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The power of choice: How institutional selection influences restoration success in Africa

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Abstract

Restoration of degraded ecosystem functions and services is an important component of conservation and sustainable development because it allows people to improve human livelihoods by reviving important ecosystem services. For restoration to be achieved a variety of factors must be in place such as policies laws, capacity and spaces in which to debate restoration decisions, amongst others. Restoration work is typically supported by restoration projects, requiring participants to decide to restore an ecosystem and so participate in restoration action. How the intervention is planned or implemented can help or hinder that restoration process. Those planning restoration projects, intervening agents, have power to influence projects through the choices that they make. For one choice, institutional choice, the local partners with which outside agencies choose to work, and thus recognise, can be another factor influencing restoration success. Poor institutional choices can have negative impacts on conservation interventions. This paper uses five case studies from Africa (Burkina Faso, two from Ghana, Senegal and Tanzania) to understand how restoration interventions are impacted by the choice and recognition dynamics of intervening agents. While in all five cases, some restoration was achieved, in four of the case, there were negative consequences for social outcomes. In the fifth, contrasting case, the project was implemented with respect for local knowledge and in ways that local stakeholders intended. The paper ends by proposing ways that intervening agents can improve their actions and so enable restoration projects achieve their objectives, specifically by presenting guidance for making institutional choices to help ensure restoration implementation.

Key words

Africa, restoration, projects, institutions, choice and recognition, NGOs

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1 Introduction: Enabling restoration

Restoration, the process of assisting the recovery of degraded ecosystem functions and services (SER 2004), is an important component of conservation and sustainable development because it allows people to improve human livelihoods by reviving important ecosystem services (Lamb 2005; Benayas et al. 2009). Restoration, and particularly forest landscape restoration, no longer only focuses on restoring an ecosystem to a historic state, but can also focus on future goals (Choi 2004) including livelihoods and well-being (Rietbergen-McCracken et al. 2007; Stanturf et al. 2014).[1] For this latter reason, households and communities may decide to restore an ecosystem (Adams et al. 2016), but this decision may also be influenced by how empowered people are to make restoration choices and the ways in which restoration interventions operate and affect people (Tidball et al. 2018). In short, restoration takes place in a social context, requiring collaborations with multiple actors, agencies, and cultures (Görg 2007; Mansourian et al. 2014). Restoration projects are thus dynamic, with social and political factors influencing them over time (Mansourian and Vallauri 2014), with several projects potentially occurring during a restoration process.

Restoration is often a largely human endeavour (Suding 2011) and so even if a restoration project has ecological aims, this occurs in a social context. Restoration success has been defined variously including actors being motivated to restore, having enabling conditions in place (including social, market and ecological), and capacity (Hanson et al. 2015). These factors in favouring restoration success have been explored in the literature and include the desire and capacity of households, communities and other stakeholders to engage in restoration (Clewell and Aronson 2006; Baynes, et al. 2017), support of laws and policies (Román-Dañobeytia et al. 2014; Rezende et al. 2018), clear tenure rights (McLain et al. 2018), trust amongst participating organisations (Metcalf et al. 2015), a people-centred approach to decision-making (Wilson and Cagalanan 2016) and safe and inclusive spaces in which to debate restoration decisions (Pinto et al. 2014); these relationships between decision-making and the physical acts of restoration are presented in Figure 1.

[1] Although there are diverse ways in which land restoration can occur (Prober et al. 2019), we focus on forests, due to the international focus on carbon forestry and in light of the Bonn Challenge (Aronson and Alexander 2013), to which more than 50 countries have pledged the restoration of 170 million hectares of land and forest (http://www.bonnchallenge.org/). The Bonn challenge promotes a forest landscape restoration approach, which focuses on multiple types of restoration interventions in a landscape.

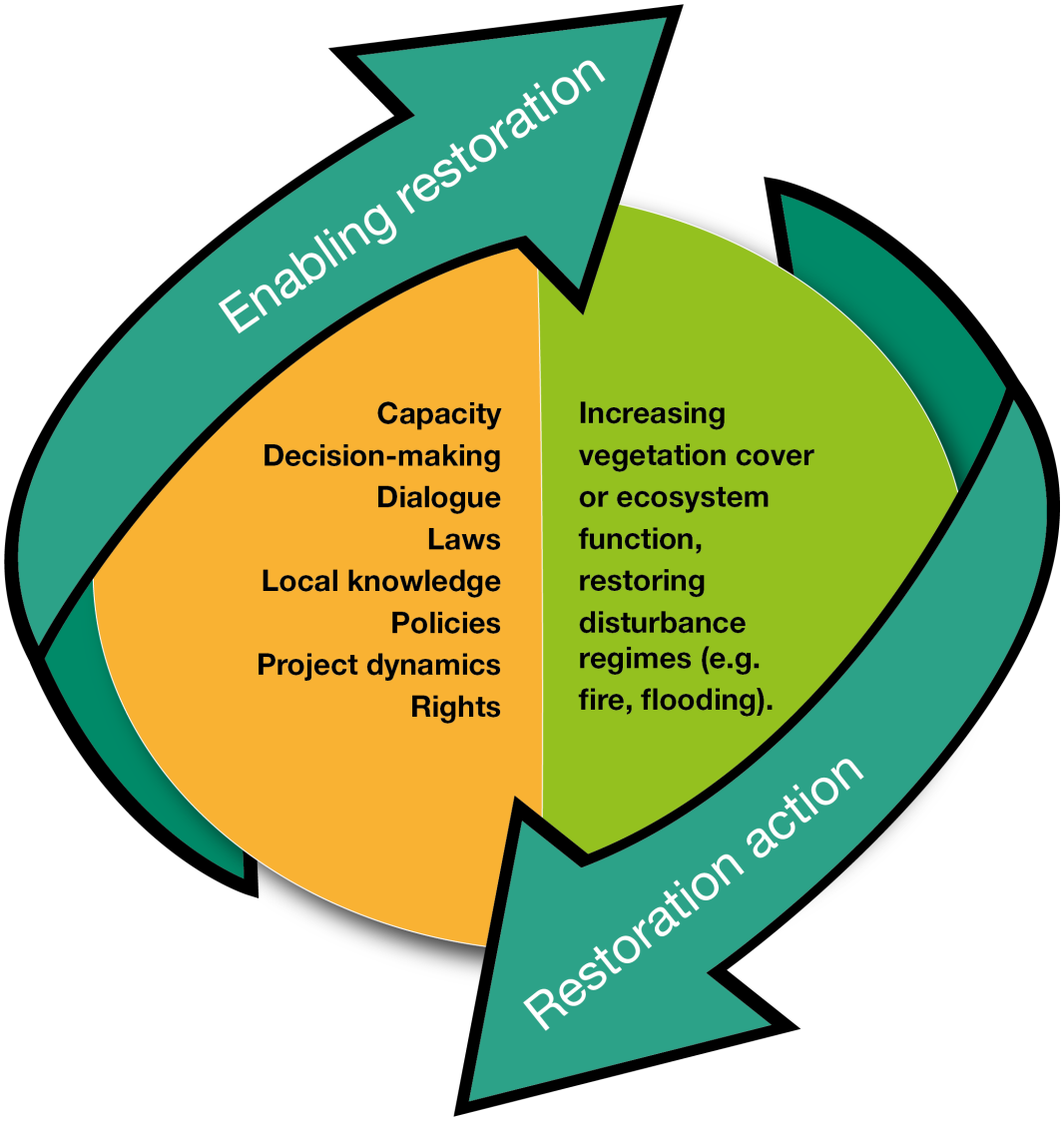

Fig. 1. The enabling factors of restoration action.

Although restoration can be driven by local people, it is often externally driven by actors such as governments, donors or conservation organisations (e.g. Mansourian et al. 2016), here called intervening agents. The inter-relationships amongst intervening agents and with local peoples is often complex. In many cases, decision-making over restoration can be influenced by several institutions, such as policy or governmental institutions, at different levels, (Nagendra and Ostrom 2012). So understanding the institutional scaffolding of a restoration site, how these institutions are chosen, how chosen institutions relate to each other, and the involvement and impact on local people r becomes important. One critical moment in a restoration process occurs when a person or group decides to restore their land or ecosystem through initiating restoration (Adams et al. 2016). This can include leading a restoration project themselves or participating in one led by others (from either inside or outside the local area), here called intervening agents. In this article, we specifically focus on projects led by intervening agents outside the local area (but acknowledge that restoration can also be a bottom-up, locally-led process). In the case of projects led by outside organisations, how the intervention is planned or implemented can help or hinder that restoration process. The decisions of these actors influence project outcomes and are related to their relationships with other actors and the setting in which a project is carried out (Jepson et al. 2011). These organisations take

on the task of developing restoration initiatives that involve local stakeholder groups, often through making choices of which groups to work with, and how to meet the demands of donors and partner agencies.

The way in which intervening agents engage with local people has been an ongoing challenge for conservation for many years (McShane and Wells 2004; Larsen and Brockington 2018; Nuesiri 2018). Studies show that restoration projects are more likely to succeed if organisations work closely with communities (Bennett et al. 2014; Le et al. 2014). Although recent restoration guidelines underscore the importance of engagement with local stakeholders (Keenleyside 2012; McDonald et al. 2016), stakeholder engagement remains difficult to implement (Couix and Gonzalo-Turpin 2015). However, if communities are partners on a project or the intended beneficiaries and their involvement in the project changes from peripheral to being actively involved in decision-making, successful restoration outcomes can occur (Mansourian et al. 2016). In a similar vein, the co-design of restoration activities with community members can place them on equal footing with project designers, resulting in grass-roots support for restoration initiatives (Kramer and Vallarino 2016).

Intervening agents have the power to influence restoration projects through the choices that they make. This includes the choices of donors to award funds to intervening agents (and also the choice by intervening agents to apply to certain donors for funding) and then the choice of these agents, through institutional choice, to work with specific local partners. Non-governmental organisations and community-based organisations can be implementing partners receiving funding from donors, or be recognised by other organisations to implement restoration projects, resulting in a diversity of potential institutional arrangements, which will be demonstrated by the cases presented later in this article. Such recognition leads to the inclusion of the chosen institutions and the potential exclusion of other actors, including who participates in the planning and execution of restoration projects, and so linking choice, recognition and participation (Figure 2). This paper specifically focuses on institutional choices of restoration projects funded by and planned by outside actors. Practitioners can be part of any of these organisations, whether they are donors, NGOs or local people.

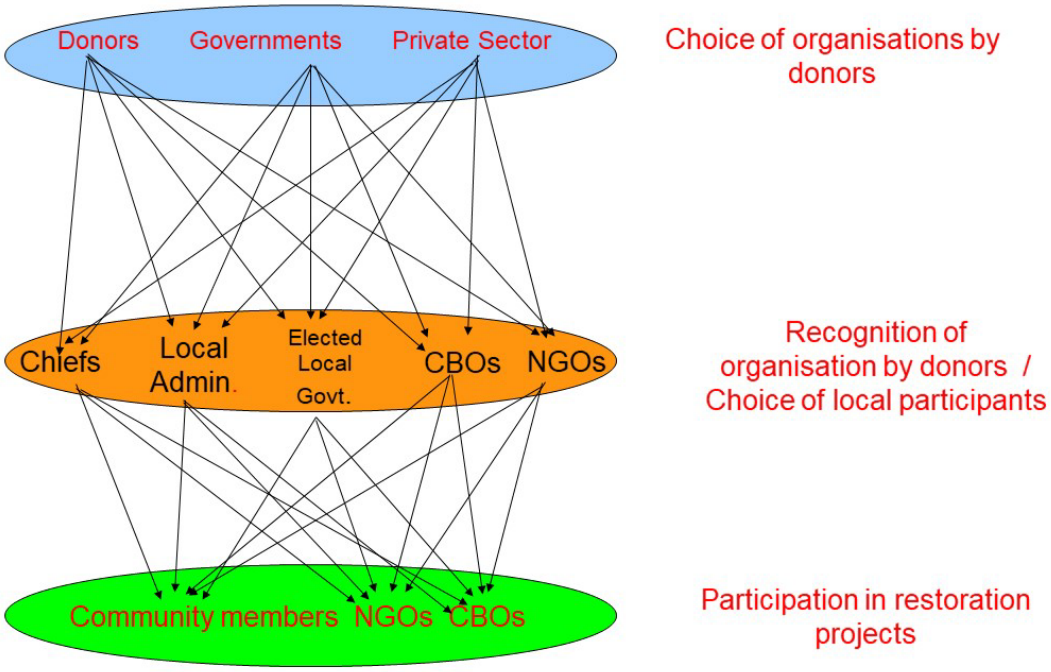

Figure 2. The choices made during project planning and implementation, across donors, implementing organisations, and local participants. Based on Nuesiri 2011 and Ribot et al. 2008. CBO = community based organisation, NGO = non-governmental organisation.

Recognition, as described by the German philosopher Hegel, is a process through which individuals interact, resulting in one party recognising the other (Honneth 2012). When restoration projects are conducted by outsiders or in a top-down process, institutional choice can play a role in articulating power dynamics. Through institutional choice, local institutions are recognized and so, empowered to act. For example, when intervening agents choose to work with another organisation or institution (Ribot 2012), the choice results in the organisation or institution receiving acknowledgment, legitimacy and decision-making authority as well as financial means from project funding (Ribot et al. 2008). The reasoning behind the institutional choices of intervening agents may relate to existing partnerships that the agencies have with local groups and the bureaucracies of these partnerships, among others (Grindle and Thomas 1989; Jusrut 2015). They influence governance, in the cases presented in this paper, because these choices can have an impact on empowerment of organisations and people to participate in restoration, to have their voices heard on restoration activities. As will be shown in the cases presented in this paper, these choices impact the accountability of organisations to local partners.

These institutional choices, by outside organisations, donors, and the recognition outcomes, shape the local context and can influence representation, participation and citizenship of those implementing restoration activities at the site level (Ribot 2016). Poor institutional choices can have damaging impacts on conservation interventions (Ece et al. 2017) and have been recently explored in the context of carbon forestry in Africa, which shows explicitly how in many cases, the recognised institutions can lead to reduced participation by certain sectors of society (Chomba 2017; Mbeche 2017; Nuesiri 2017). However, such dynamics remain poorly explored in the restoration or conservation literature (Larrosa et al. 2016). This paper moves beyond broadly critiquing intervening

agents (sensu Larsen 2016) to considering the impacts of the choices made during project implementation by intervening agents and what this means for restoration outcomes. Restoration outcomes can be defined in many ways. In this paper, the projects analysed took place in different contexts with diverse goals; understanding if the outcome of increased tree cover occurs in a just social context of sound institutional choices, is the main analytical view of this paper. This article uses five case studies from sub-Saharan Africa to explore how choice and recognition dynamics of intervening agents impact outcomes of restoration interventions.

2 Methods

Four of the five case studies, each with one case, presented in this paper were part of the Responsive Forest Governance Initiative (RFGI), which used a similar methodology across research sites; in these cases, the authors were researcher-observers. The fifth case study, from an RFGI associate in Tanzania, occurred prior to the initiative, based on a different methodology; in this case, the author was a participant. Given that different intervening agents initiated these restoration projects in different contexts, not all cases provide the same information. Projects aimed at restoration as little as 200 to 300,000 hectares.

Case studies are considered to be a good unit of study, given the richness of the actors, historical processes and causal events which are explored (Steinberg 2015). Each case study is presented with the same structure as follows: the context (including the need for restoration), the restoration intervention, the implementation and institutional choices, and the restoration outcomes, with reference to the impact of the institutional choices. Projects are diverse including those that are part of governmental programs (e.g. the Ghanaian and Senegalese cases) to those which are part of NGO projects implemented with local government or customary authorities (e.g. Tanzanian and Burkina Faso cases).

The study from Burkina Faso was conducted in the municipality of Lalgaye between 2012 and 2013. Data were collected through semi-structured interviews using the study up method (Nader 1974), which focuses on interviewing powerful actors, with a dozen national level actors and then with sixty local level actors. With the national level actors composed of the officials of the Ministry of Environment and relevant project and program representatives, we discussed their conception of participation and representation in order to understand the influence of this conception on current forest management policies. With the restoration project representatives we explored the reasons and motivations behind their institutional choices of local actors, their understanding of representation and the practical ways in which they implemented those choices. We also interviewed actors from Lalgaye and its villages including local elected officials, migrants and indigenous peoples, and forest, livestock and agriculture officers. We complemented the interviews with participant observation during project meetings in Lalgaye as well as social events in the municipality. The full case study is described elsewhere (Karambiri 2015).

The case study of the Modified Taungya System (MTS) in Ghana comes from the Offinso Forest District. Four communities, namely Nkwaankwaa, Asempanaye, Ada Nkwanta and Apenten, were chosen as study sites because of their substantial experience in the practice of the MTS under Ghana's Community Forest Management Project and the National Plantation Development Programme. We collected data over a period of twelve months between September 2012 and February 2014, during which we conducted interviews and administered questionnaires. A purposive

sample of 200 respondents comprised five project officers drawn from the staff of the District Forest Service Division (DFSD) who represented the intervening agents at the local level, 15 local representatives and 180 local people. Both qualitative ethnographic and descriptive statistical techniques for data collection and analysis were used. The full case study is described elsewhere (Adjei, Prince Osei-Wusu 2015; Adjei, Agyei, and Adjei 2018).

In the Wassa Amenfi district of the Western region of Ghana study, data collection involved review of policy documents and published literature, semi-structured face-to-face interviews, and focus group discussions in the Bontori Community Resource Management Area (CREMA). Field work was conducted for nine months between April and December 2012. Fifty-eight community members (both CREMA members and non-members, women, village chiefs, etc.) residing in the CREMA area were purposively sampled and interviewed to examine the diverse viewpoints regarding the issues around the CREMA, accountability and impact of the CREMA and its role in forestry decentralisation. We also interviewed 14 high-level actors consisting of government officials and staff of NGOs involved with the design of the CREMA concept and its implementation to examine the choice and recognition of local institutions and implications of those institutional decisions on decentralised resource management. The full case study is described elsewhere (Baruah 2015).

The study of the Somone Reserve in Senegal was qualitative in approach. After a review of the texts on forest decentralization in Senegal and related documents, a field survey was conducted in the four villages bordering the reserve (Guéréo, Soroh Khassap, Thiafoura, Somone) and the institutions deconcentrated from the state, in order to analyse the dynamics of the actors and the effects of institutional choices on democratic representation. Field work was conducted over six months from 2012 to 2013. We discussed the outcome of focus groups, semi-structured interviews and participant observation during meetings with the local population (e.g. women's promotion groups, village chiefs, notables, youth associations, local elected representatives). In addition, we conducted semi-structured interviews with state officials (national park managers, environment managers) in Dakar over the same period in order to understand the logic of their choices and their perception of representation. The full case study is described elsewhere (Samb 2015).

In Shinyanga, Tanzania, we studied the regional land use dynamics through the use of participatory tools, such as transect walks, simple participatory land use planning, expert knowledge, focus group discussions. This study took place over a long-time frame from 1986 to 2004 and is ongoing –the very early days of Participatory Rural Appraisal (PRA). The importance of working with both customary and local government institutions was recognized. The different institutions helped ensure that all key stakeholder groups (especially at the village level) were represented. The importance of *Ngitili* was recognized and used as the basis for restoration. *Ngitili* are reserved areas for end of dry season forage, as well as to provide sources of wood and tree products. Everyone in the area knows what an *Ngitili* is and the rules and norms that govern it, thus making it a useful approach to restoration in the landscape.

3 Case studies

3.1 Burkina Faso: community forest restoration in partnership with local government

Context: The community forest of Sablogo is located in east central Burkina Faso. In 1990, the forest landscape covered 34,000 hectares but dropped to 13,000 hectares by 2005 due to increasing

migration into the area, conflicting land uses, overexploitation and the conversion of forestland to agriculture and grazing (UICN 2011). This situation disrupted the socio-ecological system, reduced the ability of local people to improve their livelihoods, but also triggered the need for restoration in the area. The first restoration attempt was conducted by the state Rural Development Project (PDR) from 1996 to 2005. This project succeeded in making restoration plans, and built consensus with local people on the forest area to be restored. However, the project ended in 2005 without implementing the proposed restoration activities. From 2005 to 2007, with no project intervention and follow up the plans of the PDR, forest degradation intensified. Meanwhile, in 2006, the first municipal elections were held, and the locally elected government officials requested the assistance of the International Union for Conservation of Nature (IUCN) to continue with the restoration plans developed by the PDR.

Restoration intervention: The project Livelihoods and Landscape Strategy (LLS) funded by the Dutch Directorate-General for International Cooperation (DGIS) and implemented by IUCN in collaboration with state bureaucracies, municipal and local partners from 2007 to 2010. The LLS project pursued integrated ecological, socio-economic and political objectives. The ecological objective concerned the zoning and restoration of 10,000 hectares of forest landscape within the communal lands. Through a participatory approach, the project carried out the following activities: the demarcation of the 10,000 hectares as the forest area to be restored, the development of a forest management plan, and the recovery of degraded lands and tree planting activities within this forest area. The socio-economic goal concerned the improvement of forest-based livelihoods. The political objective sought to increase local ownership of the restoration activities by building solid forest institutions and empowering local government and the people. It also aimed to support Burkina Faso's recent decentralization policy and advocate for its effective implementation. In this regard, the restored area would become a municipal forest, with decision-making authority devolved to the local government.

Implementation and institutional choices: In contrast to many projects elsewhere in the country, the LLS project chose the local government as the main partner to implement the project, transferred them funds, and provided materials and technical support for the implementation, monitoring and evaluation of the restoration activities. Under the supervision of the local government, the local people were organized into forest users' groups and carried out the reforestation activities. In addition to decentralization, the intervening agents justified this institutional choice through the lens of social justice, legality and legitimacy. They argued that decentralization law legalizes local government's authority in decision-making over forest resources while setting them as local people's legitimate representative:

> The context of decentralization legitimized our choice of our partnership with the local government. Otherwise, we would not have had the opportunity to make this choice. The restoration request also came from a local leader and the forest is within their territory. Therefore, this choice was legitimate in our opinion and represented a right for the local government. (Project leader, Ouagadougou, May 9, 2012).

This choice changed local power dynamics, as, according to the Mayor, "the project strengthened the local government's authority regarding the forest because now people recognize the

municipality as the forest owner and manager. When needed, people refer to us first" (Lalgaye, June 21, 2012).

Restoration outcomes: The project resulted in upward accountability of the local government to IUCN whereas downward accountability about restoration decisions and actions to the local people was neglected. Local people first became frustrated when the project demarcated the previously consensual restoration area with the support of the local government. Factions among local people contested those limits arguing that parts of their current farmlands were unlawfully included within the 10,000 hectares. They argued that the inclusion of their lands in the restoration area would deteriorate their livelihoods mainly based on agriculture and that the local government did not communicate efficiently with them on the restoration project requirements. Eventually, the local government confirmed the project's demarcated forest borders and promised support to those affected. However, this resulted in conflict with the local people complaining and claiming that the local government should be responsive to their needs and accountable to them. Henceforth, the local people no longer perceived the local government as their representative but largely as the project's co-administrator (Karambiri 2015). Accordingly, they sanctioned the local government using various formal and informal mechanisms from legal action to sorcery (Karambiri and Brockhaus 2019). The project successfully restored the forest landscape and nine years later, in 2019, the restored forest persists. However, the resulting unhappiness and frustration of certain groups among the local people reduced the project's overall impacts and people's trust and support for future restoration and conservation work in the area. Although working with local government is important, downward accountability must also be assured and planned.

3.2 Working with Ghana's CREMA to enable restoration

Context: During the 1980 and '90s, Ghana was rapidly losing its forest cover due to agricultural expansion and wood exports in the wake of structural adjustment (Owusu 1998; Benhin and Barbier 2004). With the 1994 Forest and Wildlife Policy coming into force, Collaborative Resource Management Programmes were introduced which included a number of programmes on benefit sharing and management of forest and wildlife resources with local communities. The Community Resource Management Areas (CREMA) approach is one such example. Over time the approach broadened in its scope to promote biodiversity conservation and livelihood diversification by devolving authority to local populations and empowering them to make decisions about their resources (Asare, Kyei, and Mason 2013). Currently more than forty CREMAs exist in Ghana in different stages of establishment. This case takes place in Botori CREMA (comprising an area of 90 km^2, containing approximately 10,000 individuals in 1600 households) in the Western Region of Ghana.

Restoration intervention: Community Resource Management Areas (CREMA) in Ghana are partnerships among government, civil society and local communities. The approach was initially developed by the Wildlife Division of Ghana's Forestry Commission to address wildlife management outside protected areas. Communities at specific CREMA sites can adapt and set the management priorities specific to their local context. For instance while some CREMAs in Ghana focus on conserving specific animal species, others target ecotourism, or restoration of degraded lands. The primary objective of the Bontori CREMA located in Ghana's High Forest Zone was to restore and sustainably utilize degraded lands by planting and maintaining trees in privately managed cocoa

farms and secure tree tenure. The restoration objective of the project was to replant several hundred hectares of degraded lands within the Bontori CREMA with indigenous species.

Implementation and institutional choices: This CREMA project was executed by an Accra-based NGO with the help of a grant it received from the Small Grants Programme of the Global Environment Facility (GEF), the financial mechanism for several key international conventions including the Convention on Biological Diversity (CBD). IUCN played a crucial role in the development and formalisation of the CREMA after the initial funding ended.

Local people participating in the CREMA were expected to contribute through land, labour and cash resources to cover the expenses for land preparation, planting, growing, management and harvesting their trees. The project trained them on silviculture, sustainable utilization, book keeping and marketing of the products. Participating farmers received free saplings, cash support for additional income generating activities such as bee keeping, and small animal rearing. Farmers were expected to participate in restoration activities along with cocoa farming – the mainstay of the rural economy in the region.

Besides the stated rhetoric of "participatory" and "community-based" approaches, intervening agencies stated that their choice of the project partners were guided by international policy, institutional mandates, and technical and managerial goals. Other context-specific factors influencing their choices included Ghana's complex history of land and tree tenure characterized by legal pluralism, the social and political recognition of customary authorities, history of centralized forestry management, weak state capacity at the local level, and the power dynamics among various actors at the project site influenced by prior social and organisational affiliations.

In 2010, after the end of the project, the Bontori CREMA was granted a Certification of Devolution by the government, transferring the authority for management and utilization of resources, primarily timber along with non-timber forest products, to the people in the participating villages. During a governance assessment conducted later, the villagers expressed dissatisfaction with the CREMA, had low expectations of their elected representatives and the government, and perceived them as unresponsive, unaccountable and untrustworthy (Baruah 2017). Despite meeting the stated objectives, the sustainability of the project, including the restoration outcomes, were at stake because villagers started to disengage from the CREMA activities.

Restoration outcomes: As per the project closure report, 200 ha of degraded area within the CREMA were rehabilitated with indigenous species when the project ended in 2007. Seventy-five individual farms participated in tree planting and 20 MoUs were signed between the Chief and other stakeholders on the tenure of planted trees and benefit sharing arrangements. Five tree nurseries were also established in the area and around 22,000 seedlings were produced. While the project seemed to have met its restoration targets, the choice of the donor to execute the project through a local NGO during the initial phase created mistrust. The local NGO received resources and recognition to liaise with the local people and oversee project activities, but project participants raised concerns regarding the governance of the CREMA including beneficiary selection and distribution of benefits that affected the long-term sustainability and widespread uptake of the restoration activities.

To help improve governance in this CREMA, members began an Action Learning process with the CREMA executives in 2014 (Barrow et al. 2015). As a result of this process, groups identified priority actions including holding regular meetings, making documents more transparent and amending the constitution to increase leadership accountability to the people (Baruah et al. 2016). It is believed that strengthening this local institution's governance over their natural resources will help the local community to have more control over their resources and become more empowered as they exercise their rights (Mansourian et al. 2019). Ultimately, they will be in a better position to conserve and manage their natural resources.

3.3 Ghana's Modified Taungya System: degradation through lack of representation

Context: The Modified Taungya System (MTS) is a forest restoration and management strategy designed to halt forest degradation, regenerate degraded forestlands (typically forest reserves) as means of promoting forest ecosystem conservation and restoration. The MTS was designed as a partnership intervention between government, represented by the Forestry Commission and forest-fringing communities to achieve effective forest resource regeneration and management. Hence, like the CREMA, the MTS is part of Ghana's collaborative resource management programmes. Restoration-related activity in the MTS concerns tree planting and management. Successful restoration under the MTS is determined primarily by the amount of degraded forestland recovered, the nature of community representation in the forest recovery process and if local livelihoods were improved.

Restoration intervention: The Taungya System is an agro-forestry intervention whereby farmers are given parcels of land from degraded forest reserves to replant and maintain trees until the canopy closure of maturing trees make it impossible for the continuation of food crop production. In this way, local people re-establish forest plantations in degraded portions of protected forestlands and also co-manage the forest resources with the support of the District Forest Service Division (DFSD). Implementation of Taungya System in Ghana dates back to the 1960s (FC 2011 citing Agyeman et al. 2003) in response to the high rate of forest resource degradation and the acute shortage of farmlands experienced by communities adjoining forest reserves in the High Forest Zones of Ghana at the time. As part of forestry decentralization reforms in the 1990s, the Taungya System was reintroduced in the form of the MTS, which modified the old system. The MTS case take place in the Offinso Forest District of Ghana with communities including Nkwaankwaa, Asempanaye, Ada Nkwanta and Apenten chosen as study sites because of their substantial experience in the implementation of the intervention.

Implementation and institutional choices: The Forestry Commission (FC) representing the government of Ghana serves as the intervening agent for implementing the MTS through the Districts Forest Services Division (DFSD). Following the MTS implementation guidelines and local dynamics, the FC through the DFSD transfers forest management responsibilities to local authorities and community members chosen and recognized as partners in restoring, managing and drawing benefits from forest reserves to ensure commitment to sustainable forest governance in the high forest zones of Ghana. During the implementation phase, participating farmers are organized into modified taungya groups (MOTAGs) who then receive parcels of degraded forestlands and tree seedlings to initiate the tree planting and management process. The MOTAGs often work under the supervision of Taungya headmen and local chiefs who are recognized as representatives of the communities involved in the project, and by this recognition influenced the MTS implementation at

the community scale. Thus, participating farmers are expected to play active roles in forestry decisions through their membership of community level MOTAGs established in accordance with an agreement signed between the FC and representatives of participating farming communities (Forestry Commission 2011). MOTAGs are expected to have democratically elected local authorities that are broad-based with fair representation for proper interaction between all stakeholders to ensure responsive and accountable community forest management (Agyeman et al. 2003). In this regard, government tends to prioritize active community representation in forest restoration and decision-making processes while also ensuring that participating farmers have access to degraded forestlands for food crop cultivation to sustain their livelihood. Partnership agreements are signed between the Forestry Commission representing government and the elected representatives of the MOTAGs prior to the implementation of the intervention.

Restoration outcomes: In the Offinso Forest District of Ghana, lack of effective community representation was perpetuating forest degradation through excessive logging, fire and illegal farming) and undermining restoration efforts. From 2002-2007, with the implementation of the MTS, a total of 1,130 hectares of degraded forestlands were restored with teak (*Tectona grandis*) plantations by community MOTAGs in the four communities . Significantly, in each year in all four communities, MOTAGs demonstrated their ability to repair all portions of degraded forestlands given out to them. This was evident in the sizes of degraded forestlands transferred to the local people by the FC through the DFSD, and the actual sizes of degraded forestlands that the local farmers were able to restore. At the same time, households of participating farmers were able to increase food crop productivity to enhance their livelihoods through their access to degraded forestlands transferred to them. Thus, the ecological and livelihood outcomes of the MTS implemented in the four communities studied were successful. This success is due to commitment of local people to participate actively in the restoration of forests, influenced by their recognition in forestry decisions and the livelihood gains associated with the MTS. Thus, the effectiveness of restoration measures lies partly in its ability to adequately support local people's livelihood security. However, accountable and responsive community representation is necessary if restoration interventions are to be sustainable. In the case of the MTS, failure of the intervening agents to transfer adequate decision-making power and resources to local community actors and disregard for policy and implementation guidelines undermine local authorities' capacity to be responsive and downwardly accountable. Despite chiefs having some power to support the implementation of the initiative, they were not always able to influence top-down decisions of the FC. This situation adversely affects sustainable restoration efforts in this case, despite restoration actually taking place in the four study communities between 2002 and 2007 when the target of replanting 1,130 hectares of degraded forestlands was fully realised.

3.4 Senegal's mangrove restoration: when a gender focus can cause project disengagement

Context: Since 1996, Senegal has worked towards natural resource decentralisation. The 1998 Forestry Code transfered power towards locally elected authorities and put an accent on the participation of local people in the management of their forest resources. It is in this context that Senegal's National Park Direction (DPNS) created community nature reserves. This case takes place in the Commune of Somone and Sindia, where long periods of drought were threatening the forests. The mangroves in the area of the Somone lagoon had been heavily exploited by the local population and in particular the women, for firewood.

Restoration intervention: The DPNS launched an initiative to place women as their foremost partner in managing the community reserves. Restoration activities of the initiative included planting mangrove seedlings, restoration of the nearby forest, and a fishing closure to encourage the recovery of stocks. The women's group (GPF) in the Réserve Naturelle d'Intérêt Communautaire de Somone, a zone of 700 ha in the Somone watershed 65 km outside of Dakar, was the institution with which the DPNS chose to work. This choice was inspired by the success of forest restoration in the neighbouring reserve (Réserve Naturelle de Popenguine), which also focused on the participation of women. In the case here, the DPNS worked with the GPF of four villages around the Somone Lagoon. According to a senior official of the Senegalese national parks agency, the choice was made as an effort to implicate the women who were "degraders of the resources". Although the park agents had accused the women of degrading the mangroves, their choice to work with the women was motivated through an effort to make rural women actors in economic and social development, since for them, "women are a powerful driver for development and we must give then the space to show their capacity" (Senior park official, Dakar, 2013). These reasons give us a glimpse of how Senegal's decentralisation policies are not independent of national and international development policies.

Implementation and institutional choices: The partnership between the park agents and the women, placed the women in a privileged place where they received new decision-making powers and financial advantages, but which were contrary to the traditional positions that women hold in communities, and so was negatively perceived by other segments of the population. Since women are considered to be illegitimate in leadership roles in this community, they could not be contested openly and so spontaneous informal sanctions mechanisms such as disengagement, protests, sabotage, or the use of intermediaries were used by men and youth. This had negative consequences on the management and restoration of the reserve. Instead of the women accounting for their restoration and conservation work to the communities, the women accounted to the park authorities, with the financial support of their activities depending on the degree of their engagement to protect and restore the forest. However, the women were not independent in their decision-making, with the final decision remaining with the Park Director. This type of decision-making can be called an instrumentalisation of women's groups to control resource use, and remains far from the spirit of decentralisation. Other groups such as men and youth and local authorities became excluded from the management of the forest, which should have been managed by the community.

Restoration Outcome: Some restoration was achieved through the activities led by the women's group, including the regeneration of the forest (with a related increase in bird populations) and mangroves and the increase in oyster populations, which are a commercial resource for the women. However, the exclusion of other members of society from this work resulted in men disengaging from conservation activities in the reserve and young people creating their own conservation associations. Within the women's group, members felt betrayed by their leaders, with many denouncing the lack of transparency in financial management; others believed that their leaders abused their status to enrich themselves. Furthermore, some women resigned from conservation activities altogether and transferred their efforts to other women's groups or the fishing sector. Management of natural resources is now nicknamed by men as "women's work" or "women's business". These men are developing their identity as a local group in the village and now organize their own reforestation activities: they choose which areas to reforest and which to not reforest, taking into account the residences of the GPF leaders, but independently of the women's restoration activities.

3.5 Shinyanga and the cultural factors contributing to restoration

Context: Shinyanga, located in northwest Tanzania and south of Lake Victoria, supports over 2.25 million people, covering 50,000 km^2. High population densities, combined with the agro-pastoral land use, subsistence and cash cropping, exacerbated serious problems of land clearing and degradation (Barrow 1988; Otsyina 1993; Kilihama 1994; Maro 1995; Mlenge 2005). Then President Julius Nyerere declared the region the "desert of Tanzania". As a result, a national restoration project called HASHI (Soil Conservation and Afforestation Shinyanga, in Swahili: *Hifadhi ardhi Shinyanga*). HASHI started in 1985 to restore the desert. This was funded by the Governments of Tanzania and Norway, and many other donors provided support over the life of the 20 year programme, over four planned funding cycles, which allowed time for investing in capacity and community engagement.

Restoration Intervention: Restoration activities initially used exotic tree species. Over 1 million exotic seedlings were produced in one centralized government tree nursery and distributed to villagers. This was met with minimal success due to lack of ownership of the programme and the seedling selection. The local people informed the project manager, "we don't want to plant your trees, we want to plant our trees", indicating that they preferred to plant trees important for their livelihoods and not centrally grown, exotic trees. At this point, the project leader shifted his approach, a choice that was pivotal to the long-term success of the restoration project. He then understood local communities really wanted and needed trees, but that they did not want the "HASHI project trees". Top down tree planting activities failed because HASHI leaders did not consult or recognize the local people and their institutions in any meaningful manner.

Implementation and institutional choices: Learning from this, the project proponents expanded the capacity of village government chose to work with the Sukuma people responsible for traditional institutions—particularly the *Ngitili* ("enclosures" or "fodder reserves" in the Sukuma language) as well as *Sungusungu* (traditional village guards). The project built on and respected the local knowledge of the Sukuma people (e.g. identifying culturally appropriate tree species) and the *Sungusungu* were identified and integrated in the process.

The ingredients for an incredibly successful pioneering forest landscape restoration programme came together through respecting formal and informal local institutions and recognizing some of the key institutions of village government, the Sukuma leaders responsible for *Ngitili* and women in particular. Choosing to work with the formal village government, district and regional governments and customary institutions was one of the success triggers for the restoration. By 2004, more than 300,000 ha of woodland had been restored with an economic value of US$14 per person per month, approximately 1.4 times that of agriculture (Monela 2005; Barrow 2014). Nearly every family had their own restored woodland. Landless people and female heads of households were also allocated lands for restoration, while groups (e.g. women, youth) and villages had much larger areas of restored woodlands. From one centrally managed government tree nursery in 1986, over 1,000 small community and individual tree nurseries had been established by 2004.

Outcomes: While the details of this large-scale ecosystem restoration are well known (Monela et al 2005; Barrow 2014), the underlying reasons for the success are less recognized. Much of the work for the restoration was mediated through democratically elected village government and their constituent institutions such as the Environment Committee. The HASHI project adopted a strong participatory focus in an era where such approaches were only starting to gain traction from

government-driven processes (Barrow and Mlenge 2003; Mlenge 2005). The project leader became a champion of these participatory approaches, strongly contributing to the overall long-term success. The project adopted an approach that respected and built on the comparative advantages of village government and customary institutions. This resulted in greater recognition and respect for each other, as well as the knowledge systems each had, which fostered ownership. Finally, all stakeholders could be involved in restoration including farmers, groups, villages and single-headed households; even the landless were provided with village lands for conducting restoration activities.

4 Results and discussion

Restoration is a long-term process with governance arrangements continually evolving (Mansourian 2016) and being influenced by ongoing negotiations within the local governance context, across several sets of actors. Implementing projects in complex social and land use situations is difficult for many organisations and project managers, in part due to the multi-disciplinary nature of project implementation (Waylen et al. 2015). Problems may emerge, be underestimated or unaddressed if project managers are not able to understand or implement projects in complex contexts (Liu et al. 2007).

Too often programmes are technically driven, being focused on species or types of restoration rather than on the social aspects of restoration. This was the case with the early work in Shinyanga, which was met with little success until they changed the project approach and became much more participatory. In the case studies summarised in Table 1 insufficient focus was given to the choices that intervening agents made, creating poor or reduced restoration outcomes, with the exception of the Tanzanian case. This, in part, calls for longer-term projects, usually well beyond the confines of relatively short term four-year projects. Interventions need to be of a long enough duration (Borgström et al. 2016) to ensure that social structures (e.g. village government, traditional institutions) are in place, have the capacity, trust, project ownership and are strong enough to mediate restoration decisions. Initial success may, if not properly planned and negotiated, sow the seeds of its demise: technical success may fail due to inadequately addressing the social issues at the start of a project as well as those that come into play over time, such as transparency in institutional choice and other decision-making processes.

Case study	**Key observations**
Burkina Faso and community forest restoration	• A local authority chosen by an NGO to be a project partner did not account to the local people for the restoration choices and actions • Although restoration occurred, the local people were frustrated by the project and process
Ghana's CREMA	• Collaboration with a local NGO to help in CREMA development resulted in elite capture and sentiments by the population of poor representation by their elected leaders • Tree and land tenure rights, and benefit sharing arrangements need to be clarified • An action learning process enabled improved governance
Ghana's Modified Taungya System (MTS)	• The commitment of local people to actively participate in the restoration of forests was influenced by their recognition in forestry decisions and livelihood gains associated with the MTS.

	• The influence transferred to local representatives had minimal effect on their ability to challenge resource-related decisions of government representatives in the restoration process
Senegal's mangrove restoration	• Senegal's National Park Service created a partnership with women to combat mangrove degradation. This placed the women in a privileged position • This allocation of power resulted in the exclusion of other groups and in some resigning from conservation activities
Shinyanga and the cultural factors contributing to restoration	• Top down tree planting activities failed because project leaders did not recognize the local people and their institutions. • Learning from this, the project proponents worked with traditional institutions and used native species resulting in increased ownership in the program and success of restoration.

Table 1. The five case studies summarised.

4.1 Intervening agents and how their choices impact projects

Across the case studies, one of the consistent problems encountered was how institutional choice affected the communities engaging in restoration and the intended outcomes of the projects, sometimes having a negative impact on restoration activities, but always having a negative impact on the social support for restoration. The need for NGOs and agencies, including donors, to reduce their ownership in projects and to become an "interest group" was proposed as a key change to project implementation more than a decade ago (Sayer and Wells 2004). In each of the five case studies examined, we found a high level of influence by the intervening agents, rather than the agent being a collaborative stakeholder operating on equal footing with local communities and organizations.

In Burkina Faso, the recognition of the local government by the intervening agent and the related attribution of the project budget resulted in the local authority being more accountable to the NGO rather than to their constituency; this created a lack of communication about the project and lack of trust by the local people in the local government's actions. The choice of working with a local authority is often seen as a positive aspect of a project as it gives the elected officials the means to respond to their mandated environmental needs. However the recognition of the local government as the leader of the project, including holding control over the project resources that he obtained through engagement with the NGO, was not well-received by the local population. As a result, many disengaged from the project.

In the CREMA in Ghana, during the initial phase, the choice of a donor to operate through a local NGO yielded poor results. While this gave the local NGO resources and recognition, the project was not sustainable in the long-term because the NGO was not transparent and accountable to the local people. The project was unable to achieve widespread support for restoration because the local NGO activities created mistrust.

In the Modified Taungya System in Ghana, the implementation involved the choice and recognition of local institutions and representatives by the Forestry Commission (FC). In the creation of the MTS, the recognition of local chiefs and other representatives such as the Taungya headmen strengthened their status significantly. However, linked to the choice of working through these local chiefs and representatives, there were knock-on effects related to accountability. Within the local arena, the influence transferred to local chiefs, Taungya headmen and other local representatives, had minimal

effect on their ability to hold the government of Ghana accountable to the local people or challenge the resource-related decisions of government representatives in the implementation process.

In the case of Senegal, the national park agency recognised a women's group to restore mangroves. This choice led to accounting upwards to national park officials rather than to the wider community, to which the forest belonged. This caused a rift in the community, since the women only accounted to the park officials rather than to the community itself. The recognition of the women by the park officials resulted in the alienation and frustration of other groups in the village and ultimately caused the abandonment of mangrove restoration activities.

By contrast, in Shinyanga, the project manager recognised early in the project implementation a wide array of project collaborators including village governmental officers, women's groups, and traditional institutions. He also understood the importance of adopting a participatory approach. The use of participatory tools in the 1980s was rare in government agencies—so an important success factor was the "Champion" role of the HASHI project leader in Shinyanga. This both enabled the restoration work to build on local knowledge and institutions and make optimal use of more formal government institutions, such as the democratically elected village government and its committees.

4.2 What choices increase the chance of achieving restoration?

Even when restoration projects suffer from the consequences of recognition dynamics, there can be turning points. Restoration projects typically have long time lines, over which political, social and economic contexts can shift, requiring restoration interventions to adapt (Mansourian 2016). These long timelines suggest that there are several points in which circumstances may demand change in the way projects are managed, including moving from top-down to bottom-up approaches, which increase the decision-making power of local communities (Mansourian et al. 2016).

Through the MTS and the implementation and the establishment of community MOTAGs, significant portions of degraded forest resources in the Offinso Forest District have been restored. This was because the local people were able to actively participate in the replanting and management of reserved forests from which they also derived their livelihoods. That notwithstanding, the limited powers and resources transferred to local authorities to make them responsive and accountable to the community MOTAGs undermined the sustainability and effective management of the regenerated forest resources in the district. Thus, weak community representation adversely affected local people's commitment to the restoration goals of the MTS projects. Restoration interventions such as the MTS can be better executed with the transformative participation of the local people through their capacity development and assurance of their livelihood security. The single most important factor for maintaining this commitment that could bring about the effective forest restoration and sustainable forest management is to address community livelihood needs. Intervening agents can achieve this support by giving appropriate recognition, power and resources to the local representatives to make them responsive and accountable to the local people.

In Shinyanga, the project leader and his team had the humility to listen, recognise and learn from the perspectives of local people, both women and men. Based on this evolving participatory approach, the project team was able to build on and respect local knowledge systems and institutions and integrate them into the project. The project took a strong participatory approach in an era where such work was only starting to evolve.

4.3 Mitigating the impacts of institutional choice: changing roles for intervening agencies

In the Senegal, Ghana and Burkina Faso case studies, the intervening agents identified specific partners, which had negative impacts on the communities. In both the Senegal and Burkina Faso cases studies, the recognised individual or groups were not accountable to the wider community for their actions. This lack of accountability generated mistrust by the community for the group conducting restoration activities and ultimately these community groups lost interest in restoration itself. If failure occurs, future restoration in that site may be difficult to implement, as the trust between the community and the intervening agency is reduced (e.g. Stern and Coleman 2015). How could the restoration interventions have been conducted differently?

First, intervening agents need to be aware of the dynamics that they can create through their choices and the effect they have on people (Ece et al. 2017). This awareness could lead to a change in the way an intervening agency implements restoration projects. The choices described in the case studies in this paper might have been decided differently had they been informed by institutional mapping, a process which allows an organisation to identify the actors and their roles in an area, and then plan engagement (Aligica 2006; Buckingham et al. submitted, this special issue). Further, intervening agents could reduce the negative impacts of choice by utilising multi-disciplinary teams who understand and have experience in engaging the local communities. In addition to understanding the restoration actors and knowing how to involve them, agents may enable a more participatory approach, whereby restoration goals and implementation are co-developed with stakeholders from the outset. Although restoration projects may claim to have such an approach, it is not always implemented as planned (Petursdottir et al. 2017). Finally, in some case studies, the recognition of groups with little experience participating in projects may have unintended consequences especially if those groups do not understand how to be accountable for their actions, or if, in the Tanzanian case, the groups are not recognised by governmental authorities. Extra efforts need to be made to ensure that these groups use participatory mechanisms in their restoration implementation, both in deciding how to restore and whom to inform about their actions.

Second, intervening agents should work in ways that develop the capacity of the organisations with which they partner. In the case study of the CREMA in Ghana, a larger NGO continued engagement with the CREMA and lent support through capacity development, advocacy for clarifying tree tenure rights and interaction with the government and local people at the project site to encourage restoration activities. While the role of the local NGO as an intervening agency ceased in the area, the larger NGO continued to engage with the CREMA population through a series of projects. As an intervening agency, this NGO can utilise its long-term presence and work in the area to strengthen local democratic institutions, support technical capacity development and mainstream restoration activities (Mansourian et al. 2019). However, such support should also envisage an exit strategy whereby locally organized institutions become able to function independently, something foreseen in many CREMA constitutions (Baruah et al. 2016).

Third, intervening agents can support better accountability to constituencies required by their chosen partners. In some case studies, accounting back to constituencies may be hindered by a lack of means to do so, especially when constituencies are large. Providing travel funds may remove one barrier to accountability, especially in places where communities are scattered over large distances and without reliable transport. These funds are especially important to younger organisations which may not have established means to communicate with their members (Akwah Neba et al. 2018).

Intervening agents should work with project partners to ensure that they report their actions to their constituencies, developing these means during project development and so creating a clear path towards institutionalising accountability as part of the restoration approach and strategy. Responsibility for restoration projects lies at several levels, including those who accept funds to carry out restoration work, to those who represent local people and engage them to in restoration activities, to those who accept to engage in restoration work.

Finally, intervening agents should recognise and promote applications of cultural restoration knowledge. Despite local knowledge being considered as a principle for guiding restoration (McDonald et al. 2016), the utilisation of such knowledge to inform restoration interventions is extremely low (Wehi and Lord 2017), leading to marginalization of local cultures and exclusion of their knowledge in shaping restoration interventions. This under-utilisation may create a loss of empowerment to achieve restoration according to their vision. Choices might have been different in some of the case studies described here had they been informed by historical, cultural and political contexts (Gilli et al. submitted). These contexts often help to identify how to engage with traditional authorities and value traditional knowledge (Baker et al. 2014). Recognising a diversity of knowledge bases opens up the decision making context to be more inclusive of all who are part of the ecosystem to be restored (Gorddard et al. 2016; Colloff et al. 2017). Where and when such transformative interventions happen should be recognised, respected and built upon.

5 Conclusion

In drawing from the five case studies, we propose eight points to guide the institutional choice of restoration projects:

1. In choosing a local partner, build on and respect local institutions, and agree on their roles.
2. Place high importance in establishing the trust of local people and intervening agents, such as local institutions or authorities, to deliver their decentralized natural resource management roles.
3. Listen to and learn from the people and communities (men and women) in the restoration area
4. Enable people and communities plan their work and activities (outsiders can facilitate but should not dominate)
5. Enable local people and communities to learn and adapt their restoration processes and planning
6. Establish robust processes and institutional arrangements that prevent the capture of resources by elites or outsiders.
7. Facilitate partner institutions in accounting to their constituencies about restoration decisions and actions.
8. Invest in skilled and competent restoration project staff who can navigate the complex social-ecological system, including its politics and stakeholder expectations

Through choices made by intervening agencies, restoration projects can have vastly different effects on the empowerment of community members, representation of their needs and their participation in restoration. These choices consequently influence the effectiveness of the restoration interventions that each project aims to support. In all cases studies, restoration was implemented, but only in one case (Tanzania), were social outcomes also successful. For restoration to be successful for both social and physical outcomes, intervening agents need to examine the way they

plan and implement projects at the local level and consider how their choice of partner institutions can strengthen restoration efforts and maximize delivery of benefits to local participants.

It is clear that implementation of restoration work can suffer significant setbacks when there is a lack of local participation (Murcia et al. 2016). This lack can prevent interventions from being "scaled up" to meet the needs of society (Holl 2017), and can fetter the international pledges to restore large areas of land, such as the Bonn Challenge and international conventions (Aronson and Alexander 2013). However, by addressing the shortcomings that affect intervening agents during project implementation and directing them to make more appropriate institutional choices, it is possible to change the way that restoration is implemented to better reflect the needs and desires of the stakeholders and in partnership with them.

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