophie].

Derniers numéros

Série *Développement, Sociétés,
Environnements*

N°1 – 2020. Politique d'élevage ovin, pratiques et raisons des éleveurs.
Étude du cas Suisse romand. *Hélène Weber*

N°2e – 2020. The section de commune of Mourex, France. A "power to
be heard, to defend what is precious to us." *George Smith*

N°2f – 2020. La section de commune de Mourex, France. « Le pouvoir
d'être entendu, de défendre ce qui est précieux ». *George Smith*

N°3 – 2022. Du quinoa suisse ? Enjeux globaux de l'adaptation d'un «
super-aliment » exotique et idéalisation du « local ». *Florence Bétrisey*



UNIL | Université de Lausanne

Institut de géographie
et durabilité

ISSN 2673-4516 (Online)