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# Social equity and pluralism in Nature-based Solutions: Practitioners' perspectives on implementation

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ABSTRACT

The need to include pluralistic values of nature in conservation projects, including Nature-based Solutions (NbS), has become evident, and calls for value pluralism have gained traction. However, it is unclear how this can be implemented in practice. We explore how pluralism and related social equity are incorporated by practitioners involved in the governance of NbS, analysing five cases identified as exemplary by the International Union for Conservation of Nature. We develop a conceptual framework of social equity founded on five components: recognition, participation, distribution, rights, and accountability. This framework guides our analysis of primary data from in-depth interviews and secondary data from project reports. We discuss how practitioners assimilate these components in their practices and in the design of governance processes. The results indicate a strong commitment to participation and local communities' involvement, evidenced by specific practices across the projects, although at times driven by individuals rather than institutionally. Processes were conceived to foster actor participation, including those in vulnerable positions; build local capacity and strengthen ownership. Approaches to local communities' involvement typically begin by eliciting their views and values to design projects with ecological and social benefits. We discuss good practices, like extensive stakeholder mapping, citizen committees to represent local views, and multi-stakeholder platforms to articulate and communicate people's views and values. The findings underscore the need for a more comprehensive governance approach following an enhanced concept of pluralism that, beside considering plural values of nature and beyond social equity, includes diverse voices, perspectives and forms of knowledge in conservation governance.

## 1. Introduction

The world is seeking options to promote sustainability while addressing both the climate and biodiversity crises (IPCC, 2022; IPBES, 2019). How to align action for the climate and biodiversity with livelihoods? With these joint aims, the concept of Nature-based Solutions (NbS) emerged over a decade ago and is recently gaining predominance. NbS are *"actions to protect, sustainably manage and restore natural and modified ecosystems in ways that address societal challenges effectively and adaptively, to provide both human well-being and biodiversity benefits"* (IUCN, 2016, p. 1), a definition similar to that formally adopted by UNEA on 2022 (UNEA-5, 2022).

NbS fundamentally have a dual ecological and social ambition at the interface of biodiversity and climate change adaptation, and they have quickly entered international narratives. Unlike many other concepts in conservation and development, NbS emerged from practitioners, with the earliest written mentions published by the World Bank and the International Union for Conservation of Nature (WB, 2008, IUCN, 2009). NbS have attracted remarkable attention in the international arena (e.g. in Glasgow Climate Pact, 2021) and have been associated to inclusive governance (IPCC WG II, 2022). The term has permeated international discourses despite not being universally accepted among researchers (it attracted some early criticism, e.g. Kronenberg, 2015) and ongoing conceptual debates about its specific meaning (IPCC WGII, 2022) and distinction from related concepts.

The potential of NbS to deliver environmental and social benefits is increasingly understood, but their implementation is challenging and subject to debate. Natural resource management more broadly has historically struggled to adequately include local communities (Bansard, Schroder, 2021). Scholars have long asked for more inclusive decision

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making to address the lack of involvement of local communities, renewed into calls to incorporate pluralism in conservation projects (Pascual et al., 2021). These calls add to discussions about conservation governance and offer a new perspective based on pluralism. Pluralism in this context is understood as accounting for diverse perspectives regarding the value(s) of nature (Pascual et al., 2021), also beyond traditional Western economic values. It echoes earlier calls for pluralism in other fields, notably in economics (Gräbner and Strunk, 2020).

Research has shown that NbS face governance challenges because of the diversity of stakeholders involved, with often opposing views (Seddon et al., 2020). These challenges have become evident in NbS projects led by the IUCN, which has been working to improve their governance. Such realisation led the institution to create in 2020 the first NbS Global Standard (IUCN, 2020), aimed to address governance challenges and conceptual issues. At the interface between theoretical discussions about pluralism and practical governance in NbS, few studies have explored best practices regarding citizen and communities' involvement in NbS and how such practices can incorporate a pluralist approach in conservation projects.

This study investigates how practitioners working on NbS governance assimilate the emerging concept of pluralism, by documenting and discussing how communities' involvement is promoted. Our aim is to understand how pluralism, and the more common, related concept of social equity (the "recognition of the diversity of voices, meaningful participation of relevant actors and fair distribution of benefits and burdens"; Pascual et al., 2021, p.571), can be integrated in the governance of NbS, guided by two questions: (a) Through which participatory processes can pluralism and social equity be incorporated in the governance of NbS? (b) How do social equity and pluralism interact in terms of their theoretical and empirical contributions to NbS governance? As discussed below, social equity has been considered a central and comprehensive principle for governance regarding participation, citizens' involvement and distributive justice —hence the term will be preferred here to the broader and contested notion of "justice" (see Anguelovski and Corbera, 2023 on NbS and justice). The widespread use of social equity in conservation literature stems from a general desire to "correct power imbalances between those with 'advantage' and those 'without'" (Friedman et al., 2018, p.2), in terms of both material and procedural asymmetries. Although we acknowledge the many interpretations and multi-dimensionality of social equity, sometimes colliding with the notion of "justice", our aim is to better characterise its meaning and content (Friedman et al., 2018).

To address these questions, we analyse the perspectives of practitioners involved in the development and governance of five exemplary IUCN conservation and development projects. We focus on cases in the Global South for contextual coherence and also because NbS arguably have a more significant role to play in supporting local development (and communities) and sustainable economies in these countries (Mabon, 2021). These five projects are deemed successful by the institution, they vary in their characteristics, and have already integrated (or attempted to) a pluralist approach in NbS implementation, providing concrete practical examples. We develop a framework on social equity in NbS governance and use it to analyse primary data from key-informant interviews and secondary data from projects' documentation. These provide insight about practitioners views, whereas understanding whether these practices effectively promoted the incorporation of pluralism would require a formal impact evaluation that is beyond the scope of this study (e.g. eliciting views from community members).

## 2. Theoretical background

### 2.1. Social equity and participation

Conservation governance over the last decade has been reframed under a social equity umbrella that focuses on fair, participatory, inclusive and just processes (McDermott, 2013). Historically, many conservation projects have failed to adequately include *"the needs and ecological knowledge"* of Indigenous Peoples (Bansard, Schroder, 2021, p. 1) and often marginalised local communities (Domínguez, Luoma, 2020). Aware of this deficit, scholars have explored the potential of a renewed approach based on social equity, originally defined in terms of distributive fairness (of costs and benefits), later expanded to the practical process of distribution, in terms of both procedural fairness and recognition (De Kleyn et al., 2018). It became clear that a more multidimensional approach was required (Pascual et al., 2014).

Based on these ideas, practical approaches to environmental governance centred in social equity have flourished (e.g. Armitage et al., 2012; Bennett and Satterfield, 2018). In addition to a moral argument in favour of social equity in conservation initiatives (Schreckenberg et al., 2016), it is increasingly clear that resentment and a feeling of injustice can arise among local communities, which also jeopardises conservation projects (Lele et al., 2010). Good, inclusive governance in conservation projects has become an imperative (Lockwood, 2010).

Increasing evidence shows that significant benefits to people and nature can emerge from governance based on co-management (Borrini-Feyerabend et al., 2007), community-based (Berkes et al., 2007) or indigenous-led approaches (Artelle et al., 2019). The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) itself has been very explicit on the role of Indigenous peoples and local communities (IPLCs) in conservation policies (IPBES, 2019). In contrast, omitting valuable contextual knowledge shared by local actors can risk the long-term social benefits of a conservation and development project (Zabala and Sullivan, 2018).

Adequate participatory processes elicit different opinions, views and perspectives of relevant stakeholders in an inclusive way (Díaz-Reviriego et al., 2019). They empower actors to participate throughout project stages consistently (Van der Jagt et al., 2022) and contribute to outcome co-production (Wamsler et al., 2020). They also fundamentally impact the success of conservation and development projects (Cash et al., 2003), e.g., by increasing awareness among all stakeholders, promoting discussion about social acceptability of conservation measures and facilitating compliance (Daw et al., 2015).

### 2.2. Beyond participation: pluralism and the implementation gap in conservation

Alongside the importance of participation, scholars have extensively shown that individuals grant different values to nature (Zafra-Calvo et al., 2020), including relational values (Arias-Arévalo et al., 2017). These ought to be incorporated in decision-making about conservation (Jacobs et al., 2020). By failing to integrate local and/or indigenous knowledge and values, conservationists can miss a fundamental insight for conservation (Lam et al., 2020) and fuel injustices.

The need to include the perspectives of local communities (especially of rural populations in the Global South) has been explored for over three decades (Gómez-Pompa, Kaus, 1992). Similar arguments have aimed to address the mismatch between the values and perspectives of nature expressed by the "conservation movement" and those held by different collectives, especially marginalised communities (Pascual et al., 2021). Overall, there is growing concern regarding the incorporation of all people's views, and it is increasingly obvious that a pluralistic perspective about biodiversity is desirable (Pascual et al., 2021).

Accordingly, to the above calls for participation and improved participatory practices, scholars add a call to recognise pluralism in biodiversity conservation (Peterson et al., 2018). This is so despite associated procedural challenges of implementing pluralism in terms of time, effort, difficulties in dialogue among people with distinct views, and power asymmetries. A tangible outcome of this trend is the latest global assessment by IPBES, which focuses on the different values given to nature (IPBES, 2022).

### 2.3. A conceptual framework of social equity in Nature-based Solutions

Nature-based Solutions are now present in both IPCC (2022) and IPBES (2019) narratives, mostly as an umbrella concept covering many ecosystem-related approaches (Cohen-Shacham et al., 2019). Despite their challenges and *"potential adverse impacts on local communities"*, they can provide significant benefits to nature, climate and people if they are implemented adequately (Seddon et al., 2021, p.1530). However, NbS face significant governance challenges, especially because they necessarily impact a diverse stakeholders and interact with many political issues, like conflicting regulations, opposing interests and policy incoherence (see Seddon et al., 2020) — all of which might disrupt efforts for inclusive participation.

To prevent adverse impacts, NbS projects should be structured around good and inclusive governance (Kabisch et al., 2016) and include plural views and knowledge of nature (Woroniecki et al., 2020). However, if recent scholarship recognises the importance of including a *"plurality of perspectives in decision-making"* (Welden et al., 2021, p.972) and diverse voices and contexts (Hobbie, Grimm, 2020), much is left to understand how to transpose this theoretical requirement into action.

The understanding of social equity implementation is mature, relative to empirical evidence about how pluralism can be integrated in projects. While not exactly the same approaches, ideas of pluralism are built on social equity. Accordingly, to understand how pluralism can be integrated in NbS governance we developed a conceptual framework synthesising knowledge about the implementation of social equity with relevance to NbS governance (Table 1), based on the literature (Bennett et al., 2017; Bennett, Satterfield, 2018; Bennett et al., 2021; Lockwood, 2010; McDermott et al., 2013; Massarella et al., 2020; Seddon et al., 2021). We structure our framework around five main components which we identified as central to a social equity approach: recognition, participation, distribution, rights and accountability. We limit our framework and research goals to human actors and beneficiaries, considering the widespread anthropocentric focus in the literature on social equity and NbS projects. Future work may give further consideration to equity including non-human actors through alternative empirical approaches to investigate ecojustice (Washington et al., 2018).

The purpose of this framework, echoing the research questions above, is to (a) delineate what specific actions or conditions promote a participatory process that is fair, inclusive and just; and (b) assess how elements in this framework are assimilated by practitioners (NbS project officers) in their projects' governance and interact with pluralism considerations. It is also useful to reflect on the concept of pluralism. Its classical definition, centred on the inclusion of plural values of nature (Pascual et al., 2021), implicitly views it as one of the components of the *Recognition* pillar of the social equity approach as presented here. However, the evidence of this study provides insight to reconsider this interpretation.

**Table 1**
Conceptual framework of social equity in Nature-based Solutions' governance.

| Core elements | Key attributes |
|---|---|
| **Recognition** | • Identification of stakeholders and rights holders, especially marginalised communities and IPLCs.<br>• Acknowledgement of different cultures, customary rules, practices, values of nature and knowledge systems.<br>• Perception of the governance process as legitimate, trustworthy and inclusive by all stakeholders. |
| **Participation** | • Documentation of free, prior, and informed consent.<br>• Presence of effective, fair and equitable participation processes at each stage of the NbS (design, implementation, management, monitoring and evaluation), regardless of gender, age or social status.<br>• Inclusion and participation in decision making of stakeholders, with particular consideration to marginalised groups.<br>• Presence of feedback procedures, with specific acknowledgement of feedback from IPLCs.<br>• Establishment of adaptive management in the event of potential issues arising. |
| **Distribution** | • Identification of the distribution (economic and spatial) of benefits and costs, broadly understood, and collaborative identification of gainers and losers.<br>• Consideration of power balance and distribution.<br>• Establishment of processes to reduce and manage negative impacts in collaboration with local communities.<br>• Assessment of whether IPLCs and marginalised communities perceive the distribution and the process as fair.<br>• Establishment of sustainable mechanisms to support local capacity and finances, and to increase locally valued economic benefits.<br>• Consideration of intergenerational equity and the balance between short and long term benefits. |
| **Rights** | • Identification of risks to human rights and implementation of actions to mitigate those risks.<br>• Identification, recognition and preservation of the rights of IPLCs.<br>• Acknowledgement and incorporation of tenure (claims to access and use of lands) and customary rights and claims into planning. |
| **Accountability** | • Transparency of information, intentions, procedures and decisions.<br>• Presence of a regular monitoring and compliance system involving local communities and a third-party actor.<br>• Establishment of conflict resolution and grievance mechanisms.<br>• Identification of responsibilities and establishment of an accountability and responsibility mechanism.<br>• Presence of learning processes, including regular reviews and discussions about learning outcomes. |

## 3. Data and methods

### 3.1. Data: five IUCN pilot cases

We explore the research questions by analysing five case studies identified as pilot exemplary projects for the IUCN Global Standard, including the perspectives of practitioners working on them. The goal of this Standard is to signal the quality of NbS so they can be used as benchmark and inspiration for future projects (IUCN, 2020). Before applying the Standard to future projects, the IUCN has been testing it with 14 pre-selected projects, deemed particularly successful and diverse.

From the 14 projects, we selected five cases based on the diversity of their interventions, contexts, and respective successes (see Table 2). A key informant (the IUCN NbS Programme Manager) aided our selection of cases. We aimed to select projects considered successful and from a range of geographical contexts and policy stages (e.g. agenda-setting, solution-seeking, implementation). For instance, some projects implement a NbS directly (e.g. agroforestry or dune restoration), others address the context where NbS preservation occurs (e.g. exploring seaweed farming in a marine protected area, MPA). This sample offers a good balance between heterogeneity (exploring different implementation actions) and comparability (exploring common practices, successes, and approaches). It also sufficiently represents the kinds of interventions in the pre-selected IUCN projects (See Annex 1 for more details on the cases).

### 3.2. Method

We analysed the perspectives of practitioners in these five cases through in-depth interviews with project managers and document analysis, and using the conceptual framework. The combination of two sources of data provided a rich understanding (formal and informal) of how participation and elements in our conceptual framework were considered and implemented in each case, with concrete projects and practices. Given the diversity of the cases, we identify patterns, and recommendations that are relevant and applicable also in NbS projects beyond this institution.

**Table 2**
Case studies.

| Project title | Location (Period) | NbS | Aim |
|---|---|---|---|
| **AquaCoco** | Zanzibar, Tanzania (2018–2020) | Sustainable aquaculture in a MPA | Examining interactions between marine conservation (especially MPAs) and aquaculture (notably seaweed farming). |
| **BRIDGE**, "Building River Dialogue and Governance" | Global (Ongoing) | Water use and sharing in basins | Strengthening water governance, mostly in transboundary river basins. |
| **Lachua** | Lachua National Park, Guatemala (1990–2010 s) | Agroforestry and socioeconomic development | Improving ecosystem preservation, notably through agroforestry around cocoa. |
| **WACA**, "West African Coastal Adaptation programme" | West Africa (ongoing) | Coastal restoration to fight erosion | Strengthening coastal areas, preserving and restoring coastal ecosystems, fighting coastal erosion, and supporting sustainable livelihoods – including by implementing NbS on the ground (e.g. the abovementioned case of Saint Louis). |
| **WISE-UP,** "Water Infrastructure Solutions from Ecosystem Services Underpinning Climate Resilient Policies and Programmes" | Volta and Tana River Basins, West and East Africa (2013–2017) | Natural water infrastructures in basins | Demonstrating *"the application of natural infrastructure as a 'Nature-based Solution' for climate change adaptation and sustainable development"*, and optimising the relation between natural capital and built infrastructures (e.g. dams or irrigation channels) in river basins. |

#### 3.2.1. In-depth interviews

We conducted semi-structured interviews with project leaders and officers from each project. We targeted each project leader, i.e. the highest-level IUCN employee responsible for designing and managing the project directly. These were identified with the aid of the key informant (the IUCN NbS Programme Manager). In total, 13 people were interviewed in 7 sessions (some interviews were conducted with two or three respondents simultaneously; more details in Annex 2). These interviews were conducted in French, English or Spanish, depending on the interviewees, and recorded with consent.

Based on the research objectives and the conceptual framework, we identified the following topics to cover and analyse in all interviews: local stakeholders engagement processes, identifying different views, consideration of plural values of nature, conflict resolution processes, interaction with IPLCs, social-ecological outcomes, local people's perception of the processes, impact of participation on project outcomes, responsibility sharing, challenges, articulation of the lexicon of pluralism (without mentioning the term to interviewees), improvement recommendations, opinion regarding NbS and key takeaways. In addition to these topics, we also enquired interviewees about their views on their own role and those of local actors in project design and implementation. Questions were broad enough to elicit the most salient view from interviewees.

To analyse the interviews we transcribed them and conducted thematic qualitative coding. The qualitative codes referred to one of three broad categories: "governance and participation", "Nature-based Solutions", and "pluralism". These categories were also divided in several sub-categories. These were created in an inductive manner, based on our research questions and objectives (details in Annex 3).

#### 3.2.2. Secondary data analysis

The primary data from the interviews allowed us to elicit more informal and spontaneous views, as well as project leaders' values and beliefs (Scanlan, 2020). The analysis of documents provided evidence to contrast and contextualise practitioners' perspectives and projects, also following the above framework. As discussed below, the interviews led us to uncover a vision that is more progressive than that captured in documents.

The documents (listed in Annex 4) were evaluation and accountancy reports, overview presentations and position papers (documents published to express a forward-looking perspective on future projects). These had been produced for each case, some were publicly available and others shared confidentially by the IUCN for the purposes of this research. Although they are not independent reports, they provide valuable insights into how the projects were conceived, and how participation and inclusion was approached.

The document analysis helped us identify common narratives and gain additional insights about the design and management of projects, especially regarding communities' involvement processes. For instance, the documents provided further details on stakeholder mapping, the step-by-step design of participatory processes, and any emphasis on the identification of plural values and perspectives. Through our coding, we also identified specific terms associated with the topics mentioned in 3.2.1. (on pluralism, participation, values of nature, NbS, etc.).

## 4. Results and interpretation

The results from the analysis of interviews and secondary data presented below underline practitioners' perspectives on participatory practices and social equity components, strengths and weaknesses of NbS' governance, and insights about a pluralist approach.

### 4.1. Participatory practices implemented in pilot case studies

The analysis of primary and secondary data reveals a pattern of actions that respondents understood to favour participation and citizens' involvement, conducive to more equitable processes. The following is based on the perspectives and opinion of project leaders and practitioners working on the projects about participatory processes, and, given the scope of our data, are not necessarily reflective of their actual efficiency or success, or of the views of communities involved in the projects.

#### 4.1.1. Participatory processes and empowerment

According to interviewees, all five projects implemented systematic participatory processes, central to the social equity framework. This was done in different ways, notably through multi-stakeholder platforms that gathered different actors to discuss issues at stake in the project.

To succeed in participatory processes, stakeholder mapping was conducted in all five projects, following the *Recognition* component of social equity. This latter point was particularly underlined by BRIDGE and WISE-UP project leaders, who named relevant actors and their interests. The mapping process later on helped structuring the workshops (platforms) and was done by IUCN teams with the reported aim that all interests would be heard and represented (i.e. not solely the "loudest voices").

The multi-stakeholder platforms in some cases had particular emphasis on certain groups when discussing projects and facilitating

that their interests were represented (*Recognition & Participation*). This was the case of indigenous groups in Lachua (through "Consejos Comunitarios de Desarrollo", community councils for development) and BRIDGE (e.g. in Lake Titicaca, Peru), or women in AquaCoco, over-represented in seaweed farming but underrepresented in local and national discussions. In WACA, specifically in Saint-Louis, a management committee composed of villagers was responsible to work on the project with the IUCN and state representatives. In WISE-UP, specific workshops were organised for local communities alone, so that they could articulate their concerns and perspectives about water management without fearing retaliation from more powerful stakeholders (more details in, e.g. IUCN, 2021, and IUCN Water Programme, 2017).

These processes were considered vital for the success of the projects. As said by WACA interviewees, social acceptance and appropriation among local people are essential to build successful and sustainable projects in the long run, and this can only be achieved if local communities are at the core of governance processes. One way to do it was to rely on local teams and experts. For example, the BRIDGE team worked with the support of a local IUCN member organisation, *Agua Sustentable*. Another way to foster local appropriation was through mobilising local actors to implement the project. For instance, in Saint-Louis (Senegal), WACA teams relied on local communities to install local fences and windbreakers to restore the dunes. This (*Recognition*, *Participation*), in turn, helped create a sense of ownership.

Project managers also emphasised the importance of working on capacity-building and empowerment (*Distribution*, more details below). Empowerment efforts targeted two main groups of actors. First, many projects tried to empower local communities to articulate and represent their own interests, including at the political level. For example, the IUCN supported the creation of an organisation, FUNDALACHUA, to better represent local communities in Guatemala. Second, project managers often tried to empower marginalised groups, especially women. Lachua for instance, provided women with training to produce cocoa more sustainably and to fulfil central tasks in cocoa processing, reducing reliance on intermediaries. Similarly, in Zanzibar (AquaCoco) seaweed farming was perceived as a women's activity and their involvement in the discussions was key.

#### 4.1.2. Fostering inclusive participation

Most interviewees considered participation to be weak at the government policy level. This was reported, for example, by AquaCoco and WACA interviewees. In the former, local communities were not included in decision-making process around the creation of an MPA and *suffered from the project right from the start"* (AquaCoco interviewee). In the latter, local communities had been displaced without consultation and for unclear reasons (WACA interviewee). The IUCN intervention was intended to address such issues by strengthening participation in its projects, again, echoing *Participation* but also *Rights* in the social equity framework.

According to interviewees, in all five projects particular emphasis was put in a new structured approach to build trust, whereby project teams started by consulting local peoples' and stakeholders' aspirations, opinions and needs, to then co-produce actions or interventions. There was a clear intention by IUCN team members to not force participation and impose an agenda (Lachua interviewee), and to involve local communities early on. To do so, BRIDGE adopted the Chatham House rule,[1] as a means to secure confidentiality and safety for local communities.

Capacity building activities in all projects illustrate this point. In some of them (Lachua, WACA, WISE UP), IUCN teams formally asked communities about their learning needs and interests and how the organisation could help them in this process *(Accountability*). Notably, in WISE-UP an *"iterative action learning process"* (WISE-UP interviewee) was conducted to explore stakeholders' views on natural capital, engaging local actors early on, and involving them throughout the process. Such processes are somewhat related to *Accountability*, although they do not implement this element explicitly.

Challenges posed by politics were also notable in both interviews and documents. In the case of AquaCoco, there was tension between local communities and a larger scale government. The latter pursued an agenda to mainstream a blue economy policy, sometimes at the expense of the former. This seemed to be caused by poor interaction *"between the very local and the national representation"* (AquaCoco interviewee). In BRIDGE, transboundary issues and between-states tensions sometimes hindered adequate project implementation (e.g. in Lake Malawi). Both the elements of *Rights* and *Recognition* needed strengthening in these situations.

However, politics was sometimes also an opportunity, especially to influence broader policies and decisions. This was illustrated by explicit decisions in several projects. These included an aim to understand local needs and preferences in order to bring the message to a national level and potentially influence big infrastructure projects (in WISE-UP). Similarly, in the transboundary basins between Peru and Ecuador, the BRIDGE project worked on local capacity building and to understand citizens' perspectives. Based on local knowledge elicited in the process, the project later on moved to a broader political arena and facilitated multilevel dialogue. Another approach was a multilevel process (Lachua) that included local community committees and intermediate actors, consolidated in a new foundation with capacity to gather interests from committees at several levels and bring the message to a higher political realm. This was considered an effective vehicle to give space to all voices and echo them across decision levels (*Recognition*, *Participation & Distribution*).

Further, the need to adapt project planning and activities to local contexts and cultures was thoroughly emphasised, both in interviews and documents. This element is particularly clear in BRIDGE. For interviewees, this also meant incorporating local knowledge in the design and implementation of each project. For example, in Dionewar (Senegal; WACA), the main goal of the project was to reforest, and local communities helped IUCN teams select appropriate tree species by identifying a native tree that became key for fixing the dunes.

#### 4.1.3. Project leaders' perception of their own role and mission

Project leaders often emphasised that they saw themselves more as facilitators of the discussions and project implementation than as decision makers. In Saint-Louis (Senegal; WACA), local staff (state employees) and IUCN members suggested that the deciding authority was the management committee, composed of local farmers and other citizens. One interviewee described their job as about *"facilitating the room [and] creating the space for them to have these discussions"* (BRIDGE). The interviewee explicitly acknowledged that communities did not need external, unsolicited advice on what to do. Offiers acting as facilitators rather than decision makers meant that local actors did not just embrace certain projects, but would feel empowered to conduct projects as they considered them legitimate. Local actors were aware that activities such as tourism needed healthy marine and coastal ecosystems (AquaCoco), and that they needed to do something to improve recent trends (WACA). Therefore rather than opposing to protect an area, many only wanted to ensure they could continue working. Reaching this narrow but realistic equilibrium requires participation and discussion as well as the expression of plural perspectives.

### 4.2. Nature-based Solutions and communities

The five case studies also offer insights on the role of NbS in providing socioeconomic benefits, which can enhance local community

[1] The rule, adopted by the British think tank Chatham House, is defined as followed: "When a meeting, or part thereof, is held under the Chatham House Rule, participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, may be revealed." (Chatham House, n.d.)

involvement, and on the challenge posed by the conceptual limitations of NbS.

#### 4.2.1. Socioeconomic benefits

Based on the interviews and secondary data analysis, the mix of ecological and social benefits NbS provide is a major element of their appeal, largely coherent with the third element of the social equity framework (*Distribution & Fairness*).

In all five cases remarkable emphasis was put on the socioeconomic side particularly, along with the traditional ecological benefits they usually offer. For instance, the cocoa agroforestry project in Lachua is a good example of such a synergy, where "*nature conservation was not always regarded as the obvious route to development [...] and farmers [sustainably grow] cocoa while conserving forests*", which provides them several times the income of subsistence agriculture (IUCN, 2019, p.2). Similarly, in Zanzibar (AquaCoco) sustainable seaweed farming was permitted in the MPA and supported local livelihoods. In Saint-Louis (WACA), dune restoration to protect communities from the tide had also offered (sustainable) development opportunities. Interviewees suggested that farmers' revenues increased and also their number (from 60 to 180). This occurred without significantly increasing the demand for space because the absence of flooding reduced the amount of land necessary per farmer. In WISE-UP the work of IUCN staff showed that seasonal floods were key for local farmers, but at risk of disappearing because of new grey infrastructures. This was thanks to viewing natural capital (the river flow) as a socioecological matter, rather than solely as an ecosystem matter—an example of a pluralist approach to valuation.

Economic benefits can support consensus building and facilitate participatory processes. The fundamental message from the analysis of these case studies is that, by providing sustainable livelihoods while preserving ecosystems, NbS can create more consensus than conventional conservation projects. A sense of ownership appears to be strengthened because local communities understand that agroforestry (Lachua) or windbreak installations (Saint Louis), for example, are beneficial to their livelihood. As said by one Lachua interviewee, "*the common thread running through all the organisational processes has been the economic part*".

#### 4.2.2. Enhancing local communities' involvement

By providing direct benefits to local communities, NbS also facilitate compromises for conventional conservation policies like establishing protected areas. This may create win-win situations. For example, the benefits the dunes restoration programme in Saint Louis provided to local communities enabled an easier agreement on the creation of an additional protected area for animal nesting and reproduction. Likewise the preservation of ecosystems of Parque Lachua was possible because the agroforestry projects delivered more socioeconomic benefits than traditional (unsustainable) farming.

A key element of the role of NbS in enhancing community involvement is the emphasis put on placing citizens at the heart of the intervention *(Recognition & Participation)*. In turn, this aspect of NbS can create a positive trend to strengthen participation and involvement. For example, solutions are sought that include local communities and stay away from limiting access to land (key for *Rights*). In Saint-Louis, the community was directly in charge of restoring the dunes, whereas in Dionewar (both WACA), they helped IUCN teams in the reforestation programme. In Zanzibar (AquaCoco), communities are in charge of farming seaweed sustainably in a MPA. In BRIDGE projects, people participated through different water platforms to discuss how to preserve the basins while supporting their own livelihoods. In Guatemala (Lachua), local communities were central to the agroforestry and cocoa project.

If people are directly impacted by, and sometimes necessary for, the development of the project, it is key to strive to build consensus and increase involvement. This more instrumental view partially explains why effort to increase participation has been made in these projects, besides ethical or moral imperatives.

#### 4.2.3. The limits of Nature-based Solutions

Some respondents highlighted that NbS as a concept also has problems, caused to an extent by its ample definition and characterisation *(Accountability)*. This was central for AquaCoco interviewees, who insisted on the challenge of defining clearly what a NbS is, which created somewhat of a "bad press" if used for "greenwashing" (AquaCoco interviewee). Similarly, the BRIDGE interviewee said they do not use the term often, even though it applies to most of their work, because it is difficult to clearly characterise what NbS are. Consequently, interviewees and documents do not insist much on the phrase itself, but rather refer to NbS by their attributes. This is why, according to AquaCoco's interviewees, a common standard or framework was required to help clarify what NbS are and how they should be implemented — a gap that the IUCN Global Standard aimed to fill, developed in 2020 at the end of AquaCoco.

### 4.3. The meaning and usefulness of pluralism as an approach

#### 4.3.1. Including plural values of nature

Understanding local knowledge and integrating it in project development is central to the call for pluralism (e.g. Pascual et al., 2021). IUCN teams reported to have shown consideration for socio-cultural values in the design and implementation of their projects. So-called alternative values given to nature were often mentioned in the interviews and documents, which also acknowledged that ecosystem values had been undervalued for decades because of the lack of recognition of the many different contributions they bring to local communities (WISE-UP; IUCN, 2017). This contrasts with the frequent critique of the over-representation, in conservation projects, of economic values of nature associated with narratives centred around ecosystem services.

Some explicit examples were found in the documents. These include the requirement, in a publication on benefit-sharing, to "*identify socio-cultural values*" (BRIDGE; IUCN, 2021, p.36) beyond purely economic benefits. This report also mapped the diverse values that must be incorporated in the definition of benefits, including the importance of "option" (e.g. peace and security) and "bequest" (e.g. creation of a shared basin identity) as cultural ones. Other documents emphasised the "*cultural and traditional value*" of some lands for local communities (WISE-UP/ Volta; IUCN Water Programme, 2017, p.26). For example, after acknowledging the value of a specific site for the local Tharaka people (WISE-UP/Tana; Oates and Marani, 2017), the IUCN advocated to reshape a dam project. This approach was not, however, so clear in the case of AquaCoco, which documents had no explicit reference to socio-cultural values.

#### 4.3.2. Reversing the approach by starting from local communities

On many occasions, interviewees highlighted a fundamental element of engagement with local communities, summarised by this quote:

> *"They know better than us what is going on. […] It's very important to also not come in there and be like 'we're from Switzerland, we know much better than you what's going on in your own basin' [.] A lot of the time they know perfectly well what they need to do. They don't need us to come and tell them." (BRIDGE interviewee)*

As mentioned earlier, several interviewees positioned their role as supporting and facilitating communities to decide what they wish and providing them some guidance, rather than pushing a process (Lachua and WACA). They acknowledged that communities were the decision makers: "*populations are not 'involved': they are at the heart of the decision making*" (WACA interviewee). Accordingly, in most projects, interviewees suggested that special care was taken to understand different and sometimes opposing views. More importantly, they aimed to give people the means to decide for themselves without imposing the organisation's views. If a project is deemed legitimate and people feel that

they have been sufficiently included in it and in issuing rules, then continuous engagement or compliance is more likely (*Recognition & Participation*).

The emphasis on local communities, their knowledge and perspectives, and their role in participation, invites a broader discussion about the concept of pluralism and its reconceptualisation, as discussed below. From the results, including plural values of nature (i.e. the usual definition of pluralism in conservation) seems to be closely related to approaches to participation and local communities' involvement outlined in these cases. Despite not being referred to by interviewees, this extensive approach to participation, from mapping stakeholders and values to establishing management committees and stakeholder platforms, represents a comprehensive involvement process that can extend the meaning of pluralism. This study did not validate these views against those of other stakeholders or observed data. But the comprehensive approach to participation laid out, especially through an effort made to include diverse values, perspectives and knowledge, suggests a broader meaning of pluralism. As discussed below (5.3), not all participatory processes could be labelled as pluralistic. But under certain circumstances, pluralism becomes an umbrella term for the active inclusion of not only plural values, but also voices, knowledge and perspectives.

## 5. Discussion

The study of these five pilot cases provides new insights on NbS governance, the incorporation of stakeholders' perspectives (especially local communities) and the notion of pluralism.

### 5.1. Rethinking relations with local communities to reshape Nature-based Solutions' governance

Regarding the first question about processes and practices to foster pluralism and social equity in NbS governance, good practices in the cases analysed showed that self-reflection needs to be embedded at every step of a project, focusing on how to ensure the process is genuinely inclusive. Working towards this goal, IUCN project leaders observed the benefits of facilitating local communities to know and articulate what is best for them, granted that information was shared and an inclusive space for discussion with all stakeholders was created. The evidence suggests that most elements of social equity were part of practitioners' perspectives about the projects, although both interviews and documents placed less emphasis on *Rights* and *Accountability*.

All five case studies suggest that communities have been supportive of NbS and were aware of the *glocal* socio-environmental challenges the projects aimed to address. A good practice observed was where project managers recognised local people's leadership regarding specific action, pursuant to the general objective stated in the NbS (e.g. fighting coastal erosion). The task of the IUCN team was then to create a safe space for a constructive discussion to happen (see Pereira et al., 2015) — for the expression of the different and perhaps opposing views regarding projects, values of nature, etc.

Including local knowledge also means going a step further in the recognition of different values of nature and benefits and contributions derived from ecosystems (Pascual et al., 2021). This was present in the cases studied, exemplified by the emphasis on the identification of alternative socio-cultural values in BRIDGE documents (see 4.3.1). In practice it consisted of aiming to give local actors the means, skills, and power of achieving the broad aims of NbS projects.

It follows that local communities are best approached as partners, if not managers, of the projects from the beginning, "*leading, being involved in and taking an active role in management activities*" (Bennett et al., 2021, p.5). By working with them, rather than simply communicating what has been done "for them", project managers take the role of discussion facilitators.

Further, NbS projects (and community-based conservation broadly) must not ignore the necessity of interacting with multiple levels in the complex interplay of institutions (Berkes, 2007). Besides acting at the community level, several projects showed the importance of expanding action across political levels where possible, including national, and notably by channeling local interests. This ability to transfer dialogue and action from local to national, has been underlined by several interviewees as they aimed to improve the impact of local participatory processes .

The integration of pluralism and social equity in NbS also requires accounting for power dynamics, especially in the presence of often conflicting perspectives and knowledge. Some projects put special emphasis to minimise power asymmetries: in WISE-UP project leaders convened different meetings for local communities and higher-level stakeholders to allow the former to speak freely; in Lachua, local communities united their forces via a single foundation to interact with the government and mitigate power imbalances. However, these asymmetries often persist to some degree and, in some cases (e.g. AquaCoco), local communities felt very much powerless vis-à-vis projects decided by their government.

### 5.2. Strengths and weaknesses of NbS for pluralistic governance

It was clear the importance of promoting core socioeconomic benefits alongside ecological ones. Delivering direct benefits to local communities can greatly improve acceptability and consensus, and we argue that it also reinforces participation and involvement. People are more likely to participate in a project which they can derive benefits from and potentially directly lead (Kabisch et al., 2016; Seddon et al., 2021). In fact, there was evidence of so-called "*environmentalism of the poor*" (Martinez-Alier, 2002), whereby low-income people tend to favour resource conservation, but have sometimes little power in the complex dynamics involving these resources and few means to have their own language of valuation considered (ibid.).

In their paper on NbS, Woroniecki et al. (2020) concluded that "*participation of different actors in nature-based interventions did not necessarily generate a more pluralistic perspective on nature, nor alternative ways of knowing*" (p.11). Our research provides an alternative view, showing that effective participation could deliver a pluralistic vision on what nature means and on which knowledge should be accounted for in NbS projects. This was for instance the objective in BRIDGE or WACA where, through participatory practices, they incorporated their views on nature (BRIDGE) and local knowledge (WACA) and adapted projects accordingly. This point feeds an interesting reflection about the role of science in NbS: while the projects were originally based on IUCN officers' knowledge and so-called scientific evidence, they evolved in contact with local communities through the incorporation of their knowledge (Pullin et al., 2004).

### 5.3. An upgraded pluralistic approach to NbS governance and stakeholders' involvement

Interestingly, there is a lexical vacuum of pluralism in the five cases, with the absence of "plural" or "pluralistic" in both interviews and documents, except for "plural values of nature". However, this absence does not mean its underlying principles are missing. What could be considered a pluralistic approach to NbS and conservation may be referred to with other words.

The findings grant a reconsideration of what a pluralistic approach is. The literature has recently insisted on the need to incorporate pluralism, interpreted as plural values of nature (e.g. Pascual et al., 2021). But, as shown in this research, pluralism can be expanded into a new, more comprehensive approach to participation, one that goes beyond aiming to include diverse values of nature and becomes a process to explore also perspectives and knowledge, and embraces ownership of the project by other actors. This broad consideration for a plurality of views, explored in political science and economics and later on adopted in conservation research, could justify the extension of a

pluralist approach in conservation to the plurality of values, perspectives and knowledge of stakeholders.

It follows that pluralism can enrich participation. A pluralistic approach strengthens participatory processes by requiring to explore and include all different perspectives, values, views and knowledge in decision making. While participatory processes can sometimes be co-opted by the loudest voices, a pluralistic (participatory) approach gives all the means to express opinions and values, and share knowledge and realities. Rather than consultation (which sometimes may not have direct impact on project outcomes), a pluralistic approach may start from local actors and derive the key attributes of a project from their own perspectives, opinions, values of nature and knowledge. In these case studies, project leaders aimed to develop this approach. It was not entirely obvious how thoroughly this was done, but the ambition was outlined and several useful practices were put in place.

The case studies suggest that implementing a pluralistic approach, taken more broadly as the inclusion of plural values, perspectives and knowledge, is necessary to build successful projects. Social acceptance, local empowerment and appropriation are key components for the sustainability of a project, and fair and inclusive processes that include plural views of conservation and nature are likely to facilitate these by creating a sense of ownership, among others. This further supports our redefinition of pluralism as an approach.

### 5.4. Pluralism and social equity

We have used a conceptual framework on social equity to explore the five cases. By focusing on recognition, participation, distribution, rights and accountability, this framework also informs pluralistic governance and helps us explore activities that promote it.

Overall, the results indicate that social equity and pluralism, in the broader conception of the latter, are complementary but do not substitute each other. Social equity does not imply pluralism; the former approaches participation, recognition and inclusion through equitable lenses, and does not necessarily imply that pluralism, as presented above, is fully integrated. In turn, pluralism does not imply social equity. As suggested by Zafra-Calvo et al. (2020), creating a space for the expression of plural values and perspectives does not necessarily lead to an equitable outcome. Consequently, while the social equity framework provides a thorough structure for a project's governance, a pluralistic approach can enrich it, by emphasising the incorporation of diverse values, perspectives and forms of knowledge. Combining these approaches also offers sufficient flexibility to adapt to highly heterogeneous local contexts. Rather than a rigid framework, pluralism is an approach to project design and implementation, which can infuse every action implemented.

Words can have a performative function: their use changes the reality around them, and they not only describe a situation, they also create it (Austin, 1962). Hence, despite scholars conceptualising social equity as a general governance approach (including recognition and participation), it performs a specific function: focusing on equitable aspects of governance. Using the term pluralism, a different kind of statement is performed, one that insists on the plural opinions and perspectives emerging from a process. Focusing on a different aspect of a project (i.e. focusing on the incorporation of plural values, perspectives and knowledge instead of the equitable aspects of it) and performing a different function (i.e. placing the emphasis on the term pluralism instead of equity) can fundamentally influence the way we structure equitable, inclusive and participatory projects in the future.

### 5.5. The IUCN Global Standard for Nature-based Solutions

This research has explored pilot cases selected by the IUCN to test their newly developed Standard for NbS. This Standard is the first of its kind, trying to provide a clear framework on the design and implementation of efficient and inclusive NbS. Originally mobilised to evaluate past and ongoing projects, the Standard is progressively used as a basis for future NbS. We suggest ways to strengthen the ability of the Standard to guide future work. As seen in pilot cases, the "good governance" of NbS largely relies on the skills, ethics and personality of project managers. The Standard can be too unspecific in its current form, leaving room for (mis)interpretation. For instance, beyond general requirements on participation and citizens' involvements, the Standard could explicitly mention the need to include "plural values of nature", especially those of local communities, and to explore local knowledge and knowledge systems. More generally, further clarification of the general principles of the Standard could mitigate mis-implementation by underlining more clearly the importance of a pluralistic approach to NbS governance at every step of the process.

## 6. Conclusion

This research contributes to knowledge about strengthening participation and local communities' involvement in NbS governance. It has analysed practitioners' perspectives and project documentation about practices adopted in five cases, connected them together, and structured a more operational definition of what pluralism means in practice and how it can be translated into future projects. The evidence underpins the premises of an enhanced approach based on a broader understanding of pluralism, i.e. the necessary incorporation of diverse values of nature, but also of voices, perspectives and knowledge.

The cases analysed provide specific examples of practices to implement this new approach. These practices included extensive stakeholder mapping, the constitution of citizens' committees able to represent the views of local communities, and the organisation of multi-stakeholder platforms, conceived as participatory structures able to lay out people's views and values. Efforts to bring local concerns into the bigger political sphere are also noteworthy. However, as expected when studying such large international organisations, the incorporation of pluralism and the extensive approach to participation largely relied on (IUCN) individuals —on their beliefs, sensibleness and actions. This partly explains why these particular cases were selected as "pilot cases" by the IUCN to implement their Global Standard, while others were left aside by the institution (see 3.1.). To extend these individual-led principles and practices, they would need to be adopted institutionally in all NbS (at the IUCN and elsewhere), including through strengthening the Global Standard and further clarification of its (pluralistic) rationale. This would enhance the efficiency and inclusiveness of participatory processes and prevent governance issues frequently associated with NbS (Seddon et al., 2020).

As summarised by Hobbie and Grimm (2020), "*NbS are most likely to be effective and fair when they match the scale of the challenge, are implemented with input from diverse voices and are appropriate to specific social, cultural, ecological and technological contexts*" (p.1). This research has provided concrete examples of practices that try, at least in their aims and as perceived by officers, to fulfil such a pledge, whilst also strengthening the conceptual discussion around a new pluralistic approach.

Future research can support the structuration of pluralism as an approach and expand on best practices and local perceptions. This approach can be explored beyond NbS and in conservation policies more generally. Also, while it is clear the intention to take a new, more progressive, pluralistic approach to NbS, and likely to conservation, it is also fundamental to understand whether this is perceived as such by local actors. A similar analysis could also be conducted with cases in higher-income countries, to understand how pluralism and social equity interact in NbS projects. Importantly, future research should also strengthen the evidence with data from members of local communities, to understand their perception of practices in these specific NbS cases (and also in projects led by other organisations). This would indicate if the progressive approach outlined by practitioners does pass a reality test.

The study yields two additional implications for academic debates. First, this renewed approach to participation based on pluralism seems to have the potential to help address the curse of the "*environmentalism of the poor*" (Martinez-Alier, 2002; see above). Second, this study suggests caution against simplified debates on conservation implementation. A generalised critique to the "conservation movement" or "Western NGOs" (e.g. Blanc, 2020) as consistently defending their own agenda at the expense of local communities in the Global South, largely ignores existing good practices and approaches by NGOs. While not denying the existence of reprehensible practices, this research has shown that practitioners attempt to design and implement inspiring and innovative projects and that, as articulated by Sandbrook et al. (2019), the conservation movement is diverse.

## Research ethics and risk assessment

This research obtained ethical approval from the University of Cambridge. Prior to each interview, an informed consent form was signed or orally approved by all participants to clarify the context, objectives, anonymisation, and data used in the study.

## CRediT authorship contribution statement

Theodore Tallent: conceptualization, methodology, data collection, original draft preparation. Aiora Zabala: conceptualization, supervision, reviewing and editing.

## Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

## Data Availability

The interim analysis of this data is available upon reasonable request. The primary data of interview transcripts contains identifiable content about individuals, and therefore it is not deposited because it could compromise the confidentiality of the respondents and lead to non-compliance with the institutional review boards that approved this work.

## Appendix A. Supporting information

Supplementary data associated with this article can be found in the online version at doi:10.1016/j.envsci.2023.103624.

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