



Policy Matters

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Reimagining conservation: Toward a flourishing future



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The journey to reimagine conservation began as a seed – an invitation to inspire collective change across all facets of our work. Born from the recognition that realities on the ground are complex and ever-changing, it calls for a more intentional, inclusive, and justice-centred approach. Above all, we honour those on the ground whose courage and commitment push us to rethink, redo, and rejoin the work in new ways. You are the reason this movement exists.

We are deeply grateful to all those who have walked alongside us in this journey: Tim Badman, Jessica Sweidan, Sean Southey, Ana Valerie Mandri Rohen, Allan Rhodes, Iben Munck, our CEESP Steering Committee, Uearthadox, the Australian National Committee, and all IUCN Members who, in their own ways, have not only reimagined but transformed how they approach conservation. Your vision and actions are living proof that change is possible when we are willing to show up differently.

We dedicate this issue to everyone who chooses to step into the unknown, to reimagine boldly, and to act with purpose. May this work be both a reflection of your impact and an invitation for others to join in building the flourishing future we know is possible.



Editor's introduction

This issue of *Policy Matters* is devoted to the Reimagining Conservation initiative. It dives into four transformative chapters to reimagine conservation: conservation action, leadership and justice, money and power, and relationships. Through critical reflections and bold alternatives, this issue challenges us to rethink how conservation is led, who it serves, and what it can become, with articles and stories intentionally curated to reflect those discussions and guiding questions.

Reimagining Conservation began in 2021 as both a question and a commitment: what would it take to move beyond inherited conservation paradigms toward something more just, inclusive, and rooted in care? It emerged from listening – to the land, to communities, to each other, and to the shifting realities that defy simple solutions. The challenges we face today are not only ecological but also cultural, political, and relational. They demand that we reimagine not only what conservation looks like, but how and why we do it – at every level, from local action to global policy.

We are living in an era of deep uncertainty: shrinking civic space, growing polarization, climate disruption, biodiversity collapse, and widening inequities alongside mounting governance crises. Old models are failing, and business-as-usual is no longer an option. What the world needs now is leadership with the courage to challenge entrenched paradigms, bridge divides, and centre justice and care as inseparable from environmental action. Reimagining Conservation is not a technical adjustment; it is a call for bold paradigm shifts and leaders willing to chart new pathways that honour diversity, solidarity, and shared responsibility for the planet's future.

At its heart, this initiative is a global partnership built from the ground up – a living, evolving movement that honours diversity in all its forms: of knowledge, practice, and perspective. It is about slowing down to hear the voices too often silenced, about fostering leadership from those who live conservation every day, and about building strong partnerships and collaborations that connect territories with institutions, policy, philanthropy, and networks. It recognizes that the health of our planet depends on justice as much as it does on biodiversity, and that everyone – whether working in communities, organizations, governments, or global platforms – has a role to play.

Reimagine Conservation invites us to challenge the status quo and nurture a culture of care for the earth and for one another. It is an act of courage to step into the unknown, to question familiar paths, and to work collectively toward a flourishing future. This publication is both a record of that journey so far and an invitation to join it – to dream boldly, to act with intention, and to help weave a world where many worlds can thrive.

This publication gathers the voices, visions, and experiences that have shaped the Reimagine Conservation journey so far. It brings together insights from across regions and sectors, weaving stories of transformation, critical reflections on entrenched paradigms, and examples of leadership that centre justice, equity, and care. From on-the-ground practitioners to institutional changemakers, from grassroots coalitions to high-level alliances, these contributions illuminate what becomes possible when conservation is shared work. Together, they offer a living testament to the power of reimagining – and a map for the many paths still to be explored.

It is not intended to be exhaustive, but rather a beginning – a marker along a longer journey. We offer it as an invitation to keep reimagining, to keep learning, and to keep growing together toward a future where both people and the planet can flourish.

On behalf of the Editorial Team:



Kristen Walker Painemilla, Chair of IUCN CEESP



Ameyali Ramos, Deputy Chair of IUCN CEESP

Mother Earth Cries Out

Lauren Nerfa

Mother Earth is crying out
for us
to sink our hands
into her soils
once more,
to caress the leaves
of her sheltering trees,
to clean
the pollution
from her waters,
to touch her
lovingly
and speak to her
softly,
to dance
lightly
upon her back,
to fall to our knees
upon her chest
and praise
her nurturance.

Mother Earth is crying out
for us
to awaken,
to see our place in her
great circle
once more,
to open our hearts
to her love,
to breathe her miraculous air
with intention,
to heal as the tears
fall from our eyes
into the vast body
of her one
Ocean,
and to accept
our sacred responsibility,
each articulated uniquely,
to care for each other
and for her,
and to receive
from her,
our infinitely wise
and nourishing
home.





1 Reimagining conservation action

Ancient Technology

Lauren Nerfa

The fires of exploitation
are blazing
in all directions.
How did it come to this,
that through our technologies
we have set the earth alight—
our home is burning,
though many deny
what is happening before their eyes,
and our fault
for the disaster.
We started this fire,
and we must extinguish it,
not using the technology that was the spark,
but through the more ancient,
more powerful
technology
of the human heart,
to envision the solutions
that will truly resolve the crises.
May this guide our minds,
as we seek ways
to douse the flames
and nurture the regenerating land.



Chapter introduction

Jessica Campese, Aditi Bhardwaj, Kevin Chang, Swayamprabha Das, and Mahnaz Kadhem

We are experiencing interrelated planetary crises of climate collapse, biodiversity loss, and land and resource degradation. Equitable, effective, and intergenerational conservation action has never been more urgent. Yet, ‘conservation’ is understood in diverse and often contested ways. Caring for and sustaining the environment, and our relationships with it, has been central to diverse societies and cultures since time immemorial. Indigenous Peoples and local communities, including women and youth, continue to be (often unrecognized) leaders in conservation action. At the same time, there is a long history – and, in too many contexts, continued practice – of ‘fortress’ conservation and associated human rights violations. While there is growing recognition of the urgent need for equitable, human rights-based conservation action, for both justice and effectiveness, there is a long way to go to realizing and sustaining this intention. Doing so will require transformation on the part of actors across the global conservation community. With this in mind, articles in this chapter explore the importance of and pathways towards reimagining conservation action.

The chapter includes four closely inter-related sections:

- **Sparking (re)imagination** - Highlighting stories of leadership, revitalization, and transformation in relationships and understandings of conservation action.
- **Diversity in action** - Exploring approaches, values, and knowledge systems that underpin conservation.
- **Collective action** - Illustrating pathways to advance rights and equity within – and as foundational to – conservation.
- **From reflection to change?** - Exploring how (and with whose ways of knowing) we can come to understand, improve, and address the impacts of conservation (in)action.

Many of the articles relate to more than one of these four thematic sections. The aim in placing articles in a given section is not to diminish that richness, but rather to support readers in journeying through the chapter as a whole. You will also notice that conservation action, as understood here, is a very broad concept. It is closely linked to the themes of, among others, leadership, justice, power, money, and relationships, which are explored directly and in-depth in subsequent chapters.

We hope that you enjoy and gather inspiration from these reflections and stories. We are grateful to all of the authors for sharing their insights and contributions.

1.1

Sparking (re)imagination: Leadership, revitalization, and transformation

What does it mean to reimagine conservation action? This section begins exploring that question, including by inviting and challenging us to reflect on what it might look like in practice, and who decides.

In *Reimagining conservation through Indigenous remembering, revitalisation, and the recognition of Indigenous and traditional territories*, June Rubis reflects on what it means to reimagine conservation from within Indigenous worlds, rather than around them, and in the context of ongoing discussions and decisions about identification and recognition of Indigenous and traditional territories. She draws on her long-term research and kinship ties with Dayak Iban and Bidayuh communities, and explores how practices of remembering, ritual revitalisation, and concealment operate not only as forms of resistance, but also as “grounded modes of governance, survivance, and ecological care.” In *Reimagining conservation through Indigenous leadership*, Erica McCreedy and co-authors reflect on how conservation might be reimaged through Indigenous leadership, sharing their experience from the first “Reimagining Conservation” forum, held in Australia, marking the “beginning of a movement – not just a moment.” In *IPBSAP: Advancing Indigenous Peoples-led Sustainable Biodiversity*, Giovanni Reyes introduces and celebrates the landmark ‘Indigenous Peoples Biodiversity Strategy & Action Plan’, which is a collective statement of Indigenous Peoples’ views and commitments related to biodiversity in the Philippines, and a collective action to ensure these views are centred in related national plans and actions.

Chapter narrated by Jessica Campese, Aditi Bhardwaj, Kevin Chang, Swayamprabha Das, and Mahnaz Kadhem

Reimagining conservation through Indigenous remembering, revitalisation, and the recognition of Indigenous and traditional territories

June Rubis^{a)}

When we speak of conservation in Borneo, the narrative often begins with biodiversity and ends with protection. But for many Indigenous Peoples of Borneo, conservation begins with remembering.

I walk through the forests of Sarawak not as a conservation biologist alone, but as someone returning to kin. These landscapes are inscribed with histories and entanglements, of territories where knowledge, memory, and conflict have long converged. Yet in global conservation narratives, these stories are rarely heard. Indigenous lands are increasingly siloed as habitats or carbon sinks, reducing them to objectified units of value in global environmental frameworks, their peoples portrayed either as stewards or threats. Our names for places and beings are replaced. Our rituals, once central to ecological governance, are sidelined.

In this article, I draw from my research with Iban communities of Batang Ai and my own Bidayuh kin from the Jagoi territories to reflect on three interwoven processes: Indigenous remembering, ritual revitalisation, and concealment as survivance. These are not acts of longing for the past. Rather, they are forward-facing strategies of survival, political expression, and ecological care, anchored in ancestral continuity and emergent futures. This work gestures toward another kind of conservation; one that emerges not from institutional templates, but from acts of continuity, care, and refusal. It grows through memory, reactivated ceremony, and the quiet clarity of what communities choose to withhold or revive on their own terms.

This work also speaks to current debates on Indigenous and traditional territories within global biodiversity governance. Indigenous and traditional territories are broadly understood as living governance systems that embody relationships between peoples, lands, waters, and more-than-human kin. Recognising them is not a matter of “fitting” them into existing categories such as protected areas or other effective area-based conservation measures (OECMs). It is about affirming their legitimacy on their own terms, grounded in Indigenous self-determination, and ensuring that their recognition in global frameworks reflects the governance systems, laws, and values that sustain them.

The Kunming-Montreal Global Biodiversity Framework (KM-GBF) explicitly acknowledges the vital role of Indigenous Peoples and local communities in conserving biodiversity through their governance systems, knowledge, innovations, and worldviews. Target 3 of the KM-GBF calls for effective conservation through, among other elements, “recognising indigenous and traditional territories, where applicable.”

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The policy challenge is clear: while some Indigenous and traditional territories may be recognised as protected areas or OECMs, governed solely by Indigenous Peoples and local communities, in shared arrangements, or within mosaics of governance, there are many contexts in which such designations would be inappropriate, inadequate, or even harmful. In these cases, formal recognition must not undermine or replace the authority of customary systems that already meet or exceed biodiversity outcomes. Recognition processes must be led by the rightful custodians, with free, prior, and informed consent (FPIC), and in full alignment with international human rights instruments such as the UN Declaration on the Rights of Indigenous Peoples, the Indigenous and Tribal Peoples Convention (ILO 169), and the Nagoya Protocol.

The power of naming: Relational knowledges in conservation

Much of conservation science assumes its naming systems are neutral. Yet taxonomy itself is a legacy of empire. In my work on orangutan conservation, I encountered how the internationally used term ‘orang utan’, while derived from the Malay for ‘person of the forest’, is not what and how Indigenous communities, like the Iban, call and relate to these beings. For the Iban, the great ape is known as *maias*, embedded in a broader, place-specific classification system that reflects relational ethics, spiritual guidance, and ecological intimacy (Rubis, 2020).

When conservation frameworks default to externally imposed nomenclature, they participate in what Linda Tuhiwai Smith calls “the colonizing power of naming.” This is not merely semantic. Naming systems create conservation realities: who gets to know, care, and decide. Indigenous ways of knowing, often expressed through naming, reflect deep entanglements with place and more-than-human kin. Rather than centring a single Indigenous term, conservation practice must create space for diverse and relational knowledges to co-exist, unflattened by universalising frameworks.

Ritual revitalisation as governance

In another stream of my research and personal lineage, I reflected on the revival of the Gawe Nyobang (skull-blessing ritual) among Bidayuh communities, a process in which my late father played a vital role as a ritual priest following in the footsteps of his parents, my grandparents (Rubis, 2017). This ritual was revitalised in response to environmental and social stress, including deforestation, illness, and the weakening of customary institutions. It brought together cross-border sister communities (in Sarawak and West Kalimantan), rekindled ancestral responsibilities, and provided a stage for recalibrating values and leadership.

This revitalisation must also be understood as a form of Indigenous survivance, or what Vizenor describes as more than survival or endurance: a presence that actively repudiates erasure, tragedy, and domination. The revival of the ritual was not just a cultural act but a world-making assertion, one that safeguarded more-than-human relationships and ancestral responsibilities from the encroachment of conservation and state power. Revitalisation is not simply about resilience. It is a reclamation of ontological authority, that is, to define relations between land, spirits, ancestors, and people. It is governance, not in the bureaucratic sense, but in the sense of spiritual and ecological equilibrium.

After dry-season clearing, an Iban farmer walks the contour of a hill-rice field in Batang Ai, Sarawak - part of an upland cultivation cycle set amid secondary forest.

Credit: June Rubis



A political ecology of remembering and concealing

In both cases, naming the *maias* and reviving the skull-blessing ritual, we see the act of remembering as a political ecology. Remembering is not passive nostalgia. It is a conscious refusal to allow erasure. It resists the conservation logic that views people as variables and forests as metrics. It reclaims story, spirit, and specificity.

This political ecology of remembering is deeply embodied. It is in the ways we move through familiar terrain, attuned to its signs, traces, and remembered obligations (Rubis, 2024). But just as crucial is the right to conceal; to protect elements of our cosmologies and practices from being misinterpreted, instrumentalised, or co-opted.

Drawing from my work on concealing protocols, I argue that Indigenous concealment is not avoidance or absence (Rubis & Theriault, 2020). It is a form of sovereignty. Concealment can be a survival strategy in contexts of dispossession, but it is also a practice of survivance: to withhold, to obscure, to protect that which must not be made legible to systems of domination. These protocols of refusal are essential to safeguarding not only lands but also worldviews.

To reimagine conservation, we must begin not with strategy, but with story. We must ask: What memories are held by this place? What rituals have protected it? What names continue to hold meaning for the people who live with this land? What do communities choose not to reveal, and why?

This reimagining asks us to step outside frameworks of measurement and management. It calls for a return to humility by recognising that mainstream conservation is but one way of knowing among many. It invites us to honour the plurality of worlds where spiritual, ritual, and ancestral relations with land are not symbolic, but vital.

It means recognising governance not just in policies or plans, but in the dispersed leadership of communities and ceremonies. It means asking not just whether forests are intact, but whether people are sovereign, whether their knowledges are honoured, and whether silence is protected as much as speech.

Reimagining conservation is not about adding Indigenous elements to existing systems. It is about fundamentally shifting the terms of engagement. In the world I come from, rituals are not performances. They are technologies of balance. Remembering is not folklore. It is a governance practice. Concealment is not resistance alone. It is an act of care and future-making.

If conservation is to be just, it must answer to the land itself and to the peoples whose ancestors still walk it. It must leave room for what is messy and embodied, for what is sacred. Rituals, names, stories, and silences are not archaic practices of the past, but rather are living, breathing and very current.

This vision aligns with ongoing discussions under the Convention on Biological Diversity (CBD) on Indigenous and traditional territories, which call for their recognition as legitimate governance and conservation systems, distinct from protected area or OECM categories and not automatically absorbed into them. In line with the KM-GBF, many Indigenous Peoples, local communities, and their allies have called for the recognition of Indigenous and traditional territories in ways that are legally binding, where appropriate, and always grounded in Indigenous self-determination. In some contexts, legal recognition can strengthen sovereignty and tenure; in others, it risks undermining customary governance, if imposed without consent or in frameworks that do not align with Indigenous law.

Recognition processes should clearly distinguish between identification: the Indigenous Peoples and local communities-led process of defining what and where a territory is; recognition: the formal acknowledgement of that territory and its governance system; and classification: the placement of that territory into any national or international conservation category. Identification must always be led by the rightful custodians. They should also reject the automatic categorisation of Indigenous and traditional territories as conservation or restoration areas, and ensure that any integration into national biodiversity, land, and related legislation is consistent with customary governance systems, including marine, coastal, and mobility-based systems.

When Indigenous and traditional territories are recognised on these terms, conservation shifts from imposing uniform categories to affirming plural systems of governance. It moves from measuring “intactness” to ensuring sovereignty, securing tenure, honouring knowledge systems, and protecting silence as much as speech. To be credible and just, conservation

Bidayuh kin-communities divided by the modern Malaysia–Indonesia border come together for Gawea Nyobang, an annual ritual of offerings and solidarity that renews ties across the borderlands.

Credit: June Rubis



policy must move beyond measuring “coverage” to safeguarding sovereignty, tenure security, and the continuity of biocultural governance. Recognising Indigenous and traditional territories on these terms strengthens biodiversity outcomes while protecting the cultural and political integrity of the peoples who have cared for these territories across generations.

Returning to where our stories live is not symbolic: it is the basis for effective conservation. Policy and law must fully respect Indigenous and traditional territories as governance systems in their own right: defined, recognised, and, where it serves their interests, classified in other systems under the authority of their rightful custodians. This is essential to sustaining biodiversity and the relationships that uphold it.

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Reimagining conservation through Indigenous leadership

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Forum participants learning about caring for Country at Mona Mona Aboriginal community, Djabugay Country, 2024. Credit: NAILSMA

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Australia is leading a bold and necessary shift in reimagining conservation action – one that places Indigenous leadership, knowledge, and culture at its core. In 2022, it became the first country to host a “Reimagining Conservation” forum, bringing together 100 Indigenous leaders and community members, with conservationists and policymakers to rethink conservation approaches. Sponsored by the IUCN Commission on Environmental, Economic and Social Policy (CEESP) and framed by the IUCN’s Reimagine Conservation initiative, the forum marked the beginning of a movement – not just a moment.

Jointly convened by the Australian Committee of the International Union for Conservation of Nature, the North Australian Indigenous Land and Sea Management Alliance Ltd, and the Protected Areas Collaboration, this inaugural event created a space where Indigenous voices were not just included, but central. In 2024, the momentum grew, with the second forum expanding to 180 participants – doubling down on a collective commitment to reshape conservation practices in Australia.

At the heart of these forums is conservation being reimagined as ‘working together for healthy Country’ – ‘Country’ being an Indigenous term that includes all living things along with language, knowledge, cultural practice and responsibilities.

The Reimagining Conservation forums offer a respectful and culturally safe space for dialogue – where the conventional conservation paradigm is both challenged and redefined. Participants grapple with fundamental differences in how Indigenous and non-Indigenous people understand “conservation,” revealing language as well as systemic barriers. The forums invite everyone to step into and commit to a more inclusive vision for conservation that is grounded in the rich cultural frameworks and enduring knowledge systems of Indigenous Australians.

From the first forum, six key themes emerged as guiding principles for reimagining conservation (see the [report](#) and [summary](#) for more details):

- **A rights-based approach** - Biodiversity policies, governance and management must not violate rights of Indigenous people, and must ensure the social, cultural and economic needs of Indigenous communities are met.
- **Valuing culture and recognising Indigenous cultural authority** - It's important to listen, respect, and ask Indigenous people before acting to ensure programs are in the best interests of communities and Country.
- **Weaving knowledge systems** - It's time for another scientific revolution whereby Indigenous knowledge becomes fully and wholly recognised as a science and appropriately woven together with 'western' conservation science.
- **Equity in managing Country** - There needs to be equity in funding, skills, capacity, and education. Non-Indigenous conservation partners need to be culturally competent to understand cultural protocols and build relationships based on trust.
- **Managing Country together** - Progress in joint and sole management is limited by lack of capacity and funding, and resistance to letting Indigenous peoples take control of their Country.
- **Economic opportunities** - Market mechanisms for new on-Country economic opportunities for Indigenous peoples must be based on respect for the rights and benefits of local Indigenous communities.

The 2024 forum built on this foundation, turning attention to persistent funding inequities, systemic and cultural barriers, and the urgent need to shift power toward Indigenous leadership (report is in preparation).



Participants at the 2022 Reimagining Conservation Forum, Meanjin (Brisbane), Australia.

Credit Joanne Wilson / Australian Committee IUCN

Key insights from 2024:

- **Funding disparities:** Indigenous Protected Areas (IPAs) receive a fraction of the funding allocated per hectare to other government-run national parks. Similarly, Indigenous conservation organizations often miss out on philanthropic support – undermining their capacity to manage Country effectively.



Participants get their messages across in graphic scribe format - Credit NAILSMA

- **Systemic barriers:** There’s a lack of meaningful frameworks to embed Indigenous worldviews and cultural governance structures in conservation policy systems. Despite ongoing discussions, actionable frameworks remain limited. Meanwhile, Indigenous communities face “consultation fatigue”, burdened by constant requests for input with little tangible change.
- **Cultural competency:** Non-Indigenous organizations must become more culturally aware, adapting to Indigenous governance systems that operate on different timelines, values, and processes.
- **Shifting power:** The need for Indigenous leadership and self-determination in conservation efforts was a recurring theme. It was emphasized that effective conservation outcomes require a fundamental shift in power dynamics. This includes support for the “Land Back” initiative that emerged as a pivotal concept, recognizing Indigenous peoples’ rightful ownership and custodianship over their traditional lands. This paradigm shift challenges established power structures and advocates greater Indigenous control over conservation efforts.

Reimagining conservation is a transformative path forward

Honest conversations address longstanding injustices, reframe outdated assumptions, and spark new ways of thinking that honour the depth and wisdom of Indigenous relationships with Country. By placing Indigenous voices at the centre of conservation action, Australia is helping to lead a global shift toward more just, inclusive, and effective environmental stewardship. But the Reimagining Conservation forums are not just conversations – they’re catalysts. They provide a platform for illuminating barriers and opportunities in conservation. By addressing critical questions central to the future of protected areas, Reimagining Conservation is paving the way for more inclusive, effective, and culturally-grounded approaches to managing and protecting Australia’s unique landscapes. This is what reimagining looks like: not tweaking the old system, but rethinking it entirely. And as this movement grows, so does the hope for a future where conservation means care, connection, and Country – led by those who have protected it for millennia.

IPBSAP: Advancing Indigenous Peoples-led Sustainable Biodiversity

Giovanni B. Reyes^{a)}

Introduction

Indigenous Peoples in the Philippines have developed and launched the world's first Indigenous Peoples Biodiversity Strategy and Action Plan (IPBSAP) (IPBC, 2024). This article explores the development and significance of the IPBSAP, within the broader history and context of Indigenous Peoples in the Philippines, and in relation to national and global conservation targets.

The Philippines is rich in biodiversity and is a culturally diverse nation. Indigenous Peoples comprise an estimated 17 million (KATRIBU et al., 2019) of the country's population of over 110 million, and 110 ethno-linguistic groups (UNDP, 2013). Geographically, they live in sixty-five of the country's seventy-eight provinces (Cariño, 2021) with the majority coming from Mindanao (63%), Cordillera Region (34%), and Visayas (3%) (Domingo et al., 2020).

Having resisted Spanish, American, and Japanese colonization, Indigenous Peoples of the Philippines have generally maintained their belief systems and worldviews. Many still occupy their ancestral domains and observe customary laws and ways of life, though these are in varying degrees of persistence and disintegration. The 1987 Philippine Constitution marked a departure from the state's historical attitude towards Indigenous Peoples - from attempting to integrate and assimilate them to recognition of their rights, including to ancestral domains and to traditional Indigenous institutions and practices (Kapunan, 2000). Further, the constitution called for legislation providing for the applicability of Indigenous Peoples customary laws. The Philippine Indigenous Peoples Rights Act (IPRA) was enacted in 1997, purportedly to give effect to this recognition.

However, Indigenous Peoples remain one of the poorest, underrepresented, and marginalized populations in the country. The human development indices for the Philippines are the lowest in regions and provinces where there are dominant or large populations of Indigenous Peoples. (LRC, 2022; World Bank, 2024) The grossly inadequate funding of local government units (LGUs) in areas populated by Indigenous Peoples is compounded by the fact that many of these areas are remote, with comparatively low population densities, requiring special measures to ensure physical access and cultural appropriateness of service delivery.

The survival of Indigenous Peoples depends on the protection of their valuable knowledge systems and the ancestral land on which they thrive and persist. Indigenous life is not satisfactory when food is just available, adequate, accessible, and acceptable, but rather when Indigenous Peoples have access to and control over their land and resources (Reyes, 2014). Ultimately, Indigenous Peoples can become a driving force for national biodiversity conservation when their rights to their land and self-determination are respected and promoted.

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IPBSAP: Orientation

The Indigenous Peoples Biodiversity Strategic Action Plan (IPBSAP) is a landmark document, and the first of its kind in the world (IPBC, 2024). It “serves as a collective statement of how indigenous peoples view their territories, traditional knowledge, values and rights in relation to biodiversity” (Cariño, 2024). To ensure that Indigenous perspectives are centred in related national plans and actions, Indigenous Peoples engaged the Biodiversity and Management Bureau of the Department of Environment and Natural Resources (BMB-DENR), including through participation in the updating of the Philippine Biodiversity Strategy and Action Plan (PBSAP). The government’s updating of the PBSAP is focused on articulating how the Philippines will implement the 2022 Kunming-Montreal Global Biodiversity Framework (KM-GBF). As an Indigenous-led biodiversity strategy and action plan, the IPBSAP aims, more broadly, to contribute to just and regenerative transformation rooted in Indigenous and traditional territories and contributions that extend from the local level to national and global biodiversity conservation efforts.

The IPBSAP was crafted through a rigorous and rights-based approach by Indigenous Peoples of all ethnographic types, through their representative organizations. The process was facilitated by the Indigenous Peoples Biodiversity Coalition-Philippines (IPBC) – a network comprising at least thirty organizations working on Indigenous Peoples’ priorities and biodiversity in the Philippines.¹ The IPBSAP essentially points out that “recognition of Indigenous Peoples’ customary governance systems over their lands, waters, territories and natural resources need to be respected and given primacy in the planning and implementation of conservation and restoration policies, programs and projects in indigenous territories, **including where they overlap with protected areas**” (IPBC, 2024:96, emphasis added).² There are 62 protected areas overlapping with 84 ancestral domains, or a total estimate of 1.23 million hectares spread across the country (PAFID, 2019).

The IPBSAP was formally launched at the 16th Conference of Parties (COP 16) of the Convention on Biological Diversity (CBD). This launch was attuned with the historic COP 16 decision recognizing the role of Indigenous Peoples and local communities in biodiversity conservation, through the establishment of a Permanent Subsidiary Body on Article 8 (j) (SB 8j). The SB 8j is dedicated to enhancing full and effective participation of Indigenous Peoples in all Convention processes. This means that, through Free Prior and Informed Consent (FPIC), Parties to the CBD are enjoined to report on Indigenous lands and implementation of Article 8j, including documentation of traditional knowledge, innovations and practices, descriptions of national policies supporting Indigenous Peoples and local communities, conservation initiatives involving Indigenous lands, information on sharing of benefits arising from use of traditional knowledge, and identification of challenges faced and opportunities for enhancing implementation of Article 8j. ***In this light, the IPBSAP serves as an indispensable reference and a key resource for the Philippine government’s report to the SB on Article 8j.***

¹ A coalition of IPOs and Non-IPO allies, including: Partners for Indigenous Knowledge Philippines (PIKP), BUKLURAN/Philippine ICCA Consortium, Kalahan Educational Foundation (KEF), Philippine Association for Intercultural Development (PAFID) Non-Timber Forest Products Exchange Program in Asia and Philippines (NTFP Asia/NTFP EP-Philippines, Legal Rights and Natural Resources Center (LRC) and Tebtebba.

² This point was highlighted in a presentation by Sefa Tauli-Cariño during the IPBSAP launch, and later quoted in “Case 2 - Philippines: An IUCN WCPA and IUCN Protected and Conserved Areas Webinar Series for Effective, Equitable pathways to 30 x 30,” by Giovanni Reyes during the IUCN High Level Guidelines Consultation (Virtual meeting), February 11, 2025.

Historical roots, Distinction and Inspiration

The IPBSAP is shaped by, rooted in, and inspired by historical accounts of Indigenous Peoples’ “resistance to political, social and cultural inroads of colonization” (Indigenous Peoples Rights Act, 1997: Par.h, Sec.3, Ch.2. Definition of Terms). It is generally understood that the high degree of Indigenous Peoples’ continuity from pre-conquest culture to the present has resulted in the unmatched contributions in the Philippines, including hosting and providing for an estimated 75% of remaining forest cover (ICCA Consortium Philippines, 2021; World Bank, 2024), and lands in the vast majority of terrestrial Key Biodiversity Areas (KBAs) (BMB-DENR, 2016; GEF, 2019, 2023; UNDP, 2024).³

This continuity – and the contributions that arise from it – are sustained through Indigenous Peoples’ active resistance and defence of their lands and territories. One historic account is a judicial finding – long settled and never disputed – that concerns ownership of land that had been taken from an Igorot⁴ man named Mateo Cariño under a 1903 law, Act 636, passed by the American colonial government.⁵ Cariño challenged said Act from the Regional Trial Court, to the Court of the Appeals, to the Philippine Supreme Court, all the way to the US Supreme Court (Cariño, 2010), which then had jurisdiction over all Philippine Courts. The case resulted in a differentiation between lands owned by Indigenous Peoples from lands considered public or government-owned. That is, “*ancestral lands are lands which as far back as memory or testimony goes have been held by native customs and long association under a claim of private ownership and NEVER TO HAVE BEEN PUBLIC LAND*” (Cariño v. Insular Government of the Philippine Islands, 1909:940, emphasis added).⁶ This case gave birth to the Doctrine of Native Title, which in turn inspired framers of the 1987 Philippine Constitution to incorporate at least six provisions recognizing and protecting the rights and interests of Indigenous Peoples.⁷ As earlier stated, the Indigenous Peoples’ Rights Act (IPRA) was enacted in 1997 to implement rights to ancestral domains.

Threats facing Indigenous Peoples

Indigenous Peoples’ constitutional rights are, and have long been, threatened in different ways. Igorot human rights lawyer, legislator, and advocate William “Billy” Claver noted in a 1971 speech that “*vast areas embracing whole provinces and municipalities actually occupied and settled by these communities have been arbitrarily declared by the government as public parks, forests, reservations and other types of reservation.*”

³ Estimates are generally between 75 and 95 percent of terrestrial KBAs being wholly or partly within Indigenous territories. Most recently, a UNDP article notes that “there is an almost a 1:1 correspondence of Key Biodiversity Areas and ancestral domains in the Philippines” and that “many of the remaining Key Biodiversity Areas that are not protected areas are ancestral domains” (Ramachandran, 2024).

⁴ The term “Igorot” is a colonial label imposed first by lowland Filipinos with the term “I-Golod”, prefix “I” meaning “from” and “Golod” meaning “mountain region”, thus, “Igolod” or people from the mountains. Spanish colonial rule corrupted the term into “Ygorottes” to mean “Infeles” or “savages” and by succeeding American authorities to mean “Non-Christian Tribes.” Currently spelled “Igorot,” refers to ethnolinguistic groups in Northern Luzon of the Cordillera: the Ibaloy (Benguet), Kankanaey & Bontok (Mountain Province), Kalinga & Ifugao (they occupy same provinces with same names, Isneg (Apayao) and Tingguian (Abra). (Prill-Brett, 1987; Scott, 1962, via Pardo de Tavera, 1887)

⁵ The case was prompted when the American colonial Philippine Commission passed a law in 1903 (Act No. 636) that set aside land in Baguio for what would become a military reserve (‘Camp John Hay’). The act made this land *exempt from settlement and claim*, meaning local residents, including Indigenous landowners, were prohibited from claiming, living on, or settling inside these areas until further legislation. (Philippine Commission, 1903)

⁶ When Mateo Cariño challenged the American colonial government’s claim to his ancestral land, the U.S. Supreme Court, led by Justice Holmes, ruled in Cariño’s favour. The ruling was based on recognition of his right to ancestral land based on native title (Cariño v. Insular Government of the Philippine Islands, 1909).

⁷ See Philippines Constitution Section 22, Article II on State Principles and Policies; Section 5, Article XII on National Economy and Patrimony; Section 1 and Section 6, Article XIII, on Social Justice and Human Rights; Section 17, Article XIV on Education, Science Technology, Arts, Culture and Sports; and, Section 12, Article XVI on General Provisions

Consequently, these communities are now occupying these lands not as owners but on mere toleration of the government” (Claver, 1972, emphasis added).

Further, while passage of IPRA in 1997 was an important milestone, its implementation has not been without obstacles. On September 25, 1998, a petition, known as ‘Cruz v. NCIP’,⁸ and echoing an outdated colonial doctrine that all lands are State-owned,⁹ questioned the constitutionality of “Ancestral Domains” in the IPRA law.¹⁰ Essentially, the Cruz petition sought erasure of Indigenous Peoples’ lifeways and their relations with land and biodiversity, maintaining that “**community rights do not exist simply on the basis of how long it had possessed these resources**” (LRC, 2001:51, emphasis added). It contended that “**lifeways weaved into cultures that have evolved as communities interacting with their ecosystems are not legally relevant**” (LRC, 2001:51, emphasis added). The Philippine Supreme Court, coming to terms with history, and conscious of the long destitution of Indigenous Peoples, fittingly saw the opportunity to actualize empowerment and social justice. It dismissed the Cruz petition (Cruz v. NCIP).

There are also ongoing threats from so-called ‘development’ projects and lack of land rights recognition. A 2021 report estimated that, while one-third of the land managed by Indigenous Peoples and local communities in the Philippines is in good ecological condition, there are 53 active power plants located in these lands, and 23% of the land is likely to face high development pressure in the future (WWF et al., 2021:42, as cited in IPBC, 2024). Similarly, a 2023 analysis estimated that 22% of titled ancestral domain areas¹¹ (totalling 1.33 million hectares) face significant risks of negative environmental impact posed by projects within or near Indigenous Territories (LRC, 2023:9, as cited in IPBC, 2024). The spatial analysis underpinning these findings found that “mining constituted 50% of all monitored environmentally critical projects overlapping with Indigenous territories, followed by integrated forest management agreements or IFMAs (36%), infrastructures (7%), and hydropower projects and dams (4%). The remainder [are] composed of fossil fuel, land development, industrial, geothermal, and quarrying projects” (IPBC, 2024:45, citing LRC, 2024a).

The IPBSAP highlights ways that extractive industries have affected ancestral domains, including the following (IPBC, 2024:45):

- In the Cordillera region of Northern Philippines, “dams constructed since the 1960s have displaced Indigenous communities, silted up the river beds, and inundated productive rice fields, forests, and sacred sites”;
- “The Agusan Marsh, which is part of the ancestral domain of the Manobo Indigenous Peoples in Agusan del Sur, aside from being a protected area, Ramsar Wetland of International Importance and ASEAN Heritage Park, is affected by mine tailings, among other pollutants, being discharged through the Agusan River”; and,
- “The building of roads in the Mt. Candalaga ICCA has disturbed the sacred site of the Mansaka, which also serve as nesting sites of the Philippine Eagle”.

8 In its more complete form - Isagani Cruz and Cesar Europa vs. Secretary of Department of Environment and Natural Resources and the Chair and Commissioners of the National Commission on Indigenous Peoples

9 The Regalian Doctrine (aka Jura Regalia), originating in Spanish colonial law, asserted (colonial) State ownership over all lands. This Doctrine was retained by the American colonial government, and later enshrined in the 1935, 1973 and 1987 Philippine Constitutions. See LRC, 2001

10 See IPRA, 1997: paragraph A, Section 3, Definition of Terms. “Ancestral Domains”

11 These are areas with Certificates of Ancestral Domain Title (CADT) under the terms of IPRA (1997)

The IPBSAP further notes that “the Philippines’ high climate risk and vulnerability to extreme weather events heighten the urgency for a transition towards more sustainable and environment-friendly energy sources” (IPBC, 2024:45).

Threat levels are especially high in areas where biodiversity levels are also high. Where pristine natural beauty thrives, arising from Indigenous Peoples’ stewardship, land grabbing for corporate tourism has been emerging as a norm (Reyes, 2025). Similarly, where timber, water, and mineral resources are intact, due to their designation under customary law as sacred (thus making them ‘no go zones’), mining expansion and the irreversible environmental damage it brings also become the norm. This damage includes poisoning of rivers, farmlands, and coastal fishing grounds; devastation of forests; and deadly landslides. Alarmingly evident in the aftermath of such environmental devastation are consequences not only for Indigenous Peoples, but also for other communities. Beyond ensuring their own welfare, Indigenous Peoples express concern over adjacent lowland farming areas that rely on the water supply from their territories to plant and grow rice to sustain their livelihoods (Fabro, 2024). Hence, while ‘defence of land’, as amplified here, is about Indigenous Peoples’ fearlessness against perils foisted on them, it is also about ensuring survival of future generations, where oneness with the land is re-affirmed as the norm. The clear danger of losing the care, continuity, and contribution to present and future life is what forms the driving spirit behind Indigenous Peoples’ defence of land, including the forests, trees, and watersheds that thrive within these territories. As a non-Moro Indigenous Teduray of Southern Philippines expressed during a birthing ritual prayer, “*May the child that is born grow as strong and sturdy as the tree and the forest where it grows, and be rooted to the earth*” (Tiwow, 2023). This speaks to the inextricable link between an Indigenous traditional territory and customary practices – an Indigenous knowledge of “heritage preservation” that must be protected (ENIPAS, 2018).¹²

Traditional territories and their contributions to biodiversity conservation

Why is it important to include Indigenous Peoples in biodiversity strategic planning and, beyond this, to recognize and support Indigenous-led and defined plans? There is a clear duty to recognize and respect Indigenous Peoples rights, including over their lands, as described above. Further, keeping humans out of State-governed or government-managed protected area systems is intellectually flawed. Indigenous Peoples’ make outsized contributions to biodiversity conservation at all scales (e.g. Dawson et al., 2021; FPP et al., 2020; ICCA Consortium, 2021; RRI, 2020; WWF et al., 2021). The fact remains undeniable that, where conserved areas have Indigenous Peoples and their communities as stewards, biodiversity is often higher than in many areas declared by governments as “Strict Protected Zones” or “National Parks.” The 3rd CBD Global Biodiversity Outlook (2010), and independent scientific studies published in 2011 and 2012 are all one in their findings on this (respectively, SCBD, 2010:41; Nelson & Chomitz, 2011; and Porter-Bolland et al., 2012). They also found that deforestation is often higher in areas managed by governments alone, as compared to community conserved areas managed under traditional governance systems. Further, recent Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) assessments recognize the crucial contributions of Indigenous and local knowledge; they stress the critical importance and **transformative impact**

¹² Par. 1 & 2, Sec 13, ENIPAS Law . “Ancestral domains and customary rights shall be accorded due recognition. As part of heritage preservation and pursuant to the need to conserve biologically significant areas, the territories and areas occupied and conserved for and by IPs and communities shall be recognized, respected, developed, and promoted.”

of centring Indigenous Peoples' unique, place-based, and in-depth knowledge regarding biodiversity and its care (Balvanera et al., 2022; Brondízio et al., 2019; IPBES 2024a,b). For Indigenous Peoples, these findings are not new. What is new are the agencies, knowledge platforms, and treaty bodies now acknowledging and reporting them.

As noted above, the vast majority of KBAs in the Philippines coincide with lands managed by Indigenous Peoples, and over 60 protected areas overlap ancestral domains. This confirms Indigenous Peoples' rightful place as co-authors in establishing guidelines and policy on biodiversity. Meaningful recognition of these contributions cannot be separated from, and must be preceded by, recognition and respect for Indigenous Peoples rights. This includes rights to our collective territories, and governance and knowledge systems, as well as free, prior and informed consent and meaningful participation in development of plans or actions that may impact those rights.

IPBSAP book cover



IPBSAP and NBSAP

Despite these realities, policies and funding driving conservation action remain largely in the hands of governments and international organizations. This is reflected, among other places, in many National Biodiversity Strategies and Action Plans (NBSAPs). NBSAPs are key national instruments for describing a country's plans for implementing CBD decisions, including the KM-GBF.¹³ While governments are increasingly called on to ensure NBSAP development processes and content are inclusive and integrate human rights (UN EMG, 2024), in practice, rights-holder participation is often very limited (Climate Focus and Parabukas, 2023; HRBWG, 2024).

Further, as government-led processes, NBSAPs often

remain inherently reflective of government-led conservation visions and solutions.

To advance global biodiversity action, and recognition of Indigenous Peoples leadership within it, the IPBSAP is both a stand-alone plan in its own right, and has substantively informed the updated Philippine Biodiversity Strategy and Action Plan (PBSAP).¹⁴

IPBSAP formulation went through several stages, including:

1. Several Regional Roundtable Discussions on Biodiversity, with collection of Indigenous Peoples' contributions to the 23 KM-GBF targets;
2. Two National Roundtable Discussions on Indigenous Peoples and Biodiversity, where key messages by Indigenous Peoples on biodiversity implementation were submitted to the Department of Environment and Natural Resources (DENR) Secretary and the National Commission on Indigenous Peoples (NCIP);
3. A write-shop that produced the first complete iteration of the IPBSAP;
4. A formal presentation of results (the first IPBSAP iteration) to the DENR; and

¹³ Parties were asked to update their NBSAPs in CBD Decision 15/6, to address how they would implement the KM-GBF.

¹⁴ While referred to as NBSAPs globally, these plans often have different names in a given country. In the Philippines, this national plan is called The Philippine Biodiversity Strategy and Action Plan (PBSAP), available [here](#)

5. A National Consultation, including turn-over of the draft IPBSAP to the DENR-Biodiversity and Management Bureau (BMB) (PBSAP National Consultation, Tagaytay City, September 2024).

Scaling up the momentum, the IPBC and partners held a well-attended press conference and dedicated [side event](#) to launch and distribute copies of the IPBSAP at UN CBD COP 16. These were followed by active discussions about the document in ten other side events and meetings at the CBD COP, as well as side events at the UNFCCC COP 29 (November 2024).

In a circle like life itself, the IPBSAP process then dove into two localization workshops¹⁵ during which participatory planning for local actions were held. The IPBSAP was also noted in the State of Indigenous Peoples Address Report, as a positive development (LRC, 2024b).

Further exploring the IPBSAP as an Indigenous-led strategy

The IPBSAP is not simply a variation of an NBSAP. It can be helpful to explore how the IPBSAP relates to and differs from typical NBSAPs, in terms of both its development process and content. This is explored in Table 1, with the understanding that discussions about how the IPBSAP will be reflected within the PBSAP in the Philippines are ongoing.

Conclusion: Advancing partnership and reciprocity for people and nature

When it received the draft IPBSAP, the BMB made a commitment to include it in its fourth iteration of the Philippine Biodiversity Strategic Action Plan (PBSAP), as noted above. For the BMB, the benefits of working with the IPBC include engaging with a constituency with profound knowledge of biodiversity areas and learning about Indigenous Peoples' long-term strategies, which have proven effective for hundreds, if not thousands of years.

For Indigenous Peoples and their communities, critical partnership with a policy making body favourable to Indigenous Peoples' interests will strengthen legal recognition of traditional knowledge-based environmental protection practices. In this emerging convergence between a state-based entity addressing biodiversity targets and a non-state actor whose lifestyle is about biodiversity protection – and often at cost to their lives – the ultimate victory here is nature bringing life to people, and people protecting nature. Such reciprocity – based on understanding the inextricable links that interweave nature with the fabric of a people's daily life, and a policy that supports it – can lead to a successful whole-of-society approach to overcome biodiversity loss.

Moving forward, the localization of IPBSAP necessitates refinement of the IPBSAP framework, to reflect region-specific biodiversity priorities and cultural contributions of Indigenous Peoples, engage rightsholders and stakeholders to ensure broad ownership, and identify actionable outcomes to guide implementation and potential contributions to KM-GBF implementation, including Target 3.

Beyond Indigenous Peoples' involvement in State-led conservation planning, it is crucial that Indigenous-led conservation action is grounded in and advanced through our self-determined visions and plans. The IPBSAP reflects the commitments of our Indigenous Peoples and their communities to protect the planet and our country for future generations to live.

¹⁵ Localization here means, translation of IPBSAP into local action plans from November – December 2024.

Table 1. Ways that IPBSAP relates to and differs from NBSAPs.

IPBSAP	NBSAPs (generally)
Development Process & Leadership	
Indigenous-led, developed through extensive consultations by and with Indigenous Peoples and supporting organizations	Government-led process, with varying degrees of rights-holder and stakeholder engagement, often including consultative (rather than leading) engagement of Indigenous Peoples
Objectives and focus	
Provide overview of status and context of biodiversity in Indigenous lands and territories	Provide plans for meeting CBD targets, though national biodiversity priorities, frameworks, and agendas;
Communicate key contributions and commitments by Indigenous Peoples to conservation and sustainable use	Integrate / link national conservation and development actions
Put forward key issues and recommendations from Indigenous Peoples perspectives, including on PBSAP implementation	Can be one or several documents and associated processes
Serve as guiding document for, and highlight examples and stories of key contributions by, Indigenous peoples	May refer to or aim to integrate concerns and priorities of Indigenous Peoples, among others, but not as the central framework
Alignment with global frameworks and targets	
Structure that aligns with national strategy (PBSAP) and KM-GBF, through Indigenous lens and from the position of voluntary commitments / collective action	Formal instruments for CBD implementation by Parties (per Art. 6), aligned with state frameworks and governance systems
Implementation & Monitoring	
Focuses on community-led implementation, through ongoing localization and Indigenous-led monitoring	Usually governed / managed by government agencies, with varying levels of rights-holder and stakeholder involvement

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1.2

Diversity in action: Approaches, values, and knowledge systems

This section explores stories of some of the diverse approaches, values, cultures, and knowledge and governance systems that underlie conservation action and other relationships of care. This includes not only the protection of non-human species (and their diversity), but also – and often primarily – stewardship, revitalization, and sustainability of our human and more-than-human relationships.

In *Conservation through an Inuit lens: A case study of marine planning in Nunatsiavut*, Michelle Saunders and co-authors highlight how the Imappivut Knowledge Study, led by Labrador Inuit, gathered intergenerational knowledge of their homelands and waters. This knowledge has shaped, and will continue to shape, the Imappivut Marine Planning Initiative, supporting self-determination in caring for and sustaining access to and relationships with the land. Shruti Ajit and Mrinalini Rai explore transformative practices and challenges in the intersections of gender equity, environmental governance and justice, and restoration, in *Restoration by HER*. They draw on examples of women-led restoration initiatives in Argentina, Cameroon, Costa Rica, Kenya, Myanmar, and the Solomon Islands. Ameyali Ramos and Fanny Tricone, in *Revitalizing traditional fire management knowledge*, highlight how Indigenous communities are leading the way in community-driven, innovative conservation by connecting traditional fire management practices and modern technology, which has not only made significant contributions in preventing devastating wildfires but also in reviving biodiverse landscapes and strengthening cultural ties. In *Celebrating innovative and community-based initiatives in West Hawai'i*, U'ilani Naipo and co-authors reflect on grassroots networks and community-based initiatives that support and sustain stewardship and relationships of care, through a journey of celebration and learning in West Hawai'i.

Chapter narrated by Jessica Campese, Aditi Bhardwaj, Kevin Chang, Swayamprabha Das, and Mahnaz Kadhem

Conservation through an Inuit lens: A case study of marine planning in Nunatsiavut

Michelle Saunders^{a)}, Rachael Cadman^{b)}, Carla Pamak^{a)}, Rodd Laing^{a)} and Jim Goudie^{a)}

Figure 1.

A Labrador Inuit Year.

Credit: Seasonal calendar by Jessica Winters, reproduced from Cadman et al. 2025



In 2005, the Labrador Inuit Land Claims Agreement (LILCA) ratified the self-governing region of Nunatsiavut (“our beautiful land” in Inuttitit) in northern Labrador, Canada, and established the Nunatsiavut Government – the first Inuit self-government in Canada. Since 2005, Labrador Inuit represented by the Nunatsiavut Government have made strides through self-determination to govern their education, health care, social services, and the land and waters on which they depend.

a) Nunatsiavut Government, Department of Lands and Natural Resources, Labrador Canada

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Labrador Inuit culture is steeped in a mutual respect and relationship with our environment – including the lands, waters, flora, fauna, and people. Unlike Western cultures, Inuit view the calendar year through 6 seasons rather than 4 – *ukiatsâk* (early Fall), *ukiak* (late Fall), *ukiuk* (Winter), *upinngasâk* (early Spring), *upinngak* (late Spring), and *aujak* (Summer). The seasons are not marked by dates on the calendar but rather changes in the environment (Figure 1).



Goose hunting in early fall.

Credit: Michelle Saunders

The change from *ukiatsâk* to *ukiak*, for example, is characterized when a thin ice begins to form on the lakes and ponds; the ocean water gets rougher and heavier; the geese, ducks, and loons begin to arrive from their nesting grounds; and the redberries ripen and turn deep crimson from the first frosts. The Inuit way-of-knowing is complex yet simple – through experiencing and observing the changes in our environment, we understand what is to come and adapt to the world around us (Cadman et al., 2023a; Pedersen et al., 2020). Inuit knowledge cannot be explained through a few words, nor can it be properly understood in the Western world as Inuit do.

When Inuit make decisions about our environment, we are guided by our unique relationship to our lands: when

and where to harvest, how much to take, how to distribute catches or benefits among the community. These are all questions that can be answered not only through intergenerational observations of patterns out on the land, but also by what Inuit know is important, ethical, and legitimate (Flowers, 2023). To support this, we need research and science that is guided by Inuit knowledge and priorities. For this reason, the Nunatsiavut Government developed the Imappivut (“our oceans” in Inuttitut) Marine Planning Initiative to help us gather Western science and Inuit knowledge about the marine environment, all of which is grounded in what Labrador Inuit understand to be important for our people and our waters.

In 2019, the Government of Canada signed a Memorandum of Understanding with the Nunatsiavut Government to begin a marine planning initiative to fully implement “Chapter 6: Oceans Management” of the LILCA. In other regions in Canada, when assessing the establishment of a marine protected area under the National Marine Conservation Act, the process usually begins with a Canadian Science Advisory Secretariat report tabled and written by Fisheries and Oceans Canada to take stock of what is known about the area, data gaps, and important areas in marine planning and protection. The Nunatsiavut Government took a different approach. Understanding the richness and depth of Inuit knowledge that is used every day and has been passed down for generations, the Nunatsiavut Government started first with the people, developing the Imappivut Knowledge Study. The Imappivut Knowledge Study is an evergreen study, designed to allow Labrador Inuit priorities to be at the forefront of marine planning and conservation. This study asks Inuit one simple yet very complex question: “How do you use or value the marine environment?” (Cadman et al., 2023b).

This research has made clear that Labrador Inuit hold a strong understanding of and capacity for marine governance and planning. For example, community members who participated in the study made little to no distinction between marine and terrestrial spaces, understanding them to be used and valued together, not as separate systems or jurisdictions. There was also an emphasis on the importance of intergenerational knowledge transfer – practicing skills and growing knowledge among the generations so Inuit can continue to be stewards of their lands and waters in the long term. The knowledge, values, and priorities gained from the Imappivut Knowledge Study have shaped and will continue to shape the Imappivut Marine Plan.

Importantly, the word “conservation” has never come up in the interviews. Instead, Inuit talked about the importance of having access to land and country foods, of being able to take their children and grandchildren out to their ancestral places, of developing



Ducks on the water near Nain, Nunatsiavut.

Credit: Michelle Saunders

new knowledge for how to be safe on increasingly unpredictable sea ice, of monitoring the patterns and movements of culturally and ecologically important species. For Inuit, knowledge and culture are inexorably tied to being able to be in the landscape. Lands and waters are not managed with the goal of pristine, untouched wilderness. It is managed as our home – a nursery, a pantry, a classroom, a final resting place. To start out with the goal of conservation implies that it is a universally held value. On the contrary, the Imappivut Knowledge Study reflects that Labrador Inuit want long term care of our home through continued ability to access, harvest, and raise future generations in good relationship to our lands and waters. An Inuit-led marine planning initiative could not be effective without Inuit knowledge guiding and shaping each facet, including how we understand the very premise that the work is built on.

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Restoration by HER: Gender-responsive approaches to ecosystem restoration across global landscapes

Shruti Ajit^{a)} and Mrinalini Rai^{b)}

Native trees nursery established by the Pokot women to restore Kamatira Forest in West Pokot under Restore HER Rights.

Credit: Women4Biodiversity



Introduction

Ecosystem restoration is recognised as a key strategy for confronting the dual crises of climate change and biodiversity loss. The United Nations Decade on Ecosystem Restoration (2021-2030)¹ sets an ambitious agenda to restore degraded ecosystems worldwide (FAO et al., 2021). However, while the ecological dimensions of restoration are widely documented, the socio-cultural aspects – especially gender – remain critically neglected. This exclusion undermines the effectiveness and equity of restoration efforts and contributes to entrenched inequalities (Oxfam, 2021). Women, particularly those in Indigenous and local communities, are central to natural resource stewardship but are often sidelined in environmental governance (Deininger & Byerlee, 2011).

This article draws on the findings of the global summary report *Restore Her Rights: Gender Responsive Approaches to Ecosystem Restoration, produced by Women4Biodiversity* (2024), to analyse how gender equity intersects with ecosystem restoration. By documenting six case studies of women-led restoration initiatives in Argentina, Cameroon, Costa Rica, Kenya, Myanmar, and the Solomon Islands, this paper highlights both challenges and

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Restore Her Rights
Infographic.

Credit: Women4Biodiversity

transformative practices at the intersection of gender, governance, and environmental justice.

Policy context: Gender and the Global Biodiversity Framework

The adoption of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) in December 2022 marked a turning point in global environmental policy by explicitly including gender as a target. Target 23² of the KM-GBF emphasises the need for full, equitable, meaningful, and informed participation of women and girls in biodiversity governance. Target 2³, linked to the UN Decade for Ecosystem Restoration, aims to restore at least 30% of degraded ecosystems, mandating that this be achieved through inclusive and rights-based approaches (CBD, 2022). Further to the KM-GBF itself, the CBD Gender Plan of Action (GPA) 2023 - 2030 aims to guide the full and effective implementation of the KM-GBF and urges national governments to translate these targets into their National Biodiversity Strategies and Action Plans (NBSAPs) and ensure gender responsiveness in review, implementation, monitoring and reporting.

While these legal and policy advancements are substantial, practical implementation remains uneven. It is therefore crucial to further explore, and support, transformative practice.

Methodological approach

The findings summarised here are derived from qualitative documentation of six restoration projects led or co-led by women, facilitated under the Women4Biodiversity initiative between 2021 and 2024. These projects include wetland and dune restoration in Argentina (Fundación Inalafquen et al., 2024), mangrove restoration in Costa Rica (CoopeSolidar R.L. et al., 2024), forest restoration in Kenya (Pastoral Communities Empowerment Programme & Women4Biodiversity, 2024), mangrove restoration in Cameroon (REFACOF & Women4Biodiversity, 2024), forest restoration in the Solomon Islands (NIPS & Women4Biodiversity, 2024), and ethnobotanical documentation in Myanmar (KESAN & Women4Biodiversity, 2024). A participatory methodology grounded in feminist and Indigenous research practices was employed, including site visits, regional exchanges, and collaborative workshops, along with supporting restoration activities on the ground. Emphasis was placed on documenting women's lived experiences and traditional knowledge, as well as institutional barriers encountered in restoration governance.

² Accessed here: <https://www.cbd.int/gbf/targets/23>

³ Accessed here: <https://www.cbd.int/gbf/targets/2>

Existing and ongoing challenges that impact women-led restoration initiatives

Restoration efforts led by women face – and respond to – numerous intersecting structural challenges. Extractive industries such as mining, logging, agribusiness, and tourism threaten ecosystems and undermine women’s land rights. In the Solomon Islands, for example, logging and proposed nickel mining endanger Indigenous territories, prompting women to use restoration as a form of resistance against these industries’ negative impacts. In Kenya and Costa Rica, industrial interests continue to degrade forests and mangroves, highlighting the need for policy frameworks that account for local and gendered realities.

Climate change exacerbates these pressures, further complicating restoration efforts. For instance, prolonged droughts in Kenya have disrupted reforestation activities, while in Cameroon, the degradation of mangroves has led to increased flooding. The unpredictability of weather patterns underscores the necessity of incorporating climate resilience into restoration planning.

Land tenure insecurity represents a persistent barrier to women’s participation in restoration initiatives. Many women lack formal ownership or legal recognition over land, which limits their ability to benefit from restoration outcomes. Privatisation and elite encroachment often compound these challenges, marginalising Indigenous and local communities and displacing traditional governance systems.

Political inertia and governance gaps also hinder the advancement of gender-responsive restoration. National biodiversity plans and policies often reflect top-down approaches that overlook the lived experiences, knowledge, and expertise of women in Indigenous and local communities. This lack of inclusion undermines the efficacy of restoration programs and reinforces systemic exclusions.

Gender-based violence, though underreported, remains a significant deterrent to women’s participation in environmental governance. In countries like Costa Rica, Myanmar, and Kenya, women environmental defenders face threats and harassment, limiting their involvement and endangering their safety.

Women working in the mangrove in Chomes, Costa Rica.

Credit: Annie Means, CoopeSoliDar R.L., 2024



Emerging principles from gender responsive restoration processes

Despite these obstacles, women-led initiatives have articulated comprehensive principles for gender-responsive restoration (Women4biodiversity, 2024). These principles include equality and equity, good governance, and recognising traditional ecological knowledge (TEK). Ensuring equal access to resources and benefits arising from their use must be complemented by tailored support for women and girls, acknowledging the specific barriers they face. Governance structures must be transparent, participatory, and grounded in communities' realities.

The role of TEK is particularly vital, as women possess deep knowledge of medicinal plants, food systems, and cultural practices that enhance biodiversity. However, this knowledge is rarely documented or integrated into formal restoration frameworks. Recognising and valuing TEK can strengthen positive ecological outcomes and foster greater community ownership of restoration processes and sustainability.

Self-determination and autonomy are also central to women-led restoration. The CoopeMoluscos Chomes cooperative, for example, has achieved legal recognition and economic independence through larger participatory systemisation in Costa Rica. Similarly, in the Solomon Islands, women use biodiversity assessments to assert territorial rights and resist industrial encroachment (NIPS, 2022).

Intergenerational knowledge transfer has emerged as a key strategy for sustaining restoration initiatives. In Myanmar, youth participation in traditional ceremonies like Tree Ordination Day reinforces cultural identity and ecological awareness. In Kenya and Costa Rica, storytelling and cooperative education engage young people in conservation and leadership.

Women-led initiatives also emphasise the importance of joyful and creative work. By fostering wellness, empathy, and solidarity, restoration becomes a life-affirming process that transcends technical outcomes. This holistic approach redefines restoration as both ecological and social transformation.

Restoration sites supported by Women4Biodiversity at a glance.

Credit: Women4Biodiversity



Journey towards transformative processes

When put into practice, these principles have translated into innovative and impactful restoration methods. In Kenya, women have designed mandala gardens and built energy-efficient stoves to reduce pressure on forest resources. These stoves, known as “chepkubegh” or “jikos,” are built using natural materials and help reduce the dependency on firewood, contributing to both environmental conservation and household health. Women have also established community nurseries growing climate-resilient Indigenous species such as millet and medicinal plants that support food security and health.

In Myanmar, in the Kawthoolei Forest, members of the Women Research Group (WRG) are conducting ethnobotanical assessments, documenting traditional uses of plants and mushrooms that are of cultural significance. These efforts have stimulated community-wide conversations and interest in forest preservation. The WRG’s findings have become educational tools and inspired collaborations with other community leaders to expand outreach and awareness, including the involvement of youth and the community.

In Chomes, Costa Rica, women engaged in mollusc collection through the CoopeMoluscos Chomes have restored degraded mangroves and established a sea market that ensures food security and fair income distribution. This economic empowerment has facilitated greater self-determination, allowing them to obtain 37 licenses for sustainable mollusc harvesting, collectively owned by the cooperative’s members.

In the Solomon Islands, restoration has taken a political dimension. Women in the Hageulu community in Isabel Province use the restored forest, planted with Tubi trees, which hold spiritual and cultural significance, to assert land rights and resist pressures from logging and mining industries. Biodiversity assessments in the area have identified endemic species, reinforcing arguments for conservation and territorial protection.

Cross-cultural exchanges have played a vital role in enhancing restoration practices. Women from different regions, such as Argentina, Cameroon, and Kenya, have participated in regional learning visits where they shared restoration techniques and experiences. These exchanges have promoted solidarity and innovation, replicating successful strategies and fostering a sense of global sisterhood among women restoration leaders.

Capacity building and visibility are essential for institutionalising gender-responsive restoration. The six sites from this report have developed localised gender training programs that link community experiences with international frameworks such as CEDAW and CBD. These training sessions include reflections on legal rights, storytelling as advocacy, and participatory decision-making exercises. As a result, women have gained confidence and legitimacy as environmental leaders.

Furthermore, community-led governance has flourished in many sites. In Kenya’s Kamatira Forest in West Pokot, women and youth have implemented community rules that prevent grazing and tree cutting while establishing surveillance mechanisms. In Chomes in Costa Rica, women demarcated zones for mollusc regeneration and mangrove reforestation while organising regular clean-up drives and building a management plan that reflects women’s priorities in marine conservation.

These transformative processes reflect a redefinition of restoration, not only as a technical or ecological activity but as a deeply social and political one. Restoration becomes a pathway to self-determination, cultural revitalisation, environmental justice, and community healing, driven by women’s active and creative leadership.

Recommendations

The evidence from these case studies illustrates that women are not merely passive participants but central actors in ecosystem restoration. Their leadership intersects with broader issues of land rights, climate resilience, food sovereignty, and self-determination. However, these contributions remain vulnerable in the absence of institutional, policy, and financial support. Formal tenure, legal protections, adequate funding, and public recognition are necessary to sustain and upscale these efforts.

Policy frameworks like the KM-GBF offer a foundation for gender-responsive restoration, but their success depends on political will and meaningful implementation. Integrating gender equality into restoration financing, legal reforms, and monitoring mechanisms is essential. Furthermore, systematic documentation and disaggregated data are required to validate women's roles and ensure accountability.

Conclusion

Ecosystem restoration is not only about reviving degraded landscapes, but also supporting and strengthening social systems grounded in inclusion, justice, and equity. The women-led restoration efforts documented under the Restore Her Rights Initiative exemplify how community-based, gender-responsive restoration can simultaneously foster positive biodiversity outcomes, address land use change, respond to climate change, secure livelihoods, and reclaim rights. As environmental policies evolve, centring women's knowledge, experiences, leadership, and rights is essential to achieving sustainable and resilient outcomes not only in international commitments but also at the regional, national, and community levels. Governments and international institutions must integrate gender actions and indicators into biodiversity strategies, implementation, and reporting; support women-centred initiatives; secure land tenure; and invest in intergenerational, culturally grounded approaches. Restoration without gender equality is incomplete; the future of ecosystems depends on the full inclusion of those who nurture them.

Members of the Women Research Group document plant species of biocultural importance in the Salaween Peace Park in Myanmar.

Credit: Karen Environmental and Social Action Network (KESAN)



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Revitalizing traditional fire management knowledge: A bold pathway for innovative conservation

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Savanna burning, Belize.

Credit: Fanny Tricone



Introduction: A need for revitalizing Traditional Fire Management

For centuries, Indigenous and local communities have used fire as a tool for managing landscapes, shaping ecosystems, and sustaining livelihoods (Huffman, 2016; International Savanna Fire Management Initiative (ISFMI), n.d.). However, in the Americas and other regions of the world, fire management has been shaped by a colonial legacy that has largely repressed traditional knowledge in favour of rigid fire suppression policies (Pyne, 2015). These fire exclusion policies, driven by European models of land control, have had catastrophic consequences: the build-up of combustible vegetation, the loss of fire-dependent ecosystems, and the increasing severity of wildfires (Myers, 2006). The failure of fire exclusion is now widely evident, demanding an urgent rethinking of how fire is understood and managed.

Fire suppression policies in the Americas date back to the early 20th century, when national forest agencies, following European conservation models, sought to eliminate fire from landscapes. In the United States, the '10 AM Policy' of the U.S. Forest Service mandated that all wildfires be extinguished by the next morning, reinforcing the view of fire as solely destructive. Similar policies took hold in Latin America, where governments criminalized Indigenous fire practices under the guise of conservation (Ponce Calderon et al., 2020). This suppression led to unintended consequences: fire-adapted ecosystems, such as pine savannas and grasslands, became overgrown with dense fuel loads, resulting in hotter, more

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intense wildfires when they inevitably occurred (Durigan, 2020).

This colonial approach not only degraded ecosystems but also marginalized Indigenous and local knowledge holders who had long stewarded their lands through controlled burns. Wildfires once held a dual role in our world: both a threat to be feared and a tool to sustain life. For countless generations, Indigenous and local communities have understood how to live in harmony with fire. They practiced controlled burning at the right times and places to renew ecosystems and protect their homes (Huffman, 2013; ISFMI, n.d.; Kimmerer & Lake, 2001). Societies that maintained traditional fire practices – such as those in parts of Australia, Venezuela, Colombia, and Mexico – have demonstrated the ecological and cultural benefits of fire stewardship (Bilbao et al., 2010; Russell-Smith et al., 2013).

Inclusive frameworks have developed from the need to rethink fire suppression. The Integrated Fire Management concept described by Myers (2006) acknowledges fire's ecological role and cultural significance, advocating for collaborative models where local communities, scientists, and policymakers co-create fire management strategies that reflect diverse knowledge systems.

Today, a bold, innovative conservation model is emerging – Traditional Fire Management (TFM) – one that revitalizes traditional fire management knowledge as a powerful solution for both people and nature. This approach is more than a wildfire management strategy, it's an inspirational journey of collaboration that bridges old and new, proving that sometimes the key to the future lies in the lessons of the past.

In northern Australia, Indigenous communities have led a quiet revolution in fire management. Revitalizing their ancestral knowledge, they have reintroduced early dry season burns, reducing the intensity and scale of destructive late-season wildfires (Edwards et al., 2021; Russell-Smith et al., 2013). This TFM practice mirrors historical approaches that maintained open, biodiverse landscapes while preventing uncontrolled infernos.

The results have been marked: lower greenhouse gas emissions, healthier ecosystems, and strengthened cultural ties between people and land (Indigenous Carbon Industry Network (ICIN), n.d.). Importantly, fire stewardship has also created new economic opportunities through carbon credit programs, ensuring that Indigenous-led fire management is both ecologically and financially sustainable.



Burn planning with local knowledge.

Credit: Fanny Tricone

Blending traditional fire management knowledge and modern technology

One of the most promising aspects of contemporary fire management is the fusion of traditional fire management knowledge with cutting-edge technology. Revitalizing traditional fire knowledge in practice means using customary fire regimes – such as early dry-season burns that prevent massive late-season wildfires – and enhancing them with modern tools (Russell-Smith et al., 2013; ICIN, n.d.). For example, community fire managers may use drones and GPS mapping to plan burns more precisely, guided by ancestral knowledge of winds, plants, and seasons. When implemented appropriately, this synergy of old and new has proven remarkably effective.

Satellite-based monitoring helps verify that these small, controlled fires are indeed reducing wildfire risk and smoke, providing tangible evidence to policymakers and local authorities. In some nuanced and complex cases, sophisticated carbon accounting methods quantify how much greenhouse gas emissions are avoided by preventing large wildfires, effectively turning traditional fire management into climate action (Lipsett-Moore et al., 2018; Russell-Smith et al., 2017, 2024).

Conservation rooted in innovation and collaboration

The revitalization of traditional fire management knowledge is one of the most compelling examples of innovative conservation action today. By centring – rather than marginalising – Indigenous and local communities, conservation efforts can be contextually effective, equitable, and enduring.

At the heart of this innovation is collaboration. TFM is a powerful example of what is possible when diverse conservation actors work together. In fire-prone landscapes around the world, Indigenous fire-keepers are teaming up with park rangers, conservation practitioners, scientists, governments, and technical experts. Around a shared campfire (both literal and figurative), they exchange knowledge – traditional practices on one hand, and satellite imagery plus climate science on the other (ICIN, n.d.).

This united effort embodies an innovative, collaborative approach to conservation where no single perspective dominates. Instead, solutions are co-created, ensuring they are both culturally appropriate and scientifically sound.

The lessons are clear: when communities are given the autonomy to manage their lands, when ancestral knowledge is combined with modern technology, and when fire is treated as an ally rather than an enemy, landscapes flourish. This is not just about preventing megafires – it is about fostering resilience, restoring ecosystems, and strengthening cultural identities.

As the world grapples with intensifying wildfires and ecological decline, investing in Indigenous-led fire management offers a path toward a more balanced and thriving future. However, such investments must be sensitive to local governance realities, cultural contexts, and community-determined priorities to ensure true success (Lake et al., 2017).

Empowering those who know best

While technology and science are important, the true heroes of this story are the people on the frontline of conservation. They are the families and communities who have lived with and cared for their landscapes for millennia. They know their territories intimately – every slope, every wind pattern, every subtle sign of an ecosystem in distress.

Countries like Australia have made strides in integrating Indigenous fire management into national climate strategies (Russell-Smith et al., 2017). However, much work remains in Latin America and North America, where rigid regulations still hinder the scaling of traditional practices.

Moreover, successful implementation depends not only on legal reforms but also on ensuring that fire stewardship efforts are community-led and responsive to local governance structures and self-determined priorities. Policy reform should focus on empowering local communities with legal recognition, funding support, and institutional collaboration to implement integrated fire management.

The challenges to this paradigm shift are many: decades of fire suppression policies and misconceptions about fire's role in ecosystems need to be overcome. Younger generations must be engaged so that the chain of knowledge is not broken. Legal hurdles impede community-led burning. Sometimes, community knowledge holders and outside experts can initially distrust each other.

Yet, when support is directed to those on the frontline, these challenges are met with creative solutions. Dialogue platforms, training exchanges, and equitable partnerships are building trust between local communities and allies. Forward-thinking policies are gradually evolving to recognize the rights of communities to use fire responsibly as a land management tool (Lake et al., 2017). By placing Indigenous and local communities in leadership roles – backed by supportive practitioners and officials – conservation efforts become deeply rooted in local reality. The people who know the land best are at the centre of decision-making, making interventions more effective and enduring.



Post burn regrowth in fire adapted ecosystem.

Credit: Fanny Tricone

Bringing transformative impact on landscapes and lives

The revitalization of traditional fire management knowledge is yielding transformative impacts for both landscapes and people where strong governance and community leadership support its implementation. Ecologically, the difference is visible and dramatic. Where uncontrolled wildfires once scorched vast areas, now mosaic patterns of planned burns create healthier, more diverse habitats. Fire-tolerant trees and grasses regenerate, and many species – from pollinators to large mammals – thrive in these landscapes managed with periodic fire.

In Northern Australia, what was once an annual season of smoke and fear has become a time of renewal, with green shoots and wildlife returning alongside the controlled burning (Russell-Smith et al., 2013). Biodiversity is not only preserved but often enhanced by reintroducing the right kind of fire at the right time.

This approach is also transforming lives. Communities involved in these fire stewardship programs gain a renewed sense of pride and agency in conservation. TFM is a deeply embedded cultural practice that involves men, women, and youth in revitalizing intergenerational knowledge transmission. Elders are honoured as teachers, and youth are trained as the next generation of fire practitioners, creating a bridge between generations. As communities return to their lands to engage in fire management, younger generations are increasingly drawn into conservation work, ensuring continuity and resilience in the face of climate change, and a stronger spiritual connection between people and their ancestral territory.

Conservation here is not a distant concept but a living practice, one that sustains both the environment and the well-being of local people. Local jobs are created in restoring and monitoring the land, which helps strengthen rural livelihoods. In some regions, the ability to earn income through carbon credits (by documenting and selling the emissions reductions achieved through controlled burning) (ICIN, n.d.) brings a much-needed economic boost – funding community projects, education, and healthcare. However, it is crucial that these carbon credit initiatives respect community governance and are pursued only with Free,

Prior and Informed Consent and benefit-sharing arrangements in place (ICIN, n.d.). These carbon accounting outcomes are complex and nuanced, relying heavily on strong community governance systems as well as national legislation that adequately recognizes the rights of Indigenous peoples and local communities. While such models have been successful in some locations, they should not be applied as cookie-cutter practices. Instead, they should be locally sensitive and supported only when aligned with priorities self-determined by the community.

Conclusion: A pathway of hope and innovation

The journey of revitalizing traditional fire knowledge stands as a beacon of hope in the conservation world. It shows that effective solutions often emerge when we dare to bridge worlds – in this case, uniting Indigenous wisdom with modern innovation. This model of conservation is not only preventing biodiversity loss and reducing climate risks; it is truly transformative. It transforms the way people participate in and benefit from conservation, turning passive beneficiaries into active stewards of the land. It transforms landscapes, healing them with the very tool – fire – that was long seen only as a destructive force. And it is transforming our collective future, proving that inclusive, community-driven approaches can tackle the complex challenges of biodiversity loss and climate change. It's a vivid reminder that innovation in conservation can mean drawing from the deep well of Indigenous knowledge and amplifying it with science and technology.

For policymakers and conservation leaders, the lesson is profound: supporting those on the frontlines and trusting in their knowledge can unlock solutions that are both innovative and enduring. But success depends on tailoring support to each community's governance systems, cultural contexts, and self-determined goals, rather than imposing one-size-fits-all solutions.

By scaling up this approach and adapting it to different cultural and ecological contexts, we can pave a bold new pathway for conservation globally. In embracing this powerful synergy of tradition and technology, we light the way toward a more resilient, bioculturally diverse future – one controlled burn at a time.

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Celebrating innovative and community-based initiatives in West Hawai'i

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In August 2024, the co-authors (Ahmad, Kevin, and Morgan) met in Honolulu for the 31st annual Hawai'i Conservation Conference (HCC). From Honolulu, they travelled to Kona, situated on the western side of Hawai'i Island. The journey was one of learning – a reflective and appreciative road trip to the largest of the Hawaiian Islands – through communities that are embodying the spirit of grassroots conservation. This piece is inspired by that trip.

Ho'okena Beach Park.

Credit: Kevin Chang



Native Hawaiian traditions and practices have long protected, stewarded, and sustained the beautiful lands and waters of their ancestors. While these community-based initiatives are unique to these Islands, they hold valuable lessons for the larger conservation community.

The community of Ho'okena and Miloli'i in South Kona show the intricacies of Native Hawaiian stewardship and responsible community-based management. The community leaders here are at the forefront of environmental challenges and continue to advance conservation through community-designed and created solutions. These solutions are culturally aligned with Hawaiian values and are also highly effective in protecting various species. As contemporary challenges around resource-use and tourism become more dire, community leaders (including co-authors U'ilani and Charles) collectively chart a path forward that represents the communities' aspirations. The intergenerational leadership in these communities is actively engaging with state agencies, conducting important monitoring and research activities, and exploring significant actions to re-establish community control over natural resources.

This article shares various community-based management initiatives being spearheaded by

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Administrator, Kalanihale

b) Kama'aina United to
Protect the 'Āina (KUPA)

c) Dalhousie University

d) IUCN CEESP

e) Kua'aina Ulu 'Auamo
(KUA)

grassroots community movements and organizations in West Hawai'i and discusses their significance.

Communities across Hawai'i have engaged in traditional management since time immemorial. In the face of historical injustices, Native Hawaiians continue to navigate a political landscape that historically favours natural resource abuse, extraction, and tourism. While more partnerships have formed between stakeholders and rightsholders, government agencies often remain geographically distant and under-resourced, with a history of slow responses to environmental threats and challenges. Despite these challenges, communities in Hawai'i are building grassroots movements and intergenerational alliances to protect, preserve, and perpetuate the biocultural heritage of the islands. As more communities assume their right to self-governance of their lands and waters, Hawai'i is emerging as a centre of a new conservation discourse that has its root in traditional values of centuries past.

Kua'āina Ulu 'Auamo (KUA): A movement for land, culture, people, and justice

Kua'āina Ulu 'Auamo (KUA) holds a unique position in the Hawaiian conservation landscape. KUA is a community-based initiative that aims to provide support for the protection of Hawaiian biocultural resources. Through its various networks focused on community place-based management of natural resources and culturally significant species, advocacy, and knowledge-exchange, KUA helps amplify community voices and advance the rights of communities engaged in the important work of stewardship locally and state-wide (KUA, n.d).

KUA collaborates with communities that ask for its help in their community-based and locally driven work. Through the networks that KUA coordinates, communities have the opportunity to connect with other partner communities, exchange important experiences and knowledge, and work on projects of mutual benefit. KUA provides instrumental support and tools to these communities and helps advocate for their rights. KUA and its networks amplify each other's voices and build community-driven alliances that are taking on some of the most important cultural and environmental challenges facing Native Hawaiian communities.

KUA's founding network, the E Alu Pū Network, consists of various community grassroots organisations that are at the forefront of environmental battles in Hawai'i. Kalanihale and Kama'āina United to Protect the 'Āina (KUPA) – both community efforts that founded E Alu Pū and KUA – are based in West Hawai'i. Their roles in leading and re-imagining conservation and community-based management of fisheries have been pivotal in helping transform environmental governance and management in Hawai'i. Below we detail some of the important highlights from the work of these two organisations, allied with KUA's community work.

Kama'āina United to Protect the 'Āina (KUPA)

Ho'okena is situated in Kona and is considered one of the last canoe fishing villages in Hawai'i. Several canoes line the beach and serve as a reminder of the rich fishing traditions and customary culture of the people of Ho'okena. Here, they continue to perpetuate the practices passed down in this historical place, said to be one of Queen Lili'uokalani's favourites. Through many years of consistent change and transformations, Ho'okena stays resilient.

Kama'āina United to Protect the 'Āina (KUPA), headed by president Charles Young, was formed as a result of community concerns around aquarium fisheries trade in West Hawai'i

Ho'okena Beach Park.

Credit: Morgan Brimacombe



(and particularly Ho'okena). Certain species targeted by the lucrative trade included significant cultural and dietary fish. The aquarium trade raised many questions about the wellbeing of the ecosystem in Ho'okena and continues to be a serious concern. Charles Young and other community leaders have asserted a more pronounced role in governing the commercial trade in their waters. They have also begun co-managing Ho'okena Beach Park along with the county (Ho'okena Beach Park, n.d). These community leaders consistently advocate for the inclusion of their community in decision-making processes and for Pono (righteous) practices across their waters (Ho'okena Beach Park, n.d). Over the last few years, KUPA has made significant strides in advancing community priorities. As a co-manager with the county, KUPA directly manages its own lands and waters and is able to use the revenue from the beach park for various initiatives targeted at the management of the park. This includes raising awareness among tourists who visit the pristine waters of Ho'okena and ensuring that tourism in the area is sustainable and beneficial for the local ecosystems (Ho'okena Beach Park, n.d).

Over the last few years, KUPA has made significant strides in advancing community priorities. As a co-manager with the county, KUPA directly manages its own lands and waters and is able to use the revenue from the beach park for various management initiatives. This includes raising awareness among tourists who visit the pristine waters of Ho'okena and ensuring that tourism in the area is sustainable and beneficial for the local ecosystems (Ho'okena Beach Park, n.d).

The Ho'okena 'Ōpelu Project conducts important research that can potentially help scientists better understand fish spawning behaviours. Above all, its priority is to protect and feed the Ōpelu (a native fish species) to ensure that its populations continue to grow. These populations are essential in perpetuating and supporting traditional Hawaiian fishing and subsistence practices in the area. Without the fish, there is a serious risk of customary fishing practices eroding as well as depriving younger people in the community of the traditional knowledge embedded in these practices. Funding support from the government and non-profits allows the community to use traditional Hawaiian methods of conserving fish stocks and has seen encouraging results (Ho'okena Beach Park, n.d). However, more robust and community oriented supporting mechanisms are required on part of the state agencies.

KUPA is also closely involved in conservation efforts focused on the Hawaiian Spinner Dolphins. In recent years, interactions with tourists have negatively impacted the reproductive growth of the mammal. KUPA helped advocate for policy changes and supported the

adoption of a 50-yard non-approach rule that helped enforce renewed interactions between humans and dolphins on the shores of Ho'okena. The wellbeing of the biocultural resources is the priority for KUPA; directly engaging in policy formation has helped enhance biodiversity indicators (Ho'okena Beach Park, n.d).

KUPA also helps organize fishing tournaments that keep alive the traditions of the communities and bring together families. Intergenerational knowledge exchange and its sharing for continued stewardship of resources is vital. The beach at Ho'okena is lined with canoes that emphasize the close relationship between traditions that have been passed down for generations: a strong reminder of the importance of intergenerational knowledge exchange.

Kalanihale

Miloli'i – another community in South Kona – is one of the last fishing villages in Hawai'i and has a long and celebrated history. A grassroots organization – Kalanihale – has taken charge of managing and stewarding Miloli'i's lands and waters here. Formally established in 2012, Kalanihale has been leading the communities of Miloli'i in numerous initiatives that span education, social wellbeing, marine management, and Hawaiian cultural revitalization (Kalanihale, n.d).

Community members, leaders, long-time residents, and lineal descendants of Miloli'i have been engaging with state departments for the formulation of a Community-Based Subsistence Fishing Area (CBSFA). The CBSFA includes a rule-making process for the area that helps establish sustainable limits on fishing and centres community voices in conservation (Miloli'i CBSFA, n.d). These rules are based on community feedback and grounded in traditional knowledge and customary practices. In 2022, the Hawai'i Board of Land and Natural Resources (BLNR) officially approved the rules for Miloli'i CBSFA. The historic moment marked another milestone for the village of Miloli'i and further cemented the value of Native Hawaiian ways of stewardship for the lands and waters of knowledge holders – past and present (Kalanihale, n.d).

The CBSFA approval is an amazing development for the community and provides meaningful roles for the people here to assert their right to governance. It is an inspiration for many other communities, and has already had a significant impact in terms of being managed by its lineal descendants in the spirit of Native Hawaiian place-based management. The perpetuation of Native Hawaiian practices is the paramount motivation for Kalanihale, and as co-managers, they continue to chart the pathway of community-based management for Hawaiian communities.

U'ilani Naipo, Ka'imi Kaupiko, and William Mae-Huihui among others work on advancing Kalanihale's mission. This includes a Miloli'i' place-based education initiative that aims to provide important skills to young people and prepare them for leadership roles in the future. This intergenerational view of conservation is essential to the perpetuation of traditional and customary practices in Miloli'i and inculcates a sense of responsibility in the younger generation. The Lawai'a 'Ohana Camp is another initiative that strengthens these intergenerational knowledge exchanges and brings communities together in their pursuit of equitable roles in management. The mentorship for a younger generation of stewards is pivotal in long-term conservation goals for Miloli'i (Kalanihale, n.d). Therefore, the Lawai'a 'Ohana Camp is an annual affair and recently in June 2025, Kalanihale held its 15th annual Lawai'a 'Ohana Camp.

Ka'imi Kaupiko and U'ilani Naipo represent a younger generation of Native Hawaiian leaders

who have taken up the *Kuleana* (responsibility) to protect the biocultural and traditional heritage of Hawai'i. The beautiful village of Miloli'i presents a Hawaiian vision of conservation that is grounded in the knowledge of Hawaiian ancestors. It is clear that conservation from a Native Hawaiian perspective does not need to be reimagined; it merely needs to respect the knowledge that is carried through in the communities from one generation to the next.

These initiatives in West Hawai'i represent Native Hawaiian culture and traditions and are steered by communities that are establishing meaningful relationships with the state in co-managing their biocultural resources. Communities in this part of Hawai'i are reimagining conservation every day, adapting to the environmental crisis and challenges thrown at them, and are committed to the preservation of their cultural and natural resources – guided through holistic Native Hawaiian principles of stewardship and responsibility.

The article provides a brief glimpse of an emerging community-based conservation model in Hawai'i. This model brings together the place-based wisdom of knowledge holders and a younger generation of leaders to tackle the most pressing environmental issues facing Hawai'i. To find out more about the initiatives mentioned in this article, please visit the following websites: [Ho'okena Beach Park](#), [Kalanihale](#), and [Kua'āina Ulu 'Auamo](#).

Acknowledgements

Mahalo U'ilani Naipo, Charles Young, William Mae-Huihui, and Ka'imi Kaupiko – thank you for sharing story, song, and knowledge with us.

Ho'okena Beach Park.
Credit: Kevin Chang



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Collective action: Advancing rights and equity within – and as foundational to – conservation

Transformation may start with, but must ultimately go beyond (re)imagination, to concrete change. This journey is often advanced through collective action by rights-holders and their allies.

In *Securing collective land rights for justice and sustainability in Tanzania*, Paine Mako shares insights and reflections from the Ujamaa Community Resource Team (UCRT) and partner communities' long-standing efforts to secure collective land rights and linked benefits for livelihoods and conservation. This includes sustained advocacy and innovative legal and governance action. Amelia Arreguín and co-authors highlight the importance and examples of *Advancing Indigenous Peoples' rights in the implementation of Target 3* through self-determined pathways for conservation, drawing insights from an ongoing project.

Reimagining conservation action also requires acknowledging and addressing barriers to transformation. In *Transforming relations from power to equity in conservation*, Cristina Eghenter describes an exercise for shared self-reflection on equity and power in partnerships between communities and NGOs. This exercise reflects, and seeks to advance, growing awareness “of the many ways in which power is conveyed, showcased, or expressed in our engagements”, as a critical step “to address the power asymmetries and reimagine partnerships for a new conservation ethic”. In *Advancing Indigenous and community leadership of conservation requires confronting barriers to change*, Barbara Lassen and co-authors highlight some of the entrenched barriers as well as actions that can help to address them. These actions include transforming paradigms and value systems, in addition to tackling possibly ‘lower-hanging’ fruit.

Shifting focus to the international scale, Abegail Kitma highlights *Milestone agreements for Indigenous Peoples made in CBD COP 16*. She reminds readers that such advances are often the result of rights-holders' and allies' sustained advocacy and collective action, and, while celebrating these milestones, points to still open questions about the potential (dis)connections between global decisions and people's lived experience.

Collectively, these articles highlight the urgency and challenge of advancing consensus-based, collaborative, and collective action.

Chapter narrated by Jessica Campese, Aditi Bhardwaj, Kevin Chang, Swayamprabha Das, and Mahnaz Kadhem

Securing collective land rights for justice and sustainability in Tanzania

Paine Eulalia Mako^{a)}

Overview

Indigenous communities in what is today northern Tanzania have had collective, sustainable land stewardship systems since time immemorial. In the face of multiple threats, these communities are currently working to strengthen and revitalize these systems. These threats include land grabbing – e.g. through conservation-related eviction and displacement, agricultural expansion, and resource exploitation – as well as land degradation and climate change (e.g. IRPAI, 2025a; Maliasili Initiatives, 2012; UCRT, 2014, 2024).

In this context, the Ujamaa Community Resource Team (UCRT), an Indigenous Peoples-led non-governmental organization, facilitates innovative legal and community-led approaches to promote secure, collective land tenure and sustainable governance and management. We have worked with pastoralist, agro-pastoralist, and hunter-gatherer communities across northern Tanzania to protect over 3 million hectares, strengthen local livelihoods, and empower women (UCRT, 2024).

This collective progress has taken years of sustained advocacy and action to achieve. While the transformations are substantial, they may be difficult to sustain without changes in the broader context, including political and legal recognition of Indigenous Peoples and stronger protections against conservation- and investment-driven eviction and displacement.

These community co-developed approaches may, with local adaptations, be helpful for Indigenous communities seeking to secure governance and stewardship of their lands in other contexts. Here, in the spirit of shared learning and solidarity, we reflect on some of our successes and challenges, including as pathways to reimagined conservation action.

Collective land rights as a foundation for equity and sustainability

Both colonial and contemporary legal and political systems have fractured territories that many Indigenous communities historically used and occupied, thus also compromising the mobility central to their customary land management systems. This territorial fracturing occurred in part through forced settlement into villages¹ and through displacement resulting from the establishment of protected areas. Forced evictions of some Indigenous communities, carried out in the name of protected areas management, continue today. For example, as summarized in a May 2025 report from the Indigenous Peoples Law and Policy (IPLP) Program at the University of Arizona (IPLP, 2025a: paras 3 -5):

¹ Early post-colonial unity building efforts included converting all land to public land, held in trust by the president; moving people into consolidated rural villages; and forcing pastoralist peoples into permanent settlements (see, e.g., Claxton, 2003; Ole Parkipuny, 1979; UCRT, 2010).

a) Executive Director, UCRT

“Historically, the Maasai have used and occupied lands now designated as the Ngorongoro Conservation Area (NCA), Serengeti National Park (SNP), and Loliondo Game Controlled Area (LGCA). Once part of a single, interconnected ecosystem, these regions were formally partitioned in 1959. Today, the Ngorongoro Conservation Area Authority (NCAA) exerts broad control over these critical grazing areas, often without adequate consideration of the Maasai’s rights and land management practices. The NCA was established with three core mandates: promoting tourism, conserving wildlife and natural resources, and safeguarding the rights and interests of the Maasai people. However, in practice, the government has prioritised conservation and tourism over the rights of the Maasai, often treating these economic and environmental goals as paramount in the management of the NCA. This imbalance has worsened in recent years. The Tanzanian government forcibly relocated Maasai Indigenous Peoples from the NCA and surrounding areas, without obtaining their free, prior, and informed consent (FPIC), to make way for luxury tourism ventures and game reserves. The displacements have severely disrupted Maasai pastoralism – a way of life that is deeply intertwined with their cultural identity and crucial for maintaining the biodiversity and ecological health of the rangelands.”

Even within village land (the statutory designation² for most community land today) securing collective tenure in practice requires an often complex and costly process. It can be particularly complicated when seeking to coordinate land-use planning across multiple villages (e.g. NRGF, 2018), when pastoralists’ land is identified as being “unused” (e.g. UCRT, 2014),³ and/or where there are overlaps with protected areas (e.g. Stevens et al., 2024). All of these are common scenarios for Indigenous communities in northern Tanzania.

Microfinance Meeting in Ngaresero.

Credit: Ujamaa Community Resource Team



² The three main, statutory land categories in Tanzania are: *Village land* (located within village boundaries); *Reserved land* (held by the state for public good, including centrally-governed PAs); and *General land* (all other land).

³ The government can make general land available to external (non-community) actors, e.g. for development. The Land Act (1999) defines general land as including “...unoccupied or unused village land”. The (separate) Village Land Act (1999), defines village occupation and use to include “land... lying fallow ...; used for depasturing cattle belonging to villagers or... with the agreement of the villagers or in accordance with customary law; (iii) land customarily used for passage to land used for depasturing cattle”. While this latter definition would apply to many pastoralist lands, Indigenous communities are vulnerable to their village land being deemed “*unoccupied or unused*”.

Further, village land is governed under statutory institutions (including village and district governments) that are distinct from, though in some cases work closely with, customary laws and governing bodies (Maliasili Initiatives, 2012; Sulle et al., 2021). Despite these challenges, many Indigenous communities in northern Tanzania have sustained customary land governance and management systems.

Wildlife also relies on mobility across connected landscapes. In northern Tanzania, government- and NGO-led conservation approaches often focus on a combination of centrally-governed protected areas (which largely exclude sustainable use) and village-governed wildlife management areas and corridors. While this combination enables more wildlife mobility than strictly protected areas alone, the result remains disconnected protected “islands.” In contrast, well-managed pastoralist land-use systems are not only compatible with biodiversity conservation, but can enhance it (Davis & Edge, 2012; SCBD, 2010). In northern Tanzania, for instance, communities with whom we work are contributing to conservation in part by securing grazing areas that connect across multiple villages. These areas are not only used by livestock; they help ensure that wildlife can move between protected areas.

In this context, secure, collective land rights – and connectivity of grazing and other sustainable use areas within and beyond individual village boundaries – are foundational to sustainable and resilient livelihoods and to biodiversity conservation.

Innovative approaches to secure rights and sustainable livelihoods

UCRT works with partner communities to advance rights and sustainability through a combination of community-led legal, governance, and management approaches.

Securing village land and collective tenure

We support communities in securing collective tenure through a comprehensive process that includes:

- Securing Certificates of Village Land (CVLs), which establish village boundaries. This formalization often requires facilitation to clarify and agree on boundaries, including among different villages, as well as between villages and other land categories (e.g. protected areas).
- Developing Participatory Village Land Use Plans (PVLUPs) and bylaws that integrate traditional knowledge, such as rotational grazing and forest management, to balance conservation with sustainable resource use, thus mitigating overgrazing and deforestation.
- Securing Communal Certificates of Customary Right of Occupancy (CCROs), which enable entire communities to formalize collective land tenure. This approach builds on a pre-existing legal mechanism (individual CCROs). UCRT pioneered the process of using this legal instrument to secure **collective** title for defined areas of land. This not only avoids the land fracturing that can be introduced by individual CCROs; it provides an additional layer of recognition for collectively held areas.

Importantly, these participatory plans, CCROs, and governance and management strengthening efforts go across village boundaries. Many of these village land use plans,

for example, include grazing areas that connect – and can be accessed – across village boundaries. This is crucial for both livestock and wildlife mobility.

Strengthening governance and equity

UCRT works with communities to strengthen statutory and customary land governance and management systems. Among other approaches, we develop and facilitate training for village councils, village land and natural resource committees, and multi-village rangeland committees, as well as traditional leaders, women, and government institutions. Collectively, this can help to manage conflicts and to foster equity, accountability, and collective action.

UCRT also supports the establishment of [Women's Rights and Leadership Forums](#), which act both collectively and with men and other community members, to advance women's empowerment in decision-making and enhance recognition of their roles as community and family change agents, including in improving food security and education access.

Income generation

With secure land tenure, and together with trusted partners, communities have been able to develop and generate income from enterprises like eco-tourism, such as in [Lake Eyasi](#).

Impacts... and what makes them possible

Over several decades – and with ups and downs along the way – communities partnering within UCRT have been able to collectively secure:

- Over 3 million hectares of land under village land use plans;
- Over 2 million hectares of land secured under communal titles (Communal CCROs); and
- Secured land benefits for over 600,000 people.

Maasai Woman in Simanjiro.

Credit: Ujamaa Community Resource Team



Together, these achievements help Indigenous communities in Tanzania to assert and protect their rights, strengthen customary and sustainable livelihoods and governance systems. These more secure and connected lands are also contributing to the conservation of wildlife and other biodiversity in a rapidly changing climate (UCRT, 2024).

Our collective impact has been built over years of learning, innovation, relationship-building, and sustained advocacy within and beyond Tanzania. Our approaches also continue to evolve, and are adapted to each context. The legal, governance, and management focused approaches are also not, in themselves, sufficient. At the heart of what makes our impact possible are the long-term relationships and trust with the communities with whom we work. Real progress in securing collective rights and sustainable livelihoods requires a deep understanding of the complex story of, and relationship with, each community, including legacy and ongoing injustices. Solidarity and mutual support with organizations and networks working on similar issues and contexts has also been essential.

Threats to sustained progress

The substantial progress made towards securing collective land rights, and the associated benefits that this progress brings for conservation, are also precarious. They may be difficult to sustain in the long term without more fundamental changes in the broader system. While CCROs and other legal measures provide important protections, unchecked vested interests in expanding roads, building lucrative tourism destinations within and around protected areas, and other investments that drive land grabbing can undermine even seemingly secure rights. Changes in political will and stronger accountability mechanisms will require sustained and collective advocacy.

Supporting learning and action in other contexts

Our focus is, and will remain, securing the rights and livelihoods of communities with whom we work. We also hope that our co-developed approaches, and related lessons, can offer ideas, inspiration, and potential pathways for Indigenous Peoples facing similar issues. We engage in international platforms like UNFCCC, CBD, and IUCN to help amplify the importance of, and our approach to, rights-based collective action. We are also exploring ways to more widely share and exchange ideas across communities and allied organizations.

Conclusions

Partnering with communities to secure rights to, govern, and benefit from their territories strengthens livelihoods and culture. It also helps to maintain landscape connectivity and enhance biodiversity. Further, this innovative approach to securing legal recognition of communal land tenure, together with participatory land-use planning that includes customary governance and knowledge systems, can serve as a potential pathway for rights-based action by communities facing similar threats. As climate change and land degradation intensify, UCRT's experience underscores the importance of secure rights and community-led governance, which are increasingly recognized as essential for sustainable and just conservation.

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Advancing Indigenous Peoples' rights in the implementation of Target 3: Insights from the Conservation Pathways project

Amelia Arreguín Prado^{a)}, Helen Tugendhat^{a)} and Maurizio Ferrari^{a)}

The adoption of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) in December 2022 marked a significant milestone in global conservation commitments. Central to this framework, Target 3 – commonly referred to as the “30x30” target – commits to protecting at least 30% of the world’s land, inland waters, and oceans by 2030 through equitably governed systems of protected areas and other effective area-based conservation measures, recognising Indigenous and traditional territories where applicable. While this ambitious target presents an opportunity to address biodiversity loss and makes commitments to doing so through more inclusive and rights-affirming approaches, in practice, it also raises critical concerns about the rights and livelihoods of Indigenous Peoples and of local communities, whose territories often overlap with areas of high biodiversity while at the same time their lands and waters have historically borne the brunt of exclusionary conservation models¹.

Rather than viewing these territories through the lens of Protected Areas or Other Effective Area-Based Conservation Measures (OECMs) alone, we must centre the recognition of Indigenous and Traditional Territories as distinct and legitimate conservation pathways – rooted in long-standing systems of stewardship, customary governance, and cultural values. It is time to move from conservation on the land of Indigenous Peoples and local communities to conservation by and with Indigenous Peoples and local communities, on their own terms².

Credit: Forest Peoples Programme



Recognising the urgent need for approaches that uphold the rights of Indigenous Peoples and of local communities while advancing conservation, the Conservation Pathways project was launched to contribute to this shift. It aims to generate practical resources, foster informed participation in decision-making, and support the leadership of Indigenous

a) Forest Peoples Programme

1 Conservation Without Indigenous Peoples. The Case of Kichwa Territories in Cordillera Escalera and Cordillera Azul in San Martin, Peru - Forest Peoples Programme

2 Indigenous-Peoples-local-communities-and-area-based-conservation-targets-3.pdf

Peoples and local communities in shaping conservation that reflects their rights, needs, and knowledge. Through multilingual materials, policy advice, technical support, and small grants, the project has sought to support Indigenous Peoples and local communities in navigating the policy frameworks around Target 3 while strengthening community-defined visions for conservation.

This article highlights reflections from the project that can offer insights for advancing self-determined pathways for conservation as a basis for Target 3 implementation.

Credit: Forest Peoples Programme



What community-led conservation looks like in practice

While global and national commitments under Target 3 set broad parameters for conservation, it is at the local level that their implementation will ultimately succeed or fail. Indigenous Peoples and local communities have developed community-led conservation strategies that align with their rights, governance systems, and traditional knowledge. For example:

- In Guyana, Wapichan leaders raised concerns about Target 3 imposing protected areas or OECMs on Indigenous lands, particularly where land tenure remains insecure. They also identified opportunities to use international conservation commitments as a tool to strengthen the recognition of their customary governance and to secure land rights. These communities are now identifying conservation policy options that align with both their aspirations and national biodiversity commitments, therefore calling for frameworks that support – not constrain – their customary stewardship.
- In Kenya, building on the success of the [Ogiek of Mount Elgon](#) in protecting their forests and elephants as a result of their securing their community's lands, the Aweer community recently submitted a land rights petition to Parliament – a milestone in their fight for land security and community-led conservation recognition. This land rights petition underscores the inseparability of land security and conservation. The next steps in their journey will focus on governance tools, bylaw development, and mapping, ensuring their conservation efforts remain community-driven rather than externally imposed.
- In Thailand, Lisu and Karen youth have taken the lead in drafting conservation strategies for their territories. These efforts demonstrate the power of intergenerational collaboration in conservation and highlight the importance of securing community governance within national biodiversity strategies by supporting

diverse, dynamic systems of knowledge and governance, instead of imposing uniform models.

Reimagining conservation while bridging knowledge gaps

For too long, conservation knowledge has been shaped by external institutions, which are often inaccessible to those most affected by their decisions. Conservation Pathways challenges this by co-creating accessible, evidence-based materials to support Indigenous Peoples and local communities navigating the evolving conservation landscape, thus making concrete strides towards Target 3 of the KM-GBF.

- A Needs Assessment³ was developed with the goal of identifying and understanding the challenges and opportunities that Indigenous Peoples and local communities face in securing their rights in Target 3-related conservation policy. Available in multiple languages, it offers concrete recommendations to ensure an inclusive, rights-based implementation of Target 3.
- To further support engagement at local and national levels, the Target 3 Informative Brochure⁴ breaks down global policy language into clear and usable information. It helps local partners engage in national biodiversity processes related to Target 3 implementation, and explores ways to increase widespread recognition that Indigenous and Traditional Territories can serve as distinct conservation pathways.
- Multilingual training handouts support Indigenous Peoples and local communities' understanding of the Convention on Biodiversity⁵, the Global Biodiversity Framework⁶, and Target 3⁷, thus strengthening their capacity to assert their rights and influence conservation decisions.

Advancing a critical perspective at global level

These experiences highlight a growing consensus: effective, equitable conservation under Target 3 requires policy environments that respect Indigenous- and community-defined pathways. Such policy environments entail:

- Recognising Indigenous and Traditional territories as valid and distinct conservation pathways – not as support systems for Protected Areas or OECMs, but as equally legitimate modes of biodiversity governance.
- Ensuring legal land tenure and governance rights as a non-negotiable foundation for any conservation measure.
- Rejecting one-size-fits-all approaches. Indigenous Peoples and local communities must not be forced into conservation categories that do not reflect their realities and aspirations.
- Ensuring that community-led conservation receives direct, flexible financial support – not just technical advice or visibility.

3 <https://www.forestpeoples.org/en/Conservation-Pathways-Needs-Assessment>

4 <https://www.forestpeoples.org/publications-resources/briefing-papers/article/conservation-pathways/>

5 CBD training booklet 1 EN

6 CBD training booklet 2 EN

7 CBD training booklet 3 EN

- Guaranteeing zero tolerance for human rights violations at any stage of area-based conservation planning, from identification to monitoring.

Looking forward: Ensuring an inclusive 30x30

As the global community moves towards the ambitious attempt to achieve the 30x30 target, it is imperative that conservation efforts do not repeat the mistakes of the past. Future efforts must build on the strengths and self-determination of Indigenous Peoples and local communities – not override them.

Through the generation of knowledge, tools, and policy engagement, the Conservation Pathways project is helping shift the conversation narrative by showing that an alternative approach is possible – one that not only safeguards biodiversity but also strengthens the collective governance, land security, and sustainable livelihoods of Indigenous Peoples and local communities. As Target 3 is implemented, ensuring this approach is equally addressed will be crucial in advancing a just and rights-based approach to conservation.

More information and resources: forestpeoples.org/en/conservation-pathways



Dusk over the community meeting room. Credit: Helen Tugendhat

Transforming relations from power to equity in conservation

Cristina Eghenter^{a)}

Many years ago, a customary leader from the interior of Kalimantan (Indonesian Borneo) asked me to write his speech for an event at national level. I politely tried to decline by saying that I felt that it was inappropriate, but he insisted that I would have no problem doing so, as “you know the words I would utter, the metaphors I would use, you know what is important for me and my community, so you can do it.” I always knew that this was more of a test than acknowledgment or appreciation. More importantly, I was reminded that words carry identity, and messages denote power relations and manifest aspirations that need to be ‘authentic,’ that is, rooted in those Indigenous communities and histories. And unless we have long been part of that community and way of life, our language remains foreign and powerless.

Growing more aware

The way we engage with others, individually and institutionally, often exposes and is imbued with unequal relations of power, including in the sphere of conservation. Growing more aware of the many ways in which power is conveyed, showcased, or expressed in our engagements and interactions with other conservation actors in civil society is critical to taking steps to address the power asymmetries and reimagine partnerships for a new conservation ethic.

Shifting the conservation paradigm towards a rights-based approach relies on transforming relations between and among conservation actors, organizations, communities, groups, and constituencies. This is primarily because sustainable conservation outcomes are increasingly the result of the collective action of civil society and multi-stakeholder platforms working meaningfully together towards a common vision. At a minimum, more participation and collaboration can improve the quantity and quality of information for better conservation decision-making (IUCN, 2012; Ratner et al., 2022). Given the complexity of conservation challenges, collaboration and collective action are also fundamental strategies to find durable solutions. The effectiveness of collective action is directly correlated with the strength, inclusiveness, and equity of the collaborations and partnerships that are established and nurtured with trust and commitment through individual connections and social networks among conservation NGOs, other civil society organizations, rights-holders’ networks, community-based associations, and platforms.

Several reports and analyses have been produced on the matter of ‘partnerships.’ For instance, an OXFAM-Novib statement summarizes what are increasingly shared values and aspirations among big conservation organizations: **“establishing, nurturing, and facilitating authentic partnerships based on continuous reflection on power, equity and justice, fostering a culture of mutual accountability and vulnerability”** (OXFAM, 2012).

The awareness of the need to transform and improve ways to collaborate and partner, especially with rights holders and civil society, is gaining ground among big, international

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conservation NGOs who are often on the ‘powerholder’ side of the relationship. There is a need to shift from transactional to equitable relationships based on power-sharing and mutual respect and trust. Enhanced collaboration will strengthen collective action for conservation.

Through continuous and open dialogues, collective reflections, and actions, partnerships can also be transformed and renewed. This is essential to advancing a new conservation paradigm and avoid reinforcing and legitimizing existing asymmetries and imbalances among civil society actors and rights holders.

Reflecting on power imbalances through self-assessment

Equitable partnerships result from awareness and deliberate actions to change in order to counterbalance structural inequalities in power. Becoming aware of where NGOs stand on a continuum of power-holding and what actions reinforce, mitigate, or otherwise affect that power, is a necessary first step in the process of transforming conservation.

Participatory self-assessment exercises led by each organization/group independently and focused on whom we partner with, how we partner and relate to each other on several dimensions of the conservation partnership, and what the respective expectations and aspirations are with regard to the current engagement, can help understand the status and strength of the relationship. Such participatory self-assessment exercises also identify the dimensions where ‘over-powering’ by one side is hampering the agency and self-determination of the other side, and thus more equitable relations. The process is useful in that it looks at current ways of engaging but also poses the question of what one organization might want to change and what they aspire to in a more balanced relation. Interrogating enables the reimagining of the partnership to move it to more power-sharing, equity and inclusion.

Exercises of co-reflection to assess existing conservation partnerships were recently conducted in particular, one full example held in Papua (Indonesia) in November 2024. The NGO and the rights holders’ associations involved, including Indigenous groups, women’s grassroots organizations and one association focused on the rights of persons with disabilities, all recipients of sub-grants from the NGO, first conducted the self-assessment separately, then came together to share the outcome and openly learn from each other. The fact that there was an obvious power imbalance between the NGO and the local partner organizations was effectively mitigated by allowing for independent assessment and self-facilitation within the group and the common understanding and consent that the purpose of the exercise was exclusively to achieve a more trusted and ‘authentic’ partnership. The stories uncovered some unspoken feelings, celebrated trust and confidence in some cases, exposed where and when the NGO had played – and continued to hold – a dominant role in the view of partners, and revealed respective aspirations to improve and strengthen the collaboration. The exercise helped the organizations involved acquire a new awareness and consequently make the appropriate commitments.

One matter that we need to keep in mind is that ‘equitable partnerships’ might not mean the same to all those involved, and that the journeys of co-reflection and self-assessment need to ascertain and communicate the different interpretations and expectations.

Credit: Danang DKW from Pexels



Dimensions of power in conservation collaborations/ partnerships

The results of the self-assessments are analysed based on the following, emerging key aspects or dimensions in a ‘typical’ engagement between an NGO or civil society organization and rights holders pursuing conservation objectives. These dimensions aspects may overlap or be intertwined but are listed as analytical instruments to identify actions, attitudes, behaviours, and commitments for each dimension that, on an ideal continuum, can either further reinforce power asymmetries or swing the balance of power from a transactional relationship to one that is more transformative and equitable. These are briefly described to show the multiple parts in a process of change to redress and re-imagine collaborations and partnerships for a more inclusive, community-led, and rights-based conservation.

- Language and communication:** The language used in collaborations and joint actions with other organizations, especially community organizations and rights holders’ networks, is a critical indicator of the willingness to engage on more equal grounds. Is English the language used and ‘imposed’ by the international NGO, for example? Or are there genuine efforts to use the local language and even translate relevant information to the indigenous languages? Are the partner NGOs imbuing communication with a lot of technical jargon and many acronyms that hamper understanding and the ability to engage and exchange at the same level? It is also critical to ensure that access to information and feedback flows and to make efforts to learn the other partners’ communication style. For example, during the self-assessment exercise, the language of Indigenous partners was ‘simpler’ on the surface, yet also more direct and often deeper in meaning. Furthermore, when asked about the level of trust and solidarity in the partnership, one leader said, “Why do they [the NGO] only come when there is a problem?” This suggests the lack of a proper and long-term engagement strategy on the part of the NGO and instead the use of a ‘hit and run’ modality. Communication is key to creating trust and understanding and preventing conflict among partners.

- **Funding:** Often, collaborations between NGOs and local or community-based organizations are initiated and framed around a financial contract or sub-granting arrangement. This financial arrangement can be a barrier to developing a fully authentic partnership or meaningful collaboration if the terms that regulate the financial flow and accountability requirements are not fair and mutually agreed upon. To ensure that the contract also takes into consideration local needs and priorities, it is critical that bigger and more powerful partners reflect on whether communities or Community-Based Organizations (CBOs) are engaged as ‘beneficiaries’ of the funds or as subjects involved in the creation of the financial arrangement. It is also crucial to identify and apply innovative ways to remove any mental or administrative barriers and move forward with transformations, including by strengthening local partners’ autonomy in fund-raising and by decreasing their dependence on only one source of funding. Getting the financial dimension right is fundamental for transforming a partnership. It is not the quantity of funding or money value of the transfer from a partner to other partners that should determine leadership and power in the collaboration. It is important to recognize how and which resources (not only the financial) all partners can contribute, based proportionally on their respective capacities and distinct strengths, and with appropriate consideration for core institutional support by donor organizations. In the self-assessment exercise, all partners were receiving funds from the same NGO. Expressions of gratitude were mentioned, but so were requests to change financing arrangements that focused on supporting activities rather than organizational self-strengthening.
- **Capacity building and learning:** Recognizing the power, experience and expertise that on-the-ground partners have is a necessary step to building more equitable collaborations. The funding NGO mindset often remains ‘we have the capacity, and we can build others’ capacity and skills, so we can empower them.’ Mutual learning and skill sharing should be a fundamental and purposeful collaborative process to enable synergies between and among all the actors involved. This kind of learning requires effective mechanisms for self-reflection and mutual sharing of information and appreciation of diverse knowledge systems. All civil society organizations should be learning organizations that make the creation, sharing, and implementation of knowledge a key component of their strategies and ways of working. This learning approach should be based on participation, openness, and trust. Mutual learning processes can help increase respect and understanding between and among partners. This learning is only possible if the power imbalances are addressed and reversed. Equitable partnership implies full access to reciprocal information, co-creation, and institutional capacity strengthening.
- **Accountability:** It is crucial for all actors and partners involved to demonstrate a sustained organizational commitment to transparency, mutual accountability, and integrity in internal operations. Transparency is an essential pre-condition for financial, social, and programmatic accountability, and transparency and accountability create trust and enhance credibility and legitimacy. The creation of a durable environment for mutual accountability requires reflecting on and addressing power relationships, being open to challenges and criticisms, showing vulnerability, ensuring the necessary resources are available, and establishing an agreed-upon framework for joint action and inclusive, open, and honest dialogue. The exercise of self-assessment clearly showed that the gap in confidence and power differences between the NGO and CBOs made it difficult for the partners to be completely open and frank, and that a safe space and process were needed to build a more authentic collaboration.

- **Partnership agreements:** These can help support and improve transparency and mutual accountability. They can clearly and explicitly define the conditions and terms of partnerships in a “social contract.” Such terms include responsibilities, contributions, decision-making processes, and joint programs that, to truly be co-learning processes, need to be implemented and monitored through respectful and open dialogue and shared analysis.
- **Decision-making and leadership:** The practice of transparent and democratic culture within an organization is an important enabling condition for equitable partnerships. Elements like accountable, caring, and effective leadership; participatory decision-making; transparent operational procedures; and ethical practices and safeguards, including anti-corruption policies and human rights standards, are core. An equitable partnership also requires that the organization, and not only the designated staff, are informed and engaged, and share the responsibility of improving relations. The absence of involvement on the part of the senior leadership is likely to happen when one of the actors involved has a more ‘powerful’ position as ‘donor’ and thus may consider the partner organizations as beneficiaries. Leadership should also invest in and institutionalize long-term relationships with partners rooted in deep understanding and valuing partners’ leadership, capacity, and commitment to conservation.
- **Vision and collective action:** A clear vision for an equitable partnership needs to be aligned with a shared understanding of the place of civil society in securing conservation objectives and a longer-term vision. Collective action will be stronger when driven by effective partnerships, social solidarity, and deliberate efforts to realize equitable and reciprocal collaboration and coordination, based on a mutually agreed-upon vision and shared values. Such collective action can be nurtured and strengthened by building collective structures such as platforms, coalitions, and social networks, and by encouraging new forms of collaboration and inclusion. Moreover, mechanisms to build local ownership and develop long-term joint planning need to be identified and collectively decided. During the self-assessment exercise, for instance, it was clear that there was divergence on whether coalitions at the local level were solid enough to sustain impactful collective action on the ground.

Transforming relations between and among conservation actors, organizations, communities, groups, and constituencies is essential to shift the conservation paradigm towards rights, equity, and justice. The multitude of dimensions to relations in the context of conservation – many of which were mentioned above – can complicate and/or prolong the process to find solutions to the power asymmetries that still define many of the conservation partnerships between NGOs, rights-holders, and other civil society organizations. However, it is necessary to identify answers that are durable and effective in building ‘authentic’ partnerships that are institutionally owned, fully recognize the multiple dimensions of partnerships and power expressions, and acknowledge the many challenges and diversity of situations. The exercise described is not a solution in itself but it is a necessary step to open the door and enable a process of change. To be successful, the process needs to be based on a mutual willingness by all actors involved to reimagine and change partnerships through continuous and open dialogue, iterative and critical reflections at the organizational level to ensure power-sharing, respect and equity.

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Guardia! Guardia! Milestone agreements for Indigenous Peoples made in CBD COP 16

Abigail Kitma

Introduction

Negotiations over Convention on Biological Diversity (CBD) decisions can feel abstract and far removed from ‘real’ conservation action. What do late night (often stretching into early morning) debates over lines of bracketed text have to do with conservation action, let alone its reimagination? It turns out... quite a lot. Outcomes of the 16th CBD Conference of Parties (COP 16) substantially advance recognition and respect for the rights and contributions of Indigenous Peoples, local communities, women, and youth. As core components of international law governing biodiversity conservation, these decisions reflect – and can, in turn, promote – national and local progress towards more just and effective conservation action. As the world now pivots to focusing on whether these commitments are put into action, it is also important to remember these milestones, including by sharing the stories of how they were achieved. Central to that story has been Indigenous Peoples’ sustained advocacy and engagement in the CBD over decades. In this article, you are invited on a journey through some of the most pivotal points during COP 16 (and the resumed ‘COP 16.2’ session) with a focus on the decisions that most directly impact – and that were most directly advocated for and advanced by – Indigenous Peoples.

COP 16 was reportedly the largest and longest-running CBD COP yet. With around 23,000 registered delegates and an excess run time of 14 hours beyond the planned schedule, the abrupt postponement of the closing plenary of CBD COP 16¹ was met with confusion and frustration – apart from exhaustion, of course. Among the exhausted delegations in the closing plenary were Indigenous Peoples – many from Colombia as well as other parts of the world – watching and listening closely to global negotiations that could affect them when they went back home.

COP 16 was hosted by Colombia, a country known for both its cultural and biological diversity. The country took the helm from earthquake-stricken Turkey with less than a year of preparation. Colombia intended to make COP 16 the “People’s COP”. While there may be different views on their success in this endeavour, their intention and efforts were evidenced by the almost daily salsa and local trade and market in the ‘Green Zone’ (open to the public) in the heart of Cali, as well as in key decisions arising from the ‘Blue Zone’ (accessible only by COP delegates) where negotiations were conducted. Collectively, these efforts to make it the “People’s COP” can be said to have eclipsed even the equally important official COP theme of “Peace with Nature”.

¹ COP 16 was suspended on November 2, 2024. Towards the end of the extensive negotiations, some delegates had to depart Colombia due to financial, logistical, or other constraints. Ultimately, there were not enough country representatives still present to legally reach consensus on key decisions. COP 16 was resumed (and completed) in February 2025, in Rome. This resumed session is sometimes (unofficially) referred to as ‘COP 16.2’.

COP 16 was also a peculiar event. On the one hand, key negotiations on agenda were unfinished, which necessitated another session of COP 16 in Rome the following year (sometimes referred to as ‘COP 16.2’). On the other hand, landmark decisions relating to the participation of Indigenous Peoples and local communities, among others, were agreed on by Parties.

It is said that the Indigenous Peoples’ movement have put their faith in international law – particularly international human rights law. Should the same faith be placed in a multilateral environmental agreement – and specifically in the CBD – in light of these recent advancements in global environmental decision-making? This article does not provide the answer; rather, it invites reflection.

A background on Indigenous Peoples’ engagement and recognition in the CBD

Indigenous Peoples and local communities are part of one of the major observer group categories in the CBD. While Indigenous Peoples are a separate constituency in many similar international law and policy making processes, the case and history of the CBD is different. Among the three multilateral environmental agreements arising out of the 1992 Rio Earth Summit, only in the CBD text can one find reference to Indigenous Peoples, through the phrase *“indigenous and local communities embodying traditional lifestyles relevant for conservation and sustainable use”* – particularly, in its Article 8j². This eventually led to the formation of “indigenous and local communities” as one of the major groups under the CBD. After the adoption of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007 and subsequent lobbying from the United Nations Permanent Forum on Indigenous Issues (UNPFII) and Indigenous Peoples rights advocates, the word “peoples” was added to acknowledge the hard-fought right to self-determination in UNDRIP, but that the Indigenous Peoples and local communities’ caucus remains a space for both. The caucus is also otherwise known as the International Indigenous Forum on Biodiversity (IIFB), and its contributions to and role in the CBD were officially recognized by COP 5 (Decision V/16).

While the CBD is recognized for its strides in enhancing participation of Indigenous Peoples and of local communities in certain areas of its work, it is definitely not without criticism. The CBD language contains the same weaknesses and gaps that other multilateral- and government-negotiated documents tend to exhibit. For example, the Article 8j on traditional knowledge and in-situ conservation are highlighted by some as falling below the standards of the UN Declaration on the Rights of Indigenous Peoples due in part to differences in language and concepts (i.e. Article 8j states *“approval and involvement”* as opposed to *“free, prior and informed consent”*).

Moreover, the CBD language is littered with the phrase *“subject to national legislation”*, including in Article 8j, despite being an international law. This phrase can limit the linkage of Indigenous Peoples’ rights with CBD implementation, as not all countries recognize the rights of Indigenous Peoples, or even that they have Indigenous Peoples among their constituencies.

2 CBD Article 8. In-situ Conservation - “Each Contracting Party shall, as far as possible and as appropriate:... (j) Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilisation of such knowledge, innovations and practices;”



Representatives of the International Indigenous Forum on Biodiversity rejoicing after the adoption of the decision to establish SB8j. (<https://enb.iisd.org/media/sb8j-3-cbd-cop16-01nov2024-photo>)

Credit: IISD/ENB | Mike Muzurakis

Regardless of these limitations and uncertainties, a key measure of whether Indigenous Peoples have rightly placed time, resources, and dedication into the CBD process, including in lobbying for the landmark decisions in COP 16, is whether these “wins” can enhance the protection of their territories, the relationships they have built therein, and the opportunity of future generations of their communities to continue to thrive in their cultures and traditions.

With that in mind, what were the key outcomes for Indigenous Peoples at COP 16, and how might they impact the lived realities of Indigenous Peoples in their territories?

Progress on priorities for Indigenous Peoples at COP 16

After strategic lobbying by IIFB, allies, and friendly Parties, key priorities identified by the IIFB in COP 16 progressed into adopted decisions.³

First and foremost, the Parties adopted an agreement to establish a permanent subsidiary body on Article 8j (SB8j) and to adopt the programme of work on Article 8j. The IIFB had been advocating for these two interrelated agreements for quite some time already. While CBD is and has always been a Party-led process, the decision on the permanent body on

³ An ‘adopted decision’, in the context of the CBD, is a final, formal agreement or resolution reached by Parties or other CBD governing bodies during official meetings. These decisions are usually (and preferably) reached by consensus among Parties, though can be reached by a majority vote among the Parties present when consensus cannot be reached. Adopted decisions are typically the culmination of many drafts and sessions of negotiations. They contain specific commitments, requests and/or recommendations for Parties, the Secretariat of the CBD, or other institutions/actors to implement in relation to the operationalization of the Convention. These decisions can be substantive new commitments by Parties, like the global targets in the KM-GBF. They may also be, e.g., voluntary guidelines on implementation of specific aspects of the Convention, institutional arrangements for a body under the Convention, templates/outlines for reports to standardize processes, or even new funding arrangements for CBD implementation.

Article 8j signals innovation in creating a more equal space between Parties and Indigenous Peoples and local communities in decision-making, at least on issues most relevant for the latter, as partners on the ground for biodiversity conservation and sustainable use. The *modus operandi* (or method of operation) of this permanent body, however, needed more discussion. Further discussion on its *modus operandi* is on the agenda for the [first meeting of the SB8j](#), to be held in October, 2024, in Panama.

The adoption of the programme of work on Article 8j is also crucial for the newly formed SB8j. The programme of work is a set of tasks, clustered by themes or elements, that actors within the CBD agree to collectively work on together. The tasks in this programme of work are meant to support operationalization of CBD Article 8j and the elements of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) relevant for Indigenous Peoples and local communities. Two of these are new elements (i.e. not part of previous programmes of work on Article 8j) on a human rights-based approach and on access to finance.⁴

Another positive outcome for Indigenous Peoples in COP 16 is the establishment of the Cali fund for digital sequence information (DSI) (a term referring broadly to the digital forms of information about genetic resources in the context of the CBD). The decision on the Cali fund includes the possibility of allocating at least 50% of benefits towards the self-identified needs of Indigenous Peoples and local communities (CBD, 2024c, Annex para 21). Another important part of this decision was the inclusion of seven seats for Indigenous Peoples and local communities in the Cali fund Steering Committee – one each for the seven socio-cultural regions identified in the UNPFII.

Lastly, key outcomes for Indigenous Peoples related to KM-GBF monitoring, reporting, and review include the following:

Inclusion of a headline indicator on “Land-use change and land tenure in the traditional territories of indigenous peoples and local communities” in the KM-GBF monitoring framework, under Target 22 (CBD, 2025, Headline indicator 22.1). This indicator reflects recognition of the contributions from these territories, and the crucial role of tenure rights in their security. Further, because it is a ‘headline’ (vs. complementary or component) indicator, reporting on it will be mandatory.

Inclusion of other indicators relevant for Indigenous Peoples and local communities in the monitoring framework (CBD, 2025). These include optional disaggregation of information about, among others, the distribution of area-based conservation by governance types (under Target 3) and disaggregations by Indigenous and traditional territories (under several Targets, including 3)

Confirmation that actors other than national governments will be included in national reporting and global review processes, through various means. This can support recognition and inclusion of, e.g., community-based reporting.

4 Elements of the new Programme of Work are: conservation and restoration; sustainable use of biodiversity; sharing of benefits from the utilisation of genetic resources and digital sequence information on genetic resources as well as, traditional knowledge associated with genetic resources; knowledge and culture; strengthening implementation and monitoring progress; full and effective participation of indigenous peoples and local communities; human rights-based approach; and access, including direct access, to funding for indigenous peoples and local communities for the conservation, restoration and sustainable use of biodiversity. A brochure of the new Programme of Work can be accessed here: <https://www.cbd.int/traditional/doc/cbd-8j-brochure-en.pdf>

The COP President⁵ prioritised discussion on Article 8j and DSI early on in the Conference. While this strategy still did not leave enough time to reach adopted decisions on some of the more contentious agenda items, it was fruitful in relation to decisions related to article 8j, the Cali fund, and some key monitoring issues. Along with the joyous celebration of Indigenous Peoples, local communities, Parties and other allies at the adoption of decisions related to Article 8j, COP President Susanna Mohamed was also visibly in tears. She shouted “Guardia! Guardia! Fuerza! Fuerza!”⁶ along with Colombia’s Indigenous Peoples representatives at COP 16. It is worth noting that, despite occasional political and ideological differences, which is not unusual between Indigenous Peoples’ movements and their States, the Indigenous Peoples representatives of Colombia took the hosting of COP 16 as seriously as their State, and generously contributed in hosting international delegates. They had endured the gruelling negotiations of the closing plenary in solidarity with the world, as representatives of both Indigenous Peoples and of Colombia.

Why the call for a permanent body on Article 8j and related provisions

The call for a permanent body on Article 8j and Related Provisions was initially explored in COP 13, but was placed on the backburner to focus on development of the KM-GBF. At the time this article is being written, the SB8j’s institutional arrangements have not been decided.

Development of the SB8j is anchored in different CBD actors’ motivations to support Indigenous Peoples and local communities. Some of the arguments made by the IIFB, Parties, and other allies are that the SB8j can 1) Enhance participation of Indigenous Peoples and of local communities embodying traditional lifestyles; 2) clarify the roles of Indigenous Peoples and of local communities embodying traditional lifestyles in the CBD; 3) provide incentives for Indigenous Peoples and for local communities embodying traditional lifestyles to sustain their contributions and share their experiences and; 4) match the increased ambition of the new Programme of Work on 8j (which mirrors the increased ambition of the CBD through the KM-GBF).

“Institutionally, we should mirror science by way of politics”, a negotiator said during one of the contact group sessions – meaning that, given the high value associated with the knowledge and practices of Indigenous Peoples relating to the protection of their territories and resources, it is appropriate and equitable to highly value their participation in decision-making.

Another negotiator quipped that “men cannot eat an animal with only one ear”, meaning one must hear both sides to settle an argument. Some of the concerns raised about the establishment of the SB8j included, among others, the 1) resource implications of a new subsidiary body; 2) time-intensive nature of permanent subsidiary bodies; 3) siloing of traditional knowledge work, and overlapping mandates of the different subsidiary bodies; and 4) precedent of encouraging bodies for each workstream or thematic issue.

⁵ The COP Presidency is “generally held by the Minister of Environment from the host government” who “acts in this capacity as an official of the meeting and no longer participates... as a representative of his or her particular government”. This is meant to be a neutral and impartial role, in which the President “opens and closes the meeting, determines the order of speakers, rules on points of order, [and] teams with the chairs of the working groups to steer the process...” (CBD [website](#)).

⁶ In some areas of Colombia, there is a self-organized, unarmed, protection and defence structure by Indigenous Peoples who are mandated by their people to protect their communities, culture, and territories. So when Colombian Indigenous Peoples say “guardia, guardia, fuerza, fuerza”, it’s a rallying cry about protecting their peoples and territories.



Representatives from Indigenous Peoples and from local communities calling for the establishment of the SB8j outside the plenary room as Party delegates enter and exit the meeting. (<https://enb.iisd.org/media/biodiversity-actions-5-cbd-cop16-30oct2024-photo>)

Credit: IISD/ENB | Mike Muzurakis

To date, an Ad Hoc Working Group on Article 8j (WG8j) has held the mandate to provide guidance for Parties on implementing Article 8j. For the IIFB representatives in the expert group that worked on the draft decision on SB8j, understanding the history, context, achievements, and weakness of the WG8j was crucial in lobbying for a transition to a permanent subsidiary body, including in addressing concerns. WG8j was established in 1998 and has been the longest running ad hoc working group in the CBD. WG8j has produced a number of voluntary guidelines to operationalize Article 8j and other recommendations. At least one of these guidelines has been localized in a country; Finland adopted the *Akwé: Kon* guidelines as a planning tool for their Ministry of Agriculture and Forestry, through the lobbying of Sami Indigenous Peoples representatives (Markkula, 2019).

While WG8j has made important contributions, in the 25 years since its formation, the situation has changed. Parties' commitments of support to Indigenous Peoples and to local communities embodying traditional lifestyles have become stronger. Not only is there Article 8j in the Convention itself. Parties have adopted, among others, the *Cartagena Protocol* (on biosafety), the *Nagoya Protocol* (on fair and equitable sharing of benefits from genetic resources and traditional knowledge), the KM-GBF, and a number of biodiversity assessments and other decisions and guidance that recognize the contributions of Indigenous Peoples.

Regarding the concern about the resources required for a permanent body – as the SB8j will be building on the achievements of the WG8j, the resources needed to support the subsidiary body would be similar to the resources it has required to sustain the ad hoc working group. Granted, there may be increased resource needs as the work in the SB8j progresses. However, additional mobilization of resources for biodiversity work, including for the CBD meetings, has always been part of the CBD.

Regarding the concern about siloed and/or overlapping agendas of different subsidiary bodies - while traditional knowledge is part of the knowledge base that should be reviewed by the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA), the SBSTTA agenda is often full. The increased tasks that may be required of the SBSTTA under the KM-GBF may overburden it. Thus, a separate body can be helpful in addressing time constraints and work volumes. Moreover, rather than overlapping the mandates of other bodies, the SB8j tackles traditional knowledge both as a knowledge base and in relation to implementation of the CBD. As such, it can create opportunities to better address silos across the different bodies of work in the CBD.

The debates on the SB8j parallel debates at the national level. Indigenous Peoples globally have been calling on their governments to respect their right to self-determination in the stewardship of biodiversity within and connected to their territories. This respect can also be translated as, among others, treating Indigenous Peoples and their communities as partners in protecting nature, and not destroyers of nature (or 'anti-development' actors). In the CBD, the SB8j can be the body through which to embody the partnership that is needed to achieve the global vision of living in harmony with nature.

Reality check: What do the CBD decisions mean back home for Indigenous Peoples and rights advocates?

At a symbolic level, these recent decisions show that, while it is very slow, the needle is moving towards a more democratized environmental governance in the CBD – at least as close as one can get in a Party-driven multilateral system. The adoption of the KM-GBF, with a view that its implementation will be guided by a whole-of-society approach, and now the shift from an ad hoc working group on traditional knowledge to a permanent subsidiary body, are landmark agreements in international environmental law and are manifestations of this transition.

If any country implements the KM-GBF 'to the T', it can initiate measures for access to justice and protection of environmental human rights defenders, land tenure arrangements, and programs promoting customary sustainable use of biodiversity, among others. These are all relevant in many Indigenous Peoples' fight for equity, justice, and reconciliation in relation to human rights violations due to conservation.

The SB8j can also be seen as an acknowledgement of the WG8j as an international proof-of-concept that enhancing the participation of Indigenous Peoples and of local communities embodying traditional lifestyles in decision-making (supported by resource mobilization and capacity-building) can enhance biodiversity action. In this sense, it can be understood as an invitation by CBD Parties towards Indigenous Peoples and towards local communities embodying traditional lifestyles for better partnership, e.g. in KM-GBF implementation.

But, in practice, what do these matter to the First Nations youth struggling with their multi-faceted identity in a cosmopolitan city, or to the Torres Strait Islander as he fishes for his family's next meal? Can a Zapotec woman, criminalized for defending the rights of her community, use the element of protection of environmental human rights defenders in the KM-GBF as an argument in her favour in court?

Within the Indigenous Peoples movement, the expectations and understandings of what can and cannot be achieved through the CBD varies widely. In the crudest sense, one can say that the CBD does not have "teeth", and therefore there is not much change to expect from an international environmental agreement such as this. At the other end of the spectrum, one

can hope that countries will faithfully implement the decisions arising from the CBD at the domestic level, including and especially those related to safeguarding and promoting human rights in conservation and sustainable use of biodiversity.

In reality, national experiences tend to still be within the realms of fortress conservation, with a sprinkling of opportunities for co-management and co-governance here and there. While CBD decisions are international law, compliance with COP decisions relies mainly on national implementation, monitoring, and reporting. Given this, the best chance for COP decisions to be implemented, and to have meaningful impact at the community level, might be through incorporation into national plans. In the CBD context, these national plans are generally referred to as National Biodiversity Strategy and Action Plans (NBSAPs).

Strategies for ensuring NBSAPs are developed and implemented with and for the benefit of Indigenous Peoples, local communities embodying traditional lifestyles, and other local biodiversity actors will vary across countries. For example, during one of the last plenary sessions of COP 16 on the SB8j agenda, the Philippine delegation declared its support for the establishment of the SB8j, as they see it as complementary to their support of the Indigenous Peoples' Biodiversity Strategy and Action Plan (IPBSAP) in the Philippines. However, this does not necessarily mean that Indigenous Peoples involved in the IPBSAP process will not keep a watchful eye on, and be critical of, the '30 by 30' target implementation of the Philippines. Even with an Indigenous Peoples Rights Act (passed in 1997), stewardship over ancestral domains that overlap with protected areas remain contested, with Indigenous Peoples still limited in accessing resources within the boundaries of their ancestral domains. Still, the commitment of the Philippine government to implement the Philippine Biodiversity Strategy and Action Plan (PBSAP), and their recognition of the IPBSAP, can be used by communities and Indigenous Peoples' organizations in their lobbying for policy reforms and for measures to support their work in their territories.

As for the SB8j and its new Programme of Work Indigenous Peoples, the recommendations arising from COP 16 outcomes are expected to result in the development of better guidance for countries in implementing measures to support traditional knowledge in situ conservation. The tasks in the current SB8j mandate include developing guidelines on genetic resources and associated traditional knowledge; organizing exchanges of knowledge and learning platforms; developing communication materials, including in the languages of Indigenous Peoples and of local communities; developing guidelines on the protection of environmental human rights defenders; developing guidelines for the establishment of innovative incentive schemes for Indigenous Peoples and local communities; and creating a global network of national focal points on Article 8(j). These guidelines can be used as standards for national and even local policies on biodiversity and traditional knowledge.

What's next for Indigenous Peoples in the CBD?

New opportunities for observers, including Indigenous Peoples, to engage in operationalization and implementation of COP decisions and CBD processes have recently emerged, and will continue to emerge in the coming months. For example, steps in institutionalizing the Cali fund are now underway, with seven seats in the Steering Committee opened specifically for Indigenous Peoples and local communities. Several informal advisory and expert groups under the CBD have also allotted space for observers. The first SB8j meeting (to be held in late October, 2025) will also initiate key tasks under the new programme of work, including further elaboration on and guidance related to Indigenous and traditional territories.

Indigenous Peoples can also monitor and engage in their countries' processes for preparing their national reports on the KM-GBF implementation, which are due in February, 2026. The IIFB will likewise be producing a third edition of the Local Biodiversity Outlooks (LBO). The [previous LBO editions](#) are considered complementary evidence to the [Global Biodiversity Outlooks](#), which is the evidence base that the CBD Secretariat prepares based on submitted national reports and other sources.

More generally, it is hoped that CBD decisions, such as the KM-GBF and the SB8j, provide a foundation for enabling conditions to adequately support conservation by Indigenous Peoples and by local communities, in alignment with their traditional knowledge and lifestyles. For example, while SB8j is primarily a platform for enhanced participation of Indigenous Peoples and of local communities in decision-making within the CBD, it is also a symbolic commitment by countries to enhance such participation and engagement in biodiversity decision-making nationally and locally. This also means that, while the establishment of SB8j was a hard-fought step within the CBD, it is by no means the final step. Likewise, while advances like those reflected in some COP 16 decisions are not a 'Holy Grail' for reconciling injustice faced by Indigenous Peoples due to fortress conservation and the *Doctrine of Discovery*, these advances are also not small feats to dismiss. They are, rather, opportunities that Indigenous Peoples can strategically engage.

The political momentum of the KM-GBF, along with other related international processes, such as the 2030 Agenda/Sustainable Development Goals and the Paris Agreement, are opportunities for Indigenous Peoples to engage in and contribute to national and local processes for planning, monitoring, reporting and review. The SB8j, as a permanent body directly under the highest decision-making body in the CBD (which is the Conference of Parties or COP), can make recommendations that are the basis for CBD decisions. Given that it will focus on the new Programme of Work on Article 8j, and that its predecessor (WG8j) has practiced enhanced participation modalities for Indigenous Peoples and for local communities in the process, it can be expected that Indigenous Peoples' issues and local communities' issues will be given dedicated time and resources through the SB8j, including in relation to national planning, monitoring, reporting and review processes.

The international Indigenous Peoples' movement has shown how local actors can influence global decisions; it is also showing how global decisions can affect local actors. Engaging in the CBD through its various mechanisms, imperfect as they are, is part of the repertoire of tools that Indigenous Peoples can use in lobbying for the vision they want for their territories.



The International Indigenous Forum on Biodiversity (IIFB) at Rome for Resumed Sessions of the Sixteenth Conference of Parties to the Convention on Biological Diversity (CBD).

Credit: Alice Mathew

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Guardia Indigena welcome delegates of the Nature and Culture Summit in the La Delfina community. The Nature and Culture Summit is held at every CBD COP to consolidate high level messages from Indigenous Peoples and local communities for the COP and usually includes community visits such as this one.

Credit: Abigail Kitma

Advancing Indigenous and community leadership of conservation requires confronting barriers to change

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Introduction

The Kunming-Montreal Global Biodiversity Framework (KM-GBF), adopted under the Convention on Biological Diversity (CBD), presents opportunities, responsibilities, and risks for recognition of the rights and leadership of Indigenous Peoples and of local communities in conservation.¹ This is reflected in Target 3² on area-based conservation, in Section C (considerations for implementation) and the framework as a whole.

This article reflects on barriers to advancing Indigenous- and community-led conservation, and actions to address those barriers. While considering conservation initiatives broadly, we focus on governance of protected and conserved areas (PCAs).³ The article draws primarily on discussions and outputs from recent workshops, including the [Nanyuki Roadmap](#).⁴ It was developed by members of the IUCN CEESP/WCPA task force on Advancing Indigenous and Community-led Governance of Protected and Conserved Areas.

Indigenous and community leadership is crucial for conservation

Protected and conserved areas can be governed by governments, private actors, non-governmental organisations, Indigenous Peoples, or local communities; governance can

1 A note on terminology - In this paper, the terms Indigenous Peoples and local communities are both used, at times in a linked way. This use follows understandings from the CBD and international human rights law. Local communities are, thus, understood here as collective groups of individuals who have a stewardship relationship with their lands and resources, and who have developed and sustained traditional or collective ecological knowledge that they use in this stewardship. It is not used to refer to all local communities, and its applicability to any given community must be understood in context. As noted in the [IPBES glossary](#) “The term is not intended to ignore differences and diversity within and among Indigenous Peoples and between them and local communities; Indigenous Peoples have recognized and distinct rights, which are not extendable to the broader and encompassing concept of local communities”. See also HRBWG, 2024:16

2 Target 3 reads: “Ensure and enable that by 2030 at least 30 per cent of terrestrial, inland water, and of coastal and marine areas... are effectively conserved and managed through...**equitably governed** systems of protected areas and other effective area-based conservation measures, **recognizing indigenous and traditional territories where applicable**, and, **recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.**”

3 According to the IUCN, protected areas are formally designated areas with a primary focus on conservation. ‘Conserved areas’ is a broader term referring to areas where effective conservation is happening in practice, whether or not conservation is an objective.

4 The article draws on discussions at two workshops of the IUCN Task Force Advancing Indigenous and Community-led Governance of PCAs, in June 2023 in Cambridge, UK and in March 2025 in Limuru, Kenya; as well as the discussions at the [Nanyuki workshop on Advancing Rights and Equity in the Implementation of Target 3+](#).

also be shared between them (Borrini-Feyerabend et al., 2013; SCBD, 2018).⁵ Appropriate recognition and support for these diverse governance ‘types’ – including governance by and with Indigenous Peoples or local communities – has a profound impact on conservation equity and effectiveness. There is clear and growing evidence of the expansive coverage of, and conservation effectiveness in, territories and areas governed by Indigenous Peoples and by local communities (e.g. Dawson et al., 2023, 2024; Fa et al., 2020; ICCA Consortium, 2021). For example, a recent study of deforestation rates in 19 Indigenous territories in Southwestern Amazonia found that, while not immune to deforestation, all of the studied territories had avoided significant deforestation. “Their effectiveness (...) is largely associated with distinct land-based governance, resilient leadership, as well as temporal perspectives and socio-bioeconomies inclusive to more-than-human beings.” (Virtanen et. al., 2025). At the same time, many Indigenous Peoples and local communities face sustained threats, including to their lands and territories, arising in part from lack of rights recognition and security (ICCA Consortium, 2021). Indigenous and community rights and leadership in conservation are thus crucial for equitably and effectively achieving global targets (e.g. Loring & Moola, 2020; ICCA Consortium, 2021).

Implementation gap

The need for appropriate recognition and support for Indigenous- and community-led governance has been acknowledged by conservation organizations and agencies for decades (e.g. in the 2003 [Durban Accord](#)). However, control over decisions about area-based conservation remains extremely concentrated in the hands of government and – to a lesser extent – private actors and NGOs.⁶ Despite increasing international, national, and local progress, implementation lags behind conservation’s increasingly socially inclusive principles. While some national systems now recognize protected areas (PAs) under shared and community-based conservation arrangements, these remain limited and, as explored below, do not necessarily involve substantive shifts in leadership/governance roles.

What do we mean by Indigenous- and community-led governance?

Ultimately, the question above must be answered in context and by the Indigenous Peoples and the local communities concerned. Here, we explore some key considerations in relation to decision-making power and relationships in conservation governance.

Across the governance types mentioned above, PCA governance (including leadership) is largely a matter of who holds decision-making power. In practice, Indigenous Peoples and local communities play various roles in conservation initiatives – from being excluded, to merely consultees or informed parties, to stakeholders with one seat among others at the table, to being equal partners in shared governance, to holding primary or even complete control (Dawson et al., 2024). The ‘higher’ (more power-holding) ends of this ladder – i.e. shared or primary control - do not simply mean that Indigenous Peoples and local communities can influence decisions, but crucially, that conservation governance is shaped and management enacted through their experiences and knowledge systems – their values,

⁵ While these governance types offer a general framework, in practice the question of which ‘type’ best describes a given area can be very complicated - including where there are overlaps (Stevens et al., 2024) and/or differences between de jure and de facto authority (e.g. Borrini-Feyerabend et al., 2013; WWF & WPCA, 2023).

⁶ In the World Databases on Protected Areas and on OECMS, 83% of records reported are government-governed. Over 9% are reported as being under private governance, only 1% as shared governance, and a mere 0.6% as governed by IPs or LCs. The remaining 6% have no governance information reported. These figures may reflect the fact that data is primarily reported by governments, which may not recognise diverse governance approaches by non-state actors. Further, these databases cover only PAs and OECMs, while many territories and areas conserved by Indigenous Peoples and by local communities are not (and may not be appropriate to report as) either of these. Nonetheless, the global power imbalance in who designs, decides and implements conservation is undeniable.

institutions, and practices (*ibid*).

Understanding decision-making and other roles, and looking more closely at the balance of power, can offer a better understanding of whether, and in what ways, progress is truly being achieved. For example, while government recognition and support for Community-Based Natural Resource Management arrangements have increased, many of these initiatives are not community-*led*, as governments or private actors maintain decision-making powers over most issues (Nelson et al., 2021). Similarly, many so-called shared-governance arrangements struggle to progress beyond token participation of Indigenous Peoples’ and of local communities’ representatives with limited influence. More powerful actors tend to hold on to key dimensions of authority such as defining conservation objectives, measuring success, allocating funding, land ownership, sharing of benefits etc. (Gambon & Bottazzi, 2021; Gienger & Nursey-Bray, 2025; Nepal, 2002).

Further advancing Indigenous Peoples’ and local communities’ leadership in conservation is essential

In summary, there is clear interest – for both people and nature – in advancing Indigenous Peoples’ and local communities’ leadership of PCAs. While progress has been made, there is a long way to go in policy and practice. Approaches focused on rights and equitable governance can foster cooperation rather than conflict, and strengthen community custodianship. To realize these transformations, change is necessary on several levels – not just on paper (e.g. in standards, policies, laws and programs) or even just in the design and funding of initiatives, but also in the mindsets, narratives, and assumptions that underpin people’s actions, their ways of working, and the nature of their interactions (O’Brien 2018).

Revealing the punawai (spring) at the Hui Malama Loko l’ā Gathering 2023 at Alekoko Loko l’ā (fishpond) Kaua’i.

Credit: Scott Kanda courtesy of KUA



Barriers to change... and actions to help address them

Barriers to Indigenous Peoples', local communities', and allied actors' leadership in conservation vary widely.⁷ The following are shared as prominently mentioned and inter-related issues, rather than an exhaustive set. This list moves from more immediate (and perhaps more easily tackled) issues in policies, institutions, and processes to more systemic issues. The latter are harder to overcome, and conservation actors may initially think that these are beyond their mandates or capacities to address. However, as evidenced by IPBES, transformative change – defined as system-wide shifts in views, structures and practices – is necessary to address nature's decline (IPBES, 2019, 2024). It is therefore important to reflect on how collective action can impact them.

There are also already many actions being taken to address these barriers. A handful of such actions are explored below. Collectively, these reflect the need for action by different actors and at different scales, as well as for collaboration between these.

Laws, policies, and institutions

National laws and policies

The KM-GBF marks a shift in international law and policy towards recognising the distinct roles, responsibilities, and rights of Indigenous Peoples and of local communities, including women and youth (Tugendhat et.al., 2023). Since its adoption, a challenge has been translating this international step into national laws and policies related to recognition of the rights of Indigenous Peoples, and the rights of local communities stewarding nature and traditional knowledge.

Barriers

Indigenous Peoples are often not recognised. There is often a lack of comprehensive laws recognizing their existence, and securing their rights, such as those related to customary and collective tenure and institutions, and a lack of context-specific solutions to integrate them with statutory systems. Even where recognised, there can be overlapping mandates and unresolved contradictions between customary and statutory law, and within national frameworks, often including provisions on conservation and Indigenous rights.

National and sub-national **conservation related laws, policies, and strategies** often lack provisions to recognise and support Indigenous and community participation and leadership in conservation. For example, a multi-country review found that, rather than explicitly recognizing territories and areas conserved by Indigenous Peoples and by local communities, "relevant rights... in national law are [if recognized at all] often dispersed across legal frameworks". This poses challenges because, among others, "[t]hrough Indigenous Peoples and local communities can utilize... sectoral legal frameworks to affirm their rights to lands, territories, and resources, they offer insufficient protection to external threats" (UNDP, 2022, via Natural Justice). At the same time, rigid, top-down PCA frameworks hinder local innovation and action, and often do not reflect the diversity of governance systems, biocultural values, and conservation approaches. Emerging frameworks to recognise Other

⁷ Discussions in Nanyuki and within the Task Force over the last two years surfaced a number of barriers to progress, not all of which can be addressed in an article of this size. Some were general barriers stemming from, for instance, geopolitical contexts or economic models. While these are important, this article focuses on barriers specific to the PCA contexts, and only touches on transversal issues where they manifest in specific ways in this context and can be tackled by the key actors in the sector. Other discussions focused on internal barriers that communities struggle with, such as internal inequities, lack of capacity or loss of cultural identity. As this article focuses on how other actors can contribute to joint action, we are not specifically focusing on these.

Effective Area-based Conservation Measures (OECMs), for example, risk over-legislation and rigid regulations that could stifle conservation efforts by local actors. As shown from experiences with PAs declared on ancestral territories, this can result in the displacement of existing, functioning governance models and the erosion of traditional knowledge and self-determination (Stevens et al., 2024). Most countries, so far, lack enabling frameworks for recognition of Indigenous and traditional territories as a pathway distinct from PAs and OECMs, and ways to address overlap between them (Oliva et al., 2025).

Actions

A growing number of national legal frameworks ostensibly aim to recognize rights and/or support Indigenous- and community-led conservation. Promising examples (though not without challenges) have been highlighted in [Australia](#), [Brazil](#) (e.g., Bocardi de Miranda et al., 2025), [Canada](#), [Colombia](#), [Liberia](#) (e.g. Lomax and Warner, 2024) and [the Philippines](#), among others. Rights-holders and their organisations play key roles in advancing legal recognition, e.g. through their innovation, advocacy, and sustained engagement, often over many years. This is reflected in the examples noted above, as well as cases in the [Territories of Life report](#) (ICCA Consortium, 2021) and systems level assessments ([here](#)), among others.

There is clearly no simple ‘recipe’. Law and policy frameworks must be responsive to and reflective of their context, and effectively and equitably implemented, to be meaningful. And achieving this can be a long, uphill journey. Nonetheless, existing frameworks can offer ideas, including about how legal recognition evolves and what approaches have (and have not) worked well, and for whom.

Box 1. Sinjajevina, Montenegro: Between protected common lands and military training site

The montane pastures of Sinjajevina in northern Montenegro are in many parts still managed traditionally as commons, and other parts that are privately owned still follow community rules and jurisdiction. Up to eight main tribes have traditionally used this pasture since the 19th century. The rich and rare flora and fauna are recognised through the area’s status as part of the Tara Canyon Biosphere Reserve, an Emerald site under the Bern Convention, an Important Plant Area, a proposed Natural Regional Park, and a proposed EU Natura 2000 site. However, this was completely overlooked in 2019 when it was designated as a military training site for international exercises. The military ground has now been cancelled by the Montenegrin Government, but only in response to the pressure exerted through a five year lasting civil protest and campaign by the Save Sinjajevina civic initiative, an alliance of local community members, activists, academics and national and international NGOs. This resistance has successfully prevented any military exercises since late 2020, and achieved the legally binding cancellation of the military ground, but threats will remain until these community governed areas are fully respected. <https://sinjajevina.org/>

Contributor: Pablo Dominguez, researcher, ICCA Consortium

National policy processes

Barriers

One reason for inadequate policies and laws concerning Indigenous Peoples’ and local communities’ rights and roles in conservation is limited access to **policy formulation processes**. This can arise from many sources, including insufficient government transparency and consultation processes, not having direct (or self-determined) representatives present during key decision-making forums, language barriers, insufficient information and resources for participation, etc. These barriers hamper constructive collaboration in developing national enabling conditions for Indigenous Peoples and local communities-led governance.

Actions

Laws and policies can be influenced through participation in legislative and policy processes, e.g. procedures for updating National Biodiversity Strategic Action Plans (NBSAPs)⁸ and other relevant reforms. Indigenous- and community-led innovation and advocacy often precede and can inform policy reforms (e.g. case below; ICCA Consortium, 2021; HRBWG et al., 2024; Mako, 2025). However, NBSAPs and other law/policy reform processes take time (Carbon Brief & The Guardian, 2024), and often enable limited direct input by Indigenous Peoples and by local communities (Climate Focus & Parabukas, 2023). The [Escazú Agreement](#)⁹ is an example of strategies that enable participation in legislative and legal processes in Latin America and the Caribbean.

Rights-holders also develop self-determined plans and policies as stand-alone instruments and to inform and/or to complement national frameworks. Indigenous Peoples in the Philippines, for example, produced their own biodiversity strategy and action plan as a formal complementary input to the national policy (IPBC, 2024).

Box 2. Recognising locally-managed saphari forests among Machakhela National Park, Georgia

In the southwest corner of Georgia and into Turkey, a large area of forest is conserved within a network of protected areas, including Machakhela National Park, established in 2012. Initially included within the park was around 1,400 hectares of forest neighboring the settlements, which also included *saphari* or ‘shelter’ forest, an important part of the livelihoods and identities of local communities who strictly managed the area. Although an informal agreement between communities and state forestry agency had previously supported community autonomy over the saphari forests, this couldn’t be ensured by the National Agency of Protected Areas who oversee the National Park based on the National Forestry Code, which does not recognise saphari forests. Villagers protested their loss of access to and control over the forests and eventually the National Park border delimitation committee was set up in 2015 involving communities, local government and the park administration. As a result, the protected area was reduced by about 20% so that community governance and management of the saphari forests could continue as before. These customary forms of governance are missing from national policies in Georgia as in many countries. The saphari forests, along with the community use forests are now included as a part of the ‘Protected Landscape’ to be governed through a management committee of local members and others approved by the Municipality.

<https://report.territoriesoflife.org/national-and-regional-analysis/west-central-asia/forests-shrublands/>

Contributor: Irakli Goradze, UNDP Georgia

Implementation of laws and policies

Barriers

Even where robust legal and policy frameworks are in place, there are often barriers to their implementation. Among other factors, they are often disregarded when they stand in the way of more powerful interests (e.g. Mako, 2025). Likewise, cumbersome processes often lead

⁸ NBSAPs are the key instruments through which governments implement CBD agreements. All NBSAPs needed to be updated to reflect KM-GBF commitments, including to human rights based approaches

⁹ The Regional Agreement on Access to Information, Public Participation and Justice in Environmental Matters in Latin America and the Caribbean, adopted at Escazú, Costa Rica, on 4 March 2018

to tenure insecurity at the local level and to reliance on external support (from NGOs etc.) to secure territories (Alden Wily, 2018).

Actions

Necessary actions at government level include the formal recognition of customary land rights, and political support for the concerns of Indigenous Peoples and Local Communities (Tran et al., 2020), as well as mechanisms for transparency and accountability, and the application of Free, Prior and Informed Consent. Capacity-building efforts that strengthen local institutions and reduce dependency on external actors are also essential. Network building, allyship, and technical support (e.g. to navigate complex legal processes) can also be helpful in getting to implementation (e.g., Mako, 2025).

Box 3. The Siekopai Nation versus the Ecuadorian state

The Indigenous Siekopai have struggled for over 30 years to reinhabit Pë'kë'ya, a key part of their ancestral territory in Ecuador. Despite court rulings that validate their claim, as the legal system and constitution recognize their rights, the Ecuadorian government has failed to comply. *In contrast, the Ministry of Environment even signed a “use and management agreement” in 2008 with other communities, further infringing on the Siekopai’s rights.* This lack of recognition, government accountability and compliance is a threat to the continued cultural survival of the Siekopai Nation and their ability to sustain nature within their ancestral territory.

<https://storymaps.arcgis.com/stories/abac0d4970ce42bbaec563dc05faed5d>

Contributor: Amazon Frontlines

Monitoring and reporting

Barriers

Indigenous Peoples and local communities are often poorly represented in the **development and implementation of conservation monitoring systems** – regarding biodiversity as well as social dimensions, including governance. Their expertise, including traditional knowledge, is not sufficiently recognised. Reporting mechanisms led by government agencies do not sufficiently include evidence generated by Indigenous Peoples or by local communities, or their values and priorities. While there are increasingly available approaches to assess the equity and governance of PCAs, including community-based approaches (Dawson et al., 2025), uptake is insufficient (e.g. Campese & Sulle, 2018). The lack of data and evidence from diverse sources, including that generated by Indigenous Peoples and by local communities, leads to biases in reporting and poor understanding of their conservation related visions and contributions. As a simple example, the coverage of PCAs governed by, or with, Indigenous Peoples and local communities is significantly under-reported in the World Database on Protected Areas (UNEP-WCMC & IUCN, 2024).

Actions

Despite the barriers, there are growing examples of Indigenous- and community-led monitoring related to conservation (e.g. Dawson et al., 2025). These include monitoring rights recognition and implementation (e.g. [Indigenous Navigator](#)) as well as internal reflection and monitoring for self-strengthening and rights assertion (e.g. [Territories of Life SSP](#)). Support for the development of participatory monitoring systems that are sensitive to local worldviews is critical.

Data governance and sovereignty are also important dimensions of monitoring and reporting;

guidance for ethical and equitable practice have been developed by Indigenous Peoples organizations and networks (e.g. Carroll et al., 2020; ICC, 2021; ITK, 2018).

Conservation sector institutions

Barriers

Conservation projects are often strongly **dominated by state agencies and (often large, international) NGOs**. Their approaches can hamper the rights and leadership of Indigenous Peoples and local communities, even when safeguards are in place (Orozco-Quintero & King, 2018; Waylen et al., 2015; West, 2011). They typically operate with shorter-term “project logic”. In these approaches, Indigenous Peoples and local communities often (and at best) hold roles as beneficiaries, rather than partners in relationships of long-term solidarity that reflect their rights and interests.

While partnership models are (ostensibly) increasingly sought, in practice, **conservation objectives, governance, and management often continue to be externally imposed**. This can result in tokenism and false legitimacy. Similarly, community-based organisations and other grassroots organisations, especially in the Global South, struggle with imbalanced partnerships with international NGOs. Issues include inequitable sharing of resources, unnecessary and overly bureaucratic processes, and unaddressed racial and cultural biases (Paul et al., 2022)

The **mindset and attitudes** of some NGO and agency staff are, in places, still based on negative beliefs towards Indigenous Peoples and local communities and a lack of recognition and respect for their contributions and leadership. In part, these mindsets are underpinned or exacerbated by a lack of capacities – including in social sciences, cross-cultural skills, and human-rights based approaches.

Overall, there is a **lack of accountability** on the parts of conservation organisations (be they NGOs or government agencies) towards the Indigenous Peoples and local communities with whom they interact, even when activities take place in, or impact, traditional territories.

Actions

Some **initiatives to integrate human rights** into conservation planning and implementation are being undertaken by conservation organisations directly (e.g. CIHR, see Springer et al., 2011) and by coalitions of other actors (e.g. IIED, 2016; UNEP, 2024). Other initiatives are more directly focused on supporting Indigenous-led approaches, grounded in traditional knowledge and practice, such as the [Indigenous Rangers Programme](#) in Australia or the [Indigenous Leadership Initiative](#) in Canada.

There are also **accountability mechanisms** aimed at avoiding or mitigating harms to people that may arise from conservation actions (e.g. NGO and donor safeguards) as well as addressing harms that have occurred (e.g. [Whakatane Mechanism](#)).

Funding structures and processes

Barriers

Indigenous Peoples, local communities, and allied, grassroots organisations struggle to access **sufficient, accessible funding to support self-determined conservation actions** (Arreguín Prado et al., 2024; Paul et al., 2022). Most biodiversity and climate funding is channelled through governments or large conservation NGOs (Rights and Resources Initiative, 2022). Despite recent pledges (Forest Tenure Funders Group, 2023), change is slow

(Schroeder, 2023). As mentioned above, NGO-channelled funding tends to focus on external priorities with insufficient transparency on allocation, even where projects are implemented with communities and/or in Indigenous and Traditional Territories. NGOs and states are primarily accountable to funders, rather than to impacted communities. Even where funding is more direct, Indigenous Peoples and local communities often struggle with its complex, inaccessible structure, including burdensome programmatic and financial reporting (often exacerbated by a lack of local financial infrastructure), unrealistic timelines, inflexibility, and imposed objectives.

There is also a need to ensure that funding is **not provided to actions that violate rights**. This need is most often dealt with via safeguards that require, among others, impact assessments and mitigation responses. Such safeguards are now in place for many conservation organisations and some conservation funders. However, Indigenous Peoples and local communities still report a lack of accountability, such as in FPIC processes, and clear grievance mechanisms (GATC, 2023).

Actions

There are growing **commitments and initiatives for direct funding**. Initiatives like the Podali Fund in Brazil and the Indigenous Peoples of Asia Solidarity Fund seek to create direct channels of funding through to the community or people level (Indufor North America, 2023). Financial pledges have been made by governments and philanthropies to support securing tenure (Forest Tenure Pledge, Glasgow, COP26, 2021), and by multilateral funding mechanisms to provide dedicated funding for communities and Indigenous Peoples (GEF 2024, Cali Fund 2025). These are just a few among growing examples. However, the roll-out and implementation of such funds has been complicated and slow at times (Indufor North America, 2023; Sorsby et al., 2025). Further sharing experiences and building on successes can help ensure that such pledges and commitments can be implemented (Ford Foundation, 2023).

Revealing the punawai (spring) from above at the Hui Malama Loko l'a Gathering 2023 at Alekoko Loko l'a (fishpond) Kau'ai.

Credit: Scott Kanda
courtesy of KUA



Systemic issues

Historical legacies and systemic injustices

Barriers

The historical – and current – contexts of far too many protected areas include **unresolved conflict, evictions, and exclusions**, and other rights violations. Some of these injustices persist in current PA laws and policies, including the criminalisation of customary uses that are or could be compatible with conservation. In other cases, historical violations such as evictions have not been remedied, thus contributing to persistent land and resource conflicts. As long as these injustices and grievances go unresolved, it will be difficult to develop the collaborative, trust-based governance arrangements that are needed for PCAs to flourish.

Many protected areas also inherit, and continue to operate in, broader **systems of social discrimination and related injustices**, such as unrecognised land rights or systematic discrimination of Indigenous Peoples and of marginalised groups. Some of these issues stem from colonial policies, institutions, and mindsets. Racism and other forms of discrimination in PCAs and in conservation agencies and organisations undermine the transition to more inclusive and collaborative mindsets and approaches.

In recent decades, there has also been a notable **loss of civic space** in many countries, impacting civil society including movements and organizations of Indigenous Peoples, local communities, and their allies. Dissent can result in further discrimination or criminalization, and the risks faced by environment and land defenders are rapidly increasing. Extractive interests in land and resources threaten established protected areas as well as Indigenous and Traditional Territories, and public policies are too often swayed by powerful economic interests. Unchallenged, **extractive economic systems** put pressure on territories and local economies, while local notions of wellbeing and alternative, sustainable economies are not incorporated into development models.

Actions

There are growing initiatives to enhance access to information about conservation related injustices and pathways to redress. For example, the University of Arizona hosts databases on “[alleged violations](#) against Indigenous Peoples’ human rights in protected areas and natural parks” and related [recommendations](#) from UN bodies and regional courts. A [thematic map](#) within the Environmental Justice Atlas documents conservation conflicts in protected areas in India. Enhancing access to such information, through rights-based processes, is an action in itself, and can inform further action.

Some of the accountability mechanisms mentioned above (e.g. the Whakatane Mechanism) also have an explicit intention moving towards acknowledgement and at least partial **redress and conflict resolution** around legacy injustices associated with protected areas.

In Brazil, the PNGTAQ (National Policy for Quilombola Territorial and Environmental Management) includes the **explicit antiracist policy goal** to “stimulate the antiracist training of protected area managers and environmental and sanitary inspection agents” (Brazil, 2023).

Box 4. Mobilising to secure Indigenous forest rights in the Democratic Republic of Congo

Indigenous Batwa communities in the Democratic Republic of Congo, although displaced from lands now within Kahuzi Biega National Park, have mobilised to secure their rights over lands outside the park. In 2013, they registered their village forests as a Territory of Life. In the first Community Assembly they named it Kisi-Mbosa Chamakasa, Kisimbosa meaning the “fertile ancestral land” and Chamakasa “hands together”.

<https://report.territoriesoflife.org/territories/kisimbosa-drc/>

Contributor: Thierry Birindwa Mwenge, ANAPAC DRC

Shifting power relations

Barriers

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) warned that: “*Transformative change for a just and sustainable world is urgent, necessary and challenging, but possible, to halt and reverse biodiversity loss and safeguard life on Earth...*” (IPBES, 2019). They followed this warning with a multi-year assessment of determinants of transformative change (IPBES, 2024). Among the six approaches they identified to drive or enable transformative change are the “*agency and power assertion by currently marginalized groups in ways that transform power relationships.*”

A significant barrier identified in discussions during the workshops is the perceived or real lack of willingness by those in power and holding authority of different forms – be they governments, international conservation organisations or academic institutions – to **genuinely relinquish or share that power**. Their relationships with Indigenous Peoples and with local communities, even those with good intentions, can be marked by deeply entrenched power imbalances and socially-rooted discrimination. Truly recognising the rights, diverse knowledge, worldviews, and contributions of Indigenous Peoples and of local communities would entail letting go of some of this power and trusting their leadership and agency.

It is also crucial to retain responsibility and accountability. Ceding and sharing power does not mean duty-bearers abdicating their responsibilities to respect, protect, and fulfil rights, or to play fundamental roles such as upholding the rule of law. Further, governments, NGOs, and funders have responsibilities to share and use their power in new ways, such as shifting to allyship and bridging roles, with those role changes to be decided by and with rights-holders.

Actions

An apparent lack of evidence of effective conservation by Indigenous Peoples or local communities in a specific place or in a given ecosystem is often cited as a reason not to transfer power and authority. This challenge makes it all the more important to support communities in documenting more of their own stories of success in formats that are accessible to a range of audiences. Example initiatives include the [Territories of Life report](#) (ICCA Consortium, 2021), [global ICCA Registry](#), [national and regional ICCA Registries](#), and [Landmark](#).

Sharing power is also a challenge for powerful conservation actors, who may need to redefine their roles to include being allies and supporters of conservation efforts by Indigenous

Peoples and by local communities (see, e.g. [Future of Conservation NGOs Resource Library](#)).

Box 5. Overcoming fragmented coastal governance in West Kalimantan, Indonesia

In Kubu Raya, on the coast of Indonesian Borneo, bureaucratic complexities can limit the effectiveness of policies aimed at fostering local participation in natural resource management. Legal authority over the landscape is fragmented between multiple government agencies in ways that local communities often struggle to make sense of. To reassert local leadership, some communities have established their own governance bodies and formed an inter-village forum for coordination. While there are signs of ecosystem recovery already, navigating and negotiating with fragmented state structures places a heavy burden on local community members. NGO partners have stepped in with intensive support, but to sustain and scale up the progress made in Kubu Raya, greater investments are needed. The experience of these communities reveals that inviting community participation in natural resource management is not enough. Additional funding and actions are needed to provide local communities with the necessary skills, resources, and legal authority to (co-)develop and implement decisions about the ecosystems they depend on.

<https://www.planetindonesia.org/news/tag/Kubu+Raya>

Contributor: Planet Indonesia

Values and paradigms

Beyond – and as part of actions to address – the barriers above, there may be a need for deeper, fundamental shifts in the value systems and paradigms through which ‘conservation’ and the natural world are viewed.

Barriers

In 2022 the IPBES published an assessment on the diverse values of nature which came to the conclusion that “*the causes of the global biodiversity crisis and the opportunities to address them are tightly linked to the way in which nature is valued*” but that “*despite the diversity of nature’s values, most policymaking approaches have prioritised a narrow set of values (...) and have often **ignored values associated with indigenous peoples’ and local communities’ world views***” (IPBES, 2022). The later Transformative Change assessment elaborated by identifying “***relations of domination over nature and people, especially those that emerged and were propagated in colonial eras and that have persisted over time***” as one of the systemic barriers that impede transformative change (IPBES, 2024).

This is unfortunately true for the conservation sector as well. With an assumption of universality, questions of which aspects of “nature” are worth conserving, and how, are mostly defined by external actors. More fundamentally, the assumption underlying many protected area systems and their implementation is still that humans and nature need to be separated to protect the latter (Diegues, 1998). Alternative worldviews and paradigms that integrate human well-being, identity, and reciprocal care for the natural world are not sufficiently supported. Ironically, this same paradigm of separation has enabled the commodification of nature and the intensive exploitation of natural resources, resulting in biodiversity loss and further cultural erosion for impacted communities. The IPBES assessments and a growing body of literature call for shifts towards an approach of abundance and reciprocity, and an integration of humans within the natural systems we live in and can care for (Wall Kimmerer, 2013; Teixidor-Toneu, et al., 2025).

Actions

Initiatives aimed at advancing recognition and respect for Indigenous knowledge systems, and exploring their relationships to conventionally conceived western knowledge systems, include the IPBES [Indigenous and Local Knowledge dialogues](#) and UNESCO [LINKS programme](#). Within the conservation sector, examples of efforts to support such values and viewpoint shifts include IUCN CEESP-supported ‘[Reimagining Conservation](#)’ initiative and movement-based networks like the [ICCA Consortium](#).

Box 6. Struggles for recognition of Indigenous territory in Colombia, both in law and in practice

The El Itilla Indigenous Territory in the northwest Colombian Amazon has been included within a National Park at the request of the Indigenous community. However, it took years and great effort after this recognition on paper for this group’s way of life, practices, and leadership to be respected in practice. Eventually, park officials came to recognize their Indigenous knowledge system, and proposals have now been made to extend El Itilla to 105,000ha within the NP, a transformational move that may act as an inspiring precedent for other groups across Colombia.

<https://www.iccaregistry.org/en/explore/colombia/kamua-basera-resguardo-indigena-el-itilla>

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Fortifying the wall foundation at Hô'ai, Kaua'i at the Hui Malama Loko l'a Gathering 2023

Credit: Scott Kanda courtesy of KUA

Conclusion

Fundamental shifts in conservation paradigms – including within the organisational cultures of the government agencies and NGOs who control most conservation funds and programs – will hopefully grow from evidence and acknowledgement that Indigenous and local community leadership work for people and nature. Knowledge that such fundamental shifts are necessary need not stop more immediate and medium-term actions from being taken, such as increased participation, policy reforms, access to funding, and support for local conservation action, monitoring and reporting. However, it is important to expose and openly address issues such as power imbalances, discrimination, and the imposition of external values. Without these challenging but necessary conversations and responses, we run the risk of looking back in 2030 on another lost decade in the pursuit of more equitable and effective governance of protected and conserved areas.

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1.4

From reflection to change? Understanding, improving, and addressing impacts of conservation action

Conservation action has long been monitored to assess and improve its effectiveness. Today, there is also growing interest in assessing and finding pathways to improve conservation's governance and social impacts. But what does it mean for conservation action to be effective? Or to be equitable or just? How – and based on whose vision, approaches, and knowledge – does conservation get monitored or 'assessed'? This section begins to explore such questions.

Neil Dawson and co-authors invite us to reimagine conservation monitoring by *Highlighting efforts led by Indigenous Peoples and local communities to monitor conservation's social dimensions*. In *Reimagining conservation from the ground up*, Mercy Mbogho explores how site-level governance assessments of protected and conserved areas can help to advance rights-based conservation action, focusing on a case example in a Marine Protected Area. Emmanuel Nuesiri and co-authors reflect on how rights and governance issues can be better integrated into conservation planning, through *A gap analysis of governance and rights in ROAM guidance*. Together, these articles highlight progress, challenges, and open questions for assessment and monitoring of social and governance dimensions of conservation action. These include reflections on whether and how assessment can lead to change, as well as power relationships within (or governance of) assessment and monitoring processes themselves.

Finally, meaningful reimagination must include coming to terms with and taking accountability for the historical and ongoing foundations of colonialism and injustice on which far too much conservation action has been advanced. The continued call to action on this is found in, among many places, in the collective [Roadmap for Advancing Rights and Equity](#); it reflects the need for both “improved and responsive site-level grievance mechanisms to ensure rapid and effective response to problems as they arise” and “the longer-term need to address historical injustices in the establishment of some PCAs and the ongoing legacies of these exclusions”. International conservation law and policy increasingly recognize the responsibilities of conservation actors to adopt human rights-based approaches.

Chapter narrated by Jessica Campese, Aditi Bhardwaj, Kevin Chang, Swayamprabha Das, and Mahnaz Kadhem

However, upholding these commitments requires substantial transformation, which cannot be fully realized without addressing historical injustice and its legacies. Pathways towards more just conservation action are reflected, in varied ways, in each of the articles in this chapter, and throughout this Policy Matters issue. There are also evolving processes within IUCN, including exploring pathways towards a truth and reconciliation process (see, e.g. related papers from the 113th Council meeting).

Going forward, there is need for further and continued action, in terms of both scale (e.g. taking action in many contexts) and depth (e.g. shifting dominant narratives and values driving conservation action). The processes of transformation must also themselves be just, including respecting the leadership and guidance of Indigenous Peoples, local communities, environmental human rights defenders, and other rights-holders in decisions about how the impacts of conservation action (and inaction) are to be addressed.

Highlighting efforts led by Indigenous Peoples and local communities to monitor conservation's social dimensions

Neil Dawson^{a)}, Helen Suich^{b)}, Warren G. Lavey^{c)}, Juan Morea^{d)}, Malena Oliva^{e)} and Kamaljit K. Sangha^{f)}

The Global Biodiversity Framework (GBF) includes principles to pursue its targets through equitable conservation governance that respects rights. However, meaningful commitments to elevate the roles of Indigenous Peoples and local communities have been limited to date, and there is negligible monitoring of social impacts and governance associated with the Convention on Biological Diversity.

Global- or regional-scale monitoring of protected and conserved areas often focuses on management effectiveness from a Western scientific perspective, which relies heavily on ecological indicators, with little or no inclusion of Indigenous Peoples and local communities' values and the social challenges related to those areas. While tools are emerging to address the gap in coverage of governance, rights, justice, and equity, progress is slow. This means that even by 2030 – during a period of unprecedented expansion of conservation initiatives – there will be no adequate way to assess performance on rights and equity, an alarming and inexcusable situation.

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But, let us reimagine conservation monitoring for a moment: what if instead of waiting for international monitoring commitments, capacity, and data collection to catch up, we look to the social and governance monitoring that is already being done at grassroots level by Indigenous Peoples, local communities, and their civil society partners?

Locally-led monitoring activities are often referred to as potential 'alternative data sources' in policy discussions, which can complement the mainstream efforts. But what if they were viewed as the most appropriate form of monitoring to support learning, assess adherence to standards, and ensure social accountability?

In order to better understand what monitoring initiatives exist that are led by, or that partner with, Indigenous Peoples and local communities to capture the social dimensions of conservation, a global scoping exercise was commissioned by the Forest Peoples Program and the International Indigenous Forum on Biodiversity, and undertaken by an international team assembled through IUCN Commission on Environmental, Economic and Social Policy. The study sought to answer several questions:

- How much locally-grounded monitoring is already taking place, for what purposes, and using what methods?
- What can existing initiatives tell us about the types of information that should be collected?
- What could this information tell us about assessing conservation governance and

social performance at national, regional, or global scales for KM-GBF targets?

- What actions could be taken to expand the potential of Indigenous Peoples and local communities-led social monitoring?

Through consulting relevant networks and sharing a targeted online survey in English, Spanish, French and Portuguese, information about 87 initiatives was captured. Though not all initiatives were founded and led by Indigenous Peoples and local communities, they were all focused on representing the perspectives, rights, knowledge, and voices of IP&LCs. Rights, governance, equity, justice, wellbeing, livelihoods, and social, cultural, and economic impacts (and their subcomponents) were included in the broad definition of the social dimensions of conservation used.¹

The geographical distribution of the identified studies is shown in Table 1, and Figure 1 illustrates the gaps in the Middle East, North Africa, and Europe. It is unclear whether these gaps are a result of the research approach and the network and language bias, or if they represent real gaps in the existence of social monitoring initiatives.

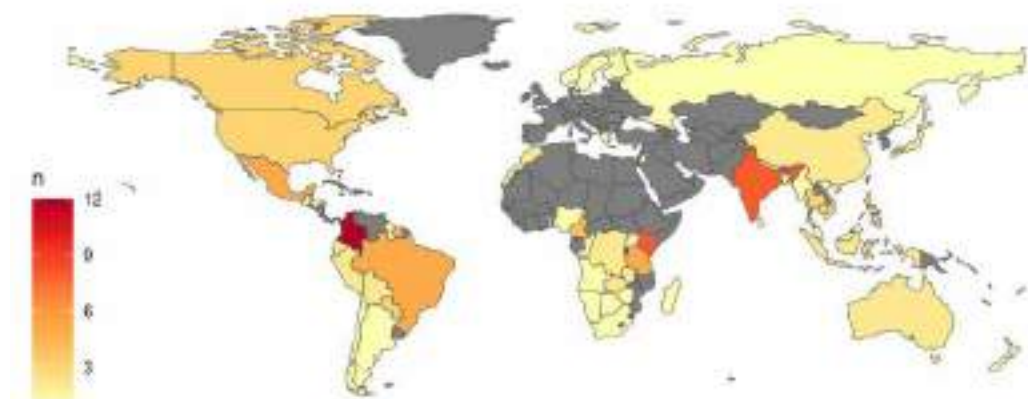
Table 1.

The distribution of social monitoring initiatives identified, by continent.

Continent	Responses	Countries
Africa	21	14
Asia	21	14
Europe	1	1
Latin America (including Mexico)	25	10
North America & Caribbean	4	3
Oceania	5	4
International initiatives	10	-
Total	87	46

Figure 1.

The distribution of monitoring initiatives by country (n = number of survey responses received per country, grey indicates no responses).



¹ All data presented in this paper are drawn from Dawson et al. (2025) 'Building from the ground up: opportunities to scale locally-led monitoring of the social impacts of conservation' <https://www.forestpeoples.org/publications-resources/briefing-papers/article/building-from-the-ground-up-opportunities-to-scale-locally-led-monitoring-of-the-social-impacts-of-conservation/>

The initiatives surveyed represented the whole spectrum of conservation governance types, not only community-led initiatives. 43% of the monitoring platforms or initiatives included conservation led by non-government organisations, 38% included those led by Indigenous Peoples and local communities, 33% included shared governance, 30% included government-led conservation, and 12% were privately led. Regarding scale, the majority (70%) worked at subnational-levels (of these, 75% of these worked at a scale below state or district level). In line with this, the main purposes of initiatives were overwhelmingly to improve site- or community-level governance and management (73%), and also to sensitize external organisations and inform planning processes (72%). Other main purposes included national-level advocacy and legal action (38%) as well as cross-community learning (31%).

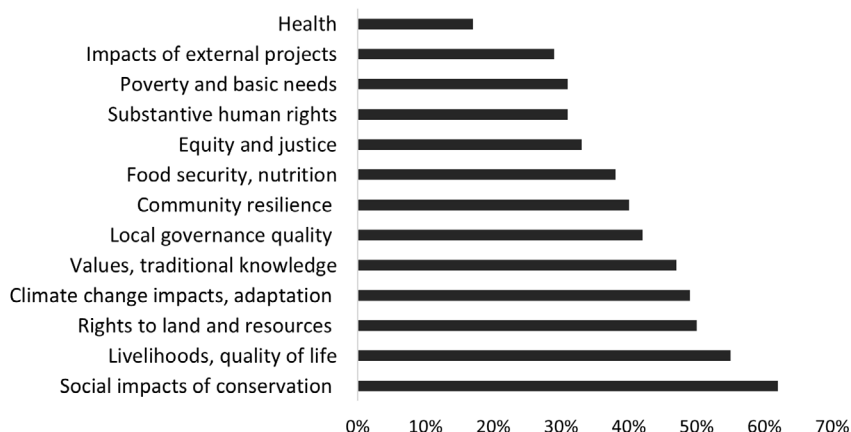
The monitoring initiatives were found to have considerable experience, with around 50% having operated for 10 years or more. There was also extensive networking: more than half (54%) were connected to wider monitoring networks to amplify the use of their data (e.g. a national network for community forestry or a network of communities living within the same ecosystem).

The categories of social data collected (Figure 2) suggest strong potential for some comparability and perhaps collation over larger scales. Most initiatives (70%) collect this data at least annually, the analysis of which would enable the detection of change relatively quickly.

Figure 2.

Categories of social monitoring data collected by initiatives (%).

NB: some initiatives covered multiple categories.



Among the 87 initiatives, the community is generally the primary level of interest (86% of initiatives) but some initiatives also collected disaggregated data on gender (72%), youth (59%), ethnicity (46%), the elderly (42%), people identified as vulnerable (35%), socioeconomic groups (30%), and people with disabilities (16%). This type of disaggregated data is of relevance to the KM-GBF targets, and can build a fine-scale social understanding related to the participation of disadvantaged groups (e.g. women) in governance and the distribution of social and other benefits from conservation actions. It can also help to determine whether these distributions are just.

Numerous challenges were faced by the managers of these initiatives, including political barriers imposed by government, levels of trust with the communities providing data, and the difficulties of bridging Indigenous and Western scientific knowledge systems. However, the key challenge faced by 65% of initiatives was securing continuing funding.

Reimagining conservation

This scoping exercise demonstrates that community-led monitoring efforts of social impacts and governance are highly relevant to the KM-GBF, particularly as useful sources to fill glaring data gaps for the assessing progress towards targets. The data collected by initiatives like those identified can measure social outcomes, particularly relating to well-being enhancement; equitable governance; Free, Prior and Informed Consent; participation; traditional knowledge; and land tenure security—issues that have largely been overlooked in monitoring to date.

Though there are significant challenges with data comparability, locally-led initiatives already play a valuable role in complementing and enriching the understanding of the impacts, processes, and results of conservation actions. Strengthening and scaling up these efforts would be a means of enhancing inclusion and accountability in conservation globally. Further, evidence of positive social and economic impacts may be necessary to gain political and financial support for recognising and continuing certain conservation efforts, or for reducing support for those generating negative impacts or with poor governance.

The lack of secure funding for Indigenous Peoples and local communities-led monitoring initiatives negatively impacts their continuity. Funding locally-led monitoring should be integral to more conservation initiatives. More direct funding to Indigenous Peoples and local communities and their organizations could facilitate the sharing of lessons, enhance consistency, and help develop structures and improve capacities to collate information at relevant national, international, or regional scales. Only through concrete support can these locally-rooted monitoring systems transform into central components of the global biodiversity monitoring architecture, ultimately bridging the persistent divide between international frameworks based on Western science and on-the-ground social realities.

Despite lacking secure financial support, the existence of the monitoring initiatives identified shows that Indigenous Peoples and local communities-led monitoring of conservation and its social impacts is possible and indeed already happening. By incorporating Indigenous knowledge systems, local governance structures, and ground-level perspectives, community-driven initiatives offer a vital counterbalance to top-down, Western scientific approaches. This scoping exercise provides valuable insights about how to direct conservation towards more equitable and just paths.

Networks of Indigenous Peoples and local communities representative organisations could harness data from these and other, similar, monitoring initiatives to produce substantiated qualitative assessments of experiences and trajectories related to social impacts, rights, and equitable governance arising from different types of conservation initiatives being implemented in a country or region. These data-sharing networks could allow a meaningful assessment of performance and progress annually, biannually, or in 2030 at a minimum. Appropriate monitoring is essential to drive the necessary progress towards both socially equitable and ecologically effective conservation.

Reimagining conservation from the ground up: The role of site-level governance assessment in advancing rights-based and equitable conservation at Watamu Marine, Kenya

Mercy Mbogho^{a)}

Importance of governance for equitable and effective conservation

The Kunming-Montreal Global Biodiversity Framework (KM-GBF), adopted in 2022, establishes an ambitious and urgent global vision to halt and reverse biodiversity loss by 2030. KM-GBF Target 3 commits countries to conserve 30% of land and waters through “*ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories*” (CBD, 2022). As global biodiversity loss and climate crises deepen, there is a growing call to shift conservation toward more equitable, inclusive, and community-centred governance, in recognition that this is essential for sustainability.

Governance is about how and by who decisions are made, including who holds and shares power and responsibilities (Graham et al., 2003), e.g. in developing overall conservation objectives and distributing benefits and costs. It is a key factor that helps determine social equity, effectiveness, and sustainable use of natural resources. This includes whether the rights and roles of Indigenous Peoples and of local communities in area-based conservation are recognized and respected, including in relation to their land and resources, and participation in decision making. Good governance provides a sense of dignity and belonging and guides against risks of negative social and conservation impacts on local communities. (e.g. Borrini-Feyerabend et al., 2013; Dawson et al., 2023)

Site-level assessments as an approach to understand and improve governance

Given the importance of governance, what are ways that it can be understood and improved? Governance assessments are one approach to this (e.g. Borrini-Feyerabend, 2013; Campese & Sulle, 2019; Franks, 2023). The KM-GBF monitoring framework now includes an indicator to report the number of protected and conserved areas assessed for equitable governance. Including such governance indicators in global monitoring can potentially enhance transparency and drive continuous improvement.

Convention of Biological Diversity (CBD) guidance has recognized three key dimensions of equity in area-based conservation: recognition, procedure, and distribution. Recognition is about acknowledging and respecting all actors and their rights, identities, knowledge, values, and institutions. Procedure involves inclusive rule, decision-making, access to information

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and justice, grievance redress, and accountability. Distribution is about equitable sharing of costs/burdens and benefits among relevant actors. (CBD, 2018)

Site-level governance assessments – i.e. assessments focused on governance in a specific protected or conserved area – can help ground these dimensions of equity, and related governance principles e.g. by revealing governance-related drivers of conflict, exclusion, or inequity; supporting recognition of customary tenure and Indigenous knowledge; guiding adaptive management based on local realities; and strengthening community trust and engagement in conservation (e.g. Borrini-Feyerabend et al., 2013; Campese & Sulle, 2019; Franks, 2023). Today there are a variety of processes, methods, and tools that enable multi-stakeholder self-assessment (or co-assessment) of governance and equity of protected and conserved areas. These include the Site Level Assessment of Governance and Equity (SAGE) (Franks, 2023), described in more detail in Box 1 and the case study below, and other frameworks and methodologies (e.g. Borrini-Feyerabend et al., 2013; IUCN and WCPA, 2016; MJUMITA & TFCG, 2014; Springer et al., 2021; Wilkie et al., 2015).

Box 1. SAGE overview

The SAGE tool is a participatory, facilitator supported governance assessment tool designed to support improvements in governance and equity in PCAs by engaging diverse stakeholders through a structured self-assessment process, especially emphasizing the involvement of Indigenous Peoples and local communities. It evaluates the quality of governance in terms of eight governance principles - classified under recognition, procedure, and distribution - through a standardised scoring system from 0 to 3, fostering participation and planning actionable solutions.

For further information on SAGE, visit: <https://www.iied.org/site-level-assessment-governance-equity-sage>

Such approaches can help different actors collectively identify gaps, what is working, and what is not working about governance in their context in a cohesive, open, and transparent manner. There is growing evidence that, *if these processes are well designed*, the opinions of different actors can be voiced, shared across groups, and respected. The different actors involved can then identify actions to improve the situation through consensus in cases where there are significant differences in views. Site-level assessment can also provide a platform for an evidence-based development approach for partners to invest in targeted interventions that advance community-led conservation efforts to reduce biodiversity loss and adapt to the effects of climate change, which in the long run contribute positively to a sustainable respect for rights, human well-being, and nature. (Based on author's personal experience; see also, e.g. Campese & Sulle, 2019; Franks, 2023; Pinto & Dehmel, 2023) Investing in governance assessments can thus facilitate and advance equitable governance of PCAs, and help to successfully deliver on Target 3. The main obstacle is the lack of adequate funding required to carry out the suggested priority actions for enhancing the governance and management of the PCAs.

Integrating site-level governance assessments into conservation strategies offers a grounded, participatory pathway to advance equitable and rights-based conservation. By embedding these tools into policy and practice – and recognizing their value for advancing global biodiversity commitments – community members, decision-makers, and all actors can better ensure that conservation efforts are ecologically sound and socially just. For policymakers and practitioners alike, the future of conservation lies in understanding and strengthening governance where it matters most – at the site level. The collaborative nature of the SAGE platform can enhance dispute resolution processes, preventing them from escalating into

serious conflicts and involving all stakeholders effectively.

Case study: Advancing governance and equity using the SAGE framework in the Watamu Marine Protected Area (WMPA), Kenya

Nestled in the heart of Kilifi North Sub-County, Kenya, the Watamu Marine Protected Area (WMPA) stands out as a beacon of hope and progress in conservation, recognized as Africa's first marine protected area and the third global biosphere reserve by UNESCO. The management of the WMPA, under the Kenya Wildlife Service (KWS), has been noted as a model for integrating community-centred conservation approaches in government-governed protected areas (Majalia et al., 2021). It was also the first site in Kenya to apply the SAGE framework in the category of a government-governed marine protected area and national park, setting a precedent and paving the way for community engagement and the advancement of equitable governance in conservation of complex coastal ecosystems.

The significance of WMPA

The WMPA encompasses diverse marine ecosystems, including coral reefs, mangroves, and fish habitats, which are essential for biodiversity and the livelihoods of local communities. However, poaching, unsustainable fishing practices (Sluka et al., 2012), and tourism have placed immense pressure on these resources (Harker et al., 2022), highlighting the urgent need for effective and sustainable governance and management strategies.

Aligning the WMPA with the targets of the KM-GBF

WMPA plays a critical role in marine conservation, which is essential for achieving the goals of the KM-GBF. This includes halting and reversing biodiversity loss, as well as safeguarding and ensuring the sustainable use of biodiversity to support marine ecosystems and the well-being of communities that rely on these ecosystems for their livelihoods and as attractions for tourism. The SAGE tool has proven effective in assessing and identifying solutions to governance deficiencies. It provides a structured approach to promote inclusive, rights-based conservation that aligns with the objectives of the KM-GBF, thereby enhancing the resilience and sustainability of the area (Pinto & Dehmel, 2023). Additionally, the monitoring framework for the KM-GBF Indicator 3.1 (CBD, 2022b) includes site-level governance assessment as one of its component indicators.

WMPA SAGE implementation

The implementation of SAGE at WMPA was carried out in a multi-phased manner, as detailed below:

Preparation and Stakeholder Engagement: The Kenya Wildlife Service engaged a diverse group of rights-holders and stakeholders, including local communities, conservation NGOs, tourism operators, and government agencies. They organized community meetings and multi-stakeholder workshops to introduce and involve participants in the SAGE process. This inclusive approach ensured that a variety of voices contributed to shaping the governance dialogue from the very beginning.

Governance Assessment: Participants collaboratively evaluated the current governance practices using the SAGE questionnaire. This exercise encouraged reflection on important issues, including fairness in resource access, clarity of rules, and participation in decision-making processes. The assessment uncovered gaps in benefit-sharing, user rights, and

internal governance, which have hindered community-led conservation efforts.

Action Planning: More than 70 interventions were proposed and grouped into six key themes: Collaboration, Protected Area Management, Benefit-Sharing, User Rights and Compliance, Internal Governance, and Concessions. These key themes provided a clear roadmap for adaptive governance and conservation.

Results and contributions to Global Biodiversity Framework targets

The SAGE contributes to Target 3 on equitable governance, Target 22 on participation in decision-making and access to justice, and to some extent, Target 3 on gender equality and responsiveness for biodiversity action.

The following conclusions are drawn from practical experiences during the assessment process, as well as focus group discussions with community, state, and non-state actors.

Strengthened Local Participation: The SAGE process highlighted traditional ecological knowledge, enhancing community ownership and participatory decision-making structures.

Institutional Strengthening: By fostering dialogue and transparency, SAGE improved inter-agency coordination and strengthened partnerships among communities, the Kenya Wildlife Service (KWS), and devolved governance structures. SAGE created an open platform where stakeholders could understand their roles in the governance and management of WMPA, helping to clarify any conflicting roles. A crucial step toward institutional strengthening is ensuring clarity in understanding the policy and regulatory frameworks for the respective protected or conserved area (PCAs). The SAGE assessment identified conflicting policies from various agencies and recommended appropriate measures for an inclusive review process.

Revised Management Plan (Target 3): The findings from the SAGE project informed the revision of the WMPA Management Plan for 2016-2026. This revision aligns with emerging conservation needs, community aspirations, Kenya's national blue economy goals, and international commitments under the Convention on Biological Diversity (CBD). As a result, it advances actionable plans relevant to policy development.

Improved Equity and Benefit-Sharing is associated with Target 15 of the Global Biodiversity Framework. This target focuses on ensuring the fair and equitable sharing of benefits arising from the utilisation of genetic resources and encourages the involvement of indigenous peoples and local communities in biodiversity conservation and sustainable use. Understanding how current conservation policies impact benefit-sharing and the management of protected and conserved areas is essential for creating effective mechanisms that achieve both conservation goals and ethical outcomes for communities. To enhance benefits and reduce burdens for local communities – addressing contextual barriers that can hinder social equity (Bennett et al., 2021) – WMPA managers have implemented a Community Partnership & Conservation Education Programme. This programme emphasizes empowering women and youth, supports sustainable livelihoods, and ensures fair resource distribution. The integration of a mechanism for the equitable distribution and sharing of tourism and marine resource benefits into the WMPA's management plan (2016-2026), which is currently under review, aims to align conservation incentives with community welfare and broader conservation objectives.

Addressing systemic barriers

WMPA is a significant tourist attraction in Kenya. Addressing systemic barriers is crucial

WMPA actors prioritise thematic priorities.

Credit:Chemi Chemi Organization



for promoting social equity (Bennett et al., 2021) as it fosters respect and dignity for diverse stakeholders, encourages equitable governance, and ensures a fair distribution of responsibilities in community-led conservation initiatives.

Some of the systemic barriers discussed during the governance assessment include historical injustices, socio-cultural rights issues, economic and political disparities, unequal wealth distribution, limited capabilities, and prevailing social norms. These barriers have, to some extent, hindered the local community's ability to gain recognition, participate in decision-making, and benefit equitably from conservation efforts.

SAGE identified several challenges that hinder conservation efforts, including limited funding, weak institutional capacity, policy barriers, a lack of a benefit-sharing mechanism, conflicts of interest between conservation goals and local livelihoods, and external pressures from climate change and tourism (Majalia et al., 2021). These factors undermine the achievement of conservation objectives and threaten the long-term sustainability of community-led initiatives (Sele & Mukundi, 2024).

Reflections from the SAGE Process: Evaluating successes and challenges

Time constraints

The WMPA initiative involved a complex SAGE process that included key stakeholders from nine different groups, such as the National Government, County Governments, NGOs, the private sector, conservation organizations, and Beach Management Units (BMUs). The process began with a planning meeting facilitated by the Kenya Wildlife Service (KWS) on September 10, 2024, and concluded with an assessment on September 27, 2024.

To address time constraints, the lead facilitator emphasized the importance of transparency and commitment – values clearly demonstrated by all participants, particularly the stakeholders. Their dedication to attending meetings, discussing next steps, and assigning responsibilities greatly improved communication and overall progress. The stakeholders' strong motivation for the WMPA SAGE was evident as they volunteered additional hours, viewing the assessment as a crucial process.

The stakeholders evaluated the following eight principles of governance, each of which plays a vital role in the WMPA SAGE:

1. Respect for the resource and human rights of community members
2. Respect for all relevant actors and their knowledge, values, and institutions
3. Effective participation of all relevant actors in decision-making
4. Transparency, information sharing, and accountability for actions and inactions
5. Access to justice, including effective dispute resolution processes
6. Effective mitigation of negative impacts on community members
7. Equitable sharing of benefits among relevant actors
8. Effective coordination and collaboration between actors, sectors, and levels

Table 1 shows time spent by the actor group to assess the eight principles.

The table highlights the significance of dedicating enough time for preliminary preparations, particularly for coordination, before starting the SAGE process. That preparation ensures that all participants are adequately informed and invested in the upcoming SAGE assessment. If possible, organizing a site visit should also be considered, keeping in mind the specific context and the diverse range of stakeholders at the site level.

Table 1.

Time spent by the actor group to assess the eight principles of governance.

Actor group	Time covered to cover 8 principles
1. Private Sector	2.5 hrs
2. NGOs/CSOs	4.5 hrs
3. County Government	5 hrs
4. BMU Youth	3 hrs
5. National Government	4 hrs
6. BMU men	3.5 hrs
7. BMU Executive	4.5 hrs
8. Conservation Groups	3.5 hrs
9. BMU Women	3.5 hrs

Governance quality results

The chart in Figure 1 shows a summary of governance quality results from the SAGE assessment process. A score of three would indicate that governance quality is excellent from the perspective of the participating group or groups, and a score of one would indicate governance quality is poor, from their perspective. It is crucial to know whose perspectives are reflected, however. Figure 1 is an aggregate summary, combining the ‘scores’ given by all the different groups who participated. This figure is shared to provide an example of how scoring is done, while respecting anonymity and data governance. In practice, participants in the SAGE process worked in distinct groups (e.g. women from the community, men from the community, government officials, conservation NGO staff, etc.). Each group generated their own set of scores (and their reasons for that scoring). This is crucial because the scores across different groups may be quite different. The main importance of the scoring in SAGE is that it stimulates discussion on the concerns of actor groups that have a less positive opinion and ideas for actions that could address these concerns and so, over time, improve governance quality and equity from their perspective.

Understanding the diversity of actor groups with distinct comprehension levels

The varying levels of understanding among community groups necessitated tailored communication strategies. Utilizing the local language for interpretation and translation proved highly effective, as it conveyed messages in a manner that resonated with participants and enhanced comprehension.

The collective respect for diverse perspectives and active engagement, along with the effective use of the SAGE tool, played a crucial role in addressing underlying conflicts and contentious issues during plenary sessions. The success of the SAGE in uniting all stakeholders fostered confidence and created a valuable, enlightening experience for everyone involved.

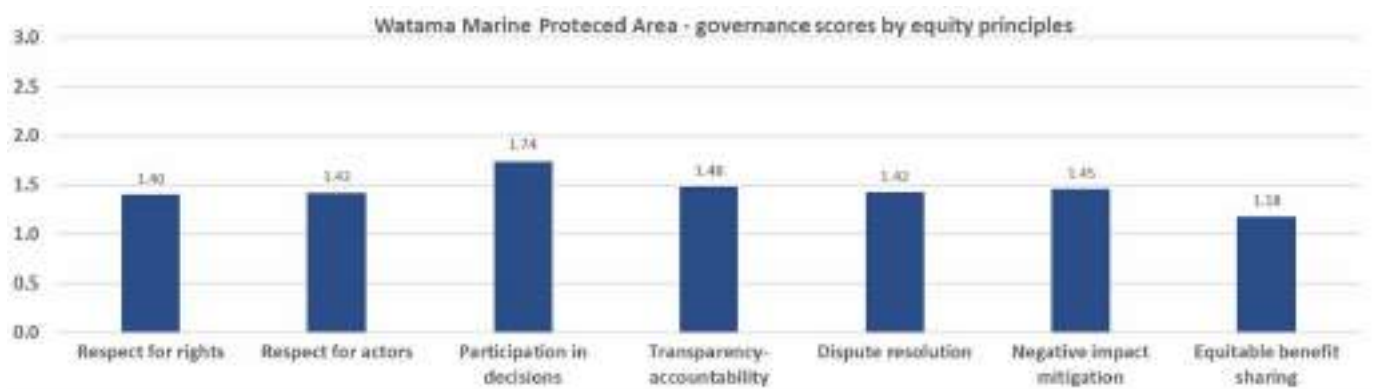


Figure 1.

Summary of governance quality results.

Credit: Phil Franks, IIED

Insights and perspectives from stakeholders

The SAGE process was widely praised by participants, who acknowledged its importance and value for the WMPA. Interviewees highlighted its inclusivity in terms of participation and representation, calling it a significant achievement of 2024 and a crucial step towards enhancing governance and equity within the WMPA. Many participants noted that the process was well-coordinated and informative, effectively bringing stakeholders together to foster a shared understanding of the challenges facing the WMPA.

Most respondents stressed the importance of integrating gender considerations and ensuring the inclusion of people with disabilities (PWDs). Time constraints were also identified as a

significant concern; future SAGE assessments should allocate adequate time for meetings at different levels, involving various stakeholder groups. This approach would promote clarity and inclusivity while addressing language barriers and varying levels of comprehension, especially for complex topics that require diverse perspectives.

There are also recommendations to improve the SAGE tool to facilitate discussions aimed at resolving contentious issues. This enhancement is vital for maintaining the effectiveness and productivity of the SAGE process.

Insights and recommendations for an improved data analysis tool

Due to the complexity of the WMPA SAGE process, the lead facilitator, in collaboration with the International Institute for Environment and Development (IIED), customized the data analysis tool to include nine actor groups instead of the originally proposed seven. This decision was made collectively to acknowledge the diverse interests of the various actor groups involved. The assessment used a decentralized approach to enable easier management of these diverse groups, ensuring that everyone's needs and perspectives were taken into account.

Insights and lessons learned from the WMPA SAGE process

The WMPA SAGE process has been described by many stakeholders as a significant eye-opener, highlighting the urgent need for a site-level multistakeholder forum once established, the proposed forum would facilitate collaborative planning and monitoring, promote inclusive governance, and enhance cooperative efforts in conservation, thereby contributing to the broader goals of the WMPA.

Additionally, the SAGE process has greatly improved continued stakeholder engagement, accountability, and clarity regarding the roles and responsibilities of each stakeholder in the governance and management of the WMPA during and after the process. This enhancement, driven by active stakeholder participation, has played a crucial role in the overall success of the initiative.

The senior management team of the Watamu Marine National Park and Reserve, along with representatives from NGOs, government agencies, and local communities, recommended implementing the SAGE process in other government-managed marine parks and protected areas.

The results of the SAGE process and the prioritisation of actions have informed the integration of these priorities into the KWS Watamu Marine Park Management Plan for the next ten years. This strategy ensures that the actions taken are sustainable and emphasizes the importance of the SAGE process in enhancing governance and equity within the Watamu Marine Protected Area.

The importance of governance assessments in supporting community-led conservation

Governance assessments can play a crucial role in enhancing community engagement in conservation efforts. By evaluating governance structures and processes, these assessments can help identify strengths and weaknesses in community management. This information is vital for empowering local stakeholders, fostering collaboration, and ensuring sustainable conservation practices. Ultimately, effective governance is essential for the success of community-led initiatives aimed at preserving natural resources and promoting biodiversity.

WMPA's use of SAGE has shown that structured, participatory governance assessments can be powerful drivers for stronger community engagement in conservation. SAGE empowered local communities, especially Indigenous groups, women, youth, and Beach Management Units (BMUs), by recognizing them as essential stakeholders in governance rather than recipients of community outreach programmes. When communities identify challenges and collaboratively design solutions, they become co-owners of conservation outcomes. The SAGE process established organized spaces for open reflection, consensus-building, and collaboration, serving as a foundation to foster trust between communities and formal management authorities, which is essential for long-term conservation success and peaceful conflict resolution.

Unequal access to resources and decision-making poses a significant barrier to effective conservation efforts. The SAGE process revealed that conservation initiatives lacking clear benefit-sharing mechanisms and secure user rights often encounter resistance or non-compliance. Improvements in governance, sparked by the SAGE process, have led to the establishment of a Community Partnership and Conservation Education Program. This program effectively integrates livelihoods and local knowledge into the WMPA Management Plan, while also advancing equitable governance and thus contributing to Global Biodiversity Framework (GBF) Target 3.

The communities in Watamu possess generations of ecological knowledge regarding fish behaviour, reef health, and mangrove cycles – insights that are often overlooked by conventional scientific assessments. SAGE has helped to establish a process through which this knowledge is being incorporated into governance decisions.

Assessment-driven action enhances accountability. Unlike many top-down assessments, SAGE emphasizes participatory and action-oriented processes. By identifying over 70 community-prioritised actions to improve governance, this structured assessment has helped translate community voices into institutional reforms. This approach goes beyond tokenistic engagement and fosters fundamental governance transformation.

Governance assessments can also unlock political and financial support. High-quality, participatory governance assessments provide evidence for development partners, donors, and governments to act upon. At WMPA, the SAGE process has already informed revisions to the marine park's 10-year management plan and sparked interest in scaling this model across other marine and terrestrial protected areas in Kenya. This highlights how governance tools can stimulate political commitment and draw in resources for locally-driven financing projects, providing an encouraging perspective for the future of conservation initiatives.

Transitioning from assessments to implementation

To effectively scale initiatives with purpose, it's important to translate the SAGE Assessment into actionable steps at the local level. This process begins by recognizing the vital role of stakeholders in integrating their priority actions into implementation plans. By embedding these priority thematic areas into management plans within their respective governance structures, we can better inform policy reforms and secure funding to enhance the governance and management of the WMPA.

Policymakers and practitioners can draw inspiration from the [Nanyuki Roadmap](#) to implement crucial actions that translate the SAGE assessment into practice. This roadmap highlights the importance of collaboration and participation, providing opportunities to enhance the recognition of rights and promote equity in area-based conservation. It identifies 11 key action areas that are critical and urgent for generating momentum across different contexts

and models, particularly in relation to Target 3 and related Targets 22 and 23 of the Kunming-Montreal Global Biodiversity Framework.

Conclusion

Governance assessments such as SAGE provide tools, evidence, and practical pathways to align conservation with community well-being, national policy, and national and global biodiversity conservation goals.

The WMPA case study illustrates how participatory governance assessments, such as SAGE, can help countries implement KM-GBF targets through inclusive, accountable, and equitable conservation efforts. By promoting governance, equity, and learning together during the assessment process, WMPA has demonstrated how local stewardship and shared decision-making can be enhanced. This approach can not only support ecological resilience and community well-being but can also help ensure the long-term effectiveness of conservation efforts, providing reassurance and confidence in the sustainability of the initiative.

To achieve commitments under the KM-GBF, it is essential to adopt strategies that are localized, driven by rights-holders and stakeholders, and supported by political will, adequate funding, and favourable policy environments.

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A gap analysis of governance and rights in ROAM guidance using the IUCN CEESP Natural Resource Governance Framework

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Introduction

As global ecological degradation intensifies, restoration has emerged as a strategic priority. Sixty-one countries have pledged to restore 210 million hectares of degraded land under initiatives like the Bonn Challenge. Recognizing the importance of this, the UN declared 2021-2030 the Decade on Ecosystem Restoration.

However, ecological restoration efforts risk failure – and may lead to or exacerbate human rights concerns – if rights-based governance is not meaningfully integrated (Walters et al., 2021; Mansourian, 2017). Graham et al. (2003) define natural resource governance (NRG) as the norms, institutions and processes that determine who exercises power and responsibilities over natural resources, how decisions are taken, and how people participate in and benefit from the management of natural resources. In simple terms, then, governance can be understood as how and by whom decisions are made, including the power relationships involved. NRG is a fundamental factor in whether conservation processes and outcomes are effective and equitable (Greiber et al., 2009; Bennett et al., 2019; Borrini-Feyerabend et al., 2021; Springer et al., 2021), including restoration (Mansourian, 2016; Brown & Pudyatmoko, 2022). Restoration, being a social process, requires decision-making processes that are participatory, just, and equitable (Adams et al., 2016).

Despite growing literature on forest and landscape governance (Agrawal et al., 2008; Ribot, 2016; van Oosten et al., 2014), restoration governance remains understudied (Guariguata & Brancalion, 2014; Erbaugh et al., 2020). This includes exploration of how restoration planning processes are governed, or how and by whom decisions are made about where, through what approaches, and with whose knowledge and ways of knowing restoration should take place.

Landscape restoration planning can be seen, in a sense, as *imagining* what a restored landscape would look like, and what needs to happen to get there. Here, we explore whether such processes can be *reimagined* by ensuring that governance and rights are considered in the planning itself and in the vision for a restored landscape that emerges. Specifically, this study analyses strengths and gaps in how key governance factors are incorporated in the content and application of the Restoration Opportunities Assessment Methodology (ROAM) framework (IUCN & WRI, 2014). ROAM is a widely used framework designed to guide large-scale ecological restoration planning. This paper examines the content of key ROAM guidance documents as well as their in-practice application in Colombia, Indonesia, Malawi, and Rwanda, to reflect on whether and how rights-based governance is addressed (and

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could be enhanced) in restoration planning approaches that are facilitated using ROAM. This gap analysis was done using the rights-based IUCN CEESP Natural Resource Governance Framework (NRGF).

Rights-based restoration

A rights-based approach “involves actively seeking to avoid negative human rights impacts, provide remedy for harm, and enhance positive human rights outcomes as much as possible. It requires addressing power relationships, and taking action with rightsholders as leaders and equal partners” (HRBWG et al., 2024:3). Rights-based natural resource governance seeks to incorporate and advance this approach in decision-making, including through centring fairness, inclusion, and empowerment for rightsholders, including marginalized communities (Cornwall & Nyamu-Musembi, 2004; UNEP, 2022). The importance of a rights-based approach (RBA) has long been acknowledged and called for in biodiversity conservation initiatives (e.g. Campese, 2009; CEESP, 2007, 2010; IUCN, 2003; Springer et al., 2011). However, recent international environmental law and policy decisions mark a sea change in global recognition of an RBA as essential for equity and effectiveness in conservation, including in relation to the rights and roles of Indigenous Peoples and of local communities. In particular, the Kunming-Montreal Global Biodiversity Framework calls on Parties to the Convention on Biological Diversity to implement the Framework – including Target 2 (on restoration) – through a human rights based approach (HRBA) (CBD, 2022, Sec. C). The EU Biodiversity Strategy also commits to an RBA (EU, 2021), and the 2024 nexus assessment promotes ensuring rights and equity, including through an RBA, as a key way to advance sustainability (IPBES, 2024).

An RBA is crucial in restoration, as it is in NRG and conservation more generally. Failures in ecological restoration, such as the displacement of 150,000 people in Uganda’s Mount Elgon project (Cavanagh & Benjaminsen, 2014), highlight the need for more equitable governance. Conversely, inclusive and culturally sensitive projects like Tanzania’s Shinyanga initiative (Barrow, 2014) demonstrate that success hinges on respecting local rights, knowledge, and participation.

Relevance of the Restoration Opportunities Assessment Methodology (ROAM)

As stated earlier, this study analyses governance gaps in ROAM guidance and in-practice application. As a framework designed to guide large-scale ecological restoration planning, it is important to understand whether and how ROAM content and applications incorporate governance and rights considerations. Fleischman et al. (2022) have observed and criticized global restoration prioritisation that excludes local voices. ROAM’s application can also constrain local voices and participation of vulnerable local groups. For example, Singh et al. (2021) show how intersecting identities, like caste and gender, shaped power and participation in India’s ROAM process.

Using the NRGF as a framework to explore inclusion of governance factors in ROAM

The IUCN CEESP NRGF (Springer et al., 2021) can help to operationalize an RBA through 10 governance principles derived from a human rights and rights of nature value system. Each principle is operationalized through a number of associated criteria. The framework also identifies four interrelated intended outcomes, as shown in Figure 1 and Table 1 below. The NRGF is a framework with which to reflect on, assess, improve, and embed governance in conservation actions.

The rights-based values are the foundation for the governance principles shown in Figure 1 and described further in Table 1. Each principle has multiple corresponding criteria to support reflection and assessment in relation to that principle (see Springer et al., 2021).

Gap analysis reveals the disconnection between a standard or guide and its practical application (Greenway et al., 2019) and is used to improve performance and processes in line with agreed standards and/or guidelines (Goupil et al., 2022). In this context, the NRGF is the rights-based governance framework used in this study to assess how governance factors are integrated in ROAM. Results from this study were initially published in a detailed research report by Campese et al. (2022). This gap analysis assesses the consideration of rights-based governance in ROAM guidance and its application in Colombia, Indonesia, Malawi, and Rwanda. The study employed literature review, document analysis, and interviews with key informants from each country.

Figure 1.

The IUCN CEESP rights-based natural resource governance framework.

Source: Adapted from Springer et al. (2021).

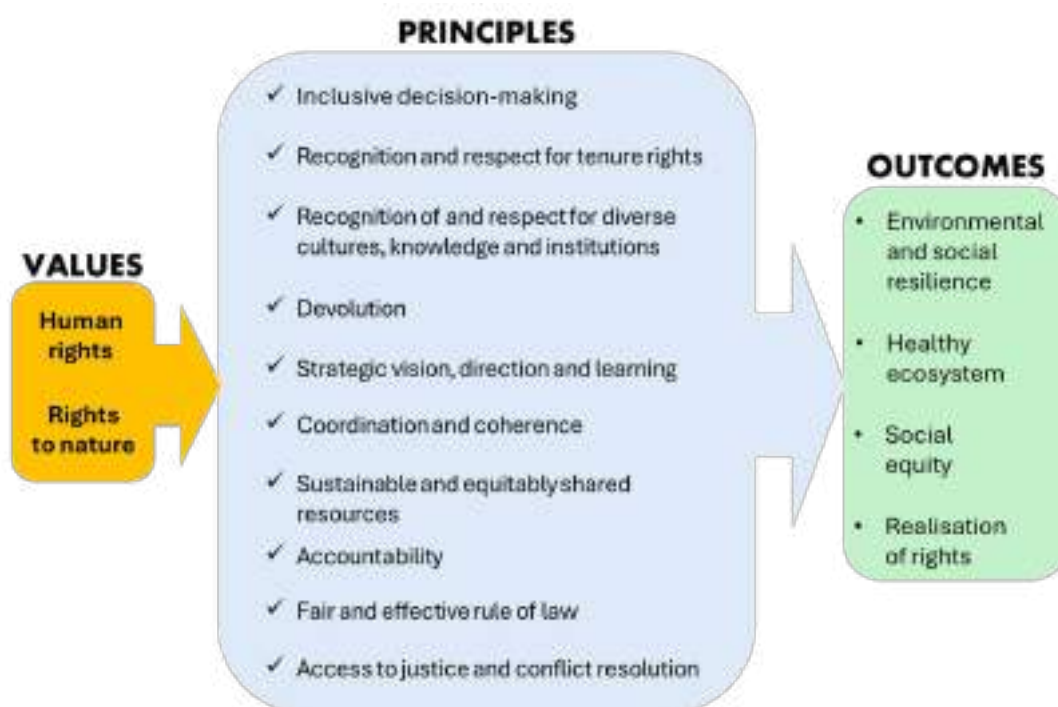


Table 1.

The NRGF rights-based governance principles

Principles	Description
Principle 1	Inclusive decision-making - Decision-making regarding natural resource policies and practices is based on the full and effective participation of all relevant actors, with particular attention to the voice and inclusion of rights-holders and groups at risk of marginalisation
Principle 2	Recognition and respect for tenure rights - Rights to lands, resources and waters are recognised and respected, with particular attention to the customary, collective rights of Indigenous Peoples and local communities, and to women's tenure rights
Principle 3	Recognition of and respect for diverse cultures, knowledge, and institutions - Natural resource governance is grounded in sound and diverse forms of knowledge and respect for diverse cultures, values, and practices
Principle 4	Devolution - Decisions are taken at the lowest possible level appropriate to the social and ecological systems being governed, with particular attention to empowering the roles and authority of Indigenous Peoples and local communities in natural resource governance
Principle 5	Strategic vision, direction, and learning - Natural resource governance is guided by an overall vision of desired environmental and social outcomes, and allows for adaptation in response to learning and changing conditions
Principle 6	Coordination and coherence - Actors involved in or affecting natural resource governance coordinate around a coherent set of strategies and management practices
Principle 7	Sustainable and equitably shared resources - Actors responsible for natural resources have the means necessary to carry out sustainable management and governance activities, including from the equitable sharing of benefits generated from natural resources
Principle 8	Accountability - Actors responsible for or affecting natural resource governance are accountable for their actions and the environmental and social impacts they produce
Principle 9	Fair and effective rule of law - Natural resource-related laws and their application are fair and effective and protect fundamental rights
Principle 10	Access to justice and conflict resolution - People are able to seek and obtain remedies for grievances and resolve conflicts regarding land and natural resources

Methodology

Gap analysis can reveal points of disconnection between a standard or guide and its practical application (Greenway et al., 2019) and identify ways to improve performance and processes in relation to those standards and/or guidelines (Goupil et al., 2022). In this context, the NRGF is the rights-based governance framework used in this study to assess how governance factors are integrated in ROAM guidance content and in-practice use. In-practice application was explored through case studies of ROAM assessments in Colombia, Indonesia, Malawi, and Rwanda. The study employed literature review, document analysis, and interviews with key informants from each country. Results were initially published in a detailed research report by Campese et al. (2022).

Country Case Overviews

- **Colombia:** ROAM was used in Antioquia to support post-conflict restoration and land distribution under the peace agreement (Bustos & Jaramillo, 2016). Stakeholder dialogues informed forest landscape restoration (FLR) planning and led to private sector-funded pilot projects.
- **Indonesia:** In Gorontalo, ROAM assessed mangrove restoration after large-scale aquaculture deforestation. Multi-stakeholder workshops generated restoration scenarios, though full restoration was resisted due to conflict fears.
- **Malawi:** A national ROAM process engaged all 28 districts, with cultural and gender-responsive assessments. Outputs led to several FLR initiatives and highlighted institutional coordination needs.
- **Rwanda:** As an early ROAM adopter, Rwanda pledged to restore 2 million hectares. The ROAM process identified opportunities across land-use types and informed several national and GEF-funded projects.

Results and Discussion

Reflections on how governance and rights issues are integrated in ROAM assessments

Principle 1 – Inclusive Decision-Making: This is a core element in ROAM guidance. All four case studies also demonstrated a strong orientation toward stakeholder engagement. However, effective participation remains uneven. In Colombia, local engagement was limited due to resource constraints. Planning for inclusivity at inception is vital (van Oosten et al., 2021), but fully effective participation requires meaningful power-sharing, dedicated financial resources, and investment in facilitation, time, and capacity-building.

Principle 2 – Tenure Rights: These are often confronted during ROAM implementation but are not systematically addressed in ROAM guidance. Emphasis tends to be placed on formal statutory rights, while customary systems are frequently overlooked. Strengthening ROAM with clear protocols for assessing and respecting diverse tenure systems could enhance equity and effectiveness. Tenure security is crucial for restoration investments (McLain et al., 2021). For instance, Rwanda’s land titling facilitated stronger rights-based planning.

Principle 3 – Cultural and Knowledge Recognition: Cultural diversity and local knowledge systems are recognized as important in ROAM guidance to some extent, and are further reflected in related innovations and adaptations. In Malawi, for instance, a survey tool with “10 culture questions for FLR” (see Wild & Walters, 2022), was a useful innovation. However, such tools remain underutilized. More systematic guidance on integrating Indigenous and local knowledge is needed. Promoting locally-driven research and co-production of knowledge would help align ROAM more closely with the NRGF principles.

Principle 4 – Devolution: This study found that, in Indonesia, inclusive workshops strengthened local governance but local empowerment is uneven. The meaningful inclusion of local governance systems is often influenced by how the ROAM process is scaled. It is not about finding the perfect level of implementation but rather designing flexible processes that empower local actors and foster cross-scale collaboration. ROAM guidance should explicitly support devolution and FPIC to safeguard community self-determination (Akello et al., 2017).

Principle 5 – Vision and Learning: A shared vision and continuous learning are critical to the success of restoration, yet the case studies revealed fragmented visions among stakeholders, which compromised cohesion. ROAM should more deliberately support long-term, context-aware learning processes that extend beyond initial assessments. In Colombia, lack of shared vision among lead institutions impeded coherence. ROAM should better support iterative learning in dynamic landscapes (Mansourian & Vallauri, 2020).

Principle 6 – Coordination and Coherence: Multi-sectoral task forces (e.g., Malawi, Rwanda) enhanced coordination and coherence across sectors and stakeholders. Yet, achieving true alignment remains challenging and time-intensive. ROAM, where well governed, can play a key role in harmonizing diverse interests into coherent policy and restoration frameworks, and in ensuring meaningful roles for Indigenous Peoples and local communities and civil society in those processes.

Principle 7 – Equitable Benefit Sharing: Indonesia’s inclusion of migrant farmers is promising, but ROAM guidance should be expanded to address impacts on people who may not hold statutory title or recognized land rights. While ROAM guidance and its application includes a cost-benefit analysis, this could be broadened to capture social and cultural dimensions, address non-landowner benefits, and align the scale of analysis with implementation

Principle 8 – Accountability: The analysis considered three dimensions of accountability. In terms of accountability within the ROAM process itself, case analyses highlighted the importance of the relationships between facilitating / convening organizations and the participating rights-holder and stakeholder groups, including whether the latter felt that conveners were trustworthy and would be accountable for ensuring a fair process and results. In Colombia, community trust in state actors was low, while university partners fared better because they had a stronger, more enduring relationship with the community. In ROAM guidance and processes, accountability also relates to who is perceived as being responsible for degradation and subsequent restoration. Case studies highlighted that care must be taken to avoid scapegoating communities for degradation. Finally, accountability for implementation of the results of ROAM processes was largely seen as lying beyond ROAM’s scope. However, convening an assessment comes with responsibility to support responsive action. ROAM guidance and processes could do more to clarify responsibilities for implementation, and to anticipate social and environmental impacts thereof. Inclusivity is critical here, as diverse actors often identify concerns otherwise overlooked. ROAM should also link outputs to frameworks like the Bonn Challenge and promote horizontal accountability (Nuesiri, 2016)

Principle 9 – Rule of Law: While ROAM guidance and processes involve identifying existing laws and policies related to restoration, they generally do not consider whether laws are fair and human rights-compliant, coherent (e.g. across bodies of law), and/or implemented and forced. These are all important gaps in relation to understanding the governance context in which restoration will take place, and thus anticipating its social impacts. Historical and contextual understanding is needed to identify and, as much as possible, address law and policy related barriers to equitable restoration processes and outcomes at the local scale. Rwanda, for example, acknowledged the need to strengthen legal frameworks within the ROAM process.

Principle 10 – Justice and Conflict Resolution: Access to justice and conflict resolution remain underexplored areas in ROAM guidance. In practice, ROAM can help mediate or even mitigate conflict. In Colombia, communities were skeptical due to past marginalization. In Malawi, chiefs resolved disputes informally. ROAM processes should include appropriate

and accessible pathways for grievance redress and conflict resolution, formal or informal, and should not be undertaken where they are likely to exacerbate conflict.

Reflections on using the NRGF as a framework for gap analysis

While the NRGF can be used to advance rights-based conservation, two key challenges arose in using it for this gap analysis and in broader discussions on the Framework's content and application: (1) its complexity, making it potentially cumbersome to apply, and (2) its reliance on qualitative metrics, which can overlook the benefits of mixed method approaches.

The NRGF's comprehensive nature, while thorough, can be overwhelming for practitioners. Its multi-layered principles and criteria take time to become familiar with and use confidently. Simplifying the NRGF without diluting its principles could enhance usability. This realization has led to the publication of the "NRGF First Look Governance Questionnaire" (see Nuesiri & Rambolamanana, 2025).

The NRGF prioritises qualitative assessments (e.g. narrative evaluations), which are essential for supporting in-depth discussion that reflects and captures nuanced social dynamics. However, the reliance on qualitative to the exclusion of quantitative considerations may limit its appeal to or applicability for some actors. Metrics such as the percentage of effectively managed community lands or the number of legal rights recognized could provide additional data on good natural resource governance. Thus, a mixed-method approach would be considered in the next iteration of the framework.

Conclusion and Recommendations

This study finds that, while ROAM guidance and processes addresses governance in some areas, it lacks a systematic rights-based approach. Using the IUCN CEESP NRGF to assess governance in ROAM has revealed gaps and opportunities for improvements.¹

First, governance and rights considerations must be embedded at the core of ROAM's official guidance, not treated as an optional add-on. Doing so requires integrating governance principles throughout the methodology, rather than addressing them in supplemental tools or annexes, and ensuring these principles are brought into the assessment process. Key issues to address in the guidance and its application include the following:

- Inclusive participation should be a central feature of every ROAM process. Rights-holder and stakeholder engagement must be adequately budgeted to ensure full, equitable, and effective participation of rights-holders, particularly those from marginalized communities, in order to avoid reproducing existing power imbalances.
- Tenure rights are foundational to equitable restoration. ROAM assessments and the restoration actions they recommend should explicitly identify, recognize, and protect land and resource tenure, including customary and collective rights.
- Equally important is the co-production of knowledge to strengthen ecological outcomes. ROAM must create space for Indigenous and local knowledge holders to engage meaningfully in the design, implementation, and monitoring of restoration.
- To enhance transparency and follow-through, ROAM outputs should be linked to existing accountability frameworks such as the Bonn Challenge. This will help hold

¹ For more detailed recommendations organized by the steps/phases of the ROAM process, see Campese et al., 2022: 40-48

actors responsible for their commitments and provide mechanisms for monitoring progress.

- Finally, restoration often occurs in complex, contested landscapes. ROAM should offer tools that support conflict resolution and enable access to justice. Incorporating such mechanisms helps to safeguard rights and promote peacebuilding.

By systematically integrating these governance elements, ROAM can become a more powerful instrument for just and effective ecological restoration.

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2 Reimagining leadership and justice

Justice for Nature

Ritu Dhingra^{a)}

What is justice for Nature?
Is it only human-centric?
Or justice for all life forms?
Is there a way to ensure justice for all?

I wonder, what does it mean?
Does Nature have rights?
Should we ask a tree first
If we can cut it down?

Should we ask animals
Before they are slaughtered?
Should we ask a river
Before polluting its waters?

Should we ask a forest
Before we cut it down?
What is fair and just?
It remains a mystery.

Who is answerable
For the loss of life forms?
The sixth Anthropocene
Is here for long.

After losing billions of species,
And billions on the verge of extinction,
Red list numbers increasing day by day,
What is mankind up to, I wonder?

When will humans understand
That they can't create life forms
Ex situ, in situ, in whatever mode,
A species once lost is lost forever.

Number of life forms are reducing—
Birds, mammals, reptiles, arthropods—
All are threatened
Due to anthropogenic actions.

Animal and plant kingdoms,
Diminishing day by day,
One species flourishing:
Homo sapiens, by the way.

Who will impart justice?
Who will find a way?
To this unjust worldly path,
By this so-called evolved species.

This is a call to Homo sapiens:
To mend their ways
And respect Nature,
To harness balance and have a say,

In finding peace and balance,
By following laws of nature,
By being one with nature,
And doing justice to nature.



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Chapter introduction

Amelia Arreguín Prado^{a)} and Melanie Zurba^{b)}

Reimagining leadership in nature conservation demands not only structural change but also a deeper understanding of justice, grounded in respect, care and love for both people and the planet. It will require action and the creation of structures at multiple scales that support equity, diversity, and inclusion. This transformation must embrace the leadership and agency of Indigenous Peoples and local communities, women, gender diverse people, and youth, as they have long been at the forefront of conservation, possessing invaluable knowledge and experience that must be centred in decision-making spaces. Their leadership is not new – it is simply undervalued. They should not only be invited into forums for nature conservation, but should be recognised as equal partners and essential leaders whose voices and actions are already shaping the present and future of conservation. They therefore should be enabled to take up meaningful seats at the table where decisions are made.

Reimagining leadership requires acknowledging the power within these groups, moving beyond tokenism to create genuine opportunities for them to influence policy and practice at the highest levels. Leadership, in this context, is not about dominance or control, but nurturing relationships, fostering collaboration, and embodying shared stewardship.

Across three main sections we explore stories that offer new models of leadership and justice.

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2.1

Embodied leadership: Women- and youth-led transformation

In *Mexico, women and conservation: An outstanding debt*, Ivett Peña Azcona reflects on what it means to lead while breastfeeding her newborn, confronting gender inequality in natural protected areas and calling for full recognition of women's roles in shaping conservation policy. The collective voice continues in *Feminist leadership as the way for human-rights-based biodiversity policies*, where a group of global advocates unpack the principles of – co-creation, care, and justice – as essential for addressing ecological collapse.

Meanwhile, the *Looking inward* piece gathers intimate reflections from youth leaders across geographies, mapping their personal journeys, tensions, and visions for leadership that is relational, decolonial, and transformative. And from the ground up, *Peer-to-peer education for exercising our rights* profiles Eco Maxei's Entrenamiento en Ciudadanía Ambiental (ECA), a grassroots initiative in Mexico that trains youth and women to exercise their environmental rights under the Escazú Agreement, showing how transformative leadership begins in community.

Chapter narrated by Amelia Arreguín Prado and Melanie Zurba

Mexico, women and conservation: An outstanding debt

Ivett Peña Azcona

Officially sworn in as National Councillor for Protected Areas at CONAP's 64th session – balancing public duty with motherhood, rights, and future generations.

Credit: Pronatura Noroeste, 2024



On September 11th, 2024, at the 64th session of the National Council of Protected Areas (CONAP), at the headquarters of the National Commission of Protected Areas (CONANP), the Mexican institution that administers the country's Natural Protected Areas (NPAs), I was sworn in as Mexico's National Councillor for Protected Areas. While I raised my right hand and said: "Yes, I protest," my left arm was holding my little two-month-old daughter, whom I was breastfeeding – a universal right of women and children.

I am a young Mexican woman, descendant of Afro-Indigenous peoples, the daughter of one of the few women *ejidatarias* of my Zapotec indigenous community of origin, San Pedro Comitancillo, Oaxaca. I'm an indigenous researcher and inevitably the issues surrounding women's leadership, gender justice, and human rights arise when we contemplate protected areas. Taking the oath means the first step to a great responsibility.

During my acceptance speech, I emphasized the theme of essential need for plural and diverse participatory bodies to be effective. This includes the guarantee of participation and recognition of Indigenous environmental groups, highlighting the collective nature of their efforts to defend the environment, their territories and cultural traditions, as established in the Escazú agreement. Unforgotten at the assembly were the empty chairs representing the legacies of those who'd lost their lives defending our common natural heritage; they also served as a reminder of the dangers faced by those currently working as defenders of nature and culture. At my side that day, 12 other new councillors were sworn in; among them two women artisans, a woman representative of the youth, and two women collaborators in civil society organizations.

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The current National Council of Protected Areas (CONAP) has 30 councillors (16 women and 14 men) in total. Striving for gender parity had been established since the call for applications for this Council. A historic moment occurred during our session: the first woman president of the National Council took the oath; before 2024 only three women had participated in CONAP.

The National Council of Protected Areas – established in the General Law of Ecological Balance – is an advisory and support body to the Ministry of the Environment and Natural Resources. It is responsible for the formulation, execution, follow-up and evaluation of the policies for the establishment, management and surveillance of the natural protected areas under its jurisdiction. Mexico protects biocultural wealth and currently has 232 Federal Natural Protected Areas (NPAs) spanning 98,000,719 hectares, and it supports 605 Areas Voluntarily Designated for Conservation (ADVC), with a surface area of 1,244,414.02 hectares in 29 of the 32 federal entities (SIMEC CONANP, 2025). Countless sites conserved by communities under their customary rules, uses and customs, and fishing refuge zones (ZRP) are still in operation nationally. All of the above creates great challenges and opportunities in recognizing, facilitating, promoting, and guaranteeing the participation of women in the decision-making processes associated with conservation initiatives.

Shared voices

With these words, I raise a topic that becomes more and more relevant and necessary for thought and reflection: equal justice and women's leadership roles in the conservation of areas. As I said before, I come from southern Mexico, Oaxaca, a territory with the greatest biological and cultural richness of all our country. The population is predominantly Indigenous. To present some elements experienced by women themselves, I offer the voices of colleagues who work in areas of nature conservation. I do not intend to imply that this is the totality, or even majority, of perspectives, but rather to pay attention to a reality: representative participation is always, to some degree, unequally differentiated due to the intersection of gender, race, class and sexual orientation. In the unique dynamics of public organizations, a gender balance is the ideal of what we are striving for.

We must recognize that the scales of women's participation in each area are also differentiated. There are women living in rural territories, *ejidos*, or communities that deal with the representation of both municipal and agrarian authorities; other women face other situations in their representation at the NPA, specifically in the following positions: area directors, park rangers, personnel and advisory councils with operational actions. Although in all the arenas of participation, the challenges and gender gaps are common, the routes, new and old, that pave the way for the participation of women, locally, regionally, nationally and worldwide are increasing.

But even though there have been many positive changes, there still remain ongoing inequalities for women: they cope with obstacles that not only hinder the recognition of their talents and capabilities but their fundamental rights as citizens (Trevilla-Espinal & Peña-Azcona, 2021). In particular, those inequalities are the tangible expression of gender and social norms including taboos or even physical barriers for participation. Nevertheless, women in recent decades have sought opportunities to actively participate in all areas of social, political, and cultural life (Blazquez & Castañeda, 2016). Unfortunately, at times they are held back by organizational structures, ingrained inequality, and threats of oppression and violence.

Within the various dimensions of challenges, land tenure is a fundamental key that defines Mexican territory. A country with a profound biocultural richness, nearly 100 million hectares correspond to an agrarian core. There are 29,813 *ejidos* and 2,416 communities registered in

the country by the National Agrarian Registry (as of December 31, 2022). The registered *ejido* surface area exceeds 82.2 million hectares, while the extension under the communal figure covers around 17.5 million hectares. This data is relevant because that means that a large part of the Mexican natural resources are under Social Property. Furthermore, 70 percent of the forests and two thirds of the water resources are located in these areas (Registro Agrario Nacional [RAN], 2023).

The decisions made in these spaces concerning diverse situations, mostly of Indigenous and rural origin, are defined and resolved by community assemblies where there are agrarian authorities. In spite of the fact that Article 37 of the Agrarian Law establishes that the agrarian authorities must be composed on equal basis (Cámara de diputados, 2024), on many occasions the women have been relegated as substitutes for members, not letting them be titular members themselves. In some cases, women’s lack of interest in participating is used to justify their absence and excuse the non-compliance with the law. In other cases, decisions concerning land tenure are made by men without consulting or notifying female stakeholders. To place things in perspective, 25.9% of the people with accredited titled land are *ejidatarias* or *comuneras*.

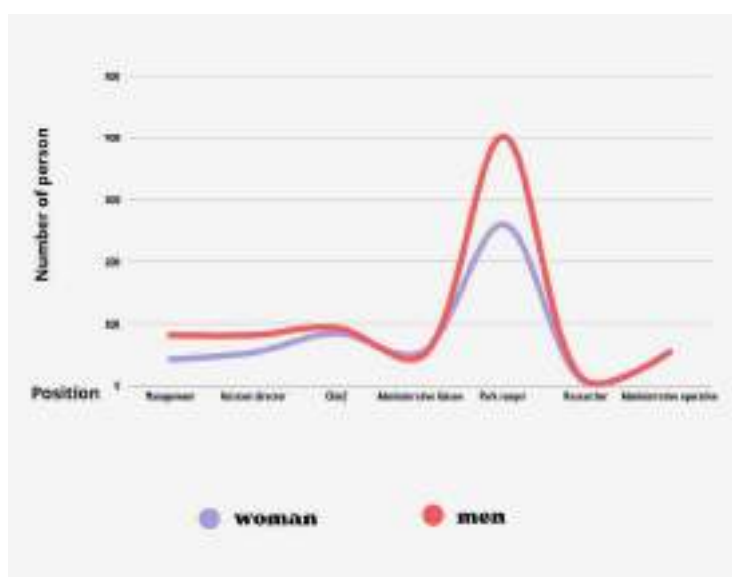
Let’s see an example within Mexico’s Natural Protected Areas: in the El Ocote Biosphere Reserve, located in Chiapas, there are currently nine women councillors out of 21 members. Meanwhile the work team is made up of 50% men and 50% women. For this participation to happen, Odetta Cervantes, the reserve’s director, has combined emphasis, energy, and commitment. “This has been the result of a gradual process in society that we women have been working and pushing for,” she said. There have also been achievements in the legal framework: modifying the norms and specifying the terms of reference for contracts to promote equity, have contributed, without a doubt, to guarantee women’s participation. However, Odetta notes “if you don’t push it, it doesn’t happen”. We can also see the results of this massive work in the active staff of CONANP: of these, 58.17% are men and 41.83% are women. However, much remains to be done to increase the gender balance for the management, sub-management and park ranger positions (Figure 1).

For Concepción Cabrera – who has worked as an environmental educator for nine years at the Cabo San Lucas Flora and Fauna Protection Area in Baja California Sur – one of the biggest challenges is to win battles in a territory where most of the people she interacts with are men, boatmen, service providers, and fishermen. Therefore, for her, it is not only important to recognize her role as an active participant, partner and collaborator with the community, but to also acknowledge her work as a woman and representative of Natural

Figure 1.

Graph showing the number of men and women in positions at the National Commission of Natural Protected Areas of Mexico.

Source: Author’s elaboration with data obtained for this work from CONANP.



Protected Areas.

The current CONAP's president, Leticia Gutierrez, also the executive director of Conservation International Mexico (CI), stated that there is a pending agenda that relates CONAP with the NPA Councils: to update the regulations to favour platforms for social participation as well as to align the mandate and the Council's objectives with the principles of the Escazú agreement, including gender parity.

In February 2025, I attended with Leticia Gutierrez the monthly meeting of the NPA Women's Advisory Collective. This women's collective originated in the context of the Covid-19 pandemic. In 2021, they identified two generalized needs experienced by women councillors: "First, most of the women on the Advisory Councils are alternates and very few are full members, this shows that women do participate in many ways and in many activities, both in the Councils and in the NPAs, however, their role is not always acknowledged and made visible. Secondly, women require tools and training to strengthen their leadership skills and effective participation in these spaces" (Basauri & Jaume, 2022).

In 2025, during the assembly attended by women councillors from 12 NPAs in Mexico and representatives of other organizations, such as Red Turismo Sustentable and Causa Natura, the need for resources to provide meeting spaces to strengthen women councillors was also mentioned. In this same session, Adriana Basauri, a woman who has accompanied the formation of this collective, acknowledged the pioneering work of some predecessors, who today make our participation possible and relevant. More and more women are embracing the responsibility to participate in shaping the direction of policies.

Nélida Barajas, Executive Director of the Intercultural Center for the Study of Deserts and Oceans, and President of the National Committee of Mexican Members at the International Union for Conservation of Nature (IUCN), shared with me that, from her experience, "it has been a struggle to make the role of women in fishing more visible; we only recognize ourselves in the role as caretakers of the planet and the home. We seek to be acknowledged for the activities we carry out to provide healthy and affordable food; to contribute to economic growth, community wellbeing, and the protection and sustainable use of ecosystems."

Credit: Livier Garcia on Pexels



In my experience working in voluntary conservation areas, both with certified landowners and with women *ejidatarías* and *comuneras*, I have been able to meet women who care for life, even with the challenges that their participation implies. In socially owned territories, the decision-making authority for establishing community conservation areas is the general assembly. Conserved Indigenous and Mestizo areas are managed and conserved through multiple landscape uses and targeting different livelihood-related objectives; forest areas, for example, are used for trade and subsistence (Peña-Azcona et al., 2020).

In community assemblies in the Los Chimalapas region, a territory recognized for its great biodiversity, women raise their voices and express their concerns. In their daily activities, they carry out small-scale fishing with other women to bring food to their families (Peña-Azcona & Arce Ibarra, 2021). And in the public assemblies, they defend the right to hold community positions and they express different points of view regarding the impact of the initiatives on the community's way of life, culture and defence of the natural territory.

When forest fires flare up in some of Oaxaca's regions, it is the women who supply physical labour and organizational know-how to establish fire breaks. Along with them, there are brigades of women making corn tortillas and providing food for the firefighters, all without economic remuneration. Therefore a bigger part of the justice argument is looking at women's caregiving role and addressing that.

Even though roles have evolved over time, women have always played a significant role in the deep traditions and long history of Mexico. And though their lives and work have been proudly recognized as the centre of domestic family life, women's roles and influence in the broader society, organizations, and movements have too often remained in the shadows, rarely visible and undervalued, while much of the daily work falls on them (Trevilla-Espinal, 2019).

In the current political and economic context of both Mexico and Latin America, there are many threatening risks and it's important to continue to ask who supports women and who provides essential care for natural areas. We cannot ignore any longer that indigenous, rural and working-class women continue to be the ones who assume multiple essential roles, under informal and precarious terms and open-ended periods for the defence of the territories (Trevilla-Espinal et al., 2020).

Final reflections

It's essential to recognize women as natural defenders, generators and conservers of life. Our objective – beyond delimited, preserved and restricted areas or spreadsheet grids, beyond the statistics, quotas and analogues – is to open spaces, create paths, and normalize the natural and equal participation of women.

In this 21st century, it is necessary and urgent to guarantee gender justice in all aspects of society including the responsibilities of living in and with nature. It has never been more pressing than today to increase the total areas of wild, natural, and conserved areas. In urban offices, far above the fray of everyday life, even if previous goals have not been achieved, new plans are being drawn up to increase conserved areas around the world. There is an ambitious plan to conserve 30% of the planet's land area by 2030 that means doubling current terrestrial protected areas and tripling the coverage of wetland and marine areas (Barborak, 2021). But will it be possible to ensure women's effective participation in conservation?

In order for society to achieve the work that needs to be done, it is critical to establish and maintain a foundation based on true respect, wisdom, capability and resourcefulness, thus normalizing the natural balances of parity that recognize the roles and importance of all

participants and stakeholders a truly new world of possibilities can be created.

Today in Mexico we have exceptional women in the highest positions of government, businesses and organizations. Great strides have been made. In addition, women have consistently provided forward-thinking leadership in area-based conservation initiatives throughout the national spectrum. This has led to increasing parity in legislation, calls and proposals.

The outstanding debt

However, there remain significant legal, and socio-economic challenges and uncertainties that continue to slow the progress to true equity. There is an urgent need to update the regulations and standards that govern protected natural areas, in order to include affirmative action and ensure both representation and care. Guarantees of respect for women's decisions; recognition of their contributions, proposals; and initiatives; encouragement of the trust that opens independent access to funding, childcare, and physical security; and prevention and eradication of gender violence are outstanding areas that still need work and focus. Mexico is in a tidal shift and is driven by visions of equality, regeneration of nature, and support for human resources on the road to a sustainable, stable future.

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Feminist leadership as the way for human-rights-based biodiversity policies

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The ecological crises we face are not just environmental failures – they are failures of leadership. For decades, we have entrusted the future of the planet to hierarchical, exclusionary, and often masculinized systems of decision-making. These models have produced technocratic fixes while ignoring systemic inequalities, and they are failing.

To meet the urgency of the moment, we must reimagine leadership itself – not just who occupies positions of power, but the very structure and culture of how decisions are made. That means embracing feminist leadership: a model grounded in shared power, inclusivity, transparency, and a deep commitment to justice. It is not a niche idea. It is a prerequisite for building a liveable future.

Leadership is not neutral

Leadership is often framed as neutral or technical. But leadership models embody values – whether implicit or explicit. Traditional models tend to reward dominance, control, and competition, which mirror the extractive systems at the heart of ecological destruction. Feminist leadership, by contrast, prioritises cooperation, care, accountability, and community. It seeks not to dominate but to transform.

This kind of leadership starts from the belief that the process matters as much as the outcome. If we are demanding that governments and institutions uphold human rights, equity, and sustainability, those same principles must govern how our own movements and organizations operate. Leading by example is not a luxury; it is a political imperative.

What does feminist leadership look like?

Feminist leadership is not just women in power. It is a fundamentally different way of structuring relationships, making decisions, and holding responsibility. It is characterized by:

- **Shared power and co-creation:** Leadership is collective. Power is distributed and decisions are made through inclusive, deliberative processes that centre marginalized voices.
- **Transparency and accountability:** Leaders are accountable not only to institutions but to the communities they serve. Transparency is not an afterthought – it's embedded in the process.
- **Representation with purpose:** It's not about optics. Feminist leadership ensures that diverse lived experiences are not only represented but inform and shape strategy and direction.

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d) Former member of the CBD WC Board of Directors

e) CBD Women's Caucus Project Officer

- **Care and integrity:** Relationships, wellbeing, and ethical consistency matter. Leadership is not about personal ambition but about nurturing spaces where justice can take root.

Why it matters for the environment

Biodiversity loss, climate change, and ecosystem collapse are not only biophysical issues – they are deeply political. Who decides what is protected, how resources are managed, and whose knowledge counts directly impacts environmental outcomes. Feminist leadership recognizes that ecological justice cannot be achieved without social and gender justice.

This is especially critical when considering the roles of women and girls in biodiversity conservation. They are often the primary stewards of land, water, and other natural resources, yet their contributions are consistently undervalued, and their rights overlooked. Ignoring these perspectives weakens conservation. Integrating them strengthens it.

A living example: The CBD Women’s Caucus

The **CBD Women’s Caucus** offers a compelling case study of feminist leadership in action. Formed as a global network of women advocating for gender justice within biodiversity policy, the Caucus exemplifies a model rooted in collaboration, transparency, and shared representation.

With around 600 members from across regions, generations, and professions, the Caucus operates through a consensus-based process where no single voice dominates. Their advocacy is deeply participatory, ensuring that positions reflect the collective wisdom of those most affected by environmental decisions.

The Caucus’s achievements speak to the power of this model:

- In **2008**, they secured the first Gender Plan of Action under the Convention on Biological Diversity (CBD).
- In **2014**, they helped implement a second such plan, this time with dedicated resources.
- In **2018**, they successfully lobbied for a gender-responsive approach to the Post-2020 Global Biodiversity Framework.
- In **2022**, their work led to the inclusion of **Target 23**, a stand-alone gender equality goal, in the landmark Kunming-Montreal Global Biodiversity Framework.

These victories were not just policy tweaks. They were structural changes – proof that Feminist leadership can move institutions and reshape global norms.

The way forward

We cannot confront ecological collapse with the same systems that created it. offers not only an alternative but a necessity: a way of leading that centres justice, restores balance, and builds the foundations for long-term, inclusive sustainability.

The CBD Women’s Caucus shows what is possible when leadership is reimagined – not as power over, but as power with. The future of our planet depends on whether we’re brave enough to follow their lead.

For more information: <https://cbd womenscaucus.org/>

Looking inward: Mapping youth perspectives on reimagining justice and leadership in conservation

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Introduction

Youth is a period marked by movement, both personal and sometimes geographical. It is a time when individuals transition from childhood to adulthood, influencing how they build relationships with places (Cuzzocrea, 2019; Robertson et al., 2017). Young people's work with communities and their perspectives on governance and environmental rights offer a valuable perspective on how youth navigate relationships with place, as well as community-based action and advocacy. Their participation and leadership are especially important in creating climate and environmental solutions since decision-making on environmental crises and governance directly impacts their futures (Karsgaard & Davidson, 2023).

Youth movements and activism globally have brought positive attention and change to important environmental and climate issues (Eide & Kunelius, 2021). While youth representation at international environmental forums has increased in recent years (Trajber et al., 2019; Zurba et al., 2023), many young people continue to face exclusion and disenfranchisement at international forums, and important young voices continue to be ignored (Hubbards & Williams, 2021).

The IUCN has strived to engage in capacity-building activities focused on young people and youth-oriented organizations, in keeping with the spirit of IUCN's Future of Sustainability report and Young Professionals Programme, to increase the ability of young people to contribute to a "just, sustainable, and peaceful world" (WCC RES 98, 2008; WCC RES 008, 2012). The IUCN Youth Strategy 2022-30 recognizes young people as strategic partners of the IUCN and values their contributions towards a just world and their role in conservation.

The Young Professionals group under the International Union for Conservation of Nature (IUCN) Commission on Environmental, Economic and Social Policy (CEESP) Theme on Governance, Equity, and Rights (TGER) is working to centre youth voices in policy discussions, recognizing the unique experiences and challenges young leaders face in conservation and environmental advocacy. This community of young people was connected through the Community-Engaged CoLab at Dalhousie University. The aim of this paper is to document youth perspectives on environmental governance while also identifying critical needs such as financial support, legal guidance, and technological access—tangible resources necessary for sustained leadership. The following piece gathers reflections from these young professionals on reimagining conservation. Except for the lead author, all young professionals are acknowledged in the author list in alphabetical order and contributed equally to this piece.

Each author contributed their thoughts and answered the question, "What does reimagining

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justice and leadership mean to you?”. It is important to note that ‘movement’ and ‘mobility’ are at the centre of these reflections, which is why we decided to add geographical regions. While many common themes emerge from the reflections, they also underscore the importance of recognizing and welcoming the diversity in lived and professional experiences. As we unite on common ground for equitable conservation, we continue to embrace our differences that are unique in their nature but not isolated from each other.



Orizaba Volcano in Veracruz, Mexico

Credit: Juan Angel Barajas

Reflections

Ahmad Hameed, 27, Pakistani:

As we reimagine conservation in all its myriad aspects, it is essential that we look closely, sincerely, and truthfully into the reasons for this reimagination. Our task for this reimagination should challenge us to confront the realities of a lost world. A world lost in imperial and colonial conquest erasing cultures, customs, traditions, and the close relationship between communities and nature across the globe.

To me, Reimagining leadership means not only to step forward and take up roles but also to step back and forgo leadership spaces in favour of a just and equitable transition of power. It means reinterpreting what leadership in conservation looks like and has looked like for the past 50 years. Therefore, reimagining justice and leadership means reconciling the past with the realities of the future. This will require concrete processes in place to ensure that a strong and moral leadership prevails without being concentrated and divided up among specific groups.

Caitlyn Renowden, 27, Swiss American:

I studied “conservation” in the U.S. for five years; however, I don’t count my journey in conservation and environmental justice starting until my Masters program, when I took two decolonized courses taught by Dr. Kyle Whyte. From then on, I gained a huge responsibility to unlearn and challenge everything I had been taught previously. During my Masters project, I advocated for a social impact assessment in what was originally just a biodiversity assessment—emphasizing Indigenous and local community rights during an electrified railway’s construction in Nepal. When I moved to Canada in 2022, I started volunteering as a researcher supporting community-led projects. I learned that being a supporter and leader in this realm also means simply listening to others’ stories, knowledge, and perspectives and uplifting that from the sidelines. To me, reimagining justice and leadership starts with personal growth, continuous reflection, and connecting with others who care deeply about decolonizing conservation.

Sophie J. Boardman, 27, Cambodian American:

My experiences in the conservation space have been focused on reconciliation, decolonization, and uplifting marginalized voices within so-called Canada and the USA. Exploring how Indigenous Peoples can achieve the power and resources to realize a future where their laws, governance, and ways of knowing are actualized, and how settlers

and allies can help make this happen. As a Cambodian Adoptee raised by white parents and brought to the West as a baby, exploring my identity and culture has taken place concurrently. I bear the legacies of colonialism and imperialism, while also seeing how power and resource imbalances continue to plague conservation. Making space for Indigenous Peoples, youth, and marginalized voices is not enough – there must be an equitable transition of power and resources in tandem with structural changes. Spaces which default to colonial structures and ideologies will never fully give power to the people who continue to be left behind.

Aden Morton-Ferguson, 24, Canadian:

Over the past few years, I have been fortunate to have opportunities to continue deepening my understanding of the inextricable links between the environment, social justice, colonial histories, and racism. As a white male settler, I've wrestled with the guilt and self-imposed fragility that come with confronting how my identity is tied to past and present socio-environmental injustices and wrongdoings. To me, reimagining justice and leadership in conservation means being uncomfortable and standing as a willing contributor in initiatives that celebrate collaboration, diversity, equity, and well-being. Based on our identities and worldviews, this discomfort can be given space as an important step in recognizing the importance of dismantling Western dominant ideas of people and the environment around us. However, my own recognition of identity and history alone is not leadership. Rather, we must activate that recognition of self and others to push the boundary on decision-making spaces that are deserving of different voices that promote collaboration and a willingness to change our behaviours and perspectives in an attempt to create environmentally and socially resilient communities around us.

Anna Jack, 20, Canadian:

To me, reimagining justice and leadership in conservation involves dismantling barriers that limit young people's participation in conservation research. As an undergraduate student seeking involvement in environmental and sustainability work, I have found it difficult to be seen as a co-creator of solutions, rather than simply a future leader. I believe that meaningful representation, justice, and leadership in conservation must reflect the diversity of the communities most affected by policy decisions, including young people. Reimagining justice, therefore, means creating collaborative, inclusive models of leadership where knowledge is shared among all stakeholders. My development as a young leader has been significantly shaped by direct engagement in environmental work. My hope for the future is that, within environmental fields, young people's voices will be valued and amplified alongside established professionals.

Kateryna Rudenko, 24, Ukrainian:

I came to Canada from Ukraine in 2022, initially as a research intern on a project focused on cross-scalar environmental governance. The motivation that had once guided my involvement shifted dramatically after the escalation of Russian aggression against Ukraine. I began to question how I could engage in global issues while grappling with the loss of something as personally valuable as my home. As a value-led researcher and writer, I found myself in a liminal space—displaced, yet feeling like I have no right to detach myself from the global ethic of care. Building a connection with the new land, Mi'kma'ki, and its communities, I opened myself to being challenged by being a guest. In this process, I was reminded of the principles I have always relied on, regardless of where I am. I believe in the freedom of people and lands, and the indestructible connection between them. Being far from home has only deepened my commitment to decolonial environmental justice and leading sustainably



Tlálóc Mountain in
Tlaxcala, Mexico

Credit: Juan Angel Barajas

through the ethic of care for human and more-than-human communities.

Juan A. Barajas, 27, Mexican:

After witnessing the wind and tide that shake many of my Latin American peers defending their territories, we must understand this struggle is not just about conservation, but about reimagining new ways of coexisting and cohabiting. Being “young” is preceded by a burning urge to confront our socio-environmental crisis, but one that fades under systematic fear, where there is no room to take initiative. Violence, precarity, and silenced voices prevent us from essential qualities that define us as youth: the bold drive to explore, imagine, and reinvent. Yet conservation becomes inevitable when we fail to uproot the predatory weed that relentlessly besieges us. That is why new forms of leadership must be woven into networks—always hand in hand despite our differences, looking each other in the eye, yet watching each other’s backs. Only through an organized community and mutual care for our vast diversity can youthful hope be restored.

Morgan Brimacombe, 27, Canadian:

I am inspired by the multigenerational activists and makers

who engage with the tension and uncertainty that emerge from transformation. I am inspired by the poets.

Beyond hope, I am drawn to the movement of creating something new together. First, recognizing those who have long been building through connection to community, land, and waters. Next, redistributing power and platforms. Truth-telling. Gutting imperial and exploitative mindsets.

I think the arts play a pivotal role in this work, in catching our attention in this attention-hungry world. For slowing us down and beckoning us to put pen to paper; for empowering young people to share what we think, what we disrupt, and what we rebuild.

It will be led with alternative ways of expression and leadership, with relationality at its core, and with meaningful collaboration. With different voices and perspectives—not symbolically—but essentially for a true redistribution of power away from the machines of exploitation and imperialism.

Conclusions

These reflections underscore the diversity of young voices in conservation and present opportunities for meaningful engagement with young professionals across a spectrum of backgrounds, geographies, and conservation fields. An important key theme of these reflections addresses the significance of truth-telling and initiating discussions on historical inequities with moral clarity and responsibility. These discussions require strong systemic changes within institutions, both in their structure and ideologies. Such changes can help kickstart fundamental reforms on representation that take into account lived experiences—often shaped by movement and mobility in all their complex diversity.

The reflections also highlight the importance of recognizing and valuing youth voices not merely as ‘young leaders’ but rather as equal co-creators of conservation solutions. Young voices are at the forefront of the greatest contemporary challenges of our time, including violence, displacement, conflict, and climate disasters. These barriers preclude them from participation in decision-making that directly impacts them. Listening and amplifying youth voices through effective and multidimensional mentorship will help encourage young people to reinvent, reimagine, and explore unique perspectives on our natural and social world. This will necessitate a commitment to different forms of linguistic, cultural, and artistic expression and the understanding that there are no standardized ways of leadership and expression. Facilitating more inclusive opportunities to address systemic problems and co-creating better pathways forward will bring communities of young people together. Youth and young professionals must be at the forefront of change in the conservation world.

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Peer-to-peer education for exercising our rights: Youths and the Escazú agreement

Amelia Arreguín Prado^{a)}, Ursula Tovilla Sánchez^{a)} and Alan Valdés^{a)}



In a world where environmental crises and social inequalities are increasingly intertwined, the need for innovative leadership and justice is more urgent than ever. The “[Entrenamiento en Ciudadanía Ambiental](#)” (ECA) by Eco Maxei offers a compelling model of how we can reimagine leadership and justice in the context of environmental conservation and civic engagement.

Launched in 2020, the ECA has empowered five generations of young leaders and women defenders, exemplifying a transformative approach to inclusive and equitable environmental advocacy.

Redefining leadership with youth and gender inclusivity



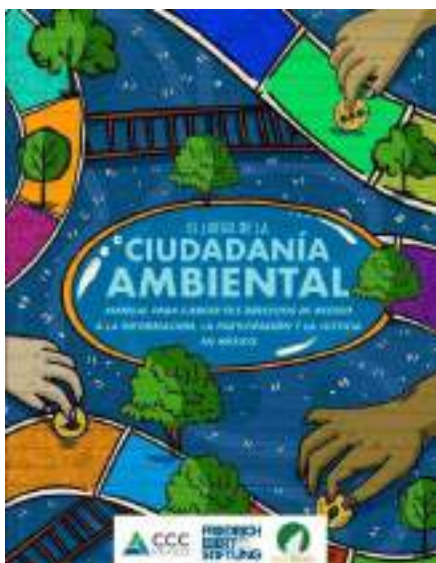
The ECA is a project designed by youths, for youths, reflecting a bold reimagining of leadership. Recognizing the vital role that young people play in shaping the future, Eco Maxei has developed a training program that goes beyond traditional environmental education. The [ECA for Youth](#), co-organized with Centro para la Colaboración Cívica-Mexico, Friedrich Ebert Stiftung and the support of Both Ends, equips participants with critical skills to understand and exercise their environmental rights under the Acuerdo de Escazú. This initiative emphasizes active participation, empowering young leaders to influence decision-making processes that affect their communities and the environment.

Simultaneously, the [ECA for Women Defenders](#), co-organized with Fundación Ambiente y Recursos Naturales from Argentina and supported by IUCN Netherlands, addresses the unique challenges faced by women in environmental advocacy. By focusing on gender-specific barriers and creating a supportive space for women defenders, the program redefines leadership through an inclusive lens. It fosters an environment where women can lead confidently, advocate effectively, and collaborate on collective solutions to environmental issues.

a) Eco Maxei AC

Empowering through community and action

A key aspect of the ECA's impact is its commitment to community building. Graduates of the program join a robust community of practice, which offers ongoing support and resources for implementing the Acuerdo de Escazú at a local level. This network not only helps maintain momentum but also reinforces the collaborative spirit essential for effective environmental advocacy. By nurturing this community, the ECA ensures that leadership is not just about individual achievements but about collective progress and shared responsibility. The ECA's approach demonstrates a reimagined model of justice – one that integrates environmental stewardship with civic engagement and gender equity. By equipping participants with practical tools and fostering a sense of community, the program bridges the gap between knowledge and action, ensuring that justice is not an abstract ideal but a tangible reality.



A milestone publication: A testament to progress

One of the most significant milestones of the ECA initiative is the publication titled “El juego de la ciudadanía ambiental. Manual para ejercer tus derechos de acceso a la información, la participación y la justicia en México”, which serves as a critical resource for understanding and advancing environmental citizenship. This publication reflects the culmination of the ECA's efforts, providing valuable insights and strategic recommendations for implementing the principles of the Acuerdo de Escazú.

This manual is a one of a kind tool to enable people to exercise their access rights protected by the Escazú Agreement: access to information, participation and information, participation and environmental justice. It underscores the importance of innovative leadership and justice in addressing environmental challenges and serves as a testament to the transformative potential of grassroots initiatives led by and for the community.

Building a just and sustainable future

The Entrenamiento en Ciudadanía Ambiental by Eco Maxei exemplifies a reimagined approach to leadership and justice in environmental conservation. By empowering young people and women, fostering a supportive community, and producing critical resources, the ECA is not only addressing immediate environmental issues but also laying the groundwork for a more inclusive and equitable future.

In reimagining leadership through the ECA, we see a model that values empathy, collaboration, and active engagement—principles that are essential for advancing justice and sustainability in today's world. As we look to the future, the ECA's innovative approach provides a powerful example of how we can lead with purpose and create lasting change for both people and the planet.

For more information visit: <https://ecomaxei.org/home2/home/nuestro-trabajo/ciudadania-ambiental>

2.2

Place-based knowledge: Land, livelihoods and the right to stay

Reimagining leadership also requires (re)conceiving and expanding our understanding of the qualities that make a leader. It calls for a model rooted in love, care, and justice – where leadership means nurturing both people and the planet, and where power is shared, not hoarded. Human diversity and biodiversity are deeply connected and the types of leaders that will be required to meet the challenges of nature conservation into the future will need to have different backgrounds and skill sets.

On the Tanzanian coast, *Tanzanian Women in the Blue Economy* spotlights seaweed farmers who are not only restoring marine ecosystems but also transforming gender dynamics and local economies through women-led cooperatives. *Stewarding Ancestral Waters* follows the Mi'kmaq struggle for self-determined fisheries governance in Mi'kma'ki, where Indigenous law and ecological stewardship converge in the fight to uphold treaty rights and marine justice. From the high-altitude pastures of northern Pakistan, *Nomadic Leadership on the Edge* tells the story of a pastoralist leader who defends the mobility and governance systems of the Gujjar-Bakarwal people amid growing legal and ecological pressures. And in the forested volcanic corridor of central Mexico, *Forest Justice and Indigenous Leadership* captures how community alliances are reclaiming sustainable forest management through democratic governance and a long-term vision of territorial care.

Leaders of the future will be justice advocates, good listeners, boundary spanners and relationship builders. They will need to act beyond self-interest and focus on communication, empowerment, and two-directional mentorship with those that are just entering spaces where decisions are being made. They will also need to embrace the complexity of the task, rather than seeking simple or politically driven solutions that may only bring short-term gains.

Chapter narrated by Amelia Arreguín Prado and Melanie Zurba

Tanzanian women in the Blue Economy

Zuhura Ahmad^{a)}

In Bagamoyo, a coastal community in Tanzania, women are leading the charge in climate action through seaweed farming, redefining leadership and advancing justice in their communities. Traditionally considered a marginal activity, seaweed farming has transformed into a cornerstone of local climate resilience, driven by these women's innovative approaches. Their work contributes to both environmental conservation – through carbon sequestration and biodiversity preservation – and economic empowerment, offering sustainable livelihoods in a region vulnerable to climate change.



This contribution explores the leadership roles these women are embracing as they challenge gender norms and drive community-led conservation initiatives. Through the formation of cooperatives and participation in capacity-building programs, they are not only securing their economic futures but also fostering networks of resilience that address broader environmental challenges. These women-led efforts highlight the critical role of inclusive leadership in achieving sustainable and just conservation outcomes.

Focusing on Bagamoyo, this piece underscores the intersection of gender equity and environmental justice. These women are breaking systemic barriers to assert their rights to land, resources, and decision-making, ensuring their voices are central in the fight against climate change. By elevating the experiences of Bagamoyo's women seaweed farmers, this contribution calls for greater recognition and support of grassroots, women-led initiatives as vital components of global sustainability efforts.

Woman (Zuhura Ahmad) tying the seaweed to the rope in the ocean.

Credit: Paul Matonya

a) WWF Tanzania and Youth For Nature



Women hold rope with seaweed in the ocean.

Credit: Paul Matonya



Women are cleaning and tying the seaweed more tightly to attach with the rope to hang well in the ocean farm.

Credit: Paul Matonya

Zuhura holds the rope with seaweed attached between two pegs in the ocean.

Credit: Paul Matonya



Seaweed champion hold seaweed ready to go to the ocean farm. Credit: Chapanisha Images

Fish out of water: The aboriginal fisheries strategy

Shelley Denny^{a)}

Canada and Indigenous Peoples are at a pivotal point in history where the long overdue opportunity to reimagine governance to better reflect leadership, including Indigenous leadership, in conservation is within reach. A just, equitable, and governance-centred approach in policy would fulfil Canada's obligation to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and legal obligations including the recognition of Aboriginal and Treaty rights in the *Constitution Act* (1982). In Canada, the Supreme Court decision *R. v. Sparrow* (1990) influenced the national policy for Aboriginal fisheries. In Eastern Canada, the Supreme Court decision *R. v. Marshall* (1999), has the potential to shape current policy. Even more recently, federal support of the United Nations Declaration of the Rights of Indigenous Peoples (UNDRIP; United Nations, 2007) obtained in 2017, the *Principles respecting the Government of Canada's relationship with Indigenous Peoples* in 2018 (Government of Canada, 2021), and the *UNDRIP Act (United Nations Declaration on the Rights of Indigenous Peoples Act, 2021)* propose that both Canada and Indigenous Peoples reimagine leadership and justice. There is much work ahead for Canada and Indigenous Peoples as they seek a way forward to address the inequities and injustices in fisheries. Given the evolving current legal environment to support Indigenous governance in Canada, this article explores the current Indigenous fisheries policy and pertinent legislation with the aim of providing recommendations to address the legal and cultural context in Atlantic Canada and the Gaspé region.

Over two decades have passed since Canada was introduced to another category of fisheries: the food, social, and ceremonial fisheries. The inception of this new fisheries category resulted in the creation of a legal framework for the implementation of the rights of Aboriginal Peoples to fish for food, social, and ceremonial (also referred to as FSC) needs. Besides affirming Aboriginal Peoples' FSC rights, legal decisions also identified the priority of Aboriginal access over commercial and sport fisheries and the need for any justifications of infringements to the Aboriginal right to fish for FSC needs to include conservation, personal safety, and the safety of others (*R. v. Sparrow*, 1990). As a result, the Department of Fisheries and Oceans' (DFO) Aboriginal Fisheries Strategy (AFS) was implemented in 1992 to outline the community-negotiated terms for fishing and other fisheries-related activities (King, 2011; McGaw, 2003; Wiber & Milley, 2007).

The AFS issues FSC licences to First Nations if they reach an agreement with DFO with provisions determined at the discretion of the Minister:

The AFS is of assistance to DFO in managing the fishery in a manner consistent with the *Sparrow* decision and subsequent Supreme Court of Canada decisions. The AFS seeks to provide for the effective management and regulation of fishing by Aboriginal groups through the negotiation of mutually acceptable and time-limited fisheries agreements between DFO and Aboriginal groups. ***Where agreement cannot be reached with an Aboriginal group, DFO will review the consultations with the group and the Minister of Fisheries and Oceans will issue a communal***

a) Unama'ki Institute of Natural Resources (UINR); Marine Affairs Program, Dalhousie University

fishing licence to the group, containing provisions that the Minister believes are consistent with the Sparrow decision and subsequent Supreme Court of Canada decisions. The licence allows the group to fish for food, social and ceremonial purposes. Where DFO reaches agreement with an Aboriginal group, the Minister of Fisheries and Oceans will issue a licence to the group that reflects the agreement reached (DFO, 2012, para 5 to 6). [Emphasis added by author].

The imposition of licences as a federal policy contrasts with DFO's Integrated Aboriginal Policy Framework (DFO, 2007). Also outdated, and developed 15 years post-AFS, the Integrated Aboriginal Policy Framework is a policy for DFO employees to build and support relations with Indigenous Peoples, working in a way that upholds the honour of the Crown and facilitates Aboriginal participation in fisheries and management of aquatic resources. Guiding principles to achieve this policy framework vision include respect for Aboriginal Peoples' values and rights, proactive and innovative approaches to address emerging issues, use of participatory and collaborative decision-making processes, and the accommodation of Aboriginal interests while balancing resource management and the interests of other Canadians (DFO, 2021a). While the above description resembles principles for co-governing, there is no reference to how co-governance could be achieved under the AFS. It is thus not surprising that co-governance was not actualized under the current legal framework until 2019. The modernization of the *Fisheries Act* (1985) enacted in 2019, however, contains opportunities to empower First Nations for self-governance and co-governance. For instance, Section 4.1 (1) of the Act specifies,

4.1 (1) The Minister may enter into an agreement with any government of a province, any Indigenous governing body and any body – including a co-management body – established under a land claims agreement, to further the purpose of this Act, including an agreement with respect to one or more of the following:

(a) facilitating cooperation between the parties to the agreement, including facilitating joint action in areas of common interest, reducing overlap between their respective programs and otherwise harmonizing those programs;

(b) facilitating enhanced communication between the parties, including the exchange of scientific and other information; and

(c) facilitating public consultation or the entry into arrangements with third-party stakeholders.

Thus, as of 2019, an existing legal avenue to implement self-governance and co-governance for Aboriginal Peoples, in addition to treaty rights to fish, became available as a result of s.4.1(1) of the *Fisheries Act* (1985). These new legal avenues for self- and co-governance led to new conflicts between Aboriginal Peoples and the Canadian government, however, as the DFO and the Supreme Court of Canada consider Aboriginal fisheries to be only for FSC needs, while the Mi'kmaq, Wolastoqiyik, and Peskotomuhkati have a different understanding, as other legal decisions affirmed the existence of treaty rights as "...in force and effect" (*R. v. Simon*, 1985, para 3). This understanding was affirmed in the Marshall Decisions for fishing. The Marshall Decisions of 1999 affirmed the treaty right to fish for a moderate livelihood but could be regulated for conservation or other public objectives. Despite these significant legal supports, there is no inclusion of treaty rights into the AFS that reflects the implementation of treaty rights for individuals to support their families, as did Donald Marshall Jr in his acquisition of eels out of season for sale. Furthermore, Indigenous fishers view Aboriginal and treaty fisheries as connected, not separate, as the court decisions and DFO treat them (Denny & Fanning, 2024). Currently, the DFO approach is to work with First Nations to

develop management plans for fishing activities that operate within the commercial fishing seasons (DFO, 2021b), thus categorizing fishing for a moderate livelihood as a commercial fishery.

The current legal context creates a very different policy climate than that of 1990-2021. Without recognition of treaty rights in AFS, or the incorporation of the significant changes in Canada's legal obligation to Indigenous Peoples since 2021, the current AFS is like a fish out of water. The 1992 AFS simply does not reflect the current, 2025 legal environment.

Can one policy accommodate all types of Indigenous fisheries across Canada? Absolutely not. Nevertheless, several recommendations have been put forward to address the policy barriers for Indigenous rights-based fisheries and alternative governance approaches that align with Indigenous leadership in conservation and justice:

- First, policies should be geographically based with treaty rights to fish to be inclusive of the Aboriginal right to fish. A single national policy does not reflect the diversity of political arrangements and historical treaties. This pluralistic policy model should not be too difficult to achieve as DFO set such a precedent with commercial fisheries on all coasts and for recreational fisheries.
- Second, rather than recognizing only legal outcomes in the current policy, historical treaties that are still valid and in effect should also be recognized to reflect the current image of the Indigenous, rights-based fisheries as both legally and historically interdependent.
- Third, co-governing mechanisms should be incorporated to respect the treaty relationships. Doing so would replace the issuing of licences regardless of whether First Nations communities agree (Denny & Fanning, 2024).

Other considerations could be to:

- Include limits to federal and provincial jurisdiction. Rather than enforcing only the federal and provincial legal context that justifies federal and provincial authority, limits to both those jurisdictions and authorities should be included because of the *Constitution Act* s.35 and s.52 and the significance of the *UNDRIP Act*. Such limits would strengthen justification for sharing governance responsibility with Indigenous Peoples and demonstrate an understanding of the Indigenous role in governance by both the government and the public at large. In the Maritimes region of DFO, there are multiple Indigenous contexts for which the governance sharing policy remains to be applied; this omission of the significance of treaty rights and the historical and political context for the diversity in Indigenous nations in Atlantic Canada needs to be corrected.
- Regional policies could be updated to reflect self-governing capabilities and the need for co-governing vulnerable Atlantic species. Equitable opportunities must be identified if the *Constitution Act* (1982) is the legislation used to justify the division of powers. This sharing of responsibility is supported by the principle of subsidiarity and can be applied to others who have the authority to make their own laws, as in the cases of Indigenous nations. This sharing of responsibility is omitted from current policy and can be viewed as the continuation of colonial powers controlling the narrative perceived by the public and actively contravening the principles of reconciliation, the current legal context, and Canada's commitment to UNDRIP.
- Lastly, given that policy follows legislation, the policy should be reviewed at least

every five years as stated in the revised *Fisheries Act*. Given the rapidly changing legal and political landscape arising from new legislation and case law, commitments to policy reviews should be on a regular cycle to align with the *Fisheries Act*.

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Nomadic leadership on the edge: The struggle of Haneef Parwana and the Gujjar-Bakarwal of northern Pakistan

Syed Mahmood Nasir^{a)}

In the mountains of northern Pakistan, there is a leader who stands at the forefront of a community who struggles with multiple social, political, and ecological challenges that threaten the lifestyle of his community. This is Mr Haneef Parwana, chairman of the Gujjar Bakarwal nomadic pastoralist community. This community undertakes long-distance vertical migration across three provinces to take advantage of seasonal forage, moving from the summer alpine pastures to the winter grazing areas in the foothills. This migratory system has evolved over centuries, allowing the Gujjar-Bakarwal to sustain both their herds and the fragile mountain ecosystems they rely on. But today, this way of life is under siege – from above and below.

Ironically most of the lands along the migratory routes and in particular the summer pastures have been designated as Protected Areas meaning that the very existence of a nomadic grazer is illegal. With so many push and pull factors, many nomads have given up a lifestyle that has evolved over centuries of communal experience.

Without a national policy on pastoralism, nomadic communities must renegotiate their access to grazing lands each year, dealing with provincial forest departments in a fragmented and uncertain process.

The solutions every year depend on the mood of the sitting forest officer – what should be a recognized right is treated as an annual favour. The pattern that is almost an annual bureaucratic ritual is repeated every year in the province of the Punjab: comments of field formations are invited by the top leadership of the forestry department, which is followed by meetings and back and forth correspondence. This procedure consumes the entire winter grazing season and at the end a letter of refusal is issued. *Mutatis mutandis* the nomadic pastoralists face similar fate in other provinces.

In this policy vacuum, Haneef Parwana's leadership has become essential.

His efforts go beyond the local: He attended the World Gathering of Nomadic People 2007 in Seville, Spain, organized by CEESP, which helped fine-tune his arguments with the forest bureaucracy, strengthen his political leadership, and hone his dispute resolution skills within the community based mainly on customary law.

At home, he works to resolve internal disputes through customary governance systems, helping maintain unity as external pressures grow. He even filed legal cases in the court of law to secure grazing rights in public lands.

But the challenges extend beyond policy. **Natural disasters like floods, earthquakes, and storms are not frequent but kill the animals of his community but unlike the settled people the nomads are never or rarely compensated mainly because they cannot afford to attend disaster relief offices to file their claims.** One major disaster was of July 2010, a sudden snowstorm hit Musk Deer National Park zone the Gujjar-Bakarwal

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LinkedIn

Mr Haneef Parwana,
chairman of the Gujjar
Bakarwal nomadic
pastoralist community.

Credit: Dr. Syed Mahmood
Nasir



were crossing during their summer migration. With no mobile coverage in the area, the community was caught unaware. The cold killed dozens of animals – goats, sheep, and mules. No official count was made; such losses are rarely recorded, and even more rarely compensated.

Despite this, the community moved forward, as they always have. This quiet endurance defines their strength.

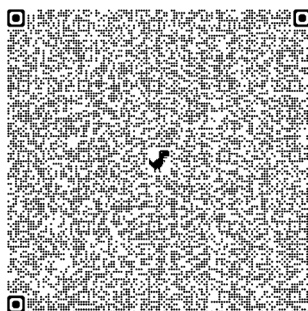
This case study highlights his life and struggle, focusing on traditional knowledge of flora and fauna, dealing with predators like snow leopards and bears, and the medicinal use of wild herbs. Interestingly, he does not aim to keep the community living in the past. Instead, he offers a win-win solution for the community to enter the modern world sustainably.

Parwana believes that lack of access to grazing lands is the one issue that is extirpating a culture and economy.

He asserts that this lack of access is fueled not by animosity but by the indifference of the state institutions that have so far taken no policy measures to address this looming crisis.

As more nomads abandon migration due to mounting obstacles, Parwana remains committed to preserving mobility – not just as tradition, but as a living system of land stewardship. His life's work underscores a vital truth: that mobile peoples are not relics of the past, but active custodians of ecological knowledge, and essential voices in shaping the future of conservation and land use policy.

His story serves as both a warning and a call to action. Without recognition and reform, nomadic lifeways may vanish – not through natural decline, but through avoidable policy failure. And with them, the loss of irreplaceable wisdom, landscapes, and social fabric.



Watch video [here](#).

Community Platforms and Governance for Sustainable Forest Management in Mexico's Volcanic Corridor: The UDEFAM Model

Raquel Jiménez Acosta^{a)}, Yamel Anaya Olguin^{b)}, Karen Armengol Hernández^{c)}

The Iztaccíhuatl-Popocatepetl National Park, located in the Trans-Mexican Volcanic Belt, is one of Mexico's most significant ecosystems. This mountainous system supplies water to more than 13 million people and is home to 467 species of flora, fauna, and fungi. Despite its ecological importance, the Park faces serious governance and natural resource management challenges. Social fragmentation and the lack of organizational structures within ejidos and communities¹ have led to unsustainable practices, including illegal logging, forest fires, and the conversion of forests into agricultural and urban land. Deforestation has led to insecurity, conflicts over natural resources, and forced migration of communities that have lost their livelihoods.

On September 19, 2017, an earthquake struck several states in Mexico, including communities near the volcanoes. One of the hardest-hit areas was the community of San Pedro Ecatingo, where many homes and infrastructures collapsed.

In response, Reforestamos México, in partnership with the San Pedro Ecatingo community, Santander Group, Merced Foundation, and Telar Social México, launched an initiative to build 10 houses and temporary classrooms based on the responsible use of forest resources. This initial effort revealed the potential of strengthening the livelihoods of affected communities and ejidos through the conservation and sustainable management of forests. Building on this momentum, and in collaboration with the Forest Stewardship Council (FSC®) and the National Union of Communal Forestry Organizations A.C. (UNOFOC), Reforestamos México launched a new recovery strategy grounded in sustainable forest management. What began as an emergency response evolved into an opportunity to restore and conserve forests while strengthening local governance, empowering communities, and creating pathways to sustainable livelihoods.

To support this initiative, a territorial platform managed by the communities and ejidos themselves was created, culminating in July 2019 with the formalization of the Union for Forest and Agricultural Development of the Valley of Mexico (UDEFAM, in Spanish) as a community-based forest enterprise. It initially brought together 12 agrarian communities – one more joined later – to conserve, restore, and sustainably use these communities' forests. The emergence of UDEFAM marks a significant milestone in community forest governance – given that similar platforms in Mexico typically require 7 to 40 years to consolidate – in quickly setting a long-term vision that is founded in local capacity-building, stable leadership, access to funding, and secure land tenure.

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1 In Mexico, communities and ejidos represent a form of land tenure of a social nature, and therefore they are of common use by a population group.

UDEFAM has fostered organization, training, and responsible forest resource management, ensuring social and economic benefits for its members through the pursuit of economic alternatives to extractive or unsustainable practices, which generate local income while protecting and restoring the natural environment. Such alternatives are driven by sustainable productive ventures and include:

- Plant production in community nurseries, aimed at ecological restoration and reforestation.
- Establishment of commercial forest plantations under responsible management criteria.
- Nature tourism and birdwatching as sources of income that promote ecosystem conservation.
- Production of pallets and sustainable timber harvesting in compliance with certification standards such as FSC®.

“Thanks to the recent creation of UDEFAM, which is a source of pride for us, expectations of progress have risen among landowners, who hope to improve their economy through diverse actions throughout the entire eastern region of the State de México.” (Daniel Rayón Flores, UDEFAM President, 2019)

The unity among ejidos and communities fostered by UDEFAM has transformed individual efforts into a shared vision of conservation and sustainable development. Overcoming the fragmentation that once limited their capacity for action, these communities have demonstrated that local organization and cooperation are key to addressing major environmental and socio-economic challenges.

Reforestamos México has been a strategic ally and key facilitator in this initiative, playing a role in connecting communities with valuable partners, enhancing their organizational capacities, and facilitating community governance processes in alliance with UNOFOC. This has led to the creation of networks with strategic allies such as UNOFOC, Santander Group, FSC®, BIMBO Group, and Sertull Foundation, while ensuring respect for communities’ decisions and autonomy.

The relationship between UDEFAM, Reforestamos México, and these strategic allies exemplifies a renewed approach to collaboration – one that emphasizes support over direction and responds to specific needs with locally-adapted solutions. These efforts have ranged from strengthening local governance to building business capacities – including training and experience-sharing – fostering community leadership, the professionalization of ejidos and forest communities, gender equality, and youth participation in forest management.

“Reforestamos México is an organization that provides guidance to communities with development potential; thanks to their support, we are able to envision projects and bring them to life, generating jobs and fostering solidarity among communities.” (Maria Antonieta Aguilar Espinosa, Treasurer at Santa Isabel Chalma, 2021)

The first significant outcome of this joint effort came at the end of 2021 when, with the investment from the Protectora de Bosques del Estado de México (Probosque), the region obtained its first FSC® Chain of Custody certification for the sawmill in the Community of San Martín Cuautlalpan, ensuring that certified forest products meet sustainability and traceability

First Partners' Tour in the Community of San Pedro Ecatzingo. From right to left: Ramiro Robledo, Executive Director of UNOFOC; Rosario Benítez Abad, President of the Community Commissariat of San Pedro Ecatzingo (2015-2018); Ernesto Herrera, General Director of Reforestamos México; Montserrat Salazar Gamboa, Founder of Telar Social; Sandra Quintero, Telar Social; Yamel Anaya Olgúin, Director of FSC® Value Chains at Reforestamos México; José Carlos Martínez, Director of Innovation at Reforestamos México; Ceferino Arenas Yañez, President of Surveillance (2015-2018); and Mauricio Benny La Valle Robledo, Project Manager at UNOFOC.

Credit: Emilio Cruz Sánchez



standards in their processing and commercialization. Later, in October 2023, six UDEFAM partners achieved a group certification of 12,119.55 hectares.

Other positive impacts include the restoration of 256 ha between 2018 and 2024, and the development of community enterprises, a forestry nursery, the promotion of Christmas tree plantations to recover degraded areas, the production of industrial flooring, and alternative tourism activities.

“Tourism has become a valuable opportunity to conserve our forests while also generating social and economic benefits for our community. Birdwatching offers a unique way to explore the forest and establish a deeper connection with nature. We are excited to know that these partnerships are strengthening an initiative that promotes environmental education and conservation – an initiative we are proud to join.” (Pedro Pérez, young community leader at Ecatzingo)

Additionally, in partnership with Bimbo Group and Bioforestal, five UDEFAM members generated 49,000 carbon credits through an innovative economic incentive for forest conservation in 2021.

Challenges in terms of achieving financial sustainability, expanding the active participation of women and youth, and professionalizing its operational structure remain, but the path to overcome them is set and UDEFAM has become a reference model in the central volcanic corridor of Mexico for community forest governance.

By 2030, UDEFAM aims to consolidate its pathway through participatory monitoring systems, permanent training programs, and a regional positioning strategy grounded in evidence, legitimacy, and results. It also hopes to evolve into a fully capable entity, managing multi-stakeholder funds and implementing large-scale territorial projects.

This story exemplifies how community-led governance can drive sustainable outcomes in forest management. The UDEFAM model demonstrates how locally organized territorial platforms can effectively steward natural resources, strengthen community resilience, and foster equitable partnerships with external partners. It adds to the growing body of evidence that community-based governance is essential for achieving integrated conservation and development outcomes – making it a relevant and inspiring model for similar efforts worldwide.

2.3

Transformative governance in a time of global crises

As global crises expose the cracks in dominant governance systems, Indigenous and local communities are charting new paths grounded in care, resilience, and self-determination. In Bolivia's Guarayu Territory, *A Landscape Approach to Forest Fire Management* shows how community-based fire stewardship rooted in ancestral knowledge can save lives and ecosystems. From the forests to the pandemic frontlines, *Health Governance and Indigenous Leadership* reveals how Indigenous communities protected their communities during COVID-19 through sovereignty and culturally grounded health responses. These stories demonstrate that effective governance begins not with top-down mandates, but with deep local commitment and collective strength.

This shift is echoed in *Transforming Conservation Relationships*, where Juan Pablo Morea calls for a turn away from technocratic control and toward inclusive, relational conservation governance. Meanwhile, *Learning for Governance* offers a platform for amplifying stories and resources and supporting connection and learning among diverse practitioners who are taking action to understand and improve.

governance. Together, these contributions challenge us to reimagine governance as a co-created practice – where legitimacy is earned through relationships, and justice means shifting power to those most affected.

Chapter narrated by Amelia Arreguín Prado and Melanie Zurba

Health governance and Indigenous leadership: Lessons from a global pandemic

Ahmad Hameed^{a) b)}, Melanie Zurba^{a) b)} and Sherry Pictou^{c)}

Introduction

A long history of colonialism has deepened structural inequalities and, compounded by racism, is making Indigenous populations more vulnerable. The COVID-19 pandemic has impacted Indigenous communities disproportionately and has had devastating impacts on their lives (Raifman & Raifman, 2020; Leon-Martinez et al., 2020). The pandemic further exacerbated systemic discrimination and inequities for People of Colour and Indigenous communities around the globe (Johnson & Buford, 2020). There is an immediate and urgent need to determine the effects of the pandemic on Indigenous communities (Mallard et al., 2021). Furthermore, these investigations need to address the social, economic, and relational impacts on these communities (Bogdanova et al., 2020; Bernauer & Slowey, 2020).

Extensive literature on the impacts of COVID-19 on Indigenous communities has been published over the last two years. Many studies have uncovered the disproportionate consequences on Indigenous populations' physical and mental health (Lawal et al., 2021; Burnett et al., 2022), education, traditional practices, culture (Moodie et al., 2021; Chew, 2021; Carr, 2020), and economic conditions (Dudgeon et al., 2021). Studies have also explored Indigenous resilience and leadership (Faruk et al., 2021; O'Keefe et al., 2021; Hutchison et al., 2021) in saving lives during this time of crisis in the absence of ample government support. Moreover, the importance of customary practices and knowledge was also emphasized in several studies (Idrus et al., 2021; Maarif, 2021). Through a systematic review of peer-reviewed literature and a media analysis, this article seeks to highlight the social wellbeing and self-governance impacts of the pandemic from the perspective of Indigenous communities and to detail community responses to these serious impacts.

Background: Covid-19 and Impacts on Wellbeing

The coronavirus (SARS-CoV-2) was declared an international public health emergency by the World Health Organization (WHO) on 30th January 2020. Millions of people around the globe have lost their lives from the virus (WHO, n.d). In addition, the pandemic resulted in massive economic, social, and environmental costs for populations around the world. The brunt of these costs was borne by equity-deserving peoples, which were already vulnerable due to structural inequities embedded in their collective histories and socioeconomic conditions, predicated along colonial lines. Historical and systematic challenges have limited access to health care facilities for Indigenous communities (Wang, 2021). Consequently, many Indigenous communities have higher instances of pre-existing conditions and co-morbidities (Dudgeon et al., 2021). These include serious and chronic ailments such as diabetes, hypertension, and lung and heart diseases, among others. The prevalence of these pre-existing conditions and often a lack of access to healthcare infrastructure puts Indigenous

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communities in a precarious and vulnerable position in the face of COVID-19, which poses higher risks for people with pre-existing conditions. Similarly, Indigenous communities were also at an elevated risk of being impacted by mental health challenges during the pandemic (John-Henderson, 2020; Faruk et al., 2021; Griffiths et al., 2021; Lawal et al., 2021; Aulandez et al., 2021). As the spread of the virus continued, communities all around the globe felt the severe impacts of COVID-19 on their health, their livelihoods, and ways of life.

This article gathers peer-reviewed literature and media articles for analysis and draws out important themes that address historical and contemporary health injustices and amplify Indigenous roles and leadership in health governance.

Disproportionate impacts on health

Along with other racialised groups, Indigenous People were at a higher risk of infection from COVID-19 and data showed disproportionately higher mortality rates in these communities. Several articles highlighted social determinants behind these trends and pinpointed socioeconomic status, inadequate access to healthcare resources, and structural inequities as leading factors that increased COVID-19 risks for Indigenous populations. The media analysis yielded similar themes that discussed the disproportionate impacts of COVID-19 on the health and wellbeing of Indigenous communities across the world. While many First Nations were able to prevent widespread infection and mortality rates during the first wave of the pandemic, subsequent waves were more likely to infect Indigenous peoples and cause serious illness and fatalities. Historical and structural inequalities compounded by lack of infrastructure and access to healthcare resources contributed to this heightened risk.

Mental health also emerged as an important indicator of these disproportionate health impacts, with Indigenous Peoples proving to be more susceptible to mental health conditions. Depression, anxiety, and psychological stress were identified by the literature as primary ailments that impacted Indigenous communities at greater rates than non-Indigenous populations during the pandemic. Studies highlighted a mental health crisis in these communities exacerbated by lack of facilities and increased burdens on healthcare systems. Indigenous communities were at a higher risk of facing mental health and wellbeing challenges pre-pandemic, and COVID-19 restrictions, isolation, and lack of access to mental health resources further deteriorated the wellbeing of these communities. Several studies concluded greater mental health challenges for Indigenous populations during the pandemic (Lawal et al., 2021; Faruk et al., 2021; Burnett et al., 2022; Brotto et al., 2021). Some harmful impacts of these increased mental health challenges mentioned in the literature included increased opioid and drug use, as well as higher rates of suicide ideation.

Disproportionate impacts on education, traditional practices, and culture

The COVID-19 pandemic disproportionately impacted the education, traditional practices, and cultural ceremonies of Indigenous communities around the globe. As the virus swiftly spread all over the world, governments ordered shutdowns of educational institutions and restricted the movement of most people. In addition, lockdowns put limits on gatherings and social events. For Indigenous communities, these restrictions posed many challenges as their access to educational resources and services became woefully reduced (Bear et al., 2021). As most educational instruction started shifting to online channels, many Indigenous students were unable to participate. Remote and distance learning required access to technology and internet connections which was not available to many Indigenous communities (Moodie

et al., 2021; Dudgeon et al., 2021; Bear et al., 2021; Heck et al., 2021; Connolly et al., 2021; Bogdanova et al., 2022). This created a digital divide between Indigenous and non-Indigenous access to educational resources and exacerbated already inherent inequities and infrastructure capabilities in the education system (Allen & Trinick, 2021).

The COVID-19 pandemic also contributed to irreversible cultural loss for many communities through high mortality rates among Elders and other older community members who hold important cultural knowledge (Lopes & Lima, 2020; O'keefe et al., 2021). Furthermore, lockdowns and restriction in movement also separated people from nature (Gonzalez, 2021; Dudgeon et al., 2021), which further set back cultural and linguistic revitalization (Dietz & Cortes, 2021; Chew, 2021). Traditional activities were curtailed, and gatherings were paused. This directly restricted important social and cultural ceremonies like funerals and fish ceremonies (Enari & Rangiwai, 2021; Carr, 2020), which provide an important avenue for families to bond and transfer intergenerational knowledge. These restrictions and bans on movement impacted Indigenous communities more than non-Indigenous populations (Moodie et al., 2020).

Disproportionate economic impacts

The literature noted that Indigenous communities were already at an economic disadvantage before the beginning of the pandemic and faced structural inequities in access to employment, housing, healthcare, and other vital resources (Moodie et al., 2020; Dudgeon et al., 2021). As the pandemic spread worldwide, Indigenous people lost their sources of income which resulted in exacerbated socio-economic inequalities in that many families were plunged further into poverty (Hofmann, 2020).

The pandemic also disproportionately affected Indigenous peoples through markedly higher food insecurity and loss of subsistence and livelihoods (Walters et al., 2021; Brant-Birioukov, 2021; Corntassel et al., 2020). An increase in food prices further worsened food security (Hutchison et al., 2021) while closure of fisheries and other traditional economic activities further exacerbated the economic crises for subsistence communities. In addition, a decrease in demand for fish during the pandemic contributed to valuable loss of income and livelihoods related to traditional fishing (Leonard, 2021).

Lagging tourism also contributed to severe economic impacts with COVID-19 restrictions eliminating tourism revenue for communities in New Zealand (Carr, 2020), Fiji, Gabon, Hawai'i, Pakistan, and Tanzania (Walters et al., 2021). Communities suffered from a lack of visitors who had previously brought income for tourist activities (Connolly et al., 2021; Hutchison et al., 2021).

Credit: Denys Gromov on Pexels



Credit: Pexels from Pixabay



Historical and structural inequities and colonialism

The literature extensively explored the role of historical and structural inequities and neo-colonial policies that pose an ongoing challenge to Indigenous communities across economic, educational, cultural, and health parameters. The roots of an inequitable healthcare system that limits access to racial minorities and Indigenous communities can be found in a long history of colonial repression and racism. Authors recognize the role of hundreds of years of assimilationist policies in setting back the education of Indigenous communities (Allen & Trinick, 2021). Racial discrimination and colonization have exacerbated health disparities across Indigenous populations and the ongoing settler colonial systems rife with systemic racism continue to amplify the impacts of COVID-19 on Indigenous peoples (Moodie et al., 2020; Dudgeon et al., 2021; Fredericks & Bradfield, 2020; Flynn & Shanks, 2021; Wendt et al., 2021). This long and oppressive history of colonial rule and ongoing structural racism within institutions and their policies has contributed towards cutting off vulnerable communities from accessing healthcare resources. This has also aggravated extreme poverty among Indigenous communities which is an important determinant of lagging education, lack of housing, food insecurity, and poor living conditions (Leon-Martinez et al., 2020; Leggat-Barr et al., 2021). Indigenous communities around the globe have consistently faced genocide, exploitation, loss of land, racism, and institutional marginalization which has made them vulnerable to epidemics in the past and to the ongoing COVID-19 pandemic.

Inadequate access to running water, healthcare and medical facilities, preventive measures, and other basic resources made Indigenous communities more susceptible to the spread of the virus (Eichelberger et al., 2021; Faruk et al., 2021). Many communities live in overcrowded homes and are unable to follow public guidelines regarding quarantine protocols and other preventive measures for the coronavirus (Moodie et al., 2020; Hendl & Roxanne, 2021). Limited availability of hospitals, healthcare workers, clean water and sanitary resources put communities at higher risk for contracting the virus (Hofmann, 2021; Bear et al., 2021; Millalen et al., 2020; Haas et al., 2021; Leon-Martinez et al., 2020). Indigenous communities are located in remote regions which makes access to facilities even more difficult with a lack of investment by governments in essential infrastructure and exacerbated discrimination based on geographic location (Dudgeon et al., 2021; Weber et al., 2021; Herbetta et al., 2021). Overcrowding and housing issues emerged as the most important challenge facing Indigenous populations in the media analysis as well. Most families on reserves live in generational homes with many family members residing in the same home (Robertson, 2020). This made it difficult to practice social distancing and forced people to quarantine in close quarters. Moreover, housing has remained a major issue in communities (especially across Canada) for a long time and governments have consistently failed communities in delivering on promises of safe and adequate housing (Perley, 2020). Lack of clean water was also identified as a major factor that contributed to deteriorating conditions during the pandemic.

Indigenous Governance during COVID-19: Resilience and Leadership

Often in the absence of outside support, many communities were left to find solutions on their own. Indigenous communities across the globe took resilient actions to stop the spread of the virus and to protect themselves against its adverse impacts. Communities came together to raise awareness about the virus and to fight its spread (Akuhata-Huntington et al., 2020; Faruk et al., 2021; O’Keefe et al., 2021). The borders and entrances to many communities were closed as protective measures immediately after the pandemic (Corntassel et al., 2020; Hutchison et al., 2021).

Communities very quickly started adapting to the realities of the COVID-19 pandemic. Digital spaces were opened up to bring people together and support each other (Chew, 2021, Enari & Rangiwai, 2021; Gillon et al., 2020; Leonard, 2021), care packages and learning packs were sent to various households (Akuhata-Huntington et al., 2020; Allen & Trinick, 2021), and various preventive measures and protocols were adopted (Blanco-Wells et al., 2021; Hornback & Ramos, 2021; Herbetta et al., 2021; Idrus et al., 2021; Deckert et al., 2021).

The literature also identified the role of traditional knowledge and practices in Indigenous resilience during the pandemic and in making adaptations to it (Walters et al., 2021; Aulandez et al., 2021). Communities engaged in ceremonial and traditional practices to cope with the difficulties of the pandemic (Herbetta et al., 2021). Traditional medicine and cultural knowledge of disease was instrumental in understanding and perceiving the impacts of the pandemic for many communities, as were rituals and ceremonies (Idrus et al., 2021; Maarif, 2021). Combining traditional knowledge with scientific understanding can help address challenges of the ongoing and future pandemics (Hornback & Ramos, 2021).

Indigenous sovereignty and self-determination were important themes within the literature included in this review. Indigenous leadership and resurgence—with relation to sovereignty and governance—in various historical and geographical contexts were pivotal in adapting to the new norms surrounding the pandemic. Indigenous leaders in many communities were quick to take action after the pandemic was declared (O’Keefe et al., 2021). Communities took charge of protective measures and were instrumental in making decisions that saved lives and stopped the spread of the virus. Indigenous leadership had positive outcomes for communities (Deckert et al., 2021). Communities which were able to govern themselves and were self-reliant during this time were best suited to tackle the challenges associated with the global pandemic (Hofmann, 2021; Walters et al., 2021). Throughout the pandemic, Indigenous communities all over the world exercised their right to self-autonomy and governance as they have since time immemorial (Hornback & Ramos, 2021) and emerged as resurgent and resilient communities.

Conclusions

The above-mentioned themes enhance our understanding of the impacts of COVID-19 from a holistic perspective grounded in community expression, and build insights around community impacts, responses, and resilience. A critical finding of this review is how the past and ongoing effects of colonization impact Indigenous communities in the face of a global pandemic, much as how they do in other large disasters (e.g., natural disasters, economic downturns, etc.) (Dudgeon et al. 2021; Moodie et al., 2020). In particular, the systems that were meant to respond to the pandemic were often situated within institutions that had many embedded structural inequalities that did not work to the advantage of Indigenous communities but instead enhanced their vulnerability. Other systems peripheral to health

care, such as access to clean water for First Nations in Canada, were also instrumental in perpetuating inequalities and the (re)colonization of communities and their health systems (Ref Hendl & Roxanne, 2022).

Despite the impacts discussed above, Indigenous communities often asserted their sovereignty freely in the absence of government support and exercised their right to self-governance with positive outcomes for community health and wellbeing. Such community decision-making and leadership processes with regard to COVID-19 measures were pivotal in reacting quickly to the pandemic and protecting lives. This included both traditional knowledge and contemporary Indigenous practices for building coping mechanisms and resilience. It will be essential for Indigenous peoples to lead the responses to future pandemics or similar crises that impact all aspects of community wellbeing.

Indigenous leadership and resilience during the pandemic offers important lessons for governance and policy. It is important to highlight how systemic issues exacerbated impacts of COVID-19 on communities. At the same time, this article describes ways in which communities exercised their governance rights over their lands and waters and continued to act as custodians even as state support lagged behind. This highlights the need to strengthen Indigenous sovereignty over their traditional territories. In addition, it emphasizes the need to provide more support and engage in a nation-to-nation dialogue with communities that prioritises reform in healthcare and a cultural approach towards stewarding community health and wellbeing. Addressing historical and systemic inequities is vital and building long-term relationships with Indigenous leaders is essential for meaningful changes that prepare state and Indigenous governance systems to respond to environmental crises, natural disasters, and urgent healthcare dilemmas.

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Learning for Governance: Building a collective space for sharing, learning, and encouraging action for equitable conservation

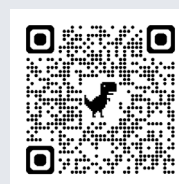
Shared learning as a pathway towards equitable governance: Governance is a crucial and complex determinant of equity and effectiveness in conservation. There is increasing focus in the global conservation community on both the importance of governance, and the pathways through which it can be understood and improved. While each context is unique, enhancing access to information, and, beyond that, building networks for shared learning and exchange, can enhance understanding and action towards more equitable governance.

The Learning for Governance Initiative: The Learning for Governance initiative (LfG) aims to provide a platform for amplifying governance stories and resources, and to support a learning network of diverse practitioners who are taking action to understand and improve environmental governance around the world. Through this, it seeks to share and build collective insights, including from community leadership, to advance equity in conservation.¹

Equitable governance of the initiative: While in early stages, LfG is striving to be reflexive and intentional about how the initiative itself is governed. It will be crucial (and not simple) to ensure its own governance supports sharing and visibility of diverse knowledge, guidance, and approaches on a 'level playing field' – e.g. between Indigenous Peoples, local communities, grassroots networks, and large NGOs.

LfG portal and tools: One way that the initiative is trying to realize its aims is by developing an [online portal](#) with a variety of tools to support communication, story sharing, information access, and learning. The first tool is a [map](#) highlighting governance stories and approaches. This portal will be expanded, with additional stories on the map, as well as living resource libraries and other tools.

Shared learning events: LfG has also begun, and will continue, to host online (and, we hope, in person) learning events. These will include both direct learning exchanges, e.g. among groups of practitioners, and more public facing webinars or similar events. For example, in the first of an ongoing [webinar series](#), Kevin Chang – the executive director of Kua`a'ina Ulu `Auamo (KUA) – spoke about the community efforts underway in Hawai'i and reflected on the work of KUA through the last three decades. Kevin emphasized the importance of community-based fisheries management and the effectiveness of an Indigenous-led vision of conservation rooted in local traditions and customs of Native Hawaiians.



Sustaining the network? Going forward, a key focus, and potential challenge, for the LfG will be sustaining the network and portal, including to ensure they complement, without duplicating, the landscape of learning and information sharing initiatives. We hope to learn from similar initiatives and adapt our approach as we grow.

Let's connect! If you'd be interested in sharing your stories, or joining the network, please get in touch at Learning4Governance@gmail.com

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¹ LfG is convened and coordinated by the IUCN CEESP Theme for Governance, Equity and Rights (TGER) in collaboration with Melanie Zurba's Community Engaged CoLab at Dalhousie University.

Video: A landscape approach to forest fire management

The story is about forest fire risk management in Urubichá (Territory of the Gwarayu Indigenous Nation in Bolivia) where various local actors explain the mechanisms adopted in the territory for the prevention of forest fires. The importance of local solutions and close collaboration between different sectors of the population to prevent and mitigate risks is highlighted.

Instead of trying to eliminate or prohibit the use of fire, which is a cultural and ancestral custom, experiences teach us to focus on work with communities, companies and farmers for the appropriate and responsible use of fire, and strengthen capacities to prevent and reduce risks and impact on their livelihoods. Strategies include establishing community networks for early warning systems; improving monitoring and response capabilities of community members; and providing knowledge of fire use and control techniques.



The results of these actions are already making a difference in the Guarayos and Chiquitania landscape. So far, 61 fire outbreaks have been controlled and many lives have been saved in 2023, with 1,641 people from 37 communities actively involved in wildfire prevention efforts covering 96,226 hectares.

This is not just a story about fire management – it is an example of how inclusive governance and respect for Indigenous knowledge can inspire effective solutions. The experience in Urubichá offers a powerful model for other landscapes facing similar challenges, showing how unity and shared responsibility can protect both ecosystems and the cultural heritage of local communities.

Watch the video [here](#):

ibifbolivia.org.bo/

Contributors: Huub Ruijgrok and Miguel Manchego Chávez



Transforming conservation relationships: Deconstructing traditional governance models for inclusive and equitable management

Juan Pablo Morea^{a)}

Conservation is undergoing a profound transformation. As environmental crises escalate and the limits of conventional approaches become more visible, scholars and practitioners increasingly recognize that protecting biodiversity cannot be achieved through ecological science alone. Conservation is fundamentally about relationships between people and nature, and between different knowledge systems and values.

The call to Reimagining Leadership and Justice necessitates a critical examination of traditional conservation methods, which frequently involve top-down approaches that inadequately address the fundamental causes of environmental degradation and overlook the contributions of local communities. Historically, these methods have been predominantly technocratic, reflecting a narrow focus on ecological and conservation biology perspectives while neglecting the human and social dimension of conservation.

Conservation initiatives are grounded in specific values and forms of knowledge that shape governance structures and management strategies. These initiatives profoundly impact diverse populations in both material and non-material ways. Hence, it is crucial to reconsider the relational aspects of conservation because conservation actions influence not only ecosystems and biodiversity but also carry inherent social and political implications. Relationships in conservation – particularly between states, conservation organizations, Indigenous Peoples, and local communities – shape how decisions are made, how resources are governed, and how benefits and burdens are distributed. As such, conservation governance must be reimagined as a relational practice grounded in equity, legitimacy, and inclusion.

This article argues that reimagining those relationships is essential to building more legitimate, equitable, and sustainable governance systems and practices within conservation. While dominant models have relied heavily on technocratic and centralized approaches, growing evidence demonstrates the importance of inclusive, place-based, and culturally rooted models that centre Indigenous Peoples and local communities as legitimate actors and rights-holders. The shift from technocratic to relational governance involves deconstructing dominant models of conservation and reconstructing them around four key relational pillars: recognition, relevance, capabilities, and valuations of nature. In doing so, this shift offers a vision of conservation that honours cultural diversity, empowers local stewardship, and aligns with global commitments under the Kunming-Montreal Global Biodiversity Framework.

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From technocratic to relational governance

For decades, conservation has operated within a technocratic paradigm. Grounded in Western ecological science and implemented predominantly by state-led institutions or international NGOs, this model has privileged expert knowledge and centralized decision-making (Büscher & Fletcher, 2020). Protected areas, as the archetypal conservation measure, have often been established with minimal input from those most affected, particularly Indigenous Peoples and local communities, resulting in displacement, marginalization, and social conflict (West et al., 2006).

Yet conservation is not merely a technical exercise; it is inherently a social and political process. Governance, understood as the institutions and mechanisms through which societies manage natural resources, is fundamentally relational. It involves negotiations of power, legitimacy, accountability, and trust (Lockwood, 2010). Technocratic models often obscure these dynamics, framing conservation challenges as problems of knowledge and control, rather than negotiation and relationship-building. Relational governance, in contrast, begins from the premise that multiple legitimate knowledge systems exist, that values and interests differ, and that equitable outcomes depend on how those differences are recognized, negotiated through dialogue and co-production, and institutionalized.

Conservation's evolution reflects broader changes in environmental thought. The rise of the people- with- nature paradigm challenges anthropocentric versus biocentric dichotomies and reframes conservation as a matter of social-ecological relationships. This framing explicitly recognizes that the boundaries traditionally used to separate people from nature are artificial and arbitrary, focusing instead on the dynamic social-ecological relationships that constitute an integrated system. It encourages an integrated approach that considers how people live with, depend on, and shape ecosystems. This vision moves beyond mere participation and demands a redistribution of authority and recognition of Indigenous Peoples and local communities as full governance actors. This shift has profound implications for the design and implementation of conservation policies, calling for more collaborative, inclusive, and context-sensitive approaches.

Credit: Nandhu Kumar on Pexels



Following the 2003 World Parks Congress in Durban, a counter-narrative gained momentum that emphasized locally-empowered stewardship. This counter-narrative challenges traditional conservation efforts that seek to separate Indigenous Peoples and local communities from biodiversity. Instead, it promotes locally grounded environmental governance that centres on the local scale, foregrounds the social and cultural impacts of conservation on adjacent communities, and redefines their role. Scholars and practitioners increasingly recognized that separating biodiversity from Indigenous and local livelihoods not only reproduces colonial logics but undermines conservation effectiveness (Dawson et al, 2021).

In many cases, technocratic and Westernized approaches fail to acknowledge traditional modes of inhabiting and caring for territory, or the customary institutions that have long governed sustainable resource use (Escobar, 2008; Büscher & Fletcher, 2020). One of the most persistent critiques is the widespread implementation of top-down strategies without genuine processes of consultation or Free, Prior and Informed Consent (FPIC). Such practices contradict international commitments, including the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007). Their knowledge systems, territorial practices, and governance institutions are now seen not only as legitimate but as potentially critical to achieving more just and effective conservation outcomes (Garnett et al., 2018; Reyes-García et al., 2022).

These critiques demand a rethinking of leadership in conservation. Top-down governance is increasingly seen as ineffective in delivering socially acceptable or ecologically sustainable outcomes. Rather than imposing control from above, leadership should foster dialogue, shared learning, and co-responsibility. In many contexts, dominant conservation actors have held disproportionate authority, sidelining the priorities and knowledge systems of local communities. Deconstructing these asymmetrical power relations is essential to building more equitable and lasting conservation partnerships. Ultimately, the question is not only how conservation is implemented, but who controls governance and how power is exercised within these relationships.

Environmental justice and the dimensions of equity

Justice is central to reimagining conservation relationships. Environmental justice frameworks articulate three core dimensions of justice – distribution, procedure, and recognition – each of which addresses a different but interrelated aspect of how conservation governance is experienced and contested (Fraser, 2006; Schlosberg, 2007; Martin et al., 2016).

- Distribution refers to how the costs and benefits of conservation are shared. Indigenous Peoples and local communities are often the ones who bear the burdens of restricted access to land and resources, while the benefits of conservation – such as international prestige, tourism revenue, or biodiversity credits – accrue to states or private actors.
- Procedure focuses on decision-making processes: Who is involved? Who decides? Many conservation interventions have involved communities only superficially. Effective participation requires access to information, the ability to influence decisions, and mechanisms for accountability.
- Recognition concerns the respect for cultural identities, knowledge systems, and values. Conservation practices that disregard Indigenous governance systems, spiritual relationships with land, or customary laws not only violate rights but undermine trust and long-term cooperation.

These three dimensions of justice are not independent but mutually reinforcing. Recognition of identities and values is a precondition for meaningful participation; participation is necessary for fair distribution; and fair distribution reinforces trust and legitimacy. Studies consistently show that the perceived legitimacy of conservation actions is a primary factor influencing local support or opposition (Bennett et al., 2019; Dawson et al., 2021; Morea, 2019).

Applying these dimensions to conservation highlights key governance gaps. Many Indigenous Peoples and local communities lack legal land rights or meaningful participation in conservation decisions. Their worldviews are often sidelined in favour of scientific or market-based approaches. As a result, conservation can reproduce historical injustices and perpetuate colonial legacies.

Factors such as access to information, transparency of processes, local agency, and feedback mechanisms all shape whether conservation is perceived as just and legitimate. The literature stresses that where communities are empowered to co-design conservation strategies, their sense of ownership increases, transforming conservation from an imposed burden into a collectively defined good (Pascual et al., 2021; Reyes-García et al., 2021).

Research in recent years has shown that perceptions of injustice – whether in the treatment received or in the distribution of benefits – reduce the willingness to cooperate and can lead to active forms of resistance. Conversely, positive perceptions of equity and justice reinforce social support, the legitimacy of the measures adopted, and the effectiveness of conservation strategies (Bennett et al., 2019; Dawson, Martin & Danielsen, 2018; Morea, 2021). The active, informed, and meaningful participation of local communities in decision-making, as well as the recognition of their knowledge and ways of life, are key factors for the success of interventions. (Walker, 2012; Dawson et al., 2017).

International agreements reinforce the need for equity. Aichi Biodiversity Target 11 (CBD, 2010) advocates for protected areas to be “effectively and equitably managed,” and is reinforced by Articles 8(j) and 10(c) of the Convention on Biological Diversity (CBD). More recently, the Kunming-Montreal Global Biodiversity Framework (CBD, 2022) incorporates equity and recognition as central pillars of conservation policy and management through Targets 3 and 22, which call for inclusive governance and full participation of Indigenous Peoples and local communities in conservation decision-making.

Yet despite these normative advances, implementation remains inconsistent. A persistent gap exists between the aspirational language of equity and the realities on the ground, where many Indigenous Peoples and local communities still face restricted access, exclusion from governance, and limited influence over decisions that affect their territories.

Ultimately, the environmental justice framework reveals that conservation is about how outcomes are pursued, who defines them, and whose voices are heard in the process. Embedding these justice dimensions into conservation governance is not only ethically necessary; it is essential to building relationships capable of sustaining biodiversity and cultural resilience in the long term.

Reclaiming leadership and local agency

Reimagining conservation relationships requires a critical examination of dominant conceptions of leadership. By highlighting the ineffectiveness of top-down governance, many scholars and practitioners question prevailing power relations. In numerous contexts, actors

have framed leadership as a form of domination or paternalism that sidelines the knowledge and priorities of local communities. At the heart of debates on procedural equity and recognition lies a central question: how is leadership exercised, and by whom?

Procedures and recognition directly shape the formation and legitimacy of leadership. When decision-making processes are defined in a top-down manner and lack meaningful participation, they tend to reinforce external or institutional leadership. While such actors may hold legal or technical authority, they often lack community embeddedness, which undermines their social legitimacy. For instance, when local communities are not recognized as legitimate stakeholders, their traditional and territorial forms of leadership are sidelined, effectively excluding them from key decision-making processes.

Instead of concentrating authority in external actors, relational leadership fosters collaborative processes grounded in trust, mutual accountability, and shared responsibility (Borrini-Feyerabend et al., 2013). It involves recognizing Indigenous Peoples and local communities not as passive recipients of conservation, but as legitimate governance actors capable of defining priorities, strategies, and values (Reyes-García et al., 2021). State agencies and NGOs should act as facilitators, supporting community institutions, enabling intercultural dialogue, and providing resources without undermining autonomy. This reconfiguration of leadership roles is fundamental to building conservation relationships based on respect, co-creation, and long-term trust.

Empirical research underscores that perceptions of legitimacy in conservation are closely tied to leadership practices. When leadership is perceived as imposed or disconnected from local realities, it weakens on-the-ground trust and reduces long-term support (Dawson et al., 2021; Bennett & Dearden, 2014). When leadership emerges from within communities or reflects local norms and structures, it generates greater buy-in and enhances the effectiveness of conservation initiatives (Delgado & Borg Rasmussen, 2021).

As Zurba and Arreguín Prado (2024) argue, in recognizing the role of Indigenous Peoples and local communities, it is essential “to move beyond symbolic inclusion and create genuine opportunities for them to influence policies and practices at the highest levels. In this context, leadership is not about domination or control, but about nurturing relationships, fostering collaboration, and embodying shared stewardship.”

Moreover, many Indigenous Peoples and local communities hold sophisticated environmental governance systems rooted in customary law, spiritual relationships with territory, and deep intergenerational knowledge. Respecting these systems is not just a matter of fairness; it allows conservation to be practiced in ways that are culturally resonant and socially legitimate. As such, reclaiming leadership means dismantling paternalistic assumptions and enabling communities to lead on their own terms.

Empowering Indigenous and local stewardship

The global conservation community is increasingly recognizing the importance of approaches that centre local governance, cultural identity, and relational values. Elinor Ostrom (1990) was one of the most influential authors in promoting a polycentric model of governance self-managed by local communities and based on customary norms and informal institutions.

Beyond perceptions of legitimacy, a growing body of evidence demonstrates that community-controlled governance is not only fairer but also more effective. Empirical studies show that conservation outcomes improve when communities have real governance power (Walker et al., 2020). A systematic review of 169 cases found a stark contrast: projects

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controlled by external agencies tend to fail socially and ecologically, whereas those where local peoples have decision-making control show positive outcomes for both biodiversity and livelihoods (Dawson et al., 2021).

In recent years, a variety of alternative approaches have emerged that seek to rethink the relationships between nature, culture, and territory with a more inclusive, participatory, and equitable perspective. Community-Based Conservation (CBC), Indigenous and Community Conserved Areas (ICCAs), Territories of Life, Co-management or Biocultural Approaches represent diverse but converging frameworks that emphasize the integration of biological and cultural diversity, local institutions, and traditional knowledge systems (Garnett et al., 2018; Borrini-Feyerabend et al., 2013).

Although alternative approaches to conservation governance vary in their specific configurations, they generally converge in recognizing the centrality of local knowledge and participation. However, their implementation faces significant challenges, including insecure land and resource tenure, weak or underdeveloped community institutions, persistent power asymmetries and elite capture, reliance on external funding, and limited formal recognition. Additional obstacles include competing rights within communities, intra-group tensions, and the inherent complexity of implementing adaptive governance models that demand sustained interaction, flexibility, and continuous learning; conditions that are often difficult to uphold over time.

Relational pathways: Recognition, relevance, capabilities, and valuations

Reimagining conservation governance through a relational lens requires more than institutional reform; it demands a profound shift in how we understand the values, rights, and lived experiences of those most directly engaged with biodiversity. Four key relational pathways – recognition, relevance, capabilities, and valuations of nature – offer a conceptual framework for this transformation.

Recognition

Recognition constitutes the cornerstone of relational governance. It extends beyond formal inclusion to encompass structural respect for Indigenous Peoples and local communities as knowledge holders, rights-bearers, and political agents. Genuine recognition entails acknowledging historical injustices, validating customary institutions, and legitimizing non-Western epistemologies and worldviews (Schlosberg, 2007). A deeper engagement with this dimension requires attentiveness to the diverse perspectives, experiences, identities, and the cultural values of those involved. It also entails the protection of fundamental human rights, including the rights to self-determination, secure land tenure, and access to dignified livelihoods.

Transformative recognition goes beyond symbolic participation, which often reinforces dependency and perpetuates asymmetries in access to information, funding, and decision-making spaces. Instead, it demands a redistribution of power and the legitimization of Indigenous Peoples and local communities' own forms of authority and governance. This implies not merely including communities in externally-driven processes, but recognizing them as rights-holders and political actors capable of autonomously managing their territories in accordance with their own knowledge systems, institutions, and priorities.

In this sense, recognition within governance provides a critical framework for analysing the contested dimensions of conservation – namely, who holds control, who is authorized to represent, which forms of knowledge are legitimized, and what decision-making processes are enabled.

Capabilities and Relevance

Achieving genuine recognition and effective participation requires the consideration of two additional, complementary dimensions: capabilities and relevance.

Amartya Sen's theory of justice (1990) argues that equity should not be assessed solely based on the distribution of resources, but rather on people's effective capabilities to pursue the lives they value, including the ability to connect with others and exercise control over their political and material environments. In this sense, participation involves more than being formally invited; it requires material and symbolic conditions such as access to comprehensible information and logistical, technical, and technological means, as well as institutional recognition, among other factors that shape opportunities for civic engagement.

Relevance, on the other hand, distinguishes between theoretical empowerment (significance) and practical empowerment (influence). Theoretical empowerment includes both self-assessment (feeling important) and external assessment (being regarded as important) in relation to the roles, functions, and actions undertaken by social actors. This type of empowerment contrasts with practical empowerment, which refers to the actual degree of influence actors exert in decision-making processes.

Thus, the notion of relevance suggests that empowerment is always relative: an actor may be formally included yet lack any real capacity to influence outcomes. The balance between theoretical and practical empowerment depends on the type or orientation of leadership, as well as on the ability to recognize and address power asymmetries.

Structural asymmetries (economic, educational, institutional) create inequalities not only in the capacity to participate, but especially in the ability to influence. Leadership approaches that aim to move beyond symbolic inclusion and toward shared governance must pay close attention to asymmetries in both capabilities and relevance. These approaches must

also foster accountable institutions capable of designing and managing policies that are responsive to the ambiguity and diversity of local communities.

Valuations of Nature

Valuations of nature complete this framework by challenging dominant approaches that reduce biodiversity to ecological indicators or market value. Relational conservation recognizes that nature holds multiple meanings – spiritual, emotional, cultural, and intergenerational. These plural values are deeply embedded in how Indigenous Peoples and local communities relate to their environments and often motivate conservation more powerfully than instrumental reasoning (Pascual et al., 2021). By recognizing the deep, often unquantifiable emotional, cultural, and spiritual connections people have with their environment, this broader understanding of value is fundamental to fostering genuine public support, ethical engagement, and long-term commitment to conservation, and thus moving beyond a transactional relationship towards one of care and responsibility.

In sum, these relational pathways offer more than a critique of dominant conservation models, outlining a pathway for reimagining conservation as a process rooted in reciprocity, shaped through shared responsibility, and sustained by culturally-grounded and equitable relationships. By centring recognition, relevance, capabilities, and plural values, conservation can become not only more legitimate, but more deeply connected to the people and territories it seeks to protect.

Reimagining conservation relationships through equity and collaboration

The global biodiversity crisis has prompted a fundamental reassessment of conservation paradigms, heralding a change from centralized and exclusionary models toward more inclusive and participatory approaches. Conservation in the future must be inherently socially just, equitable, and community-led. This requires an ongoing commitment to listening, learning, and adapting, recognizing that biodiversity protection is inseparable from human well-being and self-determination.

The analysis presented here highlights governance relationships as a critical determinant of conservation outcomes, emphasizing that the recognition and enablement of Indigenous Peoples and local communities are essential. Alternative approaches converge around the valorisation of traditional knowledge, the promotion of self-determination, and local leadership or control, demonstrating greater effectiveness in both biodiversity protection and community well-being. Nevertheless, significant challenges remain, including power imbalances, insecure land tenure, and persistent gaps between policy and practice.

Conservation thus emerges not merely as a biological or ecological challenge, but fundamentally as a socio-political one. Its success hinges on the ability to transform power relations, deconstruct colonial legacies, and build alliances grounded in mutual respect. This entails an imperative to decolonize both conservation practices and thought, recognizing the sovereignty and rights of Indigenous Peoples and local communities over their territories.

Drawing from environmental justice and equity frameworks, we have reaffirmed the importance of distribution, procedure, and recognition. Yet this article advances the discussion by proposing a deeper engagement with the concept of recognition and by extending the analytical framework to incorporate three additional dimensions: the relevance of actors in decision-making processes; the effective capabilities of communities to shape their own futures; and the plural valuation of nature, beyond utilitarian or ecological metrics.

Together, the four pillars of a shift toward relational governance – recognition, relevance, capabilities, and valuations of nature – not only illuminate the limitations of current governance models, but also point to pathways for more legitimate, inclusive, and enduring forms of conservation.

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Book review: *Territories of Life: Exploring vitality of governance for conserved and protected areas* by Grazia Borrini-Feyerabend with Tilman Jaeger

At a time when global and local conservation movements are making drastic shifts towards recognizing the effectiveness of community-based solutions, there is a need to present critical information on the history, values, principles, and humanity embedded in the governance leadership by Indigenous Peoples and local communities. *Territories of Life: Exploring vitality of governance for conserved and protected areas*, a large coffee table-format book written by Grazia Borrini-Feyerabend with Tilman Jaeger in partnership with the ICCA Consortium, presents thirty case studies that highlight the governance approaches of communities across the globe alongside critical information for understanding how such systems can be supported.

The cases are presented in clear and accessible language and include descriptions of the less tangible aspects that make governance systems thrive, such as emotional connection, collective identity, and resilience. They demonstrate how governance diversity rooted in traditional as well as contemporary philosophies and practices can provide powerful solutions to nature conservation as well as meaningful pathways for empowering Indigenous Peoples and local communities. The cases are presented alongside conceptual sections that help the reader understand how insights can be applied to different contexts. This enhances the contribution of this book as one that not only celebrates the achievements of communities, but also delivers guidance for restoring and strengthening community-based governance systems.

Complexity, challenges, and the history of how local governance systems have been disenfranchised are also

closely examined. For example, the section titled “Facing the hubris of modernity” challenges the reader to consider conventional/Western conservation as being rooted in the great shifts in economic and social systems that occurred in the second half of the 18th century. Investigating the history of conservation in this way provides powerful insights for understanding the institutional shifts in the field over the past few centuries and how such institutions might be reimagined. Important questions are asked, such as “Whose economy?”, which is the title of a section that addresses the monetization of people and nature – a trend that is embedded in conservation approaches such as ‘payments for ecosystem services’ (PES). This section guides us through critical thinking about how economic models can help or hinder governance vitality.

Territories of Life is a compendium of community-based leadership in what we today call “protected and conserved area governance”. It is rich in stories and provides many visuals that bring its stories and information to life, including photographs from the territories across the globe. It is positioned to serve as an important resource and touchstone for communities, governments, policy makers, students, and more.

Contributor: Melanie Zurba



3

Reimagining money and power

Role of Money and Power in Nature Conservation

Ritu Dhingra^{a)}

Everything is derived from nature,
 Be it money, gold, or stature,
 All is made from the five elements,
 The panch maha bhuta,
 Air, water, fire, sky, earth to supplement.
 This is a truth one should not deny,
 Then where is the question of power, money a cry?
 This economics is a sham,
 Do animals and plants
 Require money to sustain their clan?
 No, is the answer and the truth,
 How sad and sounds uncouth
 That to live, one doesn't require money.
 Mother Nature supports everyone
 And doesn't charge a guinea
 Of gold, silver, copper, whatever,
 All are extracted from Mother.
 Still, humans remain greedy and poor,
 They don't know how to respect
 The bounties of nature in daily affairs.
 They take nature for granted and act in despair,
 Destroying nature due to their selfish nature.
 They derive money and power from it
 And exploit her bit by bit.
 Then there is a major hue and cry
 Of global warming, climate change,
 Loss of species not to deny.
 Ah! What are the ways of human life?
 The Sixth Anthropocene is here to imply
 Deeds of Homo sapiens in sly.
 Why talk of money and power
 When nothing belongs to us?
 We just exploit nature
 In a way pretty ruthless.
 We must try to live sustainably,
 One with nature and shy
 From all the wrong deeds
 That might simplify
 The role of money and power
 In attaining a state where no one dies.

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Chapter introduction

Ameyali Ramos^{a)} and Swetha Stotra Bhashyam^{b)}

Across the world, commitments to protect nature are made in the language of urgency and hope. New pledges promise billions for biodiversity, for climate resilience, for the communities who live alongside and care for the world's most threatened ecosystems. Yet between these commitments and the work on the ground lies a complex web of processes, conditions, and decisions that shape what is possible.

This space between funding and action is where power reveals itself most clearly. It is where priorities are set, where access is granted or denied, where the criteria for “success” are defined. Too often, those closest to biodiversity loss – Indigenous Peoples, local communities, local NGO's, women, youth – find themselves with the least control over the resources needed to address it. Funding may arrive in smaller amounts than announced, for shorter periods than required, and under terms that fit donor frameworks rather than local realities.

The conservation funding supply chain is not just a linear pathway; it is a reflection of the values and systems that govern our shared future. Each link in this chain either reinforces centralised control or enables distributed leadership. Each decision about where money goes carries with it an assumption about who is best placed to decide, whose knowledge counts, and what kinds of change are worth investing in.

This chapter gathers perspectives from across the spectrum – funders, intermediaries, and grassroots leaders – to make visible how money and power flow through the system, and to ask how they might flow differently.

- **At the point of commitment**, *Deconstructing the Conservation Funding Supply Chain* and *(Eco)feminist Economics and Biodiversity Finance*, and *Towards Transformative Justice in Conservation Finance* reveal how global pledges are shaped by prevailing economic ideologies and entrenched power dynamics, and how justice-centred approaches can reimagine the architecture of conservation finance.
- **Through the intermediaries**, *Reimagining a New Model of Cross-Sector Nature-Positive Innovation*, Reforestamos and Nature Positive explore the role of NGOs, networks, and partnerships in translating large-scale finance into local action. They acknowledge the value intermediaries can bring while questioning how to avoid gatekeeping and ensure responsiveness to local priorities.

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- **When funding reaches local organisations,** *Building a Better Future for Conservation Funding* and *The Cali Roundtable Report* highlight barriers and emerging pathways for direct, flexible, long-term support to Indigenous Peoples, local communities, women, and youth – grounded in self-determination and trust.
- **When decision-making power shifts,** *The Chrysalis Youth Fund* and the community-led initiatives – including the Pgaz K’Nyau Social Enterprise in northern Thailand, the Misak People’s Plan de Vida in Colombia, and Peru’s Potato Park – show what becomes possible when communities and young leaders set their own priorities and define success on their own terms. In these examples, funding becomes more than a transaction; it is a commitment to sovereignty and self-determination, enabling solutions rooted in local knowledge, strategies shaped by lived realities, and leadership that grows from within.
- **In the wider economic context,** *Circular Economy and Conservation* reminds us that conservation finance does not exist in isolation – it is shaped by global consumption patterns, market incentives, and financial systems that can either undermine or reinforce ecological integrity.

While the focus here is on the supply chain of conservation funding, the conversation cannot end there. The way money moves is tied to deeper forces: the structures of the global economy, the persistence of extractive industries, and the undervaluing of cultural and ecological diversity. If we are to close the gap between commitment and action, we must transform not only the mechanisms of funding but also the systems that decide what – and who – funding is for.

The voices in this chapter offer both critique and possibility. They ask hard questions about who controls the money, how much truly reaches those on the frontlines, and what dynamics shape the journey from commitment to action. And they point toward a future in which conservation funding is an act of solidarity, where resources are entrusted to those who have safeguarded life for generations, and where the measure of success is not only in numbers but in the resilience, dignity, and sovereignty of the communities who hold the knowledge to care for our living world.

Realising such a future is not the responsibility of communities alone. Philanthropies, public donors, allied NGOs, coalitions, and other intermediaries each hold essential roles in reshaping the way resources move. Philanthropy can help shift the centre of gravity – moving away from short-term, conditional grants toward long-term, flexible commitments rooted in trust. Intermediaries can act as bridges rather than bottlenecks, translating donor priorities into community realities and ensuring that accountability is mutual, not one-directional.

When these actors choose to work in true partnership – listening deeply, ceding decision-making power, and aligning resources with locally defined priorities – the supply chain becomes more than a flow of funds. It becomes an ecosystem of relationships, where every part strengthens the whole.

Change at this scale asks for courage: from donors willing to share control, from organisations ready to examine their own influence, and from all of us to reimagine conservation as a collective endeavour in which responsibility and power are shared. Only then will the conservation funding supply chain fully serve the life it seeks to protect – honouring the people, places, and relationships that sustain our planet’s diversity, and ensuring that the work of care is met with the resources it deserves.

3.1

At the point of commitment: Where promises take shape and power takes hold

This is where the first promises are made – where global pledges take shape, often far from the forests, rivers, and coastlines they seek to protect. Decisions here ripple outward, setting priorities, defining conditions, and determining who will hold the authority to act. *Deconstructing the Conservation Funding Supply Chain*, *(Eco)feminist Economics and Biodiversity Finance* and *Towards Transformative Justice in Conservation Finance* look closely at this formative stage. Together, they expose how prevailing economic ideologies and entrenched power structures shape the flow of resources long before they touch the ground. They question the scarcity narratives that dominate conservation finance, challenge growth-driven models, and propose justice-centred approaches rooted in care, reciprocity, and equity.

Chapter narrated by Amelyali Ramos and Swetha Stotra Bhashyam

(Eco)feminist economics and biodiversity finance: A critical reflection

Amelia Arreguin Prado^{a)}

With thanks to Valentina Figuera-Martinez and Lim Li Ching for their kind review and guidance.

Introduction

The global biodiversity crisis is one of the most pressing challenges of our time. The IPBES Global Assessment on Biodiversity and Ecosystem Services (2019) warns that approximately one million species are at risk of extinction, driven by the interconnected pressures of land and water use change, habitat loss, climate change, pollution, and unsustainable resource exploitation. Further, the IPBES thematic assessment report on interlinkages among biodiversity, water, food, and health (Nexus assessment) (2024) highlights how this ecological breakdown is not isolated but interlinked with economic and social systems, where biodiversity loss threatens essential human needs such as food security, water availability, and climate stability.

In response to these urgent challenges, the international community's commitment to halting biodiversity loss culminated in the adoption of the Kunming-Montreal Global Biodiversity Framework (KM-GBF) in 2022, setting out ambitious targets for the coming decade. At the same time, Parties recognised that one of the greatest obstacles to implementation of such international agreements is the lack of readily available monetary resources. As a result, there has been a significant turn towards biodiversity finance as a proposed solution, aimed at mobilising funding for conservation and restoration efforts.

However, a critical tension arises in the way biodiversity finance is currently framed. Founded upon a scarcity narrative (Standing, 2024) based on continuous unwillingness from developed countries to meet their obligations to provide financial resources to developing countries (Pettinotti et al., 2024), the Convention on Biological Diversity's resource mobilisation strategy (inclusive of KM-GBF) calls for resources to be fetched "from all sources." This call leads to an increasing reliance on market-based mechanisms such as biodiversity credits, offsets, and private sector investments, even though the research shows that public finance is and will be the bulk of biodiversity finance (Dempsey et al., 2021; Pettinotti et al., 2024). These instruments present biodiversity as a tradable commodity, often through the establishment of markets for ecosystem services or conservation units. The growing emphasis on private sector involvement, particularly via biodiversity offsets, risks further entrenching the commodification of nature – treating ecosystems not as interconnected, living entities, but as financial assets to be transacted. An additional concern is that market-based approaches prioritise economic gains over ecological integrity and fail to address the root causes of biodiversity loss, posing ethical challenges and concerns over human rights violations.

From a Feminist Ecological Economics (FEE) perspective, this approach is fundamentally

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flawed. The FEE framework, drawing on feminist theory and ecological economics, argues that it is not possible to resolve a crisis rooted in exploitation and financialisation through the very mechanisms that sustain those dynamics. While biodiversity finance – as currently conceived – may channel capital into conservation (and this is undoubtedly needed) it also risks reinforcing the same capitalist logic that has driven ecological degradation. This essay critiques the dominance of market-based solutions and explores alternative pathways rooted in care economies, commons-based governance, and direct funding for local actors. These approaches prioritise equity, sustainability, and community-led conservation over the profit-driven rationales embedded in financial markets.



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Biodiversity finance landscape

Biodiversity finance has emerged as a central tool in the global effort to address the escalating environmental crisis. With ecosystems and species disappearing at unprecedented rates, there is increasing acknowledgement that economic resources coupled with political will, democratic governance, regulatory action, and fulfillment of international obligations are needed to fund those policies, programmes, and initiatives aimed at protecting, restoring, and sustainably using and managing biodiversity (Dempsey et al., 2021; Standing, 2024). This push – reflected in Targets 14, 15, 18, and 19 of the Global Biodiversity Framework (COP15/4, CBD 2022a) and its resource mobilisation strategy (COP15/7 - CBD 2022b, and COP16/34 - CBD 2025) – highlights the importance of economic flows and financial mechanisms to support biodiversity conservation, particularly through mobilising additional resources and ensuring equitable access to them, as well as by stopping and phasing out negative flows such as perverse incentives.

But what exactly is biodiversity finance, where does it originate from, and how is it expected to work?

Biodiversity finance refers to the various strategies and instruments used to generate, allocate, and manage economic and financial resources that directly or indirectly support biodiversity objectives. It includes public, private, and blended finance mechanisms aimed at aligning economic activity with biodiversity conservation (Arlaud et al., 2020).

However, the current approach to biodiversity finance has become increasingly narrow, shaped by the growing commodification of nature (Dempsey et al., 2021), including dominant frameworks such as the Dasgupta Review (2021) which increasingly attempt to ascribe economic value to nature's "services" in order to integrate biodiversity into mainstream financial systems. What is more, some authors have argued that "biodiversity conservation can be financed by (i) pure private capital and (ii) blended finance" (Flammer et al., 2025: 2). This trend reflects a deeper entrenchment of market ideology, where environmental value is made legible only through price mechanisms, rather than relational or intrinsic values (Spash & Hache, 2022).

While not exhaustive, the mechanisms described below are among the most illustrative of contemporary biodiversity finance strategies:

One prominent mechanism is Payments for Ecosystem Services (PES). These programmes offer financial rewards to landowners or communities that manage ecosystems sustainably, thereby creating monetary incentives for conservation (Wunder, 2005). For example, a community might receive compensation for protecting a forest that regulates rainfall or sustains a watershed. While PES can encourage environmental stewardship in theory, they often overlook critical socio-political issues. In practice, they may fail to address land tenure insecurity or pre-existing inequalities, among other issues (Corbera, 2012). Indigenous Peoples, local communities, and especially women and youth within these groups are frequently excluded from these schemes, while wealthier landowners and corporations benefit from the commodification of ecosystems under their control. Such exclusion reveals the broader unequal structural dynamics that shape financial flows in biodiversity finance (Koch & Verholt, 2020).

There is also increasing acknowledgement in the literature that the effectiveness of PES schemes remains limited in delivering sustained and equitable biodiversity outcomes. As summarised in *Beyond the Gap Report* (Bigger et al., 2021), four key lessons emerge: first, PES schemes have not generated significant new streams of private conservation finance. Second, few PES initiatives are biodiversity-focused, and those that are tend to prioritise single-species conservation. Third, there is a lack of conclusive evidence on biodiversity outcomes, with existing studies yielding mixed results. Fourth, programmes that have achieved more meaningful results have done so by aligning with local customs and institutions, integrating local values and knowledge, and ensuring equitable benefit-sharing.

Biodiversity offsets, as another emergent biodiversity finance mechanism, allow developers and corporations to “compensate” for biodiversity loss caused by their activities by investing in conservation projects elsewhere (Bull et al., 2013). The aim is to achieve “no net loss” of biodiversity, whereby destruction in one area is balanced by protection or restoration in another. However, offsets have come under widespread critique, including non-compliance with the [mitigation hierarchy](#) (environmental management framework that prioritises avoiding negative impacts over compensating for them), lack of post-implementation evaluation, uncertainty (as offsets often fail to establish or persist), methodological limitations, and lack of robust information on outcomes (Rojas-Marchini & Carmona, 2024). They enable companies to externalise environmental damage by purchasing conservation in distant areas, without addressing the root causes of biodiversity degradation. This “pay to pollute” or “pay to destroy” logic often prioritises economic growth over ecological responsibility (McAfee, 2012). Moreover, communities living near extraction or development sites are often excluded from both decision-making processes and the benefits of offset projects. This exclusion can exacerbate existing social injustices and, in the worst cases, lead to human rights violations, displacement, or other adverse impacts resulting from the interventions (Rojas-Marchini & Carmona, 2024).

In addition, financial innovations such as green bonds and impact investments have gained momentum. These instruments aim to channel private capital into environmental initiatives like habitat restoration or sustainable agriculture. Green bonds, for instance, are issued by governments or corporations with funds earmarked for environmental goals, while impact investments promise financial returns alongside social or ecological benefits (World Bank, 2024). While these approaches are claimed to unlock significant resources, critics point out that, under this logic, biodiversity is reimagined as a marketable asset traded on global finance markets. Moreover, these schemes face significant limitations in addressing the root causes of the climate and biodiversity crises at the necessary speed and scale. As a result, they often give rise to concerns about greenwashing and can increase debt burdens in developing countries, especially in the absence of robust mechanisms for measuring impact

and accountability (Kozul-Wright, 2024).

Biodiversity credits are defined as a “certificate that represents a measured and evidence-based unit of positive biodiversity outcome that is durable and additional to what would have otherwise occurred” (Biodiversity Credit Alliance, 2024: 7). But there has been a widespread debate on their feasibility and impact, emerging from deeper methodological and conceptual challenges. Researchers have pointed out the difficulty of representing biodiversity – a complex, multi-dimensional and context-specific phenomenon – within a single tradable unit. Biodiversity holds diverse forms of value, many of which are intangible or culturally specific, and some of which may even conflict. Perhaps the most fundamental challenge lies in proving that a positive biodiversity outcome is directly attributable to an intervention funded by a credit – rather than arising independently or coinciding with the displacement of threats to another location (Wauchope et al., 2024).

Because of these limitations, researchers caution strongly against using biodiversity credits to justify ongoing impacts or to support corporate “nature positive” claims. Instead, they emphasise the importance of companies first avoiding and reducing their negative impacts on biodiversity as a priority. Where credits are used, they should serve only to demonstrate measurable, additional contributions to biodiversity conservation or restoration that would not otherwise occur – such as supporting ecological recovery on land beyond the company’s direct operational footprint. In this way, biodiversity credits might play a complementary role in financing nature-positive action, but cannot replace more transformative shifts in how nature is valued and protected (Wauchope et al., 2024).



Credit: Mongkon Duangkhiew on Pexels

Although biodiversity finance can help mobilise much-needed resources, its current trajectory reinforces capitalist logics that prioritise accumulation over ecological integrity and human rights compliance. The very mechanisms designed to protect nature are increasingly embedded in economic systems that treat biodiversity as a financial product. This framing risks undermining ecological complexity by reducing it to simplified, monetisable metrics, and this approach fails to confront the structural drivers of biodiversity loss – namely, extractivism, corporate power, and inequality (Spash & Hache, 2022).

Moreover, biodiversity finance mechanisms often overlook the social dimensions of conservation. Indigenous Peoples and local communities have long served as the frontline stewards of biodiversity, yet they are frequently marginalised in the design, governance, and benefits of these mechanisms. Women, in particular, whose roles in land management and ecological care are often informal or unrecognised, are disproportionately excluded. Meanwhile, those with existing economic power – governments, multinational corporations, private landowners – tend to access and benefit from biodiversity finance more easily. This exacerbates power asymmetries and entrenches systems where those most responsible for environmental degradation continue to profit, while those most affected remain neglected.

The feminist critique

Following the landscape of biodiversity finance and its mechanisms, this essay draws on insights from feminist ecological economics, feminist political ecology, and ecofeminism to pose a fundamental question: what kind of financial strategies and mechanisms should we prioritise to address the biodiversity crisis? While these feminist traditions have not previously developed a direct critique of biodiversity finance as such, they have long challenged the capitalist, patriarchal, and colonial logics underpinning dominant approaches to development, environmental governance, and economic valuation.

By applying their conceptual tools – particularly the ethics of care, the politics of social reproduction, and collective provisioning – this essay critically examines the market-based logic that underpins much of today's conservation finance. Rather than reinforcing the extractivist and commodifying dynamics that have contributed to ecological breakdown, feminist-informed approaches invite us to imagine and implement financial practices rooted in solidarity, care, and the well-being of both human and more-than-human communities.

This section outlines six key dimensions of the feminist critique, each of which exposes the limitations, contradictions, and social injustices embedded in dominant biodiversity finance models.

Failure to address root causes

Feminist critiques argue that biodiversity finance mechanisms such as Payments for Ecosystem Services (PES), biodiversity offsets, and green bonds fail to confront the structural drivers of ecological destruction: extractivism, wealth concentration, and systemic inequality (Brockington et al., 2008), including control over women's bodies and nature (Daibes, 2023). These mechanisms depoliticise biodiversity loss by turning it into a financial issue, rather than a question of justice and power. Meeting basic needs globally does not require continued economic growth, but rather redistribution of wealth and a shift away from lifestyles of overconsumption and luxury (Mellor, 2002). Yet biodiversity finance mechanisms often reproduce the same capitalist logics that caused ecological degradation in the first place – treating nature as an externality and reinforcing patterns of dispossession (Sullivan, 2008).

Commodification and privatisation of nature

A core feminist ecological economic concern is the commodification of life – of both ecosystems and human labour. Biodiversity finance models often treat ecosystems as assets to be bought, sold, and traded (Bakker, 2007; White, 2013). This commodification not only distorts the ecological and relational functions of natural systems but contributes to the erasure of non-market values essential to sustainability. Feminist scholars argue that assigning monetary value to these “free” contributions destroys the very basis of social and ecological reproduction (Perkins, n.d.). Worse, this logic can lead to “green grabbing” – the privatization of land and commons in the name of conservation, resulting in the dispossession of Indigenous peoples and local communities (Rocheleau et al., 1996).

Rational control and patriarchal logics

Underlying the economic architecture of biodiversity finance is a belief in rational, efficient, and individualistic economic behaviour – what feminist scholars critique as the patriarchal image of ‘man’ as the standard human condition. This rationalist model, foundational to neoclassical economics, assumes that nature and people can be optimized through calculable, often mechanistic tools, such as cost-benefit analyses or market incentives (Rocheleau et al., 1996). Feminist ecological thinkers challenge this as a fiction that conceals power relations. Drawing from Marxist ecofeminism, they argue that the logic of ownership – over land, labour, and life – naturalizes exploitation, just as patriarchal systems justify control over women’s bodies and reproductive capacities (Mellor, 2009; Daibes, 2023; Perkins, nd). A feminist approach demands that we abandon such control-based models and recognise diverse, situated, and relational knowledges.

Artificial and extractive temporalities

Biodiversity finance operates on capitalist time – structured around short-term cycles of return on investment, performance metrics, and quarterly growth. Yet, ecological systems and many human lifeways unfold on profoundly different timescales. Forests may take centuries to regenerate; healing, caregiving, and subsistence practices stretch across generations and resist the neatly bounded timelines of development projects. This disconnect between financial logics and ecological or cultural rhythms risks undermining the very goals of biodiversity conservation. As Perkins (n.d.) argues, economic systems that ignore these biological and cyclical rhythms create unsustainable disconnects from ecological reality. For Indigenous Peoples and local communities – whose relationships with nature are deeply rooted, often millennial, and grounded in relational worldviews – time is not abstracted but lived through stewardship, reciprocity, and intergenerational continuity (Ruiz-Mallen & Corbera, 2013). Their traditional knowledge and cosmovisions reflect these longer horizons and are central pillars of effective conservation. Ignoring these dimensions not only risks disconnection from ecological realities but also reinforces a system that undervalues the processes and relationships most vital for sustaining biodiversity (Rathwell et al., 2015). Feminist ecological economics insists on grounding economic thinking in ecological time – acknowledging the slowness, effort, and uncertainty inherent in care, regeneration, and sustainability (Gibson-Graham, 2006b).

Invisibility of collective and reproductive labour

Feminist critiques bring attention to the “invisible labour” that underpins both ecosystems and economies: unpaid care work, community maintenance, subsistence production, and environmental stewardship – most of which is done by women. These forms of labour are rendered invisible or unaccounted for in biodiversity finance, unless they can be monetized

or fit into market-compatible forms (Mellor, 2009; Perkins, n.d.). However, monetizing unpaid labour does not correct the underlying problem – it risks expanding the very system that devalues it (Perkins, n.d.). Instead, feminist economists call for centring provisioning, not production; for building economies around what is “enough” to live well, not what is profitable (Daibes, 2023: 9). This requires new metrics, such as time-use data and care-sensitive indicators, and a redefinition of what constitutes value in economic life (Mellor, 2009).

Market dominance over democratic governance

Biodiversity finance mechanisms, particularly those mediated by global markets, development banks, or multinational corporations, often exclude the voices of those most affected by conservation policies – especially Indigenous peoples, smallholder farmers, and other communities embodying traditional lifestyles, and particularly women and girls within them. Feminist political ecologists highlight how this dominance of financial actors over environmental governance perpetuates colonial continuities and epistemic injustices, displacing local knowledges and practices with technocratic, Western frameworks (Mellor, 2009; Perkins, n.d.). Participation, when it is included at all, is frequently instrumental or symbolic rather than transformative. Decisions are made in opaque institutions governed by logics of creditworthiness, risk management, and financial performance – not care, accountability, or justice (Daibes, 2023). A feminist decolonial approach demands that biodiversity governance be radically democratised – shifting power to historically marginalised communities, supporting collective sovereignty, and grounding decisions in situated, plural, and intergenerational forms of knowledge.

Feminist critiques of biodiversity finance offer more than critique – they illuminate a radically different horizon. By challenging the commodification of nature, the erasure of care work, and the dominance of financial logics, feminist ecological economics foregrounds alternative ways of living, knowing, and valuing. These perspectives advocate for an economy grounded in sufficiency, not accumulation; in collective care, not extraction; in community wellbeing, not profit margins. As Wendy Harcourt (2014: 18–19) writes, this means building “living economies” – platforms for intergenerational, gender-aware, community-based provisioning rooted in ethics of care and respect for life. Rather than being ruled by the market, the feminist vision calls for re-embedding economic life within social and ecological systems – and ensuring that ordinary people, especially those historically marginalised, have power to shape their own futures. These insights provide a foundation for reimagining biodiversity governance not as a financial problem to be solved, but as a collective, democratic, and ethical project – setting the stage for the discussion of transformative pathways in the next section.

Ways forward

The question of how to close the financial gap in biodiversity conservation has been dominated by market-based solutions – green bonds, carbon trading, and biodiversity offset schemes. These instruments, rooted in profit motives, are inadequate for the long-term preservation of ecosystems and fail to account for the intergenerational timeframes that nature requires. More importantly, they neglect the essential role of care and solidarity – values often tied to women’s labour and community-driven initiatives (Gibson-Graham, 2006a; Mellor, 2009).

The Feminist Ecological Economics (FEE) approach proposes a fundamentally different way forward – one that seeks to reverse the capitalist privatisation of biodiversity and instead redirects resources toward a “communalisation/collectivisation of conservation action,”

drawing on Silvia Federici's work to disentangle social reproduction from the world market. This vision invites us to consider care and provisioning as a conceptual tool to imagine how to move beyond capitalism, focusing on the contributions of community and solidarity economies, everyday practices of care, the politics of place, and a beyond-anthropocentrism view that equitably address non-human others needs (Harcourt & Bauhardt, 2018).

Redirecting resources

The reliance on market mechanisms for biodiversity finance has shown its limitations, particularly in shifting the burden of ecological care onto vulnerable communities, especially women (Gibson-Graham, 2013). The shift from market-driven solutions to public investment is a critical component of the feminist vision for biodiversity conservation. FEE advocates for a substantial reallocation of resources – away from industries that contribute to ecological destruction, such as fossil fuels and industrial agriculture, and toward locally-managed, community-driven conservation initiatives. Public investment can fund locally-led long-term plans that prioritise ecological health over short-term financial returns (Mellor, 2005).

In this vision, biodiversity is not seen as an isolated resource but as an intricate, interconnected system where every species, ecosystem, and individual plays a vital role. Investing public resources in the protection and regeneration of these ecosystems must be a priority, ensuring that both human and non-human needs are met in ways that sustain the diversity of life (Perkins, 2021). Women's leadership in these conservation efforts is not only acknowledged but actively supported. Targeted policies should be developed to ensure that women, especially those in rural and Indigenous communities, have access to resources, technical support, and leadership opportunities.



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Building from the ground up

A core principle of FEE is that economic systems must reflect care and community solidarity (Gibson-Graham, 2006a). This approach acknowledges that ecosystems, like human societies, require interdependence and care to thrive. Just as the natural world is interconnected, so too must the economic systems be designed to reflect these interconnections. For this reason, the role of women – who are often the primary caregivers and stewards of natural resources in local contexts – is of central importance in the transition toward more just and sustainable economic systems. Community-driven models, such as cooperatives, community-supported agriculture (CSA), and solidarity economies, offer concrete alternatives to profit-driven models. These community-led approaches prioritise mutual aid, cooperation, and shared decision-making (Mellor, 2009). As in many Indigenous and rural communities, women are holders and sharers of traditional knowledge (MacGregor, 2009). Policies should be designed to support these efforts by ensuring women have access to training, resources, and decision-making platforms, and by ensuring these initiatives consider the intricacies of biodiversity at the community and ecosystem levels.

Public investment in eco-social enterprises

To transition toward a care-centred economy, we must also focus on eco-social enterprises – businesses that integrate environmental sustainability with social welfare. These enterprises are embedded in local contexts where care for the environment and collective stewardship are at the heart of how resources are managed and distributed. Many of these eco-social enterprises are led by women, and they provide critical services that promote community resilience and ecological restoration (Esim, 2021).

In these enterprises, biodiversity is not viewed as a mere resource to be managed for profit, but as a vital element of local cultures and community health. These businesses help demonstrate how biodiversity finance can be structured around the well-being of ecosystems and communities, rather than the individualistic interests of global markets. Public investment in these enterprises is crucial, allowing them to scale and become models for a new economy – one that values interdependence, care, and equity (Gibson-Graham, 2006b). Through such eco-social enterprises, the practical integration of biodiversity conservation and community welfare becomes a real possibility.

A new vision for Biodiversity Finance

At the heart of these alternatives is a Mother Earth-centric vision of conservation – one that places the needs of ecosystems and communities at the forefront. This vision aligns with Target 19 (f) of the KM-GBF, which prioritises conservation mechanisms that respect ecological limits and support community-based efforts. Women and girls, from Indigenous and traditional communities in particular, are already leading these efforts. Their deep knowledge of the land, accumulated over centuries, is crucial to revitalising ecosystems and ensuring conservation practices are rooted in local cultures and ways of life (LaDuke, 2014; Whyte, 2014).

Rather than framing nature as a resource to be exploited, the FEE approach calls for a reconceptualisation of the economy as an interdependent system, where the well-being of both people and the planet are prioritised. In this framework, biodiversity conservation is not a standalone task, but an integral part of everyday practices of care, solidarity, and intergenerational stewardship. This shift towards a more holistic understanding of the economy requires that public resources are directed toward ensuring women are supported as the key actors they are in these community-led conservation initiatives, which do not just

conserve biodiversity but also nurture social cohesion and cultural continuity. When women's leadership is understood through the lens of care and collective well-being, biodiversity conservation becomes deeply integrated into the social fabric of local communities, offering a model of regeneration that is both ecological and social.

Conclusion

In summary, the critique of biodiversity finance through a Feminist Ecological Economics (FEE) lens reveals deep limitations in the current market-driven models – such as Payments for Ecosystem Services (PES), biodiversity offsets, and green investments. These approaches are entrenched in capitalist frameworks that commodify nature and fail to honour the diverse temporalities, values, and interconnectedness of ecosystems and local communities. Moreover, they exacerbate existing gendered and class-based inequalities, disproportionately burdening historically marginalised groups such as Indigenous peoples and traditional communities, who are already most vulnerable to the impacts of environmental degradation.

The challenge before us is not only to question the financialisation of nature but to radically reimagine how we approach biodiversity conservation. It is essential to move away from the reductionist view that nature is a commodity to be traded for short-term profit. Rather than relying on market-based instruments that prioritise short-term financial returns and neglect the intricate, long-term processes of ecological health, biodiversity conservation must be founded on community-driven governance. It requires decentralising control over natural resources and shifting power to communities to determine how ecosystems are valued, cared for, and protected. A truly democratic approach to biodiversity finance demands regulatory frameworks that prioritise equity, justice, and community-based governance – putting the needs of local people and ecosystems above the interests of multinational corporations and financial elites.

Furthermore, these regulatory systems must be anchored in transparency, accountability, and social oversight. This allows communities to assess and monitor the effectiveness of conservation interventions, ensuring that financial flows directly benefit ecosystems and the people who depend on them. It is only through community-led initiatives, supported by participatory governance structures and regulatory systems, that we can shift biodiversity finance away from market-driven models and towards an approach that serves both ecosystems and the people most affected by their degradation.

The stakes are high. If biodiversity finance continues along its current trajectory, built on flawed assumptions of market efficiency and financial returns, it will fail to protect the planet's most vulnerable ecosystems and communities, and, even worse, it will perpetuate and reproduce injustices and harm. However, by embracing a model centred on solidarity, care, provisioning, and community ownership, we have a chance.

In this vision, nature is no longer a commodity, but the web of life we are part of, reflecting our deepest commitments to justice, interdependence, and sustainability. By placing care and community at the heart of biodiversity conservation, we can ensure a future where both the planet and its people are valued, protected, and allowed to flourish together.

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Towards transformative justice in conservation finance: The case for Basic Income for Nature and Climate (BINC)

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Introduction

Over the past 150 years, the international conservation movement has successfully protected endangered species in many places throughout the world (Langhammer et al., 2024). Yet it currently struggles to confront rapidly accelerating global biodiversity loss, which some have labelled the sixth extinction crisis (WWF, 2024). This biodiversity crisis is compounded by the growing impacts of anthropogenic climate change. Conservation and climate policy have thus become increasingly conjoined (Locke et al., 2021). At the same time, however, there is growing recognition that dominant conservation approaches, centred mainly on the creation and enforcement of protected areas (PAs) and other area-based measures, have produced a range of social injustices, including widespread displacement and marginalization of those living in or near conservation-critical spaces (Dowie, 2011; Tauli-Corpuz et al., 2020). Growing economic inequality throughout the world is a documented threat to biodiversity (Mikkelsen et al., 2007). Yet rather than redressing this inequality, conservation has unfortunately often contributed to it by further marginalizing the rural poor who most directly rely on biodiversity for their livelihoods and who are most negatively impacted by climate change (Turner et al., 2012).

Consequently, conservationists increasingly call for transformative change in policy and practice to address biodiversity loss, climate change, and social injustice together (Díaz et al., 2019; Massarella et al., 2021). One key area of concern in such calls is how conservation and climate action are financed, both globally and locally. Yet, of the hundreds of billions of dollars spent annually to address these issues, the majority remains captured by already wealthy and powerful organizations and actors in the Global North, and even these funds are considered woefully inadequate to effectively confront the scale of the problems to be addressed (UNEP, 2021; Lee et al., 2023).

To deliver the finance required, a suite of so-called “Market-Based Instruments” (MBIs) have been developed over the past several decades that aim to harness the economic value of conserved resources via “non-consumptive” use and thereby generate “conservation-friendly” livelihood opportunities for local people. Prominent MBIs include ecotourism and Payment for Ecosystem Services (PES) programmes. Other offshoots include the Reduced Emissions through avoided Deforestation and forest Degradation (REDD+) initiative, biodiversity and wetlands offsets, and so forth. Yet as we describe further below, thirty years of development and experimentation with MBIs have thus far produced few success stories and a range of criticisms (Fletcher, 2023).

a) Wageningen University, Netherlands

b) GIZ, Germany

c) WCS, Cambodia

d) Cool Earth, Peru

e) GiveDirectly, UK

f) Autonomous University of Barcelona, Spain

g) Florida International University, USA

h) UIN Ar-Raniry Indonesian International Islamic University

i) Freiburg University, Germany

j) Cool Earth, UK

k) York University, Canada

l) GiveDirectly, Germany

New funding mechanisms are therefore urgently needed to redress inequality by redistributing existing resources to deliver maximum benefits to those on the front lines of conservation and climate mitigation efforts. In this article, we advance the idea of a Basic Income for Nature and Climate (BINC) as a complement or alternative to MBIs that aims to address many of their shortcomings. BINC is inspired by the growing popularity of Cash Transfer Programmes (CTPs) and (Universal Basic Income ((U)BI) initiatives. These seek to offer an alternative to conventional economic development approaches that focus on delivering predefined benefits to local people. Instead, the cash transfer approach provides direct financial resources that can be used in the ways recipients deem most important (with the possibility of some restrictions included for conditional CTPs). The widespread success of CTPs in alleviating poverty while promoting empowerment and self-determination has inspired a proliferation of even more substantial BI pilot projects as well as growing calls to scale up UBI on a society-wide or even global basis (see e.g. Hanlon et al., 2012; Standing, 2017).

However, neither CTPs nor (U)BI projects usually include direct attention to environmental issues alongside social ones (MacNeill & Vibert, 2019). Available empirical evidence concerning the environmental impacts of existing CTPs that are not explicitly linked to conservation aims (i.e. do not have conditionality with respect to environmental behaviours or outcomes) is mixed, with some programmes indicating positive impacts and others the reverse (Alix-Garcia et al., 2013; Wilebore et al., 2019; Dyngeland et al., 2020; Ferraro & Simorangkir, 2020; MacNeill & Drummond, 2024; Malerba, 2020). These mixed results signal the need to better understand which contextual factors and/or design considerations influence the impacts of CTPs on surrounding ecosystems, in order to inform the design of CTPs that are effective at achieving positive environmental outcomes.

Here, we bring social and environmental considerations together in our BINC proposal as a promising new means to address biodiversity loss, climate change, and social development in concert within a rights-based framework. We begin by briefly describing the rise of MBIs as an understandable but ultimately limited effort to address this same constellation of issues. We outline the reasons why MBIs have often failed to achieve their aims and hence why another approach is needed. We then explain how a BINC could potentially compensate for these various deficiencies. We outline the BINC mechanism based on comparison with findings from cash transfer and basic income studies. Then we anticipate the likely challenges of implementing BINC and the variations that may be possible given contextual and design considerations. We finish by calling for the global conservation community to reflect on the potential of BINC and invest in BINC as a key component of the transformative justice needed going forward.

MBIs and their discontents

MBIs were introduced in the 1990s as part of a broader strategy to integrate social concerns into conservation planning, often called the Integrated Conservation and Development Project (ICDP) approach. They have proven quite popular. In addition to countless ecotourism enterprises, there are currently more than 500 PES programmes in operation worldwide and a similar number of REDD+ projects (Fletcher & Büscher, 2020). There are a wide variety of MBIs with diverse forms and modes of functioning (Pirard, 2012). Nonetheless, MBIs share a common aim to incentivise conservation by ascribing sufficient monetary value to protected resources to cover the opportunity costs of alternative land uses, thus making conservation more profitable than resource extraction (see Dempsey, 2016). In a number of cases, local groups have been able to leverage MBIs for significant socio-economic benefits (Shapiro-Garza et al., 2020). Overall, however, over the decades of their existence, MBIs' performance has been disappointing, as has the broader ICDP approach of which they are part (Fletcher,

2023).

MBIs' relatively poor performance is due to a variety of factors. First and foremost, it has proven extremely difficult for MBIs to generate sufficient revenue to allow conservation to outcompete resource extraction (Koh et al., 2024). This is partly because within global markets, extraction is usually far more profitable than conservation. Consequently, the revenues delivered to local resource users for conservation are generally far too low to cover the opportunity costs of alternate land uses. As a result, national governments or other entities are commonly forced to intervene either to supplement payments, or to enforce restrictions on land use, or both, in order to make MBIs succeed (Fletcher & Büscher, 2017). Many MBIs therefore function much like the government subsidy schemes they were usually introduced to replace (Fletcher & Breitling, 2012). This stands in direct contradiction to the market-based logic of the instruments themselves (Fletcher, 2023). In addition, the design costs and bureaucracy needed to develop and govern MBIs, in particular to account for the monitoring, reporting, and verification of environmental outcomes, means that the instruments are usually top-heavy, with a large portion of invested resources going to institutional overhead or technical consultants rather than the local resources users on whom the initiatives are ostensibly focused. Moreover, tying finances to volatile global markets means that funding for MBIs is generally unpredictable and unsustainable over the long term (consider, for instance, the dramatic fluctuations in prices on the global carbon market in recent years) (Haya et al., 2023).

Finally, Indigenous Peoples and local communities involved in MBIs have raised concerns regarding their social impacts. As Osborne et al. (2024: 128) summarize, common complaints include MBIs inducing:

displacement and dispossession (Sarmiento-Barletti & Larson, 2017), the undermining of local governance structures, and community conflict (Alusiola et al., 2021). Many REDD+ projects have provided minimal livelihood support (Sunderlin et al., 2017), yielding only temporary benefits for some community members (Duchelle et al., 2017; Kapos et al. 2022) while others lose out (Duchelle et al., 2018). In this way, REDD+ projects have been shown to replicate past harms against Indigenous Peoples, particularly around issues of territorial self-determination (Hein et al., 2020), while undercompensating them for lost access to forest resources. REDD+ has received widespread criticism from Indigenous organizations for its failures to support Indigenous self-determination and territorial defence (Cifuentes, 2021).

At the same time, however, some Indigenous Peoples and local communities point out that there are currently few alternative financing mechanisms available to support the stewardship of their lands.¹ Our BINC proposal aims to address this and the other concerns discussed above.

The Case for BINC

Cash transfer programmes (CTPs)

A finance mechanism grounded in a cash transfer or basic income model potentially avoids many of the issues outlined in the previous section. Indeed, CTPs were originally developed precisely to address and overcome problems created by conventional market-

¹ <https://www.fscindigenousfoundation.org/global-south-voices-in-support-of-redd/>

led development policies. Rather than pre-defining development projects then training local people on how to implement them to generate income, CTPs instead provide cash payments directly to programme participants to spend (mostly) as they choose. Many CTPs also include complementary services or training programs – a so-called “cash+” approach. Since their introduction in the 1990s, CTPs have expanded dramatically to now encompass at least 720 million people in more than 130 countries worldwide (World Bank 2018). Practitioners generally categorize CTPs as *unconditional* (allowing recipients to spend their transfers freely) or *conditional* (where certain behaviours, like receiving vaccinations or school attendance, are preconditions for the receipt of a transfer). Some CTPs also include *restrictions*, where transfers themselves can only be spent on a limited set of goods and/or services.

In reality, however, the spectrum of programming is more fluid. Still, around the world, there are far more formally conditional CTPs than unconditional ones, as many authorities are distrustful of recipients’ ability to spend money responsibly (Peck & Theodore, 2015). Consequently, conditionality remains a hot topic of contention within the cash transfer world, despite the fact that empirical research concerning CTP outcomes largely supports the claim that unconditional programmes produce as much positive benefit as conditional ones for a wide range of outcomes (Bagstagli et al., 2016; Standing, 2017).

Basic Income (BI) approaches

Basic income (BI) builds on the CTP experience to propose an even more ambitious programme for poverty alleviation (variants of this concept have also been called ‘unconditional basic income,’ ‘basic income grant,’ ‘citizen’s income,’ ‘social dividend,’ a ‘negative income tax,’ a ‘capital grant,’ and ‘participation income’). Like CTPs, BI proposes direct cash payments to recipients. However, while CTPs generally provide modest payments, BI proposes a level of payment covering an individual’s total basic needs (how these basic needs are defined remains debated), allowing them to survive on the payments alone. Additionally, while CTPs usually target only a subsection of the population (i.e., the very poor, elderly or disabled), BI is intended for everyone, rich and poor alike (the rationale being that payments to the wealthy will be returned back via taxation). Finally, BI follows the unconditional CTP model in proposing a fully no-strings-attached payment scheme.

In sum, proponents assert that a genuine BI must embody the following five principles (as defined by the Basic Income Earth Network, a global network of BI practitioners)²:

1. **Periodic:** it is paid at regular intervals (for example every month), not as a one-off grant.
2. **Cash payment:** it is paid in an appropriate medium of exchange, allowing those who receive it to decide what they spend it on. It is not, therefore, paid either in kind (such as food or services) or in vouchers dedicated to a specific use.
3. **Individual:** it is paid on an individual basis – and not, for instance, to households.
4. **Universal:** it is paid to all (within the boundaries of the given jurisdiction or project).
5. **Unconditional:** it is paid without means testing and without a requirement to work or to demonstrate willingness-to-work.

The difficulty of fulfilling all of these conditions means that a true society-wide UBI has

2 Source: <https://basicincome.org/about-basic-income/>

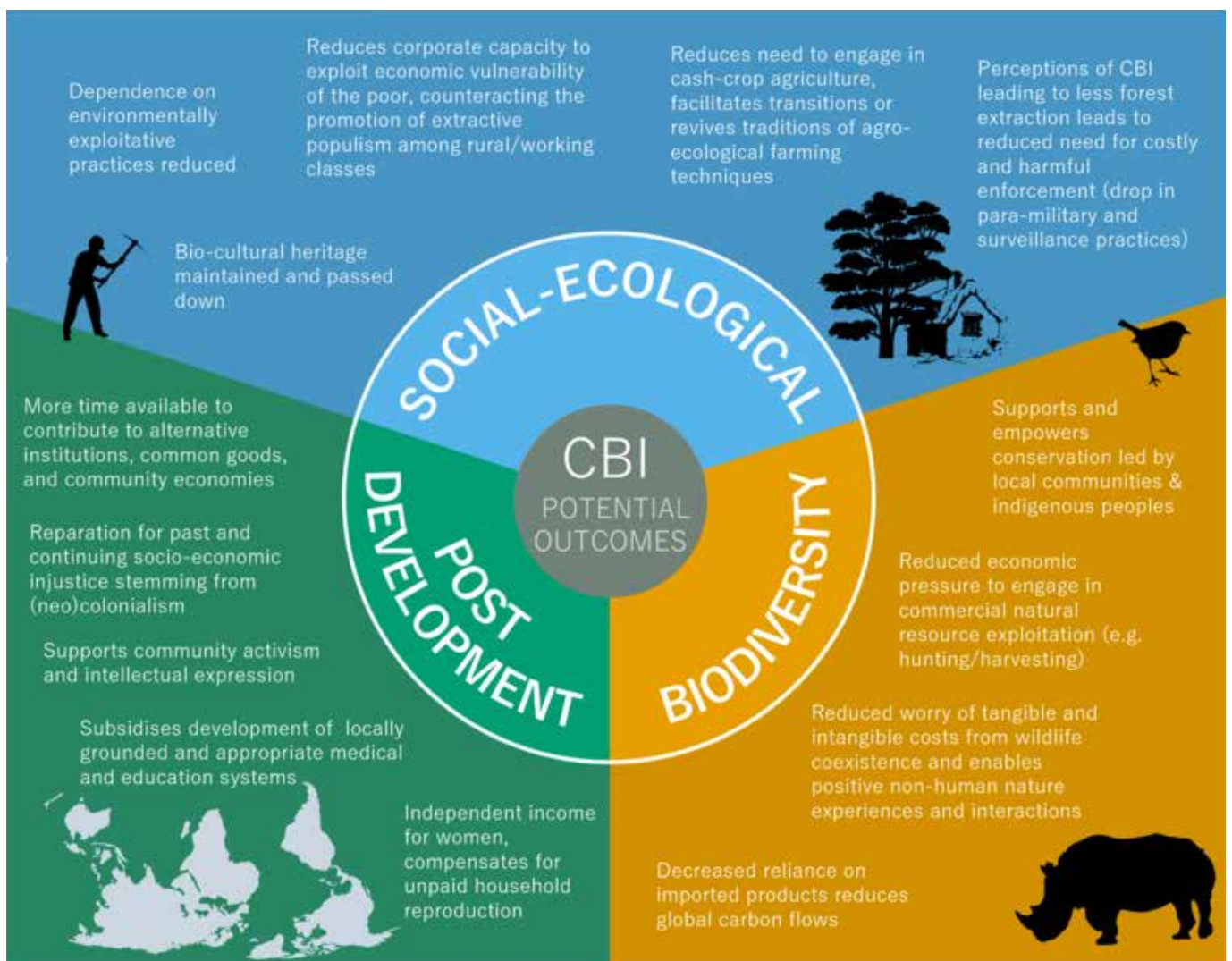
never yet existed in reality. However, a proliferating array of projects and programmes have implemented BI to varying degrees (the principle of universality is usually the hardest to replicate given limited project funding). In recent years, BI pilot studies have been implemented in a number of high-income countries including Canada, Finland, and the Netherlands, as well as lower-income countries such as Kenya, India, and Namibia (Standing, 2017).

All of this implementation has produced a growing body of robust research. Overwhelmingly, this literature demonstrates that BI experiments deliver significant benefits to participants while some anticipated negative outcomes, such as freeloading, are not observed (e.g., Bagstagli et al., 2016; Standing, 2017; Banerjee et al., 2019). This constitutes compelling evidence that an expanded and extended BI programme could potentially eliminate poverty to a substantial degree.

Basic Income for Nature and Climate (BINC)

Our BINC proposal aims to integrate these core BI principles into a composite instrument that pursues environmental protection alongside poverty alleviation in areas of high biodiversity and climate value. A previous version of this proposal was advanced as a “conservation basic income” (CBI; Fletcher & Büscher, 2020). Here, building on Mumbunan et al., (2021), we expand the concept to centralize climate mitigation alongside biodiversity protection. The result would be *a regular payment to members of communities living in or near areas*

Potential BINC benefits.
Source: de Lange et al. (2023)



considered critical for conservation and/or climate change mitigation in order to subsidize livelihoods based on sustainable resource use.

BINC thus offers an alternative approach to conservation finance that may compensate for the various deficiencies associated with MBIs. It explicitly centres local people's rights and builds trust between authorities and recipients as a first step to achieving justice (Saif et al., 2022). By tying payments to basic needs rather than any specific valuation of “ecosystem services”, BINC would help **reduce the commodification of natural resources** that MBIs encourage. They could act as an **income floor**, allowing more sustainable forms of livelihood generation to become sufficient for recipients to depend on, even if the payments are lower than the profits from alternative extractive activities. Providing unconditional payments would give recipients the **freedom and autonomy** to decide how best to spend the money they receive. Eliminating the need for oversight to enforce conditionality and delivering cash payments directly to programme participants would **reduce bureaucratic overhead** and the amount of project funding going to intermediaries. This could also help empower the local agents charged with disbursing the BINC payments. Delinking from offset financing would also avoid difficulties commonly encountered by MBIs in addressing key issues of additionality, permanence, and leakage. Instead, BINC could develop a more sustainable and dependable funding stream source that is able to shield programme participants from financial fluctuations.

The Fine Print

In practice, of course, it will be difficult to realize all of the core principles of the BI model in BINC implementation. And indeed, there remain questions concerning which core principles are in fact needed or appropriate within a given context – and we emphasise that all decisions need to be made with active participation and consent of program participants to be appropriate to their context. In the following, we consider these questions in relation to each core BI principle:

Periodic Payments

In most cases, a periodic payment that provides a regular income stream around which people can plan is probably the best option. However, some CTPs provide one bulk payment upfront, or a combination of regular payments and a one-time lump sum (e.g. at the outset to help pay off accumulated debts) (Bagstagli et al., 2016; Banerjee et al., 2019).

Universality

Universality, in the context of BINC, is understood as payments directed to those living in designated conservation-critical spaces. The conservation-critical space would be defined in an open and transparent process and could constitute, for instance, the population living within a national park, within its designated buffer zone, or in an Indigenous or Community Conservation Area (ICCA). Therefore, it is important that BINC works towards meaningfully incorporating people with diverse ways of relating to ecosystems, lands, and waters. The actual payment arrangement would be a political decision resulting from a transparent negotiation process.

Individuality

BI advocates individual-level payments for several reasons. Foremost among these is the potential for elite capture and the hoarding of resources if payments are made at the group level, or for gender-based inequality and conflict if made at the household level. Yet there is

also the danger of encouraging individuality, undermining social cohesion, and accelerating cultural change in (particularly some Indigenous) communities where these qualities are not the norm.

Cash

Distribution of BINC funds could occur via e-money in addition to physical currency (Eichhorn & Rahmadani, 2023). This could include local currencies as well as national ones. Beyond this, however, there is ongoing debate within BI discussions concerning whether the aim should be to provide income or (universal) basic *services* (Coote & Yazici, 2019). The case for a focus on income relies in part on the fact that it is precisely the inability of many national (or local) governments to provide basic services that requires most development intervention in the first place. Yet in communities not as deeply integrated into global markets, where money remains marginal, introducing cash payments also has the potential to undermine local cultural institutions and incite conflict

Unconditionality

Finally, we arrive at likely the most controversial principle, the BI emphasis on unconditionality. As with BI generally, there are many good reasons, outlined above, to advocate for unconditionality in BINC. Yet there may also be contexts in which this is not appropriate. And indeed, it is possible that BINC can never be considered truly unconditional given that by definition it is associated, even if indirectly, with pursuit of conservation aims (Mumbunan & Maitri, 2022). That is, even if programme administrators do not tie payments to environmental outcomes, participants may make this connection themselves.

From this perspective, it is clear that a key tension in developing BINC is the balance between supporting the self-determination of programme participants and achieving (as well as evidencing) conservation and climate mitigation benefits. How to best address and resolve this tension is an important consideration and active research front in any future implementation effort.

Financing BINC

Another key consideration concerns how to sustainably finance a BINC not directly linked to global environmental markets. After all, one argument in support of MBIs is that they are in fact able to generate finance directly through carbon markets and other offset mechanisms. Yet as we have shown, this comes with its own set of problems, and at any rate, remains a small proportion of what is actually needed to effectively finance conservation efforts globally (UNEP, 2021).

BINC will entail significant financial costs. A previous proposal near a protected area in Zimbabwe projected a cost of USD 7.2 million per year to provide BINC to 4000 recipients (NNM, 2018). De Lange and colleagues (2023) estimate that funding BINC globally would likely cost between USD 351 billion and 6.73 trillion annually depending on the number of recipients and level of payment. Yet while these are no small sums, they are well within the scope of the projected finance needed to scale up global conservation and climate action anyway in the future by whatever means (UNEP, 2021).

The money needed to finance BINC exists; it is merely a question of how it is distributed. It is estimated that between 1/3 and 1/4 of the world's total wealth is hidden in offshore tax havens (Campling & Colás, 2021). Global subsidies for environmentally harmful activities such

as fossil fuel and conventional agricultural production are estimated at USD 2.6 trillion per year.³ If even a small portion of these funds were directed to BINC, it could easily fund the implementation of a substantial international programme.

Conclusion

It is important to emphasize that neither BINC nor any other particular mechanism should be understood as a stand-alone silver bullet capable of achieving conservation or livelihood benefits in isolation. Nor should local residents of conservation-critical spaces be made wholly (or even primarily) responsible for achieving conservation results. No community exists in a vacuum, and the broader political-economic forces at play fundamentally influence the extent to which local people are able to effectively manage the resources around them (Berkes, 2007). Consequently, BINC must be part of a broader, more comprehensive programme for transformative change that includes attention to other dynamics, including directly confronting powerful extractive industries encroaching on local conservation spaces (Büscher & Fletcher, 2020) and establishing a broader governance framework. This attention to other dynamics must include, in particular, the formalization of land and tenure rights for Indigenous Peoples and local communities (RRI, 2019).

The next step, to which our growing international network is committed, is to develop new BINC pilot projects in other sites where we work in partnership with local civil society organizations and local people. These projects will be embedded within a rigorous transdisciplinary research framework that integrates economic, ecological, and sociological methods in pursuit of a holistic understanding of BINC processes and outcomes. Such research will yield comparable findings to cross-fertilize insights from different contexts to inform adaptive management as projects progress. This linking and learning will also assist in developing a set of best practices to guide the implementation of more projects in the future. In this way, we hope to scale up the potential for BINC to contribute to transforming how conservation and climate action are financed throughout the world. We invite other conservationists to join us in this effort in pursuit of a more just and sustainable future.

3 <https://www.businessfornature.org/reformingehs>

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3.2

Through Intermediaries

Between commitment and implementation, a network of NGOs, coalitions, and campaigns acts as translators of intent into action. Intermediaries can build essential bridges between global finance and local realities – but they can also become new centres of control. *Reimagining a New Model of Cross-Sector Nature-Positive Innovation*, Reforestamos, and Nature Positive explore this pivotal middle space. They reveal both the promise and the risk: how terms like “Nature Positive” can inspire or lose meaning, how partnerships can either open pathways or reinforce bottlenecks, and how innovation must be grounded in accountability and responsiveness to those most affected by biodiversity loss.

Chapter narrated by Amelyali Ramos and Swetha Stotra Bhashyam

Reimagining a new model of cross-sector nature-positive innovation

Jacob Park^{a)}, Swayamprabha Das^{b)} and Ernesto Herrera^{c)}

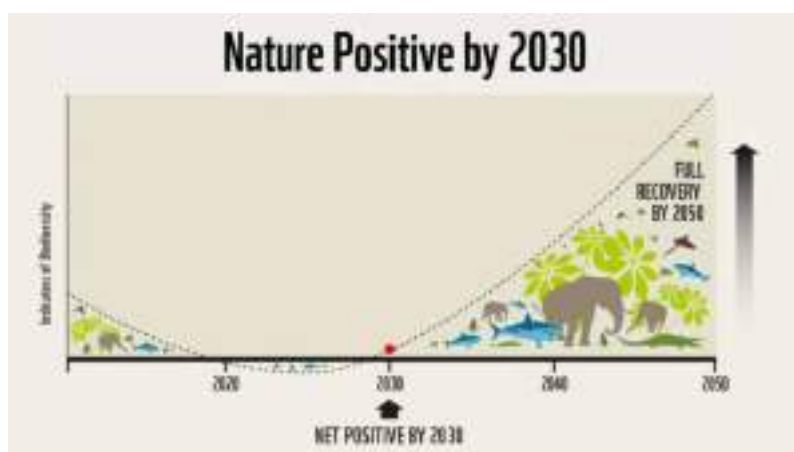
There are growing concerns in the global conservation community that traditional solutions (e.g. reliance on traditional Western donor countries as well as Western- oriented philanthropic and other related nonprofit organizations) tend to reflect the underlying techno-optimism and market-based solutions of global economic and financial elites rather than the needs and priorities of the vulnerable and marginalized people and communities who are most at risk from intensifying climate change and declining biodiversity.

At the same time, there is widespread consensus that new and diverse sources of conservation financing will be needed to achieve the [IUCN Nature 2030](#) agenda, including new and additional investments in nature-based solutions that are consistent with the Paris climate change principles (particularly around climate adaptation financing issues) and which will help mobilize more resources to Indigenous peoples and local communities. The important question is not why, but how; as in how can this critical goal be realized, and what can CEESP and other organizational components of IUCN do to help achieve this consensus? To address the issue and question of how the critical goal of Nature 2030 conservation financing can be realized, we believe that there are four important steps in rethinking and reimagining a new model of cross-sector nature positive innovation to achieve the Nature 2030 strategic goals.

Figure 1.

Nature Positive by 2030.

Source: The Nature Positive Initiative (<https://www.naturepositive.org>)



a) IUCN CEESP Steering Committee and Chair of the CEESP Business, Best Practice and Accountability Thematic Group

b) CEESP Deputy Regional Chair, South & East Asia

c) Chair, Meso America IUCN Regional Committee and Director General, Reforestamos (Mexico)

We believe that the **first step** toward fostering this new consensus on cross-sector nature positive innovation is to build on and complement (and thus avoid duplicating) the established the [global Nature Positive initiative](#), which defines nature positive (see **Figure 1**) as an initiative seeking to “halt and reverse nature loss by 2030 on a 2020 baseline, and achieve full recovery by 2050”.

Moreover, it is critically important that fostering cross-sector nature positive innovation also builds on and complements IUCN’s own work (in particular that of the Commission on

Ecosystem Management) on articulating the broad principles of collaboration with businesses (Baggaley et al., 2023) and nature positive measurements (IUCN, 2023).

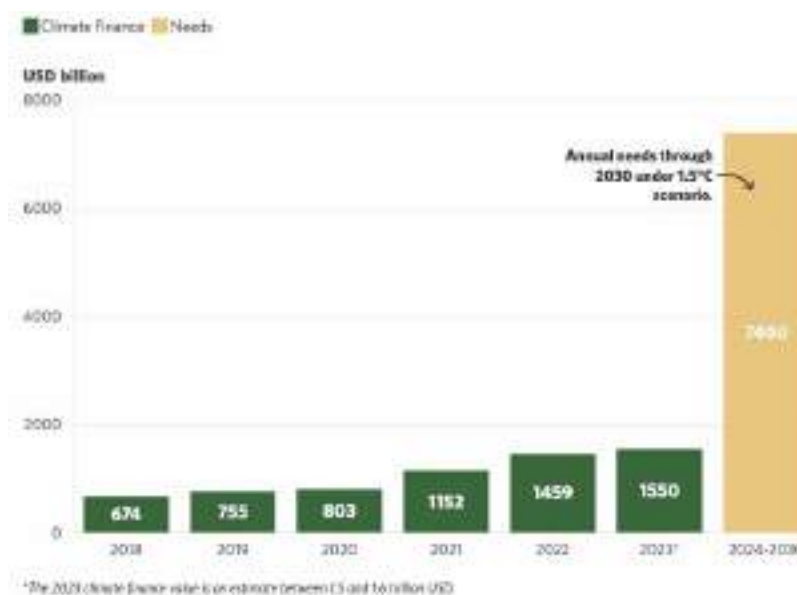
The **second step** towards fostering this new consensus on cross-sector nature positive innovation is to recognize that the international community's current efforts are not on track towards achieving the necessary financial and institutional resources target by 2030. At the 2009 COP15 climate change conference in Denmark, the international community established the voluntary global target of mobilizing USD 100 billion per year for climate action in developing countries by 2020 (OECD, 2022). This voluntary global target built on the principle of “common but differentiated responsibilities” articulated and introduced as international law more than 30 years ago at the UN Conference on Environment and Development, or the Earth Summit, in 1992 (Poula, 2020).

At the November 2024 UN climate change conference in Azerbaijan, the international community agreed on a new “collective quantified goal on climate finance” of at least USD 300 billion per year by 2035, while working towards a more ambitious commitment of USD 1.3 trillion per year by the same time frame (IISD, 2024). Although the November 2024 goal of USD 300 billion per year is almost three times what was agreed at the 2009 UN climate change conference, the Climate Policy Institute estimates (see **Figure 2**) that despite annual climate finance having more than doubled between 2018 and 2022, a further fivefold increase is required to reach the USD 7.4tn needed each year through 2030 under the 1.5°C scenario (CPI, 2024)

Figure 2.

Climate finance annual needs through 2030 under 1.5 degree Celsius scenario.

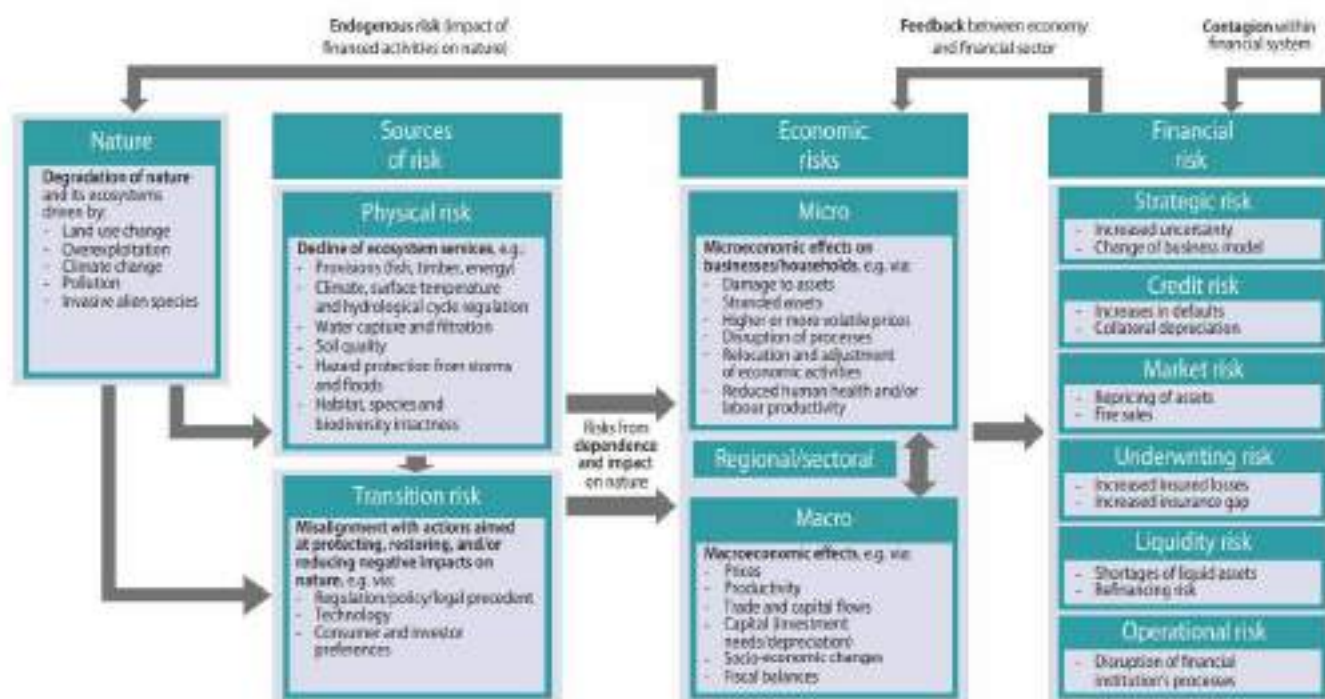
Source: Climate Policy Institute (2024)



The **third step** towards fostering this new cross-sector nature positive innovation consensus is to connect nature positive as a concept with the emerging science of nature-related financial and economic risk analysis. According to a 2024 research note (Gardes-Landolfini et al., 2024) by the International Monetary Fund (IMF), which, we should add, is usually not known as an alarmist environmental organization: “the economy is embedded in, and dependent on, nature. Yet, economic activity is degrading nature at an unprecedented pace. Interacting with climate change, nature loss and transformation can generate significant threats to the global economy and financial system” and “deep interlinkages between climate change and nature loss can exacerbate threats to the global economy and financial system.”

Moreover, according to a 2024 analysis by the Network of Central Banks and Supervisors for Greening the Financial System (NGFS, 2024), nature-related financial risks, which can be described as “the risks of negative effects on economies, individual financial institutions

and financial system,” consist of a wide range of financial and economic risks (see **Figure 3**). Such risks include “the degradation of nature, including its biodiversity, and the loss of ecosystem services that flow from it (i.e., physical risks), as well as the “misalignment of economic actors with actions aimed at protecting, restoring, and/or reducing negative impacts on nature (i.e., transition risks).”



Sources: Adapted from Svartzman, R. et al. (2021) A "Silent Spring" for the Financial System / Exploring Biodiversity-Related Financial Risks in France.

Figure 3.

Nature-related financial risks transmission channels.

Source: Network for Greening the Financial System (2024) ngfs.net/en/what-we-do/nature-related-risks

Although there is a nascent “decolonization” movement pushing to bring equity to existing philanthropic and funding systems, we strongly believe that the **fourth step** towards mobilizing this new cross-sector nature positive innovation consensus is to help more and increasingly diverse types of cross-sector conservation models that are positive for nature, positive for people, and positive for society expand at the same time. Fortunately, there is some evidence (Karolyi & Tobin-de la Puente, 2024) that private nature finance has accelerated: what the UN Environment Programme refers to as “private finance for nature” surged eleven fold between 2020-2024, from USD 9.4 billion to over USD 102 billion. This private finance for nature consists of a wide range of “innovative financial instruments like debt-for-nature conversions, nature-supportive Exchange Traded Funds (ETFs), biodiversity credits, and private venture capital for biodiversity” (Karolyi & Tobin-de la Puente, 2024). For instance, in collaboration with the World Bank and the International Finance Corporation, the Colombian subsidiary of the Spanish banking group BBVA announced that it was issuing USD 50 million in biodiversity bonds to finance habitat conservation and restoration projects in Colombia in June 2024 (Karolyi & Tobin-de la Puente, 2024).

As we start to think about 2030, and the type and scope of cross- sector nature positive innovation in the international community by then, there is an obvious need to design, develop, and scale of the next generation of nature-based solutions (IUCN, n.d.) that centre global inequality in their new strategic frameworks (International Resource Panel, 2024). However, can and will this move toward nature-based solutions continue in lieu of the international development policy paralysis in the early months of 2025? If sustainable global actions are to happen locally in the Global South, they are likely to be advanced only by leadership and innovative actions from environmental NGO and civil society actors from this region such as Reforestamos, a Mexico-based environmental NGO.

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Reforestamos: Cross-sector platforms to advance Nature-based Solutions in Mexico

Reforestamos has emerged as a leading example of how cross-sector collaboration can drive transformative solutions for nature conservation and sustainable development in Mexico and beyond. With a mission to ensure that forests and natural ecosystems remain a source of prosperity for present and future generations, Reforestamos has strategically positioned itself as a neutral and trusted articulator between the private sector, government, civil society organizations and local communities.

Rather than acting solely as an implementer of conservation projects, Reforestamos plays a critical role in bridging sectors that have traditionally operated in silos. Its approach fosters trust, facilitates dialogue, and mobilizes resources towards the creation of nature-based solutions that align environmental conservation with economic and social development priorities.

Some of Reforestamos' flagship initiatives include the Mexican Alliance for Biodiversity and Business ([AMBIN: LinkedIn](#)), which was launched in 2016 to bring together leading companies committed to integrating biodiversity into their core business strategies and the Mexican Alliance for Ecosystem Restoration ([AMERE](#)), a multi-stakeholder platform that started in 2021 to promote large-scale ecosystem restoration efforts across the country, aligned with the United Nations Decade on Ecosystem Restoration. This [2024 case study](#) provides some recent trends in biodiversity financing challenges and opportunities in the Mexican country context.

Recognizing the growing importance of climate action and carbon markets, Reforestamos also launched Amexcarbono, an association focused on promoting high-integrity forest carbon projects that ensure fair and equitable participation of local communities and landholders in the emerging voluntary carbon markets.

These initiatives exemplify how Reforestamos has been using innovative, cross-sectoral collaboration models to accelerate financing for conservation, foster territorial governance, and enhance ecosystem services such as water security, carbon sequestration, and biodiversity conservation. The critical lesson of Reforestamos' strategic model in the context of the broader Nature Positive goals is the need to move beyond traditional philanthropy and for global conservation governance to fully embrace systemic

innovation, inclusive governance, and the alignment of business incentives with ecological restoration and protection. In terms of the global Nature Positive and NbS agendas, Reforestamos case study provides four key lessons:

1. Building trust takes time. Companies advance faster when they see credible local partners and tangible environmental results.
2. Continuous learning is essential. Translating corporate interest into holistic impact requires robust governance and long-term monitoring, ensuring that nature-positive outcomes are inclusive and verifiable.
3. Policy and business coordination remains undervalued by public donors and private investors. There is a critical need for an organization to serve as a "neutral" convener to allow for systemic collaboration and mobilizing resources. Without this neutral convener, multi-stakeholder platforms tend to struggle organizationally and to sustain momentum.
4. A new Nature Positive and NbS investment and entrepreneurship ecosystem is emerging that includes companies and startups whose business models are based on ecosystem conservation and restoration. Most critically, the rise of these new private and public-private hybrid actors raise questions for future conservation research and practices such as:
 - How can NGOs collaborate with mission-driven enterprises to accelerate nature-positive outcomes?
 - How will civil society evolve within an ecosystem increasingly shaped by private investment and entrepreneurial solutions?

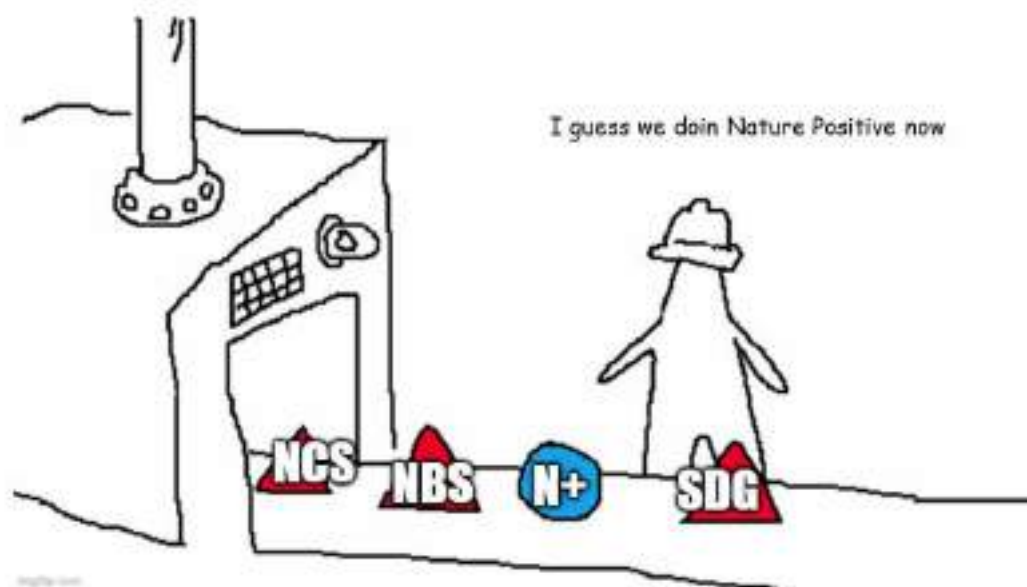
Contributors: Jacob Park, Swayamprabha Das and Ernesto Herrera

A premortem of Nature Positive: A meme of our future

Adrian Dwiputra^{a)}, Nur Abdul Bahar^{b)}, and Tasya Vadya Sarira^{c)}

A meme about Nature Positive illustrating how it emerges alongside the other widely accepted environmental terms, such as Nature-Based Solutions (NBS), Nature-based Climate Solutions (NCS), and the Sustainable Development Goals (SDGs).

Created at: imgflip.com



Nature Positive could be considered a “meme” of our future, in that it fits with Dawkins’ (2016) definition of a meme being a singular functional unit of information in our culture that spreads, proliferates, and evolves. There has been a consistent increase in the use of the term and the concept of Nature Positive in scientific publications (Figure 1). In addition, a growing number of global conservation meetings exhibit amplified calls for Nature Positive. Through its proliferating uses, the meaning of Nature Positive evolves.

Similar observations have been documented by Milner-Gulland, who raised concerns about the dilution of Nature Positive’s meaningfulness through its recent popularization (Milner-Gulland, 2022). Interestingly, they defined Nature Positive as “measurable overall net gain in biodiversity” (Milner-Gulland, 2022), which, although similar, connotes a slightly different meaning than the original definition of Nature Positive (Locke et al., 2021). If slight shifts of meaning keep occurring in the uses of Nature Positive, its definition will eventually evolve into something quite different from the original concept.

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Locke et al.’s original 2021 definition of Nature Positive, in a nutshell, denotes leaving nature in a better state than it was in 2020 – the baseline state – by 2030. The definition can be extended to include “achieving full recovery by 2050” (Locke et al., 2021). Nature Positive was originally meant to include existing goals, such as Net Zero, while adding emphasis on biodiversity aspects. Unfortunately, the mentions of Nature Positive in subsequent works such as Zaccari et al. (2023) and in some major global/regional conservation events were often not coupled with a clear definition. Most talks we attended in the recent past used Nature Positive as an ‘umbrella’ term that encompasses any actions that positively impact nature, such as tiger conservation and its positive effects on both tiger populations and forest protection. Only a few

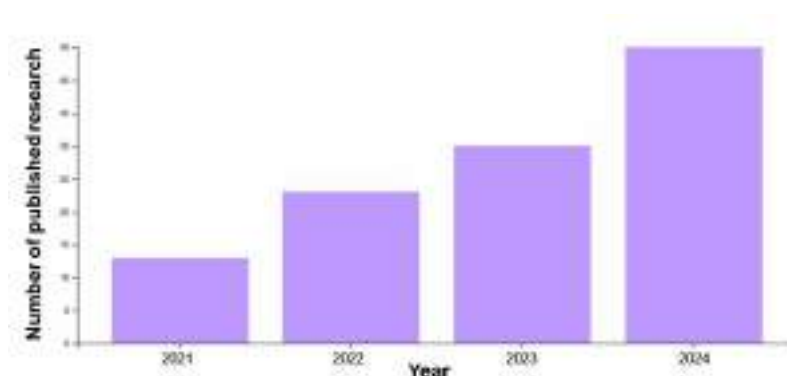
talks referred to Nature Positive in a manner consistent with Locke et al.'s original definition (2021). Similarly, in the first Global Nature Positive Summit held in October 2024, Professor Sarah Bekessy noted that the interpretation of Nature Positive has yet to be standardized – which she suggested is crucial to make it more impactful in conservation dialogues (The Biodiversity Council, 2024).

Acknowledging the ongoing evolution of Nature Positive, we believe it is timely for everyone to express our critical opinions of the definition of Nature Positive to make it less monolithic and more adaptable across the diverse contexts of its potential implementations. One way to do so is through a premortem assessment (Kahneman, 2013; Klein, 2007; Thaler, 2018) of Nature Positive by asking ourselves a hypothetical question: “25 years down the road, we have tried to achieve Nature Positive but failed. What went wrong?”

Figure 1.

An increasing amount of research on “nature positive” or “nature-positive” topics has been published since 2021. The research field is quite diverse, spanning from ecology to psychology.

Source: Web of Science database accessed 15th December 2024



The following represent a few potential answers to this hypothetical question:

1. The timeline associated with Nature Positive goals is unrealistically ambitious. By 2030, nature is required to have reached a better state than its 2020 baseline and is supposed to be on track to achieve full recovery by 2050 (Locke et al., 2021). These milestones may not account for the lag that relevant stakeholders will need to mainstream and adopt Nature Positive frameworks. Ongoing efforts aimed at formulating the measurement and implementation standards of Nature Positive (IUCN, 2023) and the recommended adaptations for businesses (Baggaley et al., 2023) will be finalized this year, leaving only 5 years for stakeholders to internalize their goals and plan ways to achieve them by 2030. Even in resilient forest ecosystems, 5 years are not enough to get back to the baseline states (Poorter et al., 2021; Romanelli et al., 2022; Fricke et al., 2022; Massimino et al., 2008). Setting unrealistic goals may lead to unethical behaviours (Ordóñez & Welsh, 2015), which are counterproductive to achieving such global goals for nature and harmful to environmental justice targets. For instance, a 3,348-hectares-forest carbon-offset project in Cambodia has been linked to lands and forests ‘legally’ extorted from Indigenous communities (Brook, 2024). Therefore, it is better to set ambitious but realistic goals (Gregory et al., 2023), and one way to do so is to have a more realistic timeline for achieving Nature Positive.
2. Uneven resource and responsibility distribution creates burdens for some countries that play particularly important roles in achieving global Nature Positive goals. The consistent duality of low-income economies with very high biodiversity and high-income, less biodiverse ones evokes a power imbalance in nature conservation, especially given the high co-occurrence of biodiversity hotspots and poverty (Fisher & Christopher, 2007). This unequal burden is evident in the country-level Species Threat Abatement and Restoration (STAR) metric, which is very likely to be adopted

to monitor progress towards Nature Positive goals (IUCN, 2023): none of the five countries that have stewardship over 31% of the total STAR values for terrestrial amphibians, birds, and mammal species at the global level are high-income countries (Mair et al., 2021).

The lack of transparency of the information required to monitor progress in achieving Nature Positive hinders its adoption and implementation. Some key metrics to monitor Nature Positive require fine-resolution biodiversity data (IUCN, 2023) which is behind a paywall. Accordingly, the institution that sets the standards of measuring Nature Positive and implementing the associated targets also takes part in setting such a paywall (see [Integrated Biodiversity Assessment Tool platform](#)). Such a situation may limit transparency and raise concerns about the neutrality of conservation institutions that set such ambitious targets and goals for Nature Positive. In addition, putting essential information behind a paywall means putting medium- and small-scale enterprises at a competitive disadvantage compared to large companies, which may harm the economies of developing nations and motivate them to resist action.

Sole reliance on market mechanisms, such as biodiversity credits, as well as businesses which do not receive meaningful buy-ins from governments and local communities, will jeopardize Nature Positive. Efforts to achieve Nature Positive targets need proper engagement from governments, local people, and business owners. However, beyond targeted engagements with business owners (Baggaley et al., 2023), there is limited information about engagement strategies tailored to governments and local communities within the rapidly developing agendas of Nature Positive. In addition, biodiversity credits and their trading currently have a long way to go due to the complexity of measuring biodiversity, the uncertain mechanism of the ‘currencies’ and trades, and premature governance.

Rather than portraying Nature Positive as absolute doom and gloom, we express our opinions to balance out the narratives and initiate wider conversations around this urgent global goal for nature. Our pre-mortem addresses a few eventualities which have not happened, and which we hope will never happen, so that the Nature Positive goal can be achieved in time. While it is too late to expect such a global “meme” to originate from the bottom up, grassroots, Indigenous, and local leaders should nevertheless take on roles in steering the evolution of Nature Positive goals and implementation away from the repetitive mistakes in which top-down frameworks—despite good intentions—fail to resonate with or empower local actors.

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3.3

When funding reaches the ground: Resourcing stewardship

Once resources arrive in the hands of local actors, the conditions attached to them determine whether they will strengthen long-term stewardship or erode it. This is the point where conservation work becomes inseparable from place, culture, and community leadership. *Building a Better Future for Conservation Funding* and *The Cali Roundtable Report* examine the realities of funding at the local level. They document the barriers – short timeframes, rigid reporting demands, and mismatched priorities – as well as emerging models of direct, flexible, trust-based support. These approaches align with the timelines of ecosystems themselves, recognising that enduring care cannot be rushed.

Chapter narrated by Amelyali Ramos and Swetha Stotra Bhashyam

Building a better future for conservation funding

Shreya Chakrabarti^{a)}, Resson Kantai-Duff^{b)} and Jessie Davie^{c)}

Conservation, as it exists today, is built on a system that too often excludes the very people who live in, depend on, and protect the world's most biodiverse landscapes. Indigenous Peoples and local communities have long stewarded forests, savannas, wetlands, and coastlines – yet their work remains severely underfunded and undervalued. Despite bold pledges and sweeping rhetoric, most conservation dollars still flow through centralized models, far removed from the landscapes and communities they aim to support.

A growing body of research – including four of our own reports ([Greening the Grassroots](#), [Rooting for Change](#), [Seeding Solutions](#), and [From Pledges to Practice](#)) – makes clear that lasting conservation outcomes require a shift in who holds resources and decision-making power. Encouragingly, we are beginning to see examples of that shift, from new funding models to global coalitions advocating for local leadership. These emerging changes offer a roadmap for transforming conservation finance into something more effective, equitable, and enduring.

The problem: A system built to exclude

Conservation finance today is still shaped by its colonial and exclusionary origins. For much of the 20th century, conservation equated with the removal of people from nature, often through the establishment of protected areas that displaced Indigenous and local communities. While the strategies have evolved, many of the same dynamics remain embedded in the system, where power, funding, and decision-making are concentrated far from the ground.

The numbers speak for themselves. Indigenous Peoples and local communities manage more than one-third of the world's most biodiverse ecosystems, yet receive less than 1% of global climate finance. In Africa, only 5-10% of private philanthropic funding goes directly to African-led organizations. Much of the funding is delivered through structures that create layers of distance between resources and those implementing conservation on the ground.

Funding practices themselves contribute to this distance. Our 2023 report, *Greening the Grassroots*, found that 92% of African conservation organizations struggle to access core, flexible funding, and 71% cite short-term, project-based funding cycles as a major barrier to long-term effectiveness. Application processes are often burdensome. Reporting requirements are rigid. Priorities are frequently defined at a distance from local realities, undermining community-led strategy.

One of the most persistent myths upholding this system is the “capacity myth” – the widely held but flawed belief that local and Indigenous organizations lack the necessary financial management skills, are likely to misappropriate funding, and would therefore be unable to manage large grants. This assumption is often used to justify why funders continue channeling money through intermediaries rather than directly supporting locally-led efforts. However, research shows that this myth is not based on evidence but on historical power

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imbalances, donor biases, and structural barriers that exclude local organizations from accessing meaningful funding.

In reality, local organizations have the expertise and experience but lack the resources to grow precisely because they are underfunded. The real issue is not a lack of capacity but rather a lack of direct, flexible, and long-term funding. Instead of perpetuating the myth, we have the opportunity to recognize that capacity is built through investment, not an inherent limitation. By shifting to trust-based models and unrestricted grants, conservation donors can empower local organizations to scale their impact, ensuring that conservation is both effective and equitable.

The solution: Invest in outstanding local organizations

There is a better way – and it’s already working in many places. Across Africa and around the world, locally rooted conservation organizations are delivering powerful results, often with fewer resources and greater impact than traditional models.

In Namibia, for example, a pioneering policy shift in the 1990s granted rural communities the legal rights to manage and benefit from wildlife through the establishment of communal conservancies. With support from organizations like the Namibian Association of CBNRM Support Organizations, communities formed over 80 conservancies that now cover roughly 20% of Namibia’s land area. These conservancies have been instrumental in tripling the country’s elephant population, from about 7,500 in the early 1990s to over 24,000 today. By giving communities a direct stake in conservation and tourism revenues, the model has reduced poaching, improved wildlife habitat, and generated millions of dollars in income and jobs for local people. It’s one of the clearest examples of how recognizing and resourcing community leadership can drive large-scale biodiversity recovery.

In Madagascar, coastal communities have created locally managed marine areas (LMMAs) to protect overfished and degraded marine ecosystems. With support from local NGO Mihari Network, these communities have implemented strategies such as temporary octopus fishery closures, community-led monitoring, and sustainable harvesting rules. The results have been

Fishing community.

Credit: Maliasili



dramatic: studies show that LMMAs have led to a 189% increase in fish biomass compared to non-managed areas, and have boosted income for small-scale fishers, especially women. Beyond fisheries, this model has helped rebuild reef health and foster long-term stewardship of coastal resources. Crucially, this approach is community-designed and community-enforced, proving that even in resource-limited settings, local governance can achieve measurable ecological and social outcomes.

In Kenya's Maasai Mara region, more than 20 community conservancies have been established around the world-renowned Maasai Mara National Reserve, offering a conservation model rooted in landowner rights and collective governance. Supported by the Maasai Mara Wildlife Conservancies Association, this model allows Maasai landowners to lease their land into conservancies, receiving regular payments and other benefits like employment, while retaining ownership. These conservancies help reduce habitat fragmentation, maintain vital wildlife corridors, and support tourism operators that channel a share of revenue directly to communities. In addition to protecting critical habitat for lions, elephants, and wildebeest, the conservancies have funded education scholarships, healthcare, infrastructure projects, and grazing plans that balance pastoralist livelihoods with conservation. By prioritising transparency and equitable benefit-sharing, the Mara conservancies demonstrate how community-led conservation can align ecological goals with social and economic resilience.

These examples show that when local actors are trusted and funded, they can deliver conservation that is not only effective, but deeply rooted, resilient, and just. The solution is not to replace existing efforts with externally designed programs, but to invest in and scale what is already working.



Maasai Mara women. Credit: Felipe Rodriguez

From problem to progress: Signs of a shift

While the challenges are systematic, there are meaningful signs of change and reasons for optimism.

One of the most compelling examples comes from [Breaking the Mold](#), a 2024 report by the Center for Effective Philanthropy that examined the impact of MacKenzie Scott's unrestricted, no-strings-attached grants. Since 2020, Scott has given \$19 billion to more than 2,000 organizations – without requiring applications or imposing restrictions. The results speak volumes:

- Two-thirds of organizations used funds to hire new staff, and over 70% maintained or expanded these positions.
- 90% of nonprofit leaders reported that unrestricted grants strengthened their long-term sustainability, and nearly half used some funds to build reserves.
- Nearly half of the organizations used flexible funding to take more risks, innovate, and expand programs, making them more credible and attractive to additional donors.

The outcomes directly challenge the assumption that organizations need to be tightly managed in order to be effective. In fact, the evidence shows that when organizations are trusted, they grow stronger and more impactful.

Similar patterns are emerging in the conservation space. Our 2024 report, *From Pledges to Practice*, cited that only 2.1% of funds pledged to support Indigenous Peoples and local communities in the \$1.7 billion Glasgow Leaders' Declaration reached those communities directly. While the pace of change is slow, our report also highlighted growing momentum for reform, including developing new funding mechanisms that simplify access and prioritise community-led action. Funding for forest conservation, in particular, is making positive strides.

A promising initiative driving this shift is the Restore Local program, launched by the World Resources Institute with support from Bezos Earth Fund. As part of its commitment to supporting nature-based solutions, the Bezos Earth Fund has pledged more than \$22 million to accelerate locally-led landscape restoration across two critical African ecosystems: the Greater Rift Valley in Kenya, and the Lake Kivu and Rusizi River Basin spanning Rwanda, Burundi, and the Democratic Republic of Congo. Restore Local focuses on empowering communities with tools, data, and funding to lead restoration efforts while investing in breakthrough geospatial monitoring technologies to track progress and ensure long-term impact. The initiative centres local leadership – not as a symbolic gesture, but as the foundation of effective ecosystem restoration.

Another example is the Good Energies Foundation partnership with Synchronicity Earth: a pooled funding model designed to channel flexible, long-term funding to local forest conservation organizations in the Congo Basin – one of the world's most critical ecosystems for biodiversity and climate stability. Recognizing that traditional funding models often exclude smaller, locally rooted organizations, this partnership focuses on removing barriers to access and aligning funding with community priorities. By pooling resources and coordinating grantmaking, the fund enables streamlined support that is adaptable, trust-based, and grounded in local leadership. It also treats a strong civil society not just as a delivery mechanism, but as a conservation outcome in itself, demonstrating a transformative approach to financing environmental stewardship.

Together, these examples point to a growing recognition that transforming conservation means reimagining the systems that support it.

What needs to happen next

The solutions are not theoretical. They are practical, proven, and ready to scale. What's needed now is for institutions – governments, philanthropists, multilaterals, and conservation networks – to commit to shifting power and resources toward locally-led leadership.

To truly shift power, we must also reckon with where it comes from. Much of the wealth behind global philanthropy has been built – directly or indirectly – through extractive, colonial, and exploitative systems that have historically harmed the very communities now being asked to conserve nature. Acknowledging this legacy is not about assigning blame, but embracing accountability. It invites funders to see their role not just as grantmakers, but as partners in repair – engaging in practices that restore relationships, centre community agency, and redress past and present injustices. Embedding this historical consciousness in funding dialogues can help align conservation finance with broader decolonial and justice-centred movements. It's not only about shifting resources, but also transforming the relationships, responsibilities, and narratives that underpin them.

This means:

- Providing multi-year flexible funding that organizations can use based on their own priorities.
- Redesigning funding processes to be accessible, proportionate, and aligned with local realities.
- Recognizing capacity as something that grows with investment, not something that must be proven in advance.
- Measuring success based on locally defined outcomes rather than external indicators alone.
- Embedding equity into every stage of funding design – from who sets priorities to who receives and manages funds.

This is not just a matter of fairness – it's a matter of effectiveness. Global conservation targets will not be met through centralized, rigid systems. They will be achieved when those closest to the land and sea are resourced and respected as the leaders they already are.

The future of conservation is local

The current conservation finance system has deep roots but is not immovable. Across continents, community-based organizations show what's possible when they are trusted and equipped to lead. New funding models, global coalitions, and bold philanthropic experiments are proving it's possible to move from promises to practice.

The question now is whether the conservation community is ready to scale these shifts – not as side experiments, but as the new standard. The future of conservation is local. It is equitable, community-driven, and built on partnership, not prescription. To realize the future, we must let go of outdated systems and trust in what has always worked: local leadership, grounded knowledge, and long-term commitment.

The Cali Roundtable Report: Making biodiversity funding work for Indigenous Peoples, local communities, women and youth

Amelia Arreguín Prado^{a)} and Helen Tugendhat^{a)}, Carla Bengoa^{b)} and Félix Feider^{b)}

In October 2024, on the margins of COP16 of the Convention on Biological Diversity (CBD) in Cali, the Forest Peoples Programme and Synchronicity Earth convened the [Cali Roundtable](#) discussion exploring how to enhance biodiversity finance for Indigenous Peoples and local communities, women, and youth. This event followed the [Montreal roundtable](#) held during CBD COP15 in 2022, which explored how to improve direct and indirect financial and technical support for the actions of Indigenous Peoples and communities in managing, using, conserving, and claiming their territories and resources. Since that initial roundtable, Indigenous Peoples, and local communities have seen both progress and persistent challenges in accessing critical funding for their work.

At the same time, there has been a growing recognition that women and youth are also central actors in biodiversity conservation. With this realisation, the Cali Roundtable expanded its scope to reflect with women and youth representatives on the specific barriers they face and the opportunities to improve access to sustainable financial support for their conservation-related efforts. This broader, more inclusive approach aimed to take stock of developments since Montreal and generate collective insights on how to make biodiversity finance more equitable and effective for all key rightsholders.

The discussions were captured into the “Cali Roundtable Report” which presents a collective assessment of the current state of biodiversity finance from the perspective of Indigenous Peoples, local communities, women, and youth, and present key reflections on three main areas:

- **Positive developments in funding for biodiversity action**

Such progress includes increased levels of direct funding for Indigenous-led organisations, more and better participation in decision-making and governance in some funding mechanisms, and a rise in research on how funding processes can better serve Indigenous Peoples, local communities, women’s organisations, and youth groups.

- **Persistent challenges that continue to affect access to funding**

Without solid relationships of trust between funders and communities, Indigenous peoples and local communities, women, and youth are often subject to shorter-term funding with high administrative burdens, which limits their ability to scale up their action and enact long-term change.

a) Forest Peoples Programme

b) Synchronicity Earth

● Recommendations for funders including philanthropists

The achievements and challenges analysed in the report can be used to create a set of 10 recommendations that can act as a guide for public and private funders to collaborate with Indigenous peoples, local communities, women and youth for effective, sustainable biodiversity conservation.

Key among these is a call for all funders to align their funding to the self-determined priorities and needs of those they want to fund; giving funding should be an act of partnership and solidarity towards a shared outcome, not a transaction to achieve an externally-defined purpose.

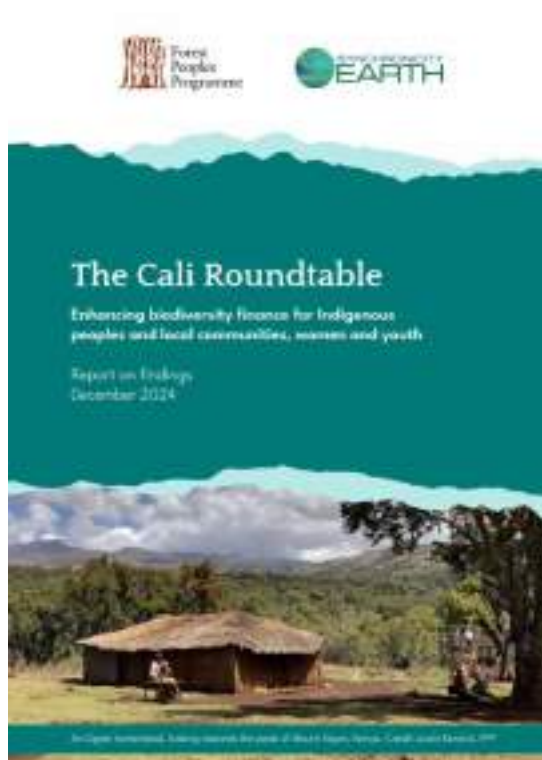
“When we plant trees, do we only want to plant trees or see them grow? This takes time. Funding should be 3+ years, and the collaboration should be long-term for results to have time to unfold.” (Indigenous woman from Kenya)

With new financial mechanisms, such as the Cali Fund and the Global Biodiversity Framework Fund, billions of dollars have been pledged to support biodiversity funding. This funding mobilization has the potential to effect transformative change, but only if it is done by and with Indigenous peoples, local communities, women and youth.



Read the [full report](#) to find out real-life experiences of rights-holders receiving and applying for funding, as well as the key initiatives, documents, and resources they have developed to support and evidence their vital work in biodiversity conservation.

You can access the Spanish, French, or Portuguese versions [here](#).



3.4

When decision-making power shifts: Redefining success

Transformation happens when those who live alongside biodiversity are trusted to set priorities and define success. *The Chrysalis Youth Fund* shows how resourcing young leaders to act on their own terms sparks agendas rooted in local realities. The Pgaz K'Nyau Social Enterprise in northern Thailand blends ecological care with economic resilience through wild honey production; *The Misak People's Plan de Vida in Colombia* enacts eco-cultural governance where rivers and moorlands are kin; and Peru's Potato Park safeguards over 1,400 potato varieties through community-led, women-centred stewardship. Together, these initiatives reveal that when decision-making power truly shifts, conservation becomes a lived practice of care, autonomy, and interdependence – not an external project.

Chapter narrated by Amelyali Ramos and Swetha Stotra Bhashyam

The Chrysalis Youth Fund: A step in shifting power to young biodiversity leaders

Young people have long been at the forefront of the biodiversity movement, organizing, educating, advocating, and envisioning new ways of living in harmony within Nature. Yet despite their leadership, **youth-led biodiversity efforts continue to struggle to receive support and funding**. In response to this persistent gap, **Synchronicity Earth launched the Chrysalis Youth Fund in September 2023**, an initiative co-created with youth partners dedicated to shifting more power and resources directly into the hands of young changemakers.

Recognizing that youth are too often excluded from the decision-making processes that affect their futures, the Fund was designed not just to support youth, but to be **shaped by youth**. In June 2024, Synchronicity Earth took a significant step by adopting its first-ever **Youth Committee**, the organization's first participatory decision-making model in which five young leaders identify funding priorities for the Chrysalis Youth Fund by recommending overlooked and underfunded youth organisations and initiatives. Each Committee member receives an honorarium for their time, experience, and leadership. The initiative is also supported and championed by **youth within the organization's staff**, who are deeply passionate about resourcing and uplifting youth-led biodiversity work.

The Chrysalis Youth Fund is still growing but it marks a crucial shift: from tokenistic youth involvement to youth-inclusive philanthropic practice, and from asking youth for input to sharing power and trust. It's a small but powerful step toward a more just and regenerative funding ecosystem, one where youth are not only heard but are better resourced and trusted to lead.

Learn more: <https://www.synchronicityearth.org/chrysalisfund/>

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A Karen youth-led enterprise in northern Thailand

Disclaimer: This case study has been drafted based on “The Story of the Pgaz K’Nyau Social Enterprise” as featured in [Local Biodiversity Outlook](#). Interpretations and framing in line with Feminist Ecological Economics are added by the author.

In the highlands of northern Thailand, the Pgaz K’Nyau (Karen) Indigenous community is cultivating a model of local economy grounded in care, interdependence, and cultural continuity. Through a youth-led community social enterprise centred on wild honey and forest products, young people are weaving together ecological stewardship and economic resilience, while affirming their place and identity within their ancestral lands.

Supported by the Pgakenyaw Association for Sustainable Development (PASD), the initiative offers a meaningful alternative to urban migration, particularly for young women, who are often the first to leave rural communities in search of work. This local, community-driven enterprise exemplifies core principles of Feminist Ecological Economics (FEE) – placing care, reproduction, and relationality at the heart of the economy. In contrast to extractive and market-centric models, the project nurtures collective livelihoods through seasonal, respectful harvesting, where bees, forests, and people are interdependent actors in a shared ecosystem.

The honey produced is not simply a commodity, but a vessel for storytelling, memory, and cultural expression. Through branding, packaging, and public engagement, the youth share their vision of conservation not as restriction, but as ongoing acts of care and reciprocity. In doing so, they reclaim economic agency while reinforcing traditional knowledge systems – especially those transmitted through the everyday labour of women.

This enterprise challenges dominant paradigms of biodiversity finance by demonstrating how value can be rooted in local relationships, not global markets. Resources generated are reinvested into the community, sustaining social reproduction and reinforcing the commons. The youth, by leading this initiative, are asserting their role not only as entrepreneurs, but as stewards of their territory and agents of continuity.

In this forest-based livelihood, we see a tangible example of how regenerative economies can grow from the ground up – led by care, sustained by culture, and anchored in the wisdom of those who know the land best.

Contributor: Amelia Arreguin Prado

The Misak people's plan de vida in Colombia

Disclaimer: This case study has been drafted based on "Children of the Water: Plan de Vida (Life Plan) of the Misak People" as featured in [Local Biodiversity Outlook](#). Interpretations and framing in line with Feminist Ecological Economics are added by the author.

In the highlands of Cauca, Colombia, the Misak people have built a living economy guided not by markets, but by care, collective responsibility, and reverence for water and land. Their Plan de Vida (Life Plan), formalised in 1992 but rooted in ancestral oral traditions, offers a powerful vision of eco-cultural governance that places spiritual and ecological wellbeing at its heart. In this framework, moorlands, rivers, and wetlands are not "natural capital," but living relatives – beings with rights and memory.

Viewed through a Feminist Ecological Economics (FEE) lens, the Plan de Vida reveals an economy where care is not marginal but central; where communal reproduction of life – of soil, seed, water, and kinship – is prioritised over profit or accumulation. The Misak concept of "being children of the water" underscores this: identity and survival are entwined with the ecosystems they protect.

The Plan's ecological rules, developed through communal decision-making and grounded in traditional knowledge, regulate land use, reforestation, and water protection – not to serve economic growth, but to sustain the conditions for life. The minga, a traditional system of collective labour, brings the community together for tasks such as tree planting and watershed restoration, affirming shared responsibility over nature's care. These are not just environmental acts, but expressions of a politics of place – where belonging, memory, and justice are interwoven into land stewardship.

In stark contrast to development models that demand extractive outputs, the Misak's approach fosters commons-based governance that reflects an ethic of interdependence. By asserting their spiritual and legal autonomy, they resist the commodification of their territories and affirm a regenerative economy led by Indigenous authority, cultural continuity, and care.

The Misak Life Plan invites us to reimagine biodiversity finance and conservation policy beyond transactional logics. It calls for an understanding of sustainability as something lived through ritual, responsibility, and relational reciprocity – where rivers, forests, and communities flourish together.

Contributor: Amelia Arreguin Prado

The Andean way of conserving life

Disclaimer: This case study has been drafted based on “The Story of the Potato Park” as featured in [Local Biodiversity Outlook](#). Interpretations and framing in line with Feminist Ecological Economics are added by the author.

Nestled in the highlands of Cusco, Peru, the Potato Park is a biocultural territory governed by six Quechua Indigenous communities who have collectively conserved over 1,400 varieties of potatoes in their ancestral lands. But more than a conservation initiative, the Park exemplifies a radically different economic logic – one grounded in care, reciprocity, and communal interdependence, central tenets of Feminist Ecological Economics (FEE).

At the heart of the Potato Park is the understanding that biodiversity is not a commodity but a living legacy – cared for through everyday practices of seed sharing, spiritual ritual, and ecological stewardship. Women are key actors in this system. As “guardians of seeds”, they lead varietal selection and ensure food and seed sovereignty across generations, embodying FEE’s call to centre reproductive and care labour in economic value.

The Park operates as a commons – a territory governed through collective decision-making, based on traditional Andean principles such as ayllu (holistic relationality) and ayni (reciprocity). Instead of top-down or market-based mechanisms, the Potato Park reinvests local knowledge and solidarity into governance and livelihood systems. Seed repatriation agreements (e.g., with the International Potato Centre) are shaped by community consent and ethical use, reinforcing collective control over genetic resources.

Local eco-enterprises – like natural product cooperatives, seed tourism, and community-led food programs – support sustainable livelihoods while protecting biodiversity. These initiatives are not profit-driven but embedded in place-based well-being and social reproduction, key to FEE’s vision for an economy that nurtures both people and planet.

The Potato Park is not just preserving potatoes – it is preserving a worldview where life is sustained through care, cooperation, and kinship with the land. It stands as a living embodiment of what a care-based, commons-centred, and feminist-aligned approach to biodiversity finance looks like in practice.

Contributor: Amelia Arreguin Prado

3.5

Looking beyond conservation

The flow of conservation finance does not exist apart from the forces driving biodiversity loss. It is embedded within global patterns of production, consumption, and trade that either undermine or reinforce ecological integrity. *Circular Economy and Conservation* widens the frame, asking us to see funding not as an isolated mechanism but as part of a larger economic story. It challenges conservation to reckon with its connections to the systems it seeks to transform – and to imagine models of investment that strengthen, rather than deplete, the living world.

Chapter narrated by Amelyali Ramos and Swetha Stotra Bhashyam

Circular economy and conservation: Rethinking the new economy

David Pérez-Castillo^{a)}

Introduction

When we think of capitalism, images often come to mind of the destruction and degradation of the planet, as well as the disparity between a wealthy few and an impoverished and miserable society. Similarly, when we think of conservation, we tend to associate it with civil society and sometimes government initiatives, which strive to protect the environment, biodiversity and national parks, among other things.

The way things have been so far, it seems that economic development and conservation are destined to perpetually conflict each other. While one seeks to make the most of everything, the other seeks to maintain things or at least keep them from running out.

However, things do not have to be as they have been so far. We are obliged to rethink the rules and structures of society, as well as the roles of its actors, to provide a viable and sustained solution that guarantees that our beautiful planet will not only continue to be richer and more wonderful, but that all the damage we have already caused can be repaired.

What is the circular economy?

It is from this desire for change that the circular economy is born, which we define as “*an economic system that is regenerative by design*” (Webster, 2017). The circular economy is usually associated with recycling and reusing, but its focus is not only on the use of materials; it also includes the creation of an economic model that is compatible with the planet.

In this century, in which we have done great damage to the planet and society, but also now have enough knowledge and technology to do things right, the question that we must ask ourselves is: What characteristics should an economic model that is compatible with the planet have?

We have misunderstood the economy as the care of the money that nations possess. We have also oriented ourselves towards this money's continuous growth, under the premise that the more money that nations have, the better their quality of life will be and the lesser their environmental impact (Andreoni et al., 1998). However, we have to change this perception and see the economy as a tool that enables us to establish the rules and operating conditions that allow us to nurture and enrich the planet in the most precious thing it has: life.

In this sense, the economy and the system that manages it, whether you call it capitalism or any other form, must:

- **Prioritise sustainability:** Aim above all else to maintain and regenerate the long-term health of ecosystems.

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- **Ensure efficient use of resources:** Minimize consumption of natural resources and promote reuse and recycling.
- **Maintain focus on sufficiency:** Seek to meet the basic needs of all within planetary limits, rather than unlimited accumulation.
- **Value ecosystem services:** Recognize and account for the intrinsic value of nature (clean air, drinking water, pollination, etc.).
- **Prioritise responsible production and consumption:** Promote production models that minimize environmental impact and encourage conscious and reduced consumption patterns.
- **Source renewable energy:** Shift from fossil fuels to clean and sustainable energy sources.
- **Eliminate anthropogenic pollution:** Minimize waste generation and ensure its safe and environmentally-friendly treatment and disposal.
- **Overlay comprehensive human well-being:** Measure progress beyond GDP by including indicators of health, education, equity, and environmental quality.
- **Implement ecological and social justice:** Consider environmental impacts on all communities, avoiding unequal distribution of pollution and promoting equity in access to resources.
- **Invest in natural capital:** Allocate resources to the protection and restoration of ecosystems.
- **Disincentivise harmful activities:** Implement policies that make it more costly to pollute and deplete resources.
- **Inclusion:** Involve all stakeholders (citizens, businesses, governments) in economic and environmental decision-making.
- **Long-term vision:** Plan and act with future generations and the long-term health of the planet in mind, rather than short-term gains.

All the above are considered in what we call the circular economy—an economy at the service of the planet and not at the service of capital, in tune with what the ecological economy is (Costanza, 1989), and what has more recently been embodied in the donut economy (Raworth, 2018) and planetary boundaries (Rockström et al., 2009).

Circular economy and conservation

Which principles of the circular economy relate directly to conservation? The correct answer is that the entire circular economy has to do with conservation, from its very definition (a regenerative economy by design) to its principles and tactics. All of them as a whole, working together, favour conservation.

To transition to a circular economy, we must change the perception of what conservation and its activities are. The conservation of biodiversity, soil, water, and the rest of the environment should not be limited and/or attributed solely to activities in the field or in natural protected areas. Conservation should not be the responsibility of specialists in the life sciences (agronomists, ecologists, etc.). It should be done in cities, in homes, and within companies.

The conservation specialists should be economists, accountants, financiers, and lawyers—that is to say, those who are designing and operating the systems on a day-to-day basis. They are the ones who must ensure that the economic system works in favour of the planet, because today's societies are driven by economics.

With the above in mind, the following are some principles of the circular economy that are directly linked to conservation:

- **Design for durability, reuse, and repair:** Creating more durable products that can be reused multiple times or easily repaired reduces the need to extract new resources to manufacture replacements. This conserves natural resources and minimizes the environmental degradation associated with extraction and production.
- **Keep products and materials in use:** Through high-quality reuse, remanufacturing, and recycling, we extend the useful life of products and prevent them from quickly becoming waste. This reduces pressure on natural resources by reducing the demand for new materials.
- **Regenerate natural systems:** Regeneration seeks to return valuable nutrients to the land and improve ecosystems. By prioritising renewable sources and practices that restore natural capital (such as regenerative agriculture), it contributes directly to the conservation and enhancement of biodiversity and the health of the planet, not to mention justice for Indigenous communities.
- **Prioritise the use of renewable and sustainably managed resources:** Opting for responsibly managed materials and energy from renewable sources reduces dependence on finite resources and minimizes the negative environmental impact associated with their extraction and use. This is crucial for long-term conservation.
- **Perform industrial symbiosis:** Symbiotic interconnection significantly reduces the generation of waste that ends up in landfills, reducing pressure on ecosystems and the need to extract new raw materials.
- **Biomimicry:** By emulating the forms, processes, and systems found in the natural world, companies can design products, materials, and production processes that are inherently more resource-efficient, less polluting, and better adapted to the limits of the planet.

In addition to the principles of the circular economy that are directly related to conservation, we must not forget the circular economy's macro-level principles:

- **Reform tax systems towards green taxes:**
 - **Action/Principle:** Shift the tax burden from labour and consumption to natural resource extraction, pollution and waste generation (environmental or “green” taxes).
 - **Relationship to conservation:** Increasing the cost of environmental degradation incentivises companies and consumers to use fewer virgin resources, produce more cleanly, and generate less waste. This discourages overexploitation of natural resources and can generate revenues to fund environmental restoration and research into clean technologies.
- **Encourage investment in circular infrastructure:**

- **Action/Principle:** Direct public and private investment towards infrastructures that facilitate circularity, such as advanced waste management and recycling systems, reuse and repair networks, and platforms for the exchange of industrial by-products.
- **Relationship to conservation:** A robust infrastructure for circularity keeps materials in use longer, reducing demand for new resources and minimizing pollution associated with waste disposal. This protects ecosystems from overexploitation and pollution.
- **Establish green design regulations and standards:**
 - **Action/Principle:** Implement regulations that promote the design of durable, repairable, reusable, and easily recyclable products. Establish minimum standards for resource efficiency and phase out hazardous substances.
 - **Relationship to conservation:** An ecological design from conception reduces the generation of waste at the end of a product's useful life and facilitates its reincorporation into the economic cycle. The elimination of hazardous substances prevents soil and water contamination, protecting biodiversity and human health.
- **Promote markets for secondary materials:**
 - **Action/Principle:** Implement policies that encourage the demand and supply of recycled and remanufactured materials by creating robust and competitive secondary markets. This may include tax incentives, recycled content quotas in products, and green public procurement.
 - **Relationship to conservation:** By increasing the value of recovered materials, high-quality recycling is encouraged and dependence on primary resource extraction is reduced. This relieves pressure on ecosystems and reduces the environmental impacts associated with mining and deforestation.
- **Promote circular business models through public policies:**
 - **Action/Principle:** Design policies that support the transition from linear to circular models, such as Extended Producer Responsibility (EPR), deposit and return systems, and product-as-a-service models.
 - **Relationship to conservation:** These models incentivise companies to design products that are more durable and easier to recover, as the companies themselves are responsible for the products' management at the end of their useful life. The product-as-a-service model decouples consumption from ownership, encouraging efficiency and reuse.
- **Invest in research and development for circularity:**
 - **Action/Principle:** Allocate public and private funds to research and development of technologies, materials, and processes that facilitate the circular economy, such as new recycling techniques, biodegradable materials, and cleaner production systems.
 - **Relationship to conservation:** Innovation is key to overcoming the

technical challenges of circularity and developing more efficient and effective solutions for resource management and pollution reduction, thus contributing to long-term environmental protection.

- **Promote “Product as a Service,” or Servitisation, models:**
 - **Action/Principle:** Encourage the transition from business models based on the sale of products to models where companies offer access to the desired functionality or outcome through a service (e.g., instead of selling light bulbs, sell “lighting as a service”).
 - **Relationship to conservation:** Servitisation inherently incentivises companies to design more durable, repairable, and upgradeable products, as their profitability depends on the longevity and efficiency of the product over its life cycle. In addition, by decoupling consumption from ownership, resource use can be optimized (e.g., a shared car is used by more people than an average private car).
- **Strengthen Extended Producer Responsibility (EPR) schemes:**
 - **Action/Principle:** Expand the application of EPR to a wider range of products and ensure transparent governance and accountability, involving all relevant stakeholders (producers, consumers, waste managers, public authorities).
 - **Relationship to conservation:** By making producers financially responsible for the management of their products at the end of their useful life, the EPR incentivises the design of more sustainable, durable, and easily recyclable products.

The above are not only linked to conservation but also have the potential to foster innovation and the development of clean technologies that can transform key sectors of the economy.



Additionally, the circular economy spurs cultural changes in the way that consumers perceive and use products, fostering greater awareness of sustainability and the environmental impact of their daily choices. Some such cultural changes include the following:

- **From planned obsolescence to durability and repairability assessment:**
 - **Cultural Change:** Moving from a consumer culture that accepts and even encourages the rapid obsolescence of products to one that demands and values the durability, quality, and ease of repair of goods.
 - **Relationship to conservation:** Increased demand for durable and repairable products reduces the frequency of replacement, reducing the need to extract new resources to constantly manufacture new products and minimizing waste generation.
- **From a preference for new to an appreciation for remanufactured, reconditioned, and second-hand:**
 - **Cultural Change:** Overcome the stigma associated with non-new products and recognize the value and quality of remanufactured, reconditioned, or second-hand items.
 - **Relationship to conservation:** Giving a second life to existing products avoids the extraction of resources to manufacture new ones, saves the energy and materials used in the original production, and reduces the amount of waste that ends up discarded.
- **From the easy throwaway culture to waste responsibility:**
 - **Cultural Change:** Develop greater individual and collective awareness and responsibility regarding the destination of products at the end of their useful life, encouraging proper separation for recycling and composting, and searching for reuse options.
 - **Relationship to conservation:** Responsible waste management increases recycling rates and reduces soil, water, and air pollution. Composting returns nutrients to the soil, and reuse avoids the need for new production.
- **From individual ownership to access and shared use:**
 - **Cultural Change:** Transition to consumption models based on access to services and shared use of goods (such as car sharing, rental tools, etc.) instead of individual ownership of each item.
 - **Relationship to conservation:** Shared use optimizes resource utilisation, as fewer products are needed to meet the needs of a greater number of people. This decreases the overall demand for production and thus the pressure on natural resources.
- **From linear mindset to life cycle awareness:**
 - **Cultural Change:** Develop a deeper understanding of the full life cycle of products, from the extraction of raw materials to their final disposal, and consider environmental impacts at each stage when making consumption decisions.

- **Relationship to conservation:** Increased life cycle awareness encourages the choice of products with a smaller environmental footprint, supports companies with sustainable practices and promotes the reduction of unnecessary consumption.
- **From the search for constant novelty to the valuation of quality and timelessness:**
 - **Cultural Change:** Decrease the obsession with the latest trends and novelties, and instead, value the quality, durability, and timeless design of products that can last and be relevant for a longer period of time.
 - **Relationship to conservation:** By prioritising quality and timelessness, the need to replace products frequently due to changes in fashion or perceived obsolescence is reduced, which in turn reduces the demand for new production and the generation of waste.
- **From opulence as a status symbol to conscious sufficiency:**
 - **Cultural Change:** Decoupling social status from the excessive accumulation of material goods and adopting a mentality of sufficiency, where real needs are prioritised and more conscious and moderate consumption is valued.
 - **Relationship to conservation:** A lower overall demand for goods leads to less resource extraction, less production, and therefore a lower overall environmental impact.

Examples of circular economy and conservation business models

It would be complicated for each of the above points to be implemented in a single place and by a single initiative. Accordingly, none of the following examples are exempt from improvement. However, the following businesses represent extant examples of how we can concretely generate economic models that are pillars of conservation and regeneration, particularly in that they go beyond philanthropy and damage replacement, which are the two most common schemes at present.

- **Patagonia (Apparel):** This well-known outdoor clothing company designs durable and repairable products, offers repair services, and has a “Worn Wear” program. Its model seeks to extend the useful life of its products, reducing the need for new production and minimizing textile waste, which directly conserves natural resources and reduces pollution associated with the fashion industry.
- **Fairphone (Electronics):** This company manufactures smartphones designed to be modular, easy to repair and with a longer lifespan. They promote transparency in their supply chain and seek to use recycled and ethically sourced materials. By extending the life of electronic devices and making them easier to repair, they reduce the generation of e-waste and the need to mine precious metals and other valuable resources.
- **AgroCycle (Agriculture):** This project transforms agricultural waste (such as *alperujo* from olive oil production) into value-added products such as bioplastics and biofertilizers. By valorizing waste that would otherwise be discarded, it reduces pollution and creates a sustainable alternative to fossil fuel by-products and chemical

fertilizers, contributing to soil health and emissions reduction.

- **Interface: ReEntry® and Carpet Tile Take-Back (Carpet):** Interface, a manufacturer of modular carpet, has implemented a pioneering program called ReEntry® that goes beyond simple recycling. They collect their used carpets from customers to reuse them when possible (giving them a second life in other spaces) or to recycle them into new products, including new carpet tiles. This “take-back” drastically reduces the amount of carpet that ends up in landfills, conserving the raw materials and energy that would be needed to produce entirely new carpet. Its commitment to recycled and bio-based materials in its products also minimizes the extraction of virgin resources.
- **Pizza (Pizzas):** Ingredients with Social Impact and Circular Potential: A Mexico City-based pizzeria distinguishes itself by using ingredients with a strong social impact component, such as its blue corn dough from small organic producers, which ensures that the resources on their land are maintained and enriched.

Conclusion

In conclusion, this analysis reveals a historical tension between the extractivist zeal of traditional capitalism and the imperatives of conservation, presenting the circular economy not as a mere recycling tool, but as a fundamental paradigm shift.

We should be moving from a vision where the capitalist economic principles dictate the rules to a model where planetary sustainability becomes the guiding principle, forcing us to rethink the metrics of success beyond GDP and to intrinsically value natural capital. The real revolution lies in shifting the responsibility for conservation from the margins of civil society and specialists to the very heart of the economic system, where managers, accountants, financiers and legislators become the new stewards of the planet.

The circular economy, with its principles of regenerative design, efficient use of resources, valuing ecosystem services, and fostering profound cultural changes, emerges as a roadmap for reconciling human prosperity with the health of the planet, demonstrating through concrete examples that a future where the economy serves life, not endless accumulation, is not only possible, but urgently needed.

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Bekaab: A platform for change agents

Bekaab, a Mayan term signifying “to be the bees of our planet,” is the name of a platform designed to unite profiles and projects focused on sustainability and regeneration. Envisioned as a social network merging aspects of Facebook, LinkedIn, and Google Maps, Bekaab aims to foster collaboration among change agents. In contrast to conventional social media that can lead to isolation and distraction, Bekaab seeks to build a strong community, enabling synergies and empowering individuals to collectively create a more sustainable world.

Bekaab, with the tagline “Energizing the transition to sustainability”, is presented as a virtual interaction platform for “change agents” and is the first strategy created by the NGO Change Agents Global Network. It seeks to foster collaboration, synergy, and action towards sustainability and regeneration.

The platform is organized into several sections, but it was designed to host two main databases:

- **Change agents database:** Allows users to explore the profiles of people that are leading social or environmental initiatives, facilitating projects, and other related profiles similar to the functions that LinkedIn provides. There are currently more than 1,685 registered members.
- **Initiatives database:** Presents socio-environmental initiatives and events, highlighting the promotion of concrete actions. Examples include “Islaurbana” for rainwater harvesting and “Lawyers for a Sustainable Economy” offering pro bono legal services. This database is a geolocated catalogue of initiatives in which people can search by topic, or by geographic location, similarly to Google Maps. We have located more than 5,000 initiatives, and our target is to reach 20,000 by 2030.

Additionally, the platform contains other sections:

- **Activity:** Shows updates and recent activity from members, promoting communication around sustainability and serving as a social network similar to Facebook.

- **Collaborative Blog:** A space to share information and perspectives on sustainability and social change, addressing diverse topics. Anyone on the platform can make articles.
- **More Functions:** Offers the “Collaboration/job board,” “Calls for projects” and “Tools for change agents”.



Bekaab targets a broad audience of “change agents:” conscious consumers, social actors, social and environmental entrepreneurs, institutions, and business owners and companies interested in sustainability.

One of the main functions is to place projects and change agents in one place, not only for an easy location, but also for the necessary promotion that sustainable projects need. Nowadays there are many people that recognize the concept of sustainability, but very few have been directly involved with a socioenvironmental project, and few people even think of sustainability when buying a product.

In contrast to current social media platforms that generate isolation, distraction, and low self-esteem (among other things), Bekaab is a social network that seeks to unite all change agents, allowing us to come together to generate synergies and empowering us to continue doing what is necessary to create the world we need.

Bekaab's core values are honesty, transparency (as evidenced by its biannual publication of finances), collaboration, connection, unity, synergy, sustainability, regeneration, and change. The organization aligns its actions with the Sustainable Development Goals (SDGs).

In summary, Bekaab is a dynamic platform that connects and empowers change agents to drive sustainability through diverse functions, initiatives, and alliances, guided by values of transparency and aligned with the SDGs.

Contributor: David Pérez-Castillo

We're told to lead, but left to sink



I began my journey in the youth movement as a teenager driven by love for the Earth, giving every ounce of my time and energy to protect what I hold sacred. I was never alone. All around the world, young people were rising, volunteering, mobilizing, organizing, and building powerful movements.

As our efforts grew, so did our impact. We took on more responsibility, led national coalitions, shaped policies, and showed up where it mattered. But the moment we began asking for funding—not for luxuries, but to sustain our work – the support wavered. Suddenly, we were too young, too idealistic, too “unpredictable” to trust with real resources.

Funders applauded our passion, but withheld their support. They called us the future, but funded the past.

It's frustrating and ironic. Youth movements like Fridays for Future and GYBN have shaped global policy frameworks under the United National Framework Convention on Climate Change (UNFCCC) and the Convention on Biological Diversity (CBD). And yet, we're constantly sidelined.

As UN Secretary-General António Guterres said, “Young people are leading the way.” But how can we lead if no one walks with us?

We need more than praise. We need long-term, flexible funding and true intergenerational partnerships. And we also need more funders to step in because, while we are grateful for the few youth champion funders who believe in us, they cannot support the entire youth movement alone.

It's time we were trusted to walk the way we've already been leading.

Contributor: Shweta Stotra Bhashyam



4 Reimagining relationships

Hold Hands More Often

Galeo Saintz^{a)}

Hold hands more often,
the fires and the floods will come to pull you apart,
the lies and deceits will come to break your covenant,
the distractions and illusions will tell compelling stories
to keep you on your lone crusade
afraid to reach out.

Touch the palm, intertwine the fingers now,
beside you reach out,
hold the hand of strangers
and children,
of the destitute and afraid, of enemies and elders,
of lovers and even fiends.
And in your hands hold beauty and beetles,
snakes and gratitude, compassion and anger,
hold dreams and tears,
hold nothing too fast or too tight.

Hold hands more often.
What if nothing less
than the touch beyond distance
this is the beginning of everything finally unestranged?

Reach out. Hold hands now.
Everything,
will change.

a) galeosaintz.com



Chapter introduction

Liza Zogib^{a)}, Elise Huffer^{b)} and Galeo Saintz^{c)}

Relationships shape everything – how we interact with each other, with nature, and even with our own future. Yet too often, we can't see these connections, we take them for granted or assume they can't change. This chapter challenges those assumptions.

Structured in three sections, it examines how we might repair, rethink, and ultimately transform relationships in ways that matter.

- **Stories of relationship** explores real-world examples of different or restored connections – between communities, across cultures, and with the natural world.
- **Rethinking rights** questions traditional ideas of ownership and entitlement, asking how legal and ethical frameworks could better reflect interdependence.
- **Relationships of renewal** looks ahead, proposing new ways of relating that are reciprocal, compassionate and based on new consciousness.

Blending research, art, and firsthand accounts, this chapter doesn't just argue for change – it shows what it could look like. The goal isn't abstract idealism, but actionable rethinking. Because if we want a different future, we need to start with the relationships that build it.

Before we dive into the first section, we start with some reflections on the Doctrine of Discovery, which arguably kickstarted a path of disconnection; the colonial conquest of lands whose legacy persists in nature conservation today.

a) DiversEarth and IUCN CEESP

b) University of the South Pacific and IUCN CEESP

c) Schumacher Society, World Trails Network and IUCN CEESP

Reflections on the Doctrine of Discovery

Kevin Chang^{a) b)} and Ahmad Hameed^{b) c)}

The recent passing of Pope Francis has many reflecting, including the community of Indigenous and religious leaders from across the world. Though we – the authors – are not Catholic, we were inspired by the leadership and heart he brought to his life's work. Nonetheless, we lament that he chose not to lead his institution so far as to clearly renounce the Doctrine of Discovery. However, within his 12-year leadership of the Roman Catholic Church, reconciliation remained a major and consistent theme. Pope Francis strongly believed in accepting and addressing historical wrongs committed under the Church's leadership, none more so than the doctrine of discovery and its impacts on Indigenous populations around the world. While his legacy will include a reflexive and relatively radical approach to reform in the Church, it also indicates the limitations of reconciliation processes being undertaken by nation-states and institutions globally.

In 2022, Pope Francis travelled to Canada to issue an official apology to First Nations, Métis, and Inuit delegates for the Church's role in Canada's residential school system. An in-person apology by the Pontiff was one of the demands of Canada's Truth and Reconciliation Commission calls to action. This moment marked a sharp shift in the Church's policy towards its role in historical wrongdoings and opened unprecedented pathways towards further discussions on the matter. It is important to note that, while an apology represents an important step forward, it only offers an acknowledgement of past wrongdoings. The ongoing appropriation and destruction of Indigenous territories still remains largely unacknowledged. The wrongs of the past continue to spill into the present.

In addition to an explicit apology delivered to Indigenous leaders, Pope Francis made further comments that acknowledged the connection Indigenous peoples have with land:

“First, your care for the land, which you see not as a resource to be exploited, but as a gift of heaven. For you, the land preserves the memory of your ancestors who rest there; it is a vital setting making it possible to see each individual's life as part of a greater web of relationships, with the Creator, with the human community, with all living species and with the earth, our common home. All this leads you to seek interior and exterior harmony, to show great love for the family and to possess a lively sense of community. Then too, there are the particular riches of your languages, your cultures, your traditions and your forms of art. These represent a patrimony that belongs not only to you, but to all humanity, for they are expressions of our common humanity.” (Pope Francis, 2022)

a) Kua'aina Ulu `Auamo (KUA)

b) IUCN Commission on Environmental, Economic, and Social Policy (CEESP)

c) Interdisciplinary PhD Program, Dalhousie University

One wonders what some of Pope Francis' predecessors would have thought of these comments. Papal bulls issued by Pope Eugenius and Pope Nicholas between 1436 and 1454 drew a stark contrast with these comments in calling for Indigenous peoples to be “invaded, captured, and vanquished...to put them in perpetual slavery...and to take away all their possessions and property...” (Newcomb, 2008; Greenberg, 2016). For centuries, the Church endorsed conquest of non-European and non-Christian lands, people, and

resources through the idea of ‘discovery’. This discovery falsely justified European colonizers’ efforts to establish sovereignty over lands outside Europe. The genocide of Indigenous peoples, their languages, and their cultures quickly followed. The subjugation sanctioned under the Church’s ‘doctrine of discovery’ was subsequently codified in law and perpetuated via mythologies such as “manifest destiny” by colonizing nations. It remains central to many contemporary nation-state relationships with Indigenous populations to this day. The contemporary culture of nature conservation is both a direct perpetrator and beneficiary of this legacy.

The legacy of conservation is deeply rooted in colonial ideals like the doctrine of discovery. The negative impacts of westernized conservation regimes and their impacts on Indigenous peoples are well documented. These regimes continue to perpetuate ‘protected area’ conservation strategies that are used to displace communities from their traditional territories. Human rights abuses are rampant in such conservation strategies, and the conservation agenda seeks to impose an idea of ‘wilderness’ that does not include people and their ties to land that date back to time immemorial. Western conservationists framed Indigenous Peoples and their presence on their ancestral lands as detrimental to environmental and conservation goals. Protected Areas, therefore, are rooted in an idea of ‘protection’ that has been defined, perpetuated, and disseminated by a racist and Eurocentric worldview. This worldview persists and continues to drive the conservation agenda.

The election of Pope Francis, with his progressive Jesuit credentials, to the papacy was hailed across the world. It gave hope to communities awaiting verbal and material reparations for the Church’s role in historical crimes. Pope Francis brought a unique perspective from the global south to his papacy (Reyes, 2022). His lived experience in Argentina included a close study of social inequalities, unemployment, imperialism, and conflict. Many of these themes appeared regularly in his teachings and writings throughout his 12-year leadership. Therefore, his identity as the first-ever South American Pontiff was central to his approach to defining the challenges of our time. He talked extensively about climate change and other current environmental challenges and believed in the strong relationship between nature, culture, and spirituality. In his second encyclical titled *Laudato Si’*, Francis wrote:

“In this sense, it is essential to show special care for Indigenous communities and their cultural traditions. They are not merely one minority among others, but should be the principal dialogue partners, especially when large projects affecting their land are proposed. For them, land is not a commodity but rather a gift from God and from their ancestors who rest there, a sacred space with which they need to interact if they are to maintain their identity and values. When they remain on their land, they themselves care for it best. Nevertheless, in various parts of the world, pressure is being put on them to abandon their homelands to make room for agricultural or mining projects which are undertaken without regard for the degradation of nature and culture.” (Pope Francis, 2015)

Francis’ papacy pushed the Church in a new direction in its relationship with Indigenous Peoples around the globe. A year after his visit to Canada, the Church officially issued statements to repudiate the “doctrine of discovery” but fell short of decisively rescinding and renouncing it (Krishna, 2023). In a statement, Francis said “Never again can the Christian community allow itself to be infected by the idea that one culture is superior to others, or that it is legitimate to employ ways of coercing others.” The Church disowned the doctrine, but it cannot distance itself from its many historical and ongoing implications.

Francis and his legacy of reconciliation goes further than any Pontiff in history. The repudiation of the doctrine was applauded by several diverse Indigenous communities

and leaders. However, it is important to note that Francis and the Church stopped short of renouncing the doctrine in all its manifestations. The repudiation does not come with accountability and rings hollow in the face of ongoing consequences of the doctrine for Indigenous and non-European communities. Nonetheless, the rejection of the doctrine has the potential to start new and meaningful conversations between the Church and Indigenous communities that can have far-reaching impacts. The Pope has opened a door for humility, responsibility, and accountability for the Church.

A reflective approach towards this responsibility and accountability will also need to permeate international environmental organizations and forums. Institutes built on the vestiges of the doctrine of discovery in all its manifestations have an immense task ahead of them. As Indigenous and local communities take centre stage in global conservation, there is an opportunity to advance processes that acknowledge the past and ongoing harms of conservation practices to these Indigenous Peoples and local communities. Meaningful processes of reconciliation will initiate trust-building with communities and begin to address and heal the wrongs of the past. Additionally, they will highlight the ongoing displacement and disenfranchisement of Indigenous peoples. IUCN's Resolution 119 renounces the doctrine of discovery 'in all its manifestations'. It calls on the conservation world to 'rediscover' our care for mother earth. The Union – just as Francis' Church – must take this opportunity to build and advance an anticolonial agenda across its constituents. A reimagining and rediscovery in this regard will be essential to formulate equitable coalitions within the conservation world.

As an American cardinal ascends the papal throne, there are challenges and opportunities in the way he will define the future direction of the Roman Catholic Church. Increasingly, the world around us is descending into conflict and division. The rise of fascism and imperialism is no longer contained to any one part of the world. In deeply troubling times, Pope Leo will have to face an onslaught of challenges and ensure that the Church under his leadership strives to be a force for moral good. Despite political costs, his papacy will not only need to take consistent principled stands but will also need to extend the goodwill and reconciliatory approach of his predecessor. As old alliances shift or fade away, the IUCN, like the Church, will do well to continue to strengthen its relationship with Indigenous communities and to directly reflect and take action on the wrongdoings of the conservation community.

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4.1

Stories of relationship: Restoring bonds and reinvigorating culture

This section challenges conventional perspectives on how humans relate to other species, ecosystems, and even economic systems. Through diverse voices – Indigenous knowledge, scientific insight, and entrepreneurial innovation – it reveals how deeply our bonds with the natural world shape identity, culture, and survival.

Liza Zogib's *A meditation on our relationship with other beings* explores sacred connections between humans and species, questioning the notion of separation. Philippa Brakes and Annette Lanjouw dismantle the myth of human exceptionalism in *Reimagining relationships through animal culture*, showing that culture is not ours alone. Tēvita O. Ka'ili's *Tauhi Fonua* grounds us in Tongan kinship with the ocean, where caretaking is both spiritual and practical. Finally, Shelby Matevich and Joeri Sol argue for fresh approaches in *Discarding old paradigms*, proving that conservation and entrepreneurship can – and must – work together.

Together, these pieces don't just describe relationships – they demand that we see them differently. The question is no longer whether we're connected, but how we choose to honour – or ignore – those ties.

Chapter narrated by Liza Zogib, Elise Huffer and Galeo Saintz

A meditation on our relationship with other beings: Sacred species, humanity, and peace

Liza Zogib^{a)}

Left to right: Ven. Kelzang Dorji; Hideaki Inomoto; Amchi Tenjing Dharke; Nima; Radhika Bhagat; Kanna Siripurapu; Kedipfuu Mekrisuh; Lakshmi Unnithan; Olga Letykai-Csonka; Natthu Gawade; Priyadarshinee Shesthra; Prafulla Kalokar; Liza Zogib; Seno Tsuha; Tulkula; Rajasri Ray; Ven. Lama Tsering Penjor; Ang Rita Sherpa; Roshan Rai. MISSING: Khenpo Kamal Bhandari.

Credit: Brihat Rai and Priyash



In the quiet retreat of Buddha Pāda, Kalimpong, north-east India, a gathering took place in May 2024 that sought to rekindle an ancient truth: **we are not separate from the earth or other beings, but deeply woven into the same fabric of living**. The meeting, convened by DiversEarth and infused with wisdom from Buddhist teachings, Asian body practices, shamanic traditions, and the lived experiences of Indigenous and rural communities, offered a profound meditation on how we might restore balance – within ourselves, with other beings, and with the planet. The following is an overview and reflection of that collective meditation.

At the heart of our discussions was Lord Atisha’s seven-point cause and effect instruction, a guiding light for compassionate living:

*“Recognising all sentient beings as one’s mother,
Remembering their kindness,
Repaying their kindness,
Love,
Compassion,
The Special Resolve, and
Mind of Enlightenment.”*

These words, echoed by Ven. Lama Penjor of the Central Monastic Body in Bhutan, remind us that to see another being as “mother” is to nurture empathy, to acknowledge interdependence, and to act with kindness. This is not merely a spiritual ideal but a necessary ethic in a world fractured by greed and ignorance.

a) DiversEarth

Sacred species, sacred land

Seno Tsuha, from Chizami Village in Nagaland, spoke of seeds as more than just sustenance – they are “memory, community, family, culture, sharing, healing, bonding, and resistance.” Her words revealed a truth often forgotten in this world: land is not a resource to be extracted but a living being to be honoured. Similarly, Natthu Gawade of the Madia Tribal community shared how “nature is his culture,” embodied in the sacred trees that birth the totem poles of his people.

Prafulla, a Nanda-Gawali pastoralist, posed a crucial question: “Is nature for taking from or giving back to?” His life with cattle, his reverence for the lavhan grass in which Lord Krishna resides, and his resistance to forced evictions in the name of “conservation” challenge the dominant narrative that humans must be removed to save nature. Instead, he embodies a reciprocal relationship – one where care, not control, is the foundation.

Science, spirituality, and the sacred

Dr Rajasri Ray, Centre for studies in Ethnobiology, Biodiversity and Sustainability (CEiBa), West Bengal, bridged worlds, showing how sacred groves and religious architecture are not just cultural artifacts but ecological lifelines. Her work proves that science and spirituality need not be at odds – both can affirm what Indigenous wisdom has long known: trees, animals, and landscapes are sacred, and their protection is non-negotiable.

Olga, Arctic shaman, carried this truth further, speaking of negotiation between species. Her lineage – the clan of the Crow and the Polar Bear – taught her how to live with other species, to learn from them. Her stories of wolves, orcas, reindeer and her sacred throat singing were living testimony to interspecies kinship.

The cry of the earth and the call to action

Ang Rita Sherpa, a guardian of Chomolungma (Mt. Everest), spoke of the devastating symmetry of climate change – melting glaciers in the Himalayas mirroring the collapse of polar ice. His unexpected kinship with penguins underscored a painful irony: even the most remote beings are tightly bound to our decisions, our actions, our compassion.

Tulku Ngawang Tenzin, our host, shared how the birds singing during COVID lockdowns deepened his resolve for environmental action, leading his monastery in Sikkim to become zero-waste. His story is proof that awakening need not come from grand gestures but from listening – deep listening – to the world from which we emerge.

Priya Shestra’s encounter with her special species, the red panda standing atop a rubbish pile, was a stark metaphor: even the most sacred beings are victims of our waste, our greed. Her resolve to work toward a zero-waste Himalayas is a call to all of us.

Food as revolution, culture as resistance

Roshan Rai of Zero Waste Himalayas reminded us that food production and preparation can be a revolutionary act, whether it is kinema (fermented soybeans) or tongba (millet brew shared in community). His reflection on being an “urban child” one step removed from his ancestral knowledge resonated deeply – how many of us long for reconnection.

When Kedipfuu and Seno, community members from Chizami Village in Nagaland sang, their voices carried the soul of a community who remember their place on the earth, of the

earth. As Kanna Siripurapu also illustrated through his stories – the miraculous flowering, the Sorghum of the Gond tribes, the chocolate Mahasheer fish – every being has a story, each woven with that of another.

From compassion to action

This powerful retreat was a reclamation of ancient wisdom, of reciprocal relationships, of the understanding that peace on Earth must include all beings. As Khenpo la reminded us, “disconnection, pride, and ignorance lead to violence.” The antidote? Knowing our interdependence, releasing compassion, and from that moving to right action.

May the energy of this gathering emanate outward. May we remember, as Amchi-la (traditional Tibetan medicine practitioner) said: “we are the five elements.”

According to the Explanatory Tantra:

Without the element earth, no matter can be formed.

Without water, there will be no cohesion.

Without fire, the fetus cannot mature.

Without air, there will be no growth.

Without space, there will be no room to grow.

We are simply kin to the crow, the polar bear, the sacred seed, and the melting glacier. And in that remembering, may we find the courage to heal.



Video: <https://www.youtube.com/watch?v=TyzzWldjlsM&t=42s>

Reimagining relationships through animal culture

Philippa Brakes^{a) b) c)} and Annette Lanjouw^{d)}

Evidence for social learning and/or culture is emerging for an ever-growing number of species.

Credits: Cockatoo, Barbara Klump; Port Jackson shark, Catarina Vila Pouca; African elephants, Vicki Fishlock, Amboseli Trust for Elephants; remainder, Shutterstock



For thousands of generations, human communities living close to nature have observed and understood the cycles of non-human (hereafter ‘animal’) behaviour, from migrating birds, to fish that predictably appear at certain times of year, to the ability of some animals to locate and extract food. Indigenous cultures have listened deeply and watched carefully the rhythms and tides of the natural world and its inhabitants. As a result, these human cultures share rich traditional knowledge of behavioural dynamics and understand that many animals are themselves the keepers of ecological knowledge. It is precisely this keen connection and attention to nature, plus the ability to pass on knowledge with high fidelity within our families and among our contemporaries, that has enabled our species to be successful in such a wide range of habitats.

Modern technology now enables us to observe some of these cycles of the natural world on a grand scale. For instance, visualizations of bird¹ and ungulate migrations² can now provide

a) Whale and Dolphin Conservation, Chippenham, Wiltshire SN15 1LJ, UK.

b) Centre for Ecology and Conservation, University of Exeter, Penryn, Cornwall TR10 9FE, UK.

c) Cetacean Ecology Research Group, Massey University, Auckland 0745, New Zealand.

d) Arcus Foundation, Cambridge, CB21AW, UK.

1 <https://migrationatlas.org/>

2 <https://www.cms.int/en/gium/migration-atlas>

Bottlenose dolphins and fishers cooperate in a rare contemporary mutualism between humans and another species (Cantor et al., 2023)

Credit: Alexandre Machado



global perspectives on how species use habitat. Technology helps us to understand how animals share information with each other, including about the location of critical feeding or breeding habitat, or how to access difficult or rare resources (Jesmer et al., 2025). Like us, many other species do indeed learn from each other (Whiten, 2017; 2021) through the processes of social learning (Hoppitt & Laland, 2013). Sometimes knowledge is passed between peers within a single generation (Garland et al., 2011). In other cases, knowledge is shared between generations (Whitehead & Ford, 2018). Learning from others, rather than individual learning, is key and can result in unique non-human cultures (hereafter ‘animal cultures’). Culture, whether human or non-human, can be described as information or behaviour that is shared between individuals and within or between communities, and which is acquired from conspecifics through some form of social learning (after Whitehead & Rendell, 2015). In humans, culture shapes our languages, how we dress, what we eat, how we socialise, and much more. While humans have multidimensional and complex cultures which are constantly evolving and that have enabled us to be successful in a wide range of habitats, culture also shapes the lives of many other species (Brakes et al., 2025).

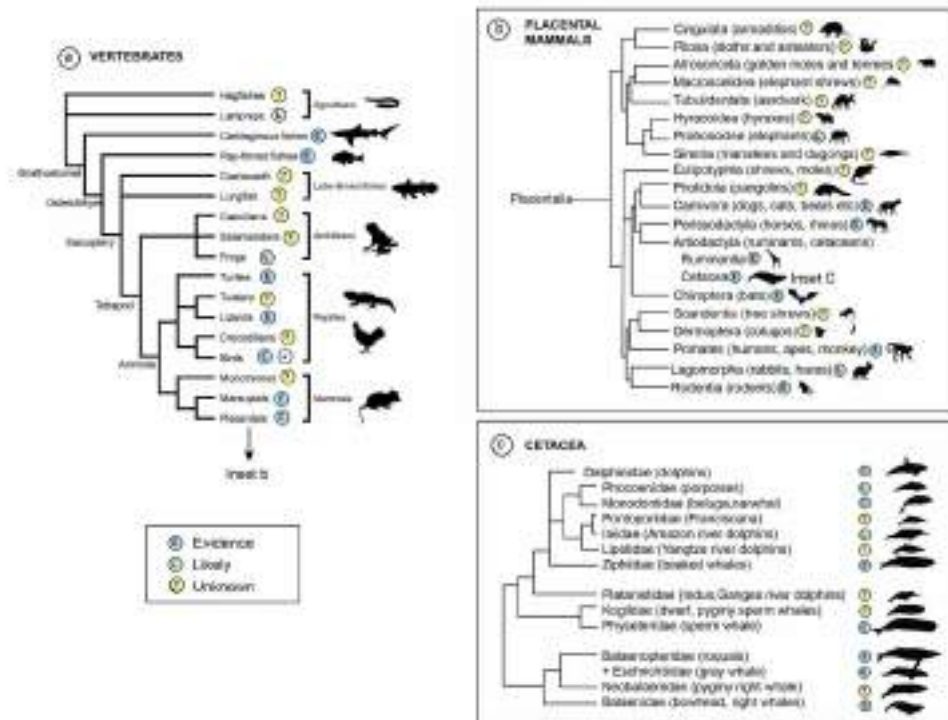
The existence of animal cultures is no surprise for many non-Western societies, including Indigenous Peoples. But Western research on animal cultures has not been without controversy. From the earliest days of Jane Goodall’s bold leap – more than 50 years ago – suggesting chimpanzees have culture (Goodall, 1973), to later assertions by Hal Whitehead, Luke Rendell and colleagues that whales, dolphins, and porpoises (cetaceans) also have cultural behaviours (Rendell & Whitehead, 2001a), it took some years for the concept of animal culture to be fully accepted by the scientific community. As recently as the turn of the millennium, Rendell and Whitehead’s suggestion that cetaceans have culture solicited a staggering 28 published responses in the academic literature (Rendell & Whitehead, 2001b).

Yet here we are, decades later, and evidence of social learning and animal culture is available for a wide range of species; from parrots to meerkats, fish to bats (Brakes et al., 2025). Animal culture is finally coming of age. Methods to detect and monitor animal cultures

are burgeoning (Whiten & Rutz, 2025) and discussions on how best to safeguard these cultures are emerging (Brakes et al., 2025). Whilst we are only just beginning to describe and document some of the many cultural behaviours that are found across vertebrate species and beyond, animal cultures have doubtless been in existence for thousands of years – possibly even before some of our bipedal ancestors roamed the Earth. We do not know how long the oceans have been thrumming with whale song, or how long inhabitants of spring forests have been greeted by birds’ dawn chorus, but given the driving forces of gene-culture coevolution (Whitehead et al., 2019), it is plausible that socially learned information has been providing adaptive advantage to other species for a very long time. It is wondrous to alight on the idea that the past richness of Earth’s biodiversity was not merely a function of genetic diversity alone.

The evidence for social learning or culture is widespread across vertebrate species, but this may only be the tip of the iceberg.

Credit: Figure from Brakes et al. (2025)



Palaeontology provides some tantalizing hints of the history of animal cultures. There is fossil evidence, for example, of stone tools being used by chimpanzees some 4,300 years ago (Mercader et al., 2007). Given the long evolutionary history of many of our planetary cohabiters and the biological processes that shape cultural evolution, it is quite likely that the world was filled with culturally diverse behaviours long before humans arrived. Nevertheless, we are collectively responsible for our planet’s imperilled biodiversity, and therefore for conserving and safeguarding it. To do that, it is worth considering that life on Earth has been shaped not only by genes and the environment, but that it has also been sculpted through shared information, beyond human knowledge.

How animal cultures interact with the environments is complex (Bolcato & Aplin, 2025). We now are starting to make headway in unravelling the relevance of animal cultures for their conservation. Traditional conservation approaches have focused primarily on conserving the diversity of species, subspecies, and viable, resilient populations through preserving genetic diversity and habitats. However, knowledge of behavioural variation – including differences in culture and how culturally transmitted behaviour can support or prevent adaptations in rapidly changing environments – is only just beginning to be integrated into conservation management (Meaux et al., 2025; Greggor et al., 2025; Wessling et al., 2025; Eguiguren et al., 2025). Understanding animal culture can assist some reintroduction efforts (Greggor et al., 2025), and knowledge of social learning in both humans and other species can help us

navigate human-wildlife interactions and ‘conflicts’ (Meaux et al., 2025). Although evidence of animal cultures is biased towards some of the best-studied species (Brakes et al., 2025), culture is important for species that live in a host of different habitats, from the pelagic oceans where culture can help some whales find a mate or navigate to suitable feeding habitat in a patchy environment; to the cacophony of bird song that establishes territories or attracts mates (Aplin et al., 2025); to the dense rainforest where foraging skills can be passed between generations to allow primates access to novel food sources (Izar et al., 2025), or where drumming on tree buttresses may communicate with other members of a group, ward off assailants, or signal prowess (van Loon et al., 2025).

Culture matters for conservation. Just as rich and diverse culture can be an indicator of community resilience in human populations, culture can generate resilience within wild populations by facilitating the rapid spread of adaptive information, sometimes helping to buffer against rapid environmental change (Wild et al., 2019). In stark contrast, when culture leads to conservatism or specialisation, strikingly rigid cultural behaviour can lead to vulnerability within populations. One of the best documented examples is the Southern Resident killer whales along the Pacific northwest coast of America which have a unique fish-eating culture that has been passed between multiple generations. Their foraging culture is so conservative that they do not deviate from this behaviour. Yet this dietary rigidity is also threatening their survival as the populations of their preferred prey, chinook salmon, decline (Whitehead & Ford, 2018). Nevertheless, killer whales can also exhibit more ephemeral cultures, such as the fad of carrying salmon on their heads which was documented some decades ago, disappeared, and then seemed to reappear recently³. The impacts of more ephemeral cultural behaviour are unknown, but will depend on the type of information being shared between individuals.

Similarly, for some bird species the ability to share information through social learning can also be critical for species survival. For example, the Regent Honeyeater is a critically endangered songbird endemic to south-eastern Australia whose population declines due to habitat pressures have been compounded by demographic effects associated with low population density. Around 12% of wild males have learned the song of other species (Crates et al., 2025), which is likely the result of lack of exposure to their own song due to low population numbers. Learning the ‘wrong’ song is significant in this species as males whose songs differ from the cultural norm are less likely to find a mate or initiate nesting, which has contributed to the species’ precipitous decline. Fortunately, efforts are underway to reintroduce the native song of these birds back into wild populations through a novel process of ‘cultural rescue’ (Crates et al., 2025).

Understanding culture and cultural variations is complex. There are many forces that shape culture and culture itself is dynamic, so identifying specific targets for conservation action depends on multiple factors (Brakes, Dall & Townley, 2025). There is no ‘one-size-fits-all’ solution, so the conservation of animal cultures must be nuanced. In many instances, the most salient targets for conservation may be the diversity of culture and supporting the capacity and conditions for culture to arise (Brakes et al., 2025). This requires long-term studies that can help us better understand threats to populations and how behaviour changes over time. Such longitudinal studies can also provide insights on individual associations – perhaps even personalities and learning biases – as well as individuals’ roles in their social groups. These factors can be influenced by the age, experience, and sex of the individual, as well as their relationships with other individuals.

³ <https://www.newscientist.com/article/2457910-occas-have-begun-wearing-salmon-hats-again-and-we-may-soon-know-why/>

Besides scientific insights on cultural processes for conservation and feedback from practitioners about what works best in practice, what may ultimately be most important are the deeper philosophical implications of animal culture. Tellingly, animal cultures show us that species beyond humans have ways of doing things that are not just innate and based on instinct. These behaviours have been shaped through environmental and social processes, passed within or between generations, and can result in social patterning that may operate in a similar way to the ethnic markers that help us identify with our own cultural group. Cultural fads may thus be important for group identification, such as in the case of the cohort of

Chimpanzee with grass in her ear.

Credit: Edwin J C van Leeuwen Chimfunshi Wildlife Orphanage Trust, Zambia



chimpanzees who adorn themselves with a single blade of grass (van Leeuwen et al., 2014), bottlenose dolphins in the wild who copy tail-walking from each other (Bossley et al., 2018), or chimpanzees who share fermented, alcoholic breadfruit (Bowland et al., 2025). Perhaps even more intriguing is the evidence of self-medication in some great apes, as it is considered unlikely that individual trial and error would result in the specific use of plants that are rich in anti-bacterial and anti-fungal compounds (Laumer et al., 2024).

Animal culture challenges us to think differently about nature, not just in terms of its utility to conservation, but more broadly in relation to other species' capabilities (Nussbaum, 2024). We argue that animal culture may have intrinsic value to the animals themselves (Brakes et al., 2025; Lanjouw, 2024) beyond its practical extrinsic value to human conservation efforts. Animal culture can help us better understand the complexity and granularity of the natural world, reconnect us with nature itself, and reconnect us with nature's stories through relatable cultural experiences. Knowledge about animal cultures requires us to turn our attention to the idea that species beyond our own may have specific ways of doing things and that these behaviours help identify them as part of unique tribes, such as the acoustic clans of sperm whales (Eguiguren et al., 2025), not just wider genetic populations.



Social sperm whales. Credit: Wildestanimal Shutterstock

Bonobos foraging in the Democratic Republic of Congo.

Credit: JABRUSON/Bruce Davidson, Arcus



Animal culture can be a powerful tool to help us reimagine our relationships and reconnect with ancient knowledge, across human cultures, but also to connect with beyond-human knowledge systems. Culturally-transmitted behaviour shapes our existence as human beings every single day of our lives. Our cultures are dynamic and our commitment to specific cultural behaviours can drive us towards impressive cultural feats, such as oceanic wayfinding, developing vaccine technologies to overcome pathogens, or sending probes into deep space in search of extraterrestrial intelligence. But our cultures can also generate suboptimal behaviour, leading us to do things that are bad for our own health and the health of our planet.

Animal culture may help us better understand some of the origins of human culture and the underlying processes that have generated the incredible diversity of our cultures. But perhaps more importantly for the future of our cultures and for all of biodiversity, animal cultures can reconnect us with the natural world at a deep level and reshape how we modern humans see ourselves, our place in nature, and our relationships with nature across our collective futures. It can help us deepen our respect for other animals, and value their lives and their place on this planet.

For more information about the new 5 year IUCN project on animal culture visit: [Cultural diversity in non-human species and conservation | IUCN](#)

Mapping the diversity of animal cultures

Culture is part of the rich biological diversity of Earth.

Orca photo credit: Rob Lott/WDC

Explore maps [<https://arcg.is/fCDrC>] which showcase examples of non-human culture in primates and cetaceans and discover the relevance of social learning for conservation efforts.

Animal culture provides a fresh opportunity to reconnect with other streams of knowledge, both human and beyond-human knowledge.



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Tauhi Fonua: Weaving kinship and ecological care through the Tongan creation story

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Tonga is a large ocean state that is located in Moana Oceania.¹ The Tongan territory is east of Fiji and south of Sāmoa, stretching over an expansive seascape that is predominantly oceanic in nature and character. Most of Tonga's geographic area comprises of ocean, a place that serves as a home and as a living entity that is also an ancestor. Tongans view themselves as one with their environment. This oneness is expressed in the Tongan cosmogony, or creation story, and articulated in the Indigenous Tongan tā-vā philosophy of reality (Ka'ili, 2017, 2023, 2024; Māhina, 2017).

Indigenous tā-vā philosophy of reality

The tā-vā philosophy of reality places a high value on ancestral wisdom and knowledge, embodying the appreciation of past insights within its time-space conceptual and practical approach. During the late 1990s and early 2000s, a number of scholars within the Moana Oceanian community voiced concerns regarding the prevailing use of Western philosophies, theories, and practices to explain the cognitive, emotional, cultural, and practical aspects of life in Moana Oceania. They argued that this method was not only asymmetrical but also imposed Western notions on Moana Oceanian concepts, practices, and philosophies (Ka'ili et al., 2017; Ka'ili, 2024; Māhina, 2017).

Consequently, the tā-vā philosophy of reality, rooted in Indigenous knowledge, was developed to promote Moana Oceanian ancestral thinking and feeling. The formulation of the tā-vā represented a collective philosophical movement by Hūfanga-He-Ako-Moe-Lotu Professor Dr. 'Okusitino Māhina, a Tongan philosopher and historical anthropologist, along with other scholars, including myself (Ka'ili et al., 2017; Ka'ili, 2024; Māhina 2017).

So, what is the tā-vā philosophy of reality, or tāvāism? It is an Indigenous-based Moana Oceanian philosophy that is deeply anchored in ontological and epistemological tenets (Ka'ili et al., 2017). In this essay, I focus on the tenets that point to the relationality and intersectionality between Tongans and their ecology.

The tā-vā philosophy involves a profound understanding of reality through the Indigenous Tongan understanding of time and space. Essentially, this philosophy revolves around the concept that tā, time, and vā, space, are foundational elements that delineate and constitute reality (Lear et al., 2021a).

From an ontological viewpoint, tā and vā operate as a medium where all entities exist within

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¹ In this article, I will be using the term Moana Oceania to refer to the region of Oceania (Chitham et al., 2016). Moana is one of the Indigenous terms for Oceania, particularly for Eastern Oceania. I am following Hau'ofa (2008) and his use of Oceania.

a single level of reality, encompassing nature, mind, heart, and society (Ka'ili et al., 2017). Tā and vā constitute a *hoa*, a duality, creating inseparable complementary dualities like land and sea, and human and environment. These pairs always coexist in reality, denoting perpetual relationships within nature, mind, heart, and society (Lear et al., 2021b). Consequently, tā, time, acts as a tempo-marker for vā, space, while vā serves as a spatio-composer for tā (Potauaine & Māhina, 2011). This complementary dualism underscores that humans, as tempo-spatial entities, are intrinsically linked to nature. Humans emerge from nature, and nature is an ancestor or relative. Thus, all entities perpetually engage in a web of relationships, creating harmony or conflict, symmetry or asymmetry, as they *felavai* (intersect) with each other (Ka'ili, 2024).

Harmony and beauty through symmetry

Tā and vā are arranged in a symmetrical or rhythmic manner, fostering harmony and beauty. The symmetrical relationship between humans and the environment is pivotal in the Moana Oceanian tā-vā configuration, reinforcing the intersectionality of natural and societal rhythms.

The tā-vā philosophy of reality posits that tā (time) and vā (space) are inseparable in reality. Tāvāism argues that to deepen our understanding of natural, mental, emotional, and sociocultural concepts and practices, both tā and vā must be examined cohesively and in relation to one another. As previously mentioned, tā and vā are epistemologically arranged in diverse ways across cultures. Thus, culture embodies a specific sociocultural arrangement of tā and vā, or time and space. In Tonga, as well as in most Moana Oceanian cultures, artists mediate or reconcile conflicting times-spaces by rhythmically tempo-marking space and symmetrically spatio-composing time to engender *mālie* or beauty (Ka'ili, 2017; Māhina-Tuai, 2017).

The Indigenous and artistic marking of tā in vā and composing of vā in tā, are visually displayed in *kupesi*, which are intricate and elaborate geometrical designs adorning Moana Oceanian tattoos, carvings, fine mats, decorated bark cloths, coconut sennit lashings, jewelry, garlands, etc. (Ka'ili, 2017; Māhina-Tuai 2017). Acoustically, it is expressed through the rhythmic patterns that define Moana Oceanian drum beats, music, dance movements, and poetic compositions. In addition, the tā-vā (time-space) configuration is manifested in social relations, especially within *tauhi vā* – the Indigenous Tongan art of maintaining harmonious and beautiful sociospatial relations through the performance of *fatongia*, or sacred duties (Ka'ili, 2005; Ka'ili, 2017; E. Shumway, personal communication, 2002) – and in *tauhi fonua*, the Indigenous Tongan art of sustaining symmetrical or reciprocal relationships with the *fonua*, or ecology.

Fonua: Ecology

The concept of *fonua* encompasses the weaving together of land, people, history, culture, and ecology (Tu'itahi, 2005). *Fonua* means land, people, mother's placenta/womb, and environment (Māhina, 1992; Ka'ili, 2017; Ka'ili 2024; Thaman, 1997). *Fonua* is also an Indigenous Austronesian philosophical concept expressing the intimate relationship between society and ecology, bestowing equal importance upon people and the environment. *Fonua* encompasses both culture and nature, embodying oneness and unity in both. Parallel concepts are observed across other regions of Moana Oceania, such as *honua* in Hawai'i, *fanua* in Sāmoa, *whenua* in Aotearoa, *fenua* in Tahiti, *hanua* in the Cook Islands, and *vanua* in Vanuatu and Fiji. Linguists have also identified cognates of *fonua* in languages of the Philippines and Indonesia, as well as in the homeland of Austronesian culture in Taiwan (Reuter, 2006). In Tongan cosmogony, *Fonua* is viewed as an ancestor because humans

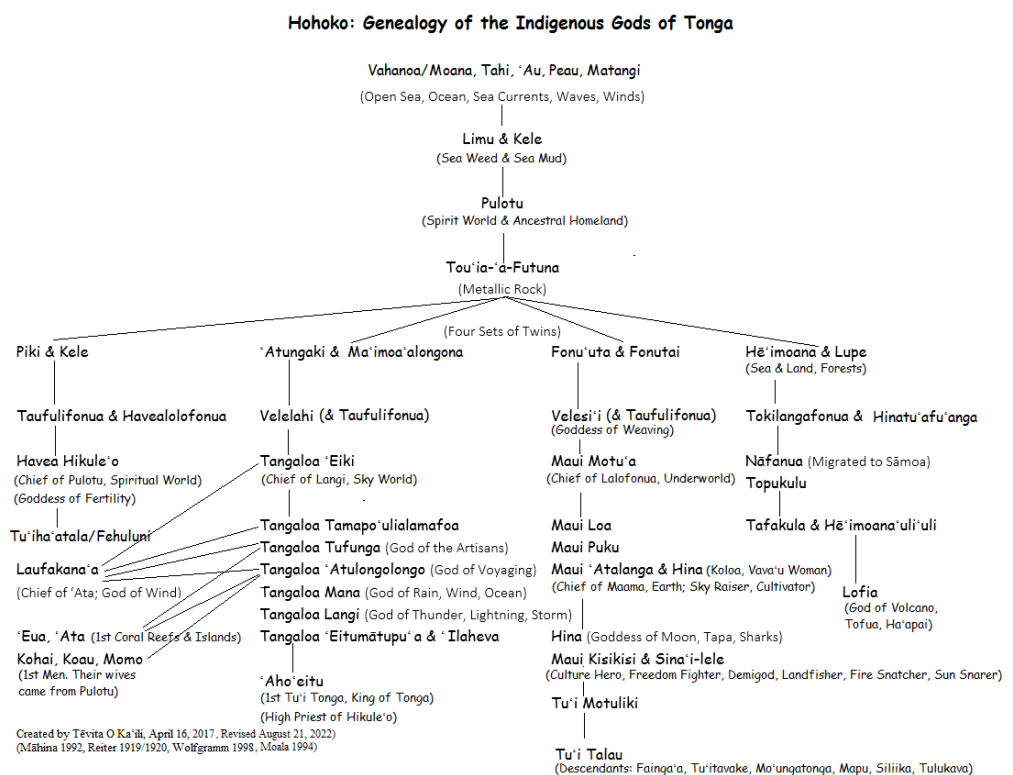
originate, tupu, from Mother Earth. Under the lens of Tongan philosophical understanding, fonua encompasses three ecological domains: (1) the mother’s womb/placenta, (2) Mother Earth, and (3) the womb/placenta of Mother Earth. Consequently, humans are born from the first fonua (the mother’s womb), live on the second (Mother Earth), and upon death, return to the third (the womb of Mother Earth) (Māhina, 1992; Ka’ili, 2017). This movement from one fonua to another is a cyclical reconfiguration of time and space. Humans are the Fonua because all life springs from it.

Tauhi Fonua: Caring for the fonua, ecology

The cultural significance of fonua appears in the Tongan practices of tauhi fonua. Tauhi fonua describes the continuous practice of sustaining a harmonious and balanced relationship among people as well as between people and their environment. Various species, including birds, sharks, and whales, are viewed by Tongans as sacred deities of the fonua. For instance, there is an ancient ritual where Tongans, upon encountering a whale during sea voyages, would present an offering of kava, a sacred drink, to the whale (Farmer, 1855: 126-127). In Tonga, whales are held in high esteem and reverence. Ala-i-Pulotu and Fanguna-i-Vaka are two Tongan whale deities. Both whale deities trace their origin to the ancestral and spiritual Tongan homeland of Pulotu.

Tongan cosmogony states that Tongans emerged from the high sea and that their primordial ancestors are seaweed Limu and sea sediment/mud Kele. Recounting the Tongan creation story highlights the deep-rooted kinship ties between Tongans and the ocean. In addition, it underscores the reasons Tongans practice tauhi fonua, caring for the fonua, or ecology. The creation account below is my rendition based on the multiple versions of the Tongan cosmogony that I have gathered over the years (Wolfgramm, E. personal communication, July 2000; Ma’afu, 1907: 139-161; Māhina, 1992: 59-60; Moala, 1994: 2-9, 39-41; Taumoefolau, 2011:43-44; see figure 1).

Figure 1. Genealogy of the Ancestors in the Tongan Cosmogony (Ka’ili, 2017; Ka’ili, 2024)



Tala tupu'anga 'o e fonua: The creation story of the fonua, ecology

In the beginning, the vast ocean, Vahanoa, and the ancestral land, Pulotu, were all that existed (Māhina, 2016). From the deep sea, two ancient ancestors arose: Limu, the Seaweed, and Kele, the Sea Sediment or Sea Mud. The forces of waves, currents, and wind united them. They drifted in the ocean for eons until they landed on the sacred and spiritual home island of Pulotu (Ka'ili, 2024).

On the island of Pulotu, Limu and Kele gave birth to Tou'ia-'a-Futuna, a unique metallic and volcanic rock. One day, this volcanic rock began to tremble like an earthquake, rumble like thunder, and eventually cracked open. From its core emerged four pairs of fraternal twins. The first pair was the sticky slime Piki and the soil Kele. The second pair consisted of 'Atungaki and Mā'imoa'alongona. It is possible that 'Atungaki is a reference to the 'atu fish (bonito), and Mā'imoa'alongona is a reference to the alongo (stringray shark). The third pair of twins emerged as a land turtle named Fonu'uta and a sea turtle named Fonutai. The last pair were a sea snake/shark named Hē'imoana and a pigeon named Lupe (Ka'ili, 2024).

Piki and Kele, the first twins, had a son named Taufulifonua and a daughter named Havealolofonua. The second set of twins, 'Atungaki and Mā'imoa'alongona, had a daughter named Velelahi. The third set of twins, Fonu'uta (Land-Turtle) and Fonutai (Sea-Turtle), had a daughter named Vesi'i. The last set of twins, Hē'imoana (Sea Snake, Shark) and Lupe (Pigeon, Dove), had a son named Tokilangafonua and a daughter named Hinatu'afu'anga (lit. Hina of the Outer Sea Floating Pumice) (Ka'ili, 2024).

Taufulifonua and Havealolofonua, the children of the first set of twins, gave birth to the goddess Havea Hikule'o. In some versions, Hikule'o is portrayed as male, while in other stories, Hikule'o is depicted as female (Gifford, 1924: 153; Gifford, 1929: 291). Hikule'o appears to be a gender-fluid ancestor. The Kingfisher bird known as Sikotā is the vaka, vessel/avatar, of Hikule'o (Ka'ili, 2024).

Taufulifonua and Velelahi had a son, Tangaloa 'Eiki, while Taufulifonua and Vesi'i had a son, Maui Motu'a. Havea Hikule'o, Tangaloa 'Eiki, and Maui Motu'a are the three divine ancestors and the principal deities of the Indigenous Tongan spirituality (Ka'ili, 2024).

Hina, Tangaloa, and Maui are common ancestors of Tongans and many people of Moana Oceania. In the early days, all ancestors lived in Pulotu, the spiritual homeland. In Pulotu, the ancestors gathered beneath the famous talking tree, named 'Akaulea, to drink kava. They mixed their kava with water from Vaiola, the famous Healing Water of Life, of Pulotu. Overseeing the kava-drinking rituals and serving as the master of ceremonies was the talking tree 'Akaulea. Pulotu is the place where kava first appeared, and it is the sacred ancestral island where kahokaho yams, taros, heilala plants, ō fishes, and whales originated (Ma'afu, 1904; Gifford, 1924; Moala, 1994).

Tokilangafonua (lit. the Adze that Builds the Fonua) and his sister Hinatu'afu'anga (sea floating pumice), the children of the last set of twins, had siamese twin daughters named Nāfanua and Topukulu. Tokilangafonua migrated to Sāmoa and had two daughters, the Tafakula (lit. the Red Horizon) and a shark deity known as Hē'imoana'uli'uli (lit. Wanderer in the Deep Black Ocean). Tafakula and Hē'imoana'uli'uli had a child, Lofia, the deity of the volcano on the island of Tofua in Ha'apai, Tonga (Ka'ili, 2024).

Ecological stewardships of the deities

Taufulifonua and Havealolofonua not only birthed new lands but also instilled a sacred duty of stewardship in their offspring, entrusting them with the tauhi fonua, or caretaking of diverse ecologies. Havea Hikule’o was anointed as chiefess and caretaker of both homeland Puluotu – the origin place of whales – and the earthworld Maama (Moala, 1994). Tangaloa ‘Eiki was given stewardship over the skyworld Langi. Maui Motu’a was designated the caretaker of the underworld of Lalofonua. The sea snake/shark Hē’imoana was chosen to safeguard the ocean’s intricate ecosystems, while the pigeon Lupe was entrusted with the stewardship of inland forests. Tongan deities were entrusted with ecological stewardship on all the scapes – the skyscape, the landscape, the subterranean-scape, and the seascape (Ka’ili, 2024).

The deity Tangaloa ‘Eiki fathered Tangaloa Tamapo’ulialamafoa, Tangaloa ‘Atulongolongo, Tangaloa Tufunga, Tangaloa Mana (the god of rain, wind, and ocean), Tangaloa Langi (the god of storm, thunder, and lightning), and Tangaloa ‘Eitumātupu’a (the divine ancestor of all Tongan monarchs and chiefs) (Moala, 1994). Similarly, Maui Motu’a fathered Maui Loa, Maui Puku, and Maui ‘Atalanga. Maui ‘Atalanga and Hina, in turn, gave birth to Maui Kisikisi, also revered as Maui Fusifonua, the deified ancestor responsible for fishing up lands from the ocean depths. Maui ‘Atalanga and Hina also gave birth to a daughter named Hina, the guardian and goddess of sharks, tapa-making, and the moon. Tongans consider themselves as ascendants (tupu, emanate) from these divine stewards, thus inheriting a profound responsibility for ecological guardianship (Ka’ili, 2024).

The god Tangaloa ‘Eiki sent his son Tangaloa ‘Atulongolongo in the vaka, vessel/avatar, of a seabird known as kiu (Pacific golden plover) to search for any land in the earthworld Maama, since all that could be seen from the skyworld Langi was the vast sea. The seabird Tangaloa ‘Atulongolongo searched for many days until he found a coral reef (in some versions, a sandbank).

After hearing Tangaloa ‘Atulongolongo’s report of his search, Tangaloa ‘Eiki asked his other son, the artisan deity Tangaloa Tufunga, to throw down volcanic dust from his celestial workshop to the earthworld Maama. The volcanic dust mixed with the coral reef to form the islands of ‘Eua and ‘Ata, the first two islands in Tonga. Later on, Tangaloa ‘Atulongolongo dropped a seed on ‘Ata from his beak, which grew into a fue (creeper plant) that covered the island (Ka’ili, 2024).

During his next visit, the seabird Tangaloa ‘Atulongolongo pecked at a rotten branch of the fue plant, causing a larva to emerge. By pecking at the larva, it divided into three parts, which transformed into the first Tongan humans: Kohai, Koau, and Momo. The first Tongan humans originated from an island created by the Tangaloa gods from a coral reef (Ka’ili, 2024).

Maui Motu’a and his children brought women from the ancestral homeland of Puluotu to be the wives of the first three humans. They also sailed to the island of Manuka in Sāmoa and procured an old fishhook from Tonga Fusifonua, Tonga, the fisher of fonua. The Maui clan used the old fishhook to haul up the other Tongan islands, including some of the islands in Fiji, Sāmoa, Tahiti, Hawai’i, and Aotearoa. After Maui fished up the island of Tongatapu from the sea, he walked across Tongatapu and transformed the hills into lush and fertile fonua. With each step, grass, flowers, breadfruit trees, and other trees emerged spontaneously. The fonua around his feet swelled into mounds brimming with yams, sweet potatoes, taros, and a variety of other food crops (Ma’afu, 1907:145; Ka’ili, 2024).

Tongan cosmogony and caring for the fonua

The Tongan cosmogony emphasizes the intersection of humans and nature, highlighting ecological responsibilities through the concept and practice of tauhi fonua. The practice of tauhi fonua denotes sustaining the fonua, or ecology, by symmetrically timing vā and spatially constituting tā. Essentially, it entails fostering a reciprocal and synchronous relationship between humans and ecological entities. Living in harmony with the fonua is pivotal. Many Indigenous peoples have a long history of living in synchronicity with their fonua. Tauhi fonua nurtures a reciprocal relationship between humans and their environment, including the land, sea, wind, sky, subterranean elements, and other natural components. These elements are regarded as ancestors, such as Vahanoa, the Vast Sea, and are treated with reverence and veneration (Ka'ili, 2024)

Primordial Tongan ancestors like seaweed Limu and sea sediment Kele emerged from the Vast Sea and played a central role in the creation of the Tongan mother rock, Tou'ia-'a-Futuna. This volcanic rock gave birth to fraternal twins, including soil, turtles, sea snakes, fish, sharks, and birds. All of these are considered ancestral beings with ecological importance. Natural phenomena such as earthquakes and volcanic eruptions are significant in these creation stories and are revered as part of the fonua, or ecology (Ka'ili, 2024).

Names of ancestors often include the term “fonua,” signifying land and its people and emphasizing the importance of ecological stewardship. Ancestors like **Taufulifonua** and **Havealolofonua** are credited with creating new ecologies and designating guardians for various environments. Fonua also appeared in the names of early ancestors, such as **Tokilangafonua** and his daughter **Nāfanua** (fanua is the older form of fonua).

Deified ancestors like Tafakula (Red Horizon) protect the land and are called upon for blessings against natural calamities. Other caretakers, such as Tangaloa and Maui, highlight the Tongan duty toward various elements of nature, including birds, coral reefs, soil, and even elements of the subterranean realm (Ka'ili, 2024).

The Maui clan, recognized as cultivators and mariners, further emphasizes the significance of ecological responsibility. They are credited with fishing up islands from the ocean and nurturing their gardens, underscoring the importance of respecting and sustaining the fonua. The cosmogonical phrase “fishing up islands with an old fishhook” is a metaphorical reference to the use of Indigenous astronomical knowledge related to the fishhook-shaped Scorpio constellation for locating new fonua and ecologies (Moala, 1992: 39-41). Overall, the Tongan cosmogony acts as a foundational narrative that shapes ecological duties and responsibilities, profoundly embedding these concepts and practices in culture and identity (Ka'ili, 2024).

Caring for the moana, ocean

Tongan cosmogony, tala 'o e fonua, clearly states that Tongans are related to the ocean and its marine elements, including seaweed, sea sediment/mud, sea snakes, sharks, sea turtles, corals, and sea birds. Tongans are related to these sea elements, and thus, have a fatongia, a sacred duty, to tauhi fonua, or care for them and sustain symmetrical relations with them to ensure their sustainability for present and future generations. This is critically important in our contemporary world, considering the ongoing destruction of our oceanic kinfolk.

Destruction of our Ocean relatives

The destruction of our ocean relatives is devastating. The eradication of our oceanic realm began with European imperialism, particularly the pernicious extraction of resources from the ocean for the sole benefit of the imperial centre. European whaling, for example, hunted and killed whales to near depletion to obtain meat, oil, and blubber for Europe. While resources were being squeezed out at an alarming rate from the sea, certain Christian missionaries mounted a frontal attack on Indigenous cosmogonies and labeled them “paganism.” In



Nifo'i 'Anga (Shark Teeth) motif

Credit: Tēvita O. Ka'ili

Moana Oceania, Indigenous deities were de-divinized and relegated to superstition. This dethroning of Indigenous sacred ancestors led to all forms of desecration by colonizers and settlers, from the demolition of sacred deity stones to the defilement of carved images of the deities. This iconoclastic ideology led not only to the loss of beautiful arts but also to the loss of Indigenous scientific knowledge. Today, in Tonga, very few carved images of the deities have survived the onslaught of colonization (Ka'ili, 2023).

Once the Indigenous deities of Moana Oceania were weakened through coloniality (Quijano, 2008; Tecun & Siu'ulua, 2023), it was only a matter of time before further debasement ensued. As these deities faded into obscurity, the ocean was no longer regarded as an ancestor, a spiritual place, or a source of mana, but rather as a raw material to be exploited for colonial and corporate greed. Over the years of intense colonization, the ocean began to suffer immensely from the pathologies of modernity and coloniality (Quijano, 2008). First came the devastation from nuclear testing (Marshall Islands, Christmas Island, Johnston Atoll, Mururoa, Fangataufa), military weapon testing (Kanaloa-Kaho'olawe, Guam), and corporate drilling for oil. This was followed by pollution from the pervasive plastic of modernity and coloniality

(Quijano, 2008), along with noise generated by industrial and military ships. Single-use plastics and discarded nets and ropes choked the life out of marine ecosystems (Ka'ili, 2023).

Noise from seismic surveying for oil and military sonar testing (i.e., the U.S. Navy's sonar testing in Hawai'i) deafened and disoriented ocean life, which led to numerous whale beachings and other problems. In addition, fish stocks, particularly tuna, were depleted due to over-fishing. Next, deep-sea trawling nets that “bulldoze” the seabed destroyed the ocean floor and killed nearly all living creatures. Deep-sea bottom trawling is essentially oceanocide. Following that, sharks were killed for their fins (shark fining) and turtles for their shells, sea cucumbers were over-harvested, corals were bleached as a result of the high usage of oxybenzone sunscreen products, and sea sand was depleted because of sand mining to feed the voracious appetites of concrete construction (i.e., mining of sand from Maui for constructions on O'ahu). Then, came the acidification of the ocean due to high concentrations of carbon dioxide in the atmosphere from the over-consumption of fossil fuels. Now, the world is on the brink of another marine life decimation with the threat of seabed mining for minerals to keep up with the demands of modern life. This is a result of nations and corporations exhausting the minerals on land in their unsustainable development projects (Ka'ili, 2023).

Tongan cosmogony and ecological responsibility: Opposing deep-sea mining

On cosmogonical and environmental grounds, I strongly oppose deep-sea mining. As mentioned above, Tongan cosmogony clearly states that Tongans originated from Vahanoa (Open Sea), Limu (Seaweed), and Kele (Sea Sediment). Deep-sea mining is destructive and harmful to our ocean homeland and our first Tongan ancestors, Limu and Kele. The minerals in the ocean are a manifestation of our ancestor Kele (Sea Sediment). It is clear from Tongan cosmogony that Kele is not just minerals for extraction. Minerals are kin and sacred ancestors that must be protected from desecration. The open sea Vahanoa, the initial place of creation and the ocean interspace between islands, is a *vā* that must be *tā* (marked) to protect from the exploitation of the extractive industry. Extracting minerals from the seabed without reciprocity or restoration is an asymmetrical process that leads to cultural and environmental destruction. Deep-sea mining is a form of colonialism. As the ascendants of the largest ocean on earth, Tongans have a *fatongia* (sacred responsibility) to care for our ocean.

Deep-sea mining is both ecocide and ethnocide (destroying culture). It threatens the very fabric of our marine kin: not only Limu (Seaweed) and Kele (Sea Sediment/Mud) but also Fonutahi (Sea Turtle), Hē'imoana (Sea Snake, Shark), Hē'imoana'uli'uli (Shark of the Deep Black Ocean), Tangaloa Mana (God of the Ocean), Tangaloa 'Atulongolongo (Pacific Golden Plover), and Hina (Goddess of Sharks). Our unique Tongan cosmogony teaches us about the profound bond we share with these marine family members, underlining our *fatongia*, sacred responsibility, to protect and preserve them. We must stand firm in our commitment to safeguard our oceans, honouring the legacy of our ancestors and ensuring the vitality of our marine relatives for generations to come.

Indigenous Tongans are not the only Moana Oceanians who use their creation story to guide their opposition to deep-sea mining. Native Hawaiian Solomon Kaho'ohalahala argues that Native Hawaiians have an intangible but equally significant connection to the ocean. He cited the Kumulipo, the Native Hawaiian cosmogonical chant, which traces the origin of life to the 'uku ko'ako'a, the coral polyp in the depths of the sea (Harriman-Pote, 2024). For Kaho'ohalahala, the coral polyp is the oldest Hawaiian ancestor, and holds spiritual relationships with the Koholā, or humpback whale (*Megaptera novaeangliae*). The humpback whale is the manifestation of the Hawaiian god of the sea and is respected for its ability to dive into the depths of the deep sea and the sacred place of our creation. Caring for and protecting them is vital for the existence of marine life and Native Hawaiians (Hyolmo, 2025). Kaho'ohalahala views the process of deep-sea mining as intruding into the sacred place of Hawaiian creation. He noted that the authorities seeking to approve the process of deep-sea mining have not considered the cultural input, cultural genealogy, and cultural perspective of Native Hawaiians (Harriman-Pote, 2024).

There are pressing environmental and cultural issues concerning the proposal to open our home ocean to the emerging seabed mining industry. The "Clarion-Clipperton Zone," situated between Hawai'i and Mexico, is abundant in precious minerals, highly sought after for 'green technology', attracting interest from both nations and corporations. This zone is not only vital to our heritage in Moana Oceania, but it also represents a living entity and a sacred space of creation for its people. Many ancestors trace their origins to the waters of Tangaloa Mana or Kanaloa, the oceanic deity. This southeastern region of Moananuiākea in Hawai'i, earmarked for seabed mining, is inhabited by numerous water relatives. The Clarion-Clipperton Zone is rich in minerals, or our ancestors, like nickel, cobalt, copper, zinc, lithium, and manganese,

which appear as small metal spheres called polymetallic nodules.

As the Indigenous people of Moana Oceania, we belong to the ocean. Our cosmogonies (creation stories) inform us that the Ocean is our ancestor. We must work alongside our allies – conservationists, biologists, and environmentalists – to stop the extraction of our ancestors from our Mother Ocean. Deep-sea mining is another form of ecological colonization, similar to overfishing, shark finning, ocean pollution, sea acidification, coral bleaching, and more. For Moana Oceanians, the sea is an ancestor, and seabed mining is an act of violence. The recent attempt to rebrand seabed mining as ‘mineral harvesting’ cannot hide the environmental, cultural, and spiritual devastation caused by extraction practices. We must safeguard the deep sea for future generations by honouring our fatongia, our sacred responsibility, of tauhi fonua, nurturing and sustaining the fonua.

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Discarding old paradigms: Finding fertile ground at the nexus of conservation and entrepreneurship

Shelby Matevich and Joeri Sol

Amid growing recognition that conventional, top-down models of conservation should give way to locally-rooted and participatory interventions, a team at the University of Amsterdam is exploring the dynamics of conservation entrepreneurship. While conservation and entrepreneurship are both highly interdisciplinary research fields, cross-fertilization between the two is limited (Lobo et al., 2023). It raises the question: are the Yellowstone Model and Silicon Valley Model undermining cross-disciplinary collaborations?

Western histories of conservation usually begin with the Yellowstone National Park Protection Act (1872), which introduced national regulations to “provide for the preservation...of all timber, mineral deposits, natural curiosities, or wonders within said park, and their retention in their natural condition” (Act establishing Yellowstone National Park, 1872). Thereafter, this Yellowstone Model of conservation was exported around the world: vast, enclosed national parks, devoid of human settlements and managed under the purview of state agencies and big international NGOs. A century later and a thousand miles West emerged a digital-age gold rush (Baker & Welter, 2024). Silicon Valley is home to the buzzing headquarters of various Fortune 1000 companies and is considered a nursery for high-growth and high-profit entrepreneurship. This Silicon Valley Model of entrepreneurship is sensationalized by quirky CEOs and ‘unicorn’ start-ups operating on the cutting-edge of technological innovation.

While both are paradigmatic examples of how conservation is practiced and how entrepreneurs operate, they are hardly representative. Conservation and entrepreneurship are delightfully diverse – the inevitable result of fundamentally human endeavours expressed in unique contexts around the world. Though this plurality is undoubtedly recognized by the scholars in their respective fields (Sandbook et al., 2019; Welter et al., 2016), is it also appreciated beyond these silos? At a time when conservation is calling for transformative change and entrepreneurship is considering its societal relevance (IPBES, 2019; Wiklund et al., 2018), the enduring legacy of the Yellowstone and Silicon Valley Models might better be understood as obstacles to mutual enrichment.

Conservation

Conservation is and has been different things to different people: a last hold-out against development, or a new frontier of capitalism; a safe haven for national monuments, or the perpetrator of community dispossession. It can be good intentions gone wrong, or collaborations to recover species from the edge of extinction. It can be the mechanism for increased governmental control, or the regenerative legacy of Indigenous relations. Behind each of these notions are different value systems, different ways of relating to nature, and consequently different methods for practicing conservation (Pascual et al., 2023; Louder & Wyborn, 2020).

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Within this complexity, one concern is widely shared: we are in the middle of a biodiversity crisis that is the direct consequence of human activity. The loss is well-documented: wildlife populations have declined over 70% in the last 50 years (WWF, 2024), roughly one in three species on the IUCN Red List faces elevated extinction risks (IUCN, 2024), and extinction rates are orders of magnitude higher than historical background rates (IPBES, 2019). The Planetary Boundaries Framework echoes this, estimating that the stability and resilience of biodiversity has passed its “safe operating space for humanity” (Richardson et al., 2023). In short, biodiversity loss is dangerously high and this impacts everything: from the regulation of the Earth’s climate and the pollination of the world’s crops, to humanity’s wellspring of inspiration and cultural heritage.

There is increasing recognition that the biodiversity crisis is not just a problem for the conservation sector. WWF’s Living Planet Report: A System in Peril (2024) prioritises change across food, finance, and energy systems. Meanwhile, the latest IPBES reports (2019, 2024) call for “transformative changes across economic, social, political and technological factors” – including paradigms, goals, and values (IPBES, 2024). Both reports highlight the unsustainable and unevenly distributed role of economic growth as a driver of biodiversity loss (Otero et al., 2024). Accordingly, the recently-adopted Global Biodiversity Framework takes a “whole-of-government and whole-of-society approach” to the biodiversity crisis (CBD, 2024). There is debate on how this Framework will play out: it has been considered both a groundbreaking achievement or at risk of becoming another link in the chain of conservation’s colonial legacy (Dawson et al., 2024; Obura, 2023; Sandbook et al., 2023).

Entrepreneurship

Like conservation, entrepreneurship comes in many flavors. It has been applauded for its job creation, but it’s also been condemned for collapsing regional economies. It’s been the impetus of creative destruction, but also a health hazard for the individuals who undertake it. It has turned beggars to billionaires and been the modus operandi of the informal sector; it is the domain of both organizations and individuals, for prosocial goals or to exploit market failures. Entrepreneurship as a phenomena has perhaps “always been with us” (Baumol, 1990). To many it is more a social and emancipatory relation than an economic one (Rindova et al., 2009). It is rather a reflection of a society’s dominant norms that determine how entrepreneurship is understood and valued – by the agents of change themselves, and the scholars who study them (Steyaert & Katz, 2004).

Sun - Arthur Dove, born Canandaigua, NY 1880- died Huntington, NY 1946.

Credit: Smithsonian American Art Museum, Bequest of Suzanne M. Smith



When we look beyond the unicorns – as many researchers are doing – we find the “cows and horses” (Welter et al., 2016). These are the everyday entrepreneurs tackling real world problems in almost every context. Social entrepreneurship is better-known, but there are many others that embody this “entrepreneurial spirit”, though they are less often regarded as such. Necessity-based and informal entrepreneurship, rural or grassroots entrepreneurship, Indigenous and institutional entrepreneurs are all working in different places and configurations, with goals and motivations that extend beyond the directly economic, operating in spaces outside of the market. There are increasing calls to recognize, understand, and support these agents of change as entrepreneurs, especially in a world that is moving beyond GDP growth and profit maximization as qualifiers of success and societal well-being. In this context, notions of societal impact,

sustainability, public good, collective action, and grand challenges are influencing the future direction of entrepreneurship research (Wiklund et al., 2018; Vedula et al., 2021; Muñoz & Cohen, 2018).

Entrepreneuring for conservation

Everyday entrepreneurs – even the ecopreneurs – might not immediately see a role for themselves in the Global Biodiversity Framework. Its most recognizable “30x30” target (protecting 30% of land and sea by 2030) seems simply a continuation of the Yellowstone Model of conservation: an undertaking for governments, international NGOs, or elites with the power and finance to stake more fences around nature (Büscher & Fletcher, 2015; Arjaliès & Banerjee, 2024). Likewise, conservationists searching for transformative pathways may have little appetite for entertaining entrepreneurial approaches, equating it with community dispossession, land grabbing, or “selling nature to save it” (Wolford, et al. 2024; McAfee, 1999; Dowie, 2009). These concerns are well-founded; there are numerous ongoing instances of business converging with conservation guided by old paradigms (Cligge, 2024; Iordăchescu, 2018; Vesalon & Anghel, 2024; Holmes, 2015).

However, there is a story of conservation and entrepreneurship that lies beyond the realm of the Yellowstone and Silicon Valley models. While these models hold value in certain contexts, their dominance likewise restricts our imaginations and connections with each other. Conservation and entrepreneurship communities are energized by efforts to expand the frameworks of understanding and narratives that surround them: to open up the way they are understood, evaluated, and practiced. Parallel notions of resistance and radical transformation infuse both, evidenced by growing bodies of research on: diverse knowledge systems and economies; relational logics of care, collaboration, and commoning; notions of justice and degrowth (Tedmanson et al., 2015; George et al., 2023; Keim et al., 2024; Slade Shantz & McMullen, 2024; Díaz & Pascual, 2025; Büscher et al., 2016; Büscher & Fletcher, 2019).

Understood this way, entrepreneuring for conservation is already happening: it can be found in the initiators of community-owned land trusts and the holistic mindsets of farmers and restaurateurs; it is apparent in novel legal frameworks that reshape the way we recognize nature; and in the constellations of movement actors navigating combinations of social, ecological, and economic logics inherent to their work. It seems there are ample opportunities to explore, innovate, and realize biodiversity outcomes that include a broader range of actors with a more diverse tool set. If we discard our old paradigms: can we reimagine conservation and entrepreneurship as allied disciplines? Together, they may well be the fertile ground from which transformative biodiversity action takes root.

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4.2

Rethinking rights

What if nature had legal standing? What if our policies reflected not just human interests, but the intrinsic value of ecosystems? This section examines how shifting our understanding of rights – for the ocean, species, and entire landscapes – can reshape conservation and human responsibility.

Michelle Bender and Mere Takoko's *Ocean Rights* challenges us to see the sea not as a resource, but as a living entity with its own rights. Nigel Crawhall's analysis of the Kunming-Montreal Global Biodiversity Framework reveals how policy can bridge biological and cultural diversity, transforming our relationship with nature. Finally, Jacob Phelps, Miaomiao Tian, and Rika Fajrini argue in *How legal actions can help reimagine relationships with nature* that recognising diverse, relational values in our policies and decision-making is key to imagining more sustainable trajectories.

These pieces move beyond theory, offering concrete pathways to redefine rights, policies, and legal frameworks. The message is clear: the future of conservation depends on rethinking who – and what – has a voice.

Chapter narrated by Liza Zogib, Elise Huffer and Galeo Saintz

Ocean rights: Reimagining the human-ocean relationship

Michelle Bender^{a)} and Mere Takoko^{b)}

Monken children, Myeik Archipelago, Myanmar

Credit: Ben Jones / Ocean Image Bank



The Ocean in crisis: A call for change

The Ocean is in crisis. Its once-pristine waters are now choked with plastic, its vibrant coral reefs are bleaching at unprecedented rates, and marine life is struggling against the onslaught of overfishing and habitat destruction. Rising temperatures and acidification are reshaping ecosystems in ways we can barely comprehend, threatening not just marine biodiversity but also the livelihoods of millions who depend on the sea, and the health of the planet. This unfolding environmental crisis makes one thing clear: the way we relate to and use the Ocean must change.

For centuries, Western society has viewed the Ocean as an inexhaustible resource, leading to its unsustainable exploitation. This anthropocentric mindset has fueled legal and economic systems that prioritise profit over the Ocean's well-being. It has been a highway for commerce, a dumping ground for waste, and a "limitless" supply of fish. These practices have resulted in severe consequences for the Ocean, including overfishing, pollution, habitat destruction, and climate change. Such a mindset, one of separateness and dominance, creates an illusion where humans believe themselves distinct and superior to the natural world. This illusion of separation has led to a disconnect between humans and the Ocean, allowing for its exploitation with little regard for the repercussions. However, the consequences of this unsustainable exploitation are now undeniable, forcing a reassessment of this harmful paradigm.

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Converging science and Indigenous knowledge

The concept of Ocean Rights is not a new invention but rather a rediscovery of an ancient understanding. Indigenous communities have long understood the Ocean as a living relative, deserving of respect and reciprocity, not just as a resource to be exploited. This perspective is rooted in a deep understanding of the interdependence of all living things and the importance of maintaining balance within the natural world. The Māori concept of Kaitiakitanga beautifully illustrates this philosophy, emphasising guardianship and the deep bonds between humans and Nature. The Māori people view themselves as protectors, rather than owners, of the Ocean. This worldview is reflected in their relationship with tohorā (whales). For generations, Māori have revered whales as kin and spiritual guides, who embody the mauri or life force of the sea. When a whale strands on a beach, it is not merely an animal in distress; it is an event of profound spiritual and ecological significance, calling for communal care and ceremonial acknowledgment.

Western science is now beginning to affirm what Indigenous knowledge systems have always known: relationality and reciprocity are fundamental to sustainability. Indeed, in recognising the intrinsic value of the Ocean and acknowledging its interconnectedness with all life, Western science is starting to converge with Indigenous worldviews. Ocean Rights stands at the convergence of these two knowledge systems, offering a way forward that is both legally robust and ethically grounded. Incorporating Indigenous perspectives and knowledge into legal frameworks and conservation efforts can ensure that the Ocean's rights are protected and that its vital role in sustaining life on Earth is respected. Ultimately, recognising the inherent rights of the Ocean and embracing Indigenous perspectives paves the way toward a more just and sustainable future for all.



Paddle boarders over a coral reef at sunset. Credit: Grant Thomas / Ocean Image Bank

A future of partnership and care

The Ocean is not just a vast expanse of water; it is the source of all life on Earth. The Ocean regulates our climate, sustains life, and provides food and livelihoods for billions of people. Microscopic organisms like phytoplankton produce over half of the oxygen we breathe, making every second breath we take a gift from the Ocean. Far from being separate from us, the Ocean is woven into the very fabric of our existence and a powerful reminder that protecting it means protecting ourselves.

Reimagining our relationship with the Ocean is not just about protecting marine ecosystems and species; it is about creating a liveable future for all, human and nonhuman alike. A world where humanity and the Ocean thrive together is not just possible; it is necessary. By embracing relationality and care, we can move beyond exploitation towards a future of shared prosperity. The Ocean does not belong to us. It is a part of us. And in protecting its rights, we protect our own future.

The Joint Programme of Work on the links between Biological and Cultural Diversity under the Kunming-Montreal Global Biodiversity Framework: Transforming relationships

Nigel Crawhall^{a)}

Introduction

15 May 2025

In December 2022, the 15th Conference of the Parties to the UN Convention on Biological Diversity (CBD COP15) adopted a landmark agreement that confirmed the bond between human rights, cultural diversity, and the conservation of biological diversity. Like the 2015 Paris Agreement under the UN Framework Convention on Climate Change (UNFCCC), the Kunming-Montreal Global Biodiversity Framework (KM-GBF) shifted a global paradigm and put human relationships, rights-based approaches, and ‘whole of government / whole of society’ approaches at the centre of international decision-making in relation to environmental recovery.

The CBD COP15 framework is a key multilateral treaty and invites rights holders and Parties of the CBD to revisit and transform how they understand each other and work together for integrated results that reach deeply into human social and economic organising in diverse landscapes and seascapes. It also brings into focus the question of whether the different rights holders and Parties can define an institutional and epistemic pathway to allow them to work together effectively and transform practices at site and systems level.

The formulation of the KM-GBF outcome document was built on years of advocacy, research, dialogue, negotiations, and efforts by Indigenous Peoples, civil society groups, conservationists, scientists, diplomats, and negotiators to find a balanced approach that would be scientifically credible, socially coherent, and politically acceptable. The KM-GBF recognises characteristics of human culture and social organisation which sustain biodiversity over long periods of time. Congruently, the institutional frameworks which are meant to deliver the results foreseen in the KM-GBF include: a treaty mechanism, multilateral agencies, national decision-makers and national bureaucracies, national conservation agencies, sub-national governments, the private sector, and holders of Indigenous and local knowledge who are organised in a myriad of ways. This last link takes us beyond bureaucracies and formal institutions into a space where custodian institutions are invited into the framework but may not have formal legal recognition.

This paper explores what is anticipated in the KM-GBF that would support both cultural diversity and biological diversity, as well as how different institutions are positioned to jointly achieve such transformation. The people who can bring about this transformation speak thousands of different languages and have very different ways in which they value nature and

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make decisions about resources and landscapes. Moreover, the people who can bring about this transformation find themselves in different institutions and roles, and the relationships between both people and institutions will need to be predisposed or supported to enact the new paradigm.

The KM-GBF annex on Nature and Culture, decision 15/22 (see references), sets out a sophisticated framework for strengthening synergies between knowledge systems, cultures, and languages, which have the potential to enable a more holistic approach to reversing the loss of both biological diversity and cultural diversity. The annex recognises and enables the diverse and complex relationships between people and nature, including value systems, the protection and sustainable use of nature, improving education, and the opportunity to transform the relationships between professional conservation measures and the diverse forms of custodianship which have defined and shaped both human cultures and their respective landscapes, freshwater systems, and seascapes for centuries and even for millennia.

The annex to decision CBD/COP15.22 is a call from the Parties to the CBD for the United Nations Educational, Scientific and Cultural Organisation (UNESCO), the Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services (IPBES), the International Union for the Conservation of Nature (IUCN), the Secretariat of the CBD (SCBD) and Indigenous Peoples along with other entities to devise a work plan to advance the second Joint Programme of Work on the Links between Biological and Cultural Diversity (JPoW). The first JPoW was established in Nagoya, Japan at COP10, and the new and more detailed version is a key component for enabling results and relationships under the KM-GBF.

The JPoW covers a range of actions, including promoting dialogue between holders of Indigenous and local knowledge with scientists, improving co-management, supporting community led monitoring, cooperating on indicators for the KM-GBF targets, mobilising UNESCO instruments dealing with natural and cultural heritage, protecting rights over genetic resources, and investing in public education to enhance understanding of the relationship between biological diversity and cultural diversity.

The COP15 decision was likely shaped by the highly visible results of the 2019 IPBES Global Assessment. The Global Assessment and the Summary for Policy Makers were not only constructed through transdisciplinary dialogue and cooperation involving a wide diversity of national and regional contexts, it was also one of the first negotiated documents that systematically examined the role of Indigenous Peoples and local communities in effective conservation of biodiversity, both intentional and as a result of their land-use and landscape management practices.

Various authors identify a bridge from the IPBES assessments to the final version of the KM-GBF (including Diaz et al. (2020) and Lehmann (2023)). The coherence of the IPBES assessments, and particularly the 2019 Global Assessment, helped produce a synthesis of complex phenomena and policy-relevant pathways which were then expressed in a UN agreement. The IPBES process itself was informed by many knowledge holders and sources of evidence, including a consistent effort by custodians to defend customary governance. The argument about the vital role of custodianship and complex governance and decision-making picked up fresh momentum in the 20th and 21st centuries with significant validation from diverse research initiatives, including those associated with Elinor and Vincent Ostrom and the Bloomington School of Political Economy. The Ostroms' evidence-based research methodologies and the emergence of a framework for understanding decision-making within common pool resources management eventually led to Elinor Ostrom winning the Nobel prize in Economics in 2009 (Tarko, 2016). The many efforts by custodians and researchers brought

this evidence into focus in the methodology of IPBES and was expressed in the influential 2019 IPBES Global Assessment.

The second JPoW is premised on the meaningful cooperation of both multilateral agencies and Indigenous Peoples' networks and platforms that are engaged with the CBD and the implementation of the KM-GBF. This paper relays the evolution of the relationships between the key actors and rights holders and then shares the different perspectives on the second JPoW that were expressed during a series of dialogues between the UN system and Indigenous Peoples' international forums. These dialogues provide us with insights into the implementation of the KM-GBF and the new opportunities for diverse actors and rights-holders to work together in relationships that are rights-based and transformative, while acknowledging the challenges of compatibility between different institutional contexts, epistemological diversity, and power hierarchies.

Background to cooperation

The cooperation between the Secretariat of the UN Environment Programme (UNEP), the parent body of the CBD, and UNESCO, along with Indigenous Peoples and other partners, began with a dialogue during the World Summit on Sustainable Development in Johannesburg in 2002. UNEP and UNESCO, with distinguished international leaders, presented the high-level roundtable on Cultural Diversity and Biodiversity for Sustainable Development. This event grew into a multifaceted relationship between UNESCO and other multilateral entities around the interaction of cultural and biological diversity. It also set the stage for another major event that took place a year later in Durban, South Africa: the IUCN's 5th World Parks Congress (WPC), which formalised the importance of a rights-based approach and the need for multiple governance systems in site-based conservation. What emerged as the Durban Action Plan at the 5th WPC was taken up by the Parties to the CBD at COP7 in Kuala Lumpur. This cluster of key international events not only set new international norms and agendas, it also strengthened institutional ties and cooperation between multilateral entities and Indigenous Peoples and other non-state custodians of cultural diversity and biodiversity (Dearden, 2008; IUCN, 2004)¹.

The momentum of cooperation between SCBD, UNESCO, IUCN and Indigenous Peoples and other place-based custodians built up and led to the International Conference on Biological and Cultural Diversity (ICBCD): Diversity for Development – Development for Diversity, held in Montreal, Canada in June 2010. The ICBCD, hosted by the Secretariat of the CBD and supported by the Canadian National Commission to UNESCO, and the governments of Canada and of Quebec, responded to a call from CBD COP 9 to bring together diverse rights holders, stakeholders and entities. Present were United Nations entities, Indigenous Peoples, local community representatives, and a range of experts on nature and culture, as well as interested Member States. The conference created a foundation for relationships which would eventually stimulate diverse dialogue forums, relationship building, *rapprochement*, and efforts to understand and describe the complex relationships between human cultural diversity, including diverse knowledge systems, languages, natural resource governance regimes, and value systems, which could potentially

1 The [Durban] Accord proposes a new paradigm for [protected areas] PAs that integrates conservation goals with sustainable development in an equitable way. Celebrating the diversity of nature and cultures, the multiple benefits from PAs, and successes in their conservation, the Accord highlights a number of concerns, including: inadequate PA coverage, particularly for marine and freshwater ecosystems; a lack of recognition of the conservation efforts of local communities and mobile and indigenous peoples; a decline in wild areas outside PAs; parks on paper, not in practice; island PAs; and threats from human-induced climate change. (from IISD, 2003)

be recognized and enabled to have a long-term effect on the vitality of both nature and culture. It was there that, responding to COP9 decision IX/27, the initial Joint Programme of Work (JPoW) between UNESCO and the CBD Secretariat (SCBD) was developed.

The first JPoW was welcomed by the 10th meeting of the Parties to the CBD (CBD COP 10) held in October 2010 in Nagoya, Japan (Decision X/20). That decision was a catalyst to a series of new relationships and efforts to build dialogue and identify a shared purpose and mutual understanding between rights holders, duty bearers, professionals, and custodians of nature and culture across the planet.

In parallel, throughout this period, the International Indigenous Forum on Biodiversity (IIFB) had been strengthening its capacity and influence within the CBD process. Founded at CBD COP 3 in Buenos Aires, IIFB has a formal engagement in the CBD process and initiated a range of research, normative, and capacity building activities for its members and the Parties to the CBD.

Also highly significant in this timeline was the adoption of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) in September 2007. UNDRIP was itself a major milestone for the United Nations not only in its recognition of Indigenous Peoples as rights holders but also in making the explicit connection between identity, rights, and stewardship of territories.

The multiple forums which engaged with the JPoW, the greater inclusion of diverse custodian voices, and rapid emergence of the global Indigenous Peoples' movement all served to shift the focus of multilateral entities to more seriously consider the relationship between the environment, human rights, and cultural diversity. This relationship was now shaping the institutions responsible for advancing global norms and steering global delivery.

Subsequently, CBD COP-14 recognized that the first JPoW had been a useful platform for collaboration between the CBD and UNESCO in pursuit of common objectives with respect to nature and culture. COP14 also requested the Executive Secretary to consult with UNESCO, subject to the availability of resources, to prepare options for possible elements aimed at a *rapprochement* of nature and culture in the post-2020 global biodiversity framework. (Decision 14/30, para. 25 and 26)

Source: Secretariat of the Convention on Biological Diversity, cbd.int/lbcd/about



The results of the JPoW were reviewed by COP14 and decision XIV called for further cooperation. This cooperation was defined within the KM-GBF in line with other principles, particularly the emphasis on human rights, the role of Indigenous Peoples, and the application of Indigenous and local knowledge systems in the efforts to protect biodiversity and sustain cultural diversity on the planet.

While the UN relies on formal, negotiated decisions, there has been a parallel process of building institutional linkages and trust relationships between different actors and rights-holders. SCBD, UNESCO, and the IUCN took concerted steps to engage with Indigenous Peoples and welcome them into spaces for dialogue and influence. IIFB became catalytic in advancing Indigenous engagement in the CBD, and IIFB-affiliated Indigenous Peoples' Organisations (IPOs) took up membership with the IUCN. Owing to UNESCO's structure, the formalisation of institutional recognition took longer, however, leading IPOs did achieve formal accreditation with UNESCO and eventually the International Indigenous Peoples' Forum on World Heritage (IIPFWH) was formed autonomously in 2017. IIPFWH has set as part of its mandate to engage with UNESCO on the relationship between nature and culture, and the synergistic experiences and value systems of Indigenous Peoples.

Traditional Indian musicians welcome delegates to the 46th World Heritage Committee meeting in New Delhi, India.

Credit: UNESCO/N. Crawhall



What the second JPoW needs to deliver

The initial JPoW held out an important opportunity for greater dialogue and was explicitly designed to include both the conservation agenda and the human dimension of sustainability and of territories.

The second JPoW is embedded in a more explicit rights-based framework. It is ambitious and draws together numerous threads that are relevant to the interaction of formal science, the myriad of ways that custodians around the planet have cared for country, the ways in which people revere places and species, and the ways in which people govern for sustainability, including in the face of an increasingly unstable climate.

The second JPoW is intended to support coherent and joint actions and implementation, providing direct help to achieving the KM-GBF, which is led by an agreed set of targets ([cbd.int/gbf/targets](#)) and related indicators.

SCBD describes the new JPoW as being built on four elements:

1. A joint strategy to stop the ongoing and often dramatic decline in global diversity of both nature and culture
2. Science and knowledge dialogue, recognising the equivalence of knowledge systems, and using this to shape efforts with regards to indicators and monitoring
3. Unpacking the complex relationships between cultural diversity and biological diversity, including elaborating an integrated approach to socio-ecological systems
4. Developing new approaches to communication, education, and public awareness (CEPA)

The second JPoW also places greater importance on what is referred to as Traditional Knowledge by CBD.

Central to the challenge posed by effective action under the JPoW is the question of language vitality as a proxy for cultural diversity and language as a vehicle for knowledge generation and transmission in relation to conserving nature. UNESCO, SCBD, Indigenous leaders, and language experts worked intensively on language vitality indicators under the first JPoW. Under the second JPoW, SCBD has invited UNESCO to continue to engage on the traditional knowledge and language indicators. As the second JPoW coincides with the International Decade of Indigenous Languages (IDIL 2022-2032), it creates opportunities for associating joint actions on the links between language and biodiversity.

Key messages from the SCBD

The CBD, drawing on the text of the KM-GBF, has set out the following priorities for its approach:

- An integrated approach to nature conservation that places communities at the centre of the action and employs a sustainable use model, a diversity of territorial approaches, and the active participation of Indigenous Peoples and local communities in policy and decision-making.
- Funding and technical resources for Indigenous Peoples and local communities to maintain effective governance.
- Indigenous languages in transmitting traditional knowledge and biodiversity conservation:
 1. Strengthen Indigenous Participation: Ensure Indigenous voices are heard throughout the policy planning process. Indigenous Peoples should be recognized as rights holders, not just stakeholders.
 2. Respect Customary Laws and Practices: Biodiversity conservation should align with Indigenous customary laws and traditional practices, recognizing their role in maintaining ecosystem resilience.
 3. Foster International Solidarity: Collaboration and solidarity among governments, Indigenous Peoples and local communities are crucial to addressing environmental justice and promoting equitable benefit-sharing.

4. Invest in Indigenous Peoples and local communities: Prioritise funding and resources to support Indigenous communities' conservation efforts, infrastructure, education, and access to information.
5. Promote Knowledge Exchange: Facilitate the exchange of best practices and insights across various knowledge systems, focusing on Indigenous and local knowledge. (UNESCO 2024)

Within the KM-GBF, a number of Goals, Targets, and Indicators are relevant to Indigenous Peoples, local communities, and the interaction of cultural diversity and biological diversity, such as targets 3, 21 and 22. These refer to the 30 x 30 conservation goal and its mobilisation of knowledge, data, and information for decision making, including knowledge of Indigenous Peoples and local communities. These targets also aspire to full, equitable, inclusive, effective, and gender-responsive representation and participation in decision-making, as well as access to justice and information related to biodiversity by Indigenous Peoples and local communities.

Karen elder, Jorni Odochao plays the 'kwae' buffalo horn pipe at a workshop on Indigenous knowledge of pollinators, Hin Lad Nai village, Thailand.

Credit: UNESCO/N. Crawhall



Voices and pathways

In response to the CBD COP15 decision, UNESCO worked with SCBD and IUCN to convene four global dialogues with Indigenous Peoples in different parts of the world during 2024, to provide an opportunity for dialogue and listening, and for Indigenous leaders to share their ideas, visions, and priorities to achieve the aims of the JPoW.

These dialogues were undertaken by the principal agencies responsible for the elaboration of the JPoW and each interacted with an international platform led by Indigenous Peoples. These included the 23rd session of the UN Permanent Forum on Indigenous Issues (UNPFII) which is a sub-committee of the UN Economic and Social Council, the IPBES Task Force on Indigenous and Local Knowledge, the 17th session of the Expert Mechanism on the Rights of Indigenous Peoples, and the International Indigenous Peoples' Forum on World Heritage at a day-long event on the margins of the 46th session of the World Heritage Committee in New Delhi.

A concise summary of the highlights of each dialogue are provided below, and the results are available online for consultation.

Overall, Indigenous Peoples strongly favour a more integrated approach to nature and culture, and the need for improved understanding, cooperation, investment, and partnerships. From different corners of the planet, Indigenous Peoples consistently uphold the principle that culture and nature are intertwined and interdependent, and that custodianship is fundamental for any successful conservation of nature.

The Indigenous Peoples views were appreciated, recognised, and supported by all the major institutions engaged in the JPoW, who have consistently been moving in the direction of a rights-based approach to protecting biodiversity and more recently emphasising the inter-relatedness of cultures, languages, natural resource governance, successful conservation, and sustainable use of wild resources.

The dialogues highlighted the importance of the JPoW and the need for real transformation, which includes new types of relationships between professional conservationists, protected areas management, and Indigenous custodians. The dialogues drew attention to the important opportunity provided by UNESCO's leadership in the International Decade of Indigenous Languages (IDIL) which is being elaborated in parallel with the KM-GBF and the JPoW.

The four global dialogues in 2024 also highlighted the opportunity to develop new practices and legal frameworks which can recognise customary laws and governance, while bringing in new technologies and new approaches for monitoring and reporting on conservation, including the Other Effective Area-based Conservation Measures (OECMs) which are part of the CBD framework.

UNPFII – New York, USA

The side event “Culture-Nature: Joint Programme of Work on Links between Biological and Cultural Diversity” took place on 15 April 2024, at the 23rd Session of the UN Permanent Forum on Indigenous Issues (UNPFII). Hindou Oumarou Ibrahim (M'bororo), Chair of the UNPFII noted that for Indigenous Peoples: *‘Everything is interconnected. Our languages are connected to our ecosystems. We are saying that Indigenous participation means understanding our principles and includes those principles in implementation.’*

Lorna Wanosts'a7 Williams (Lil'wat First Nation), Professor Emerita at the University of Victoria in Canada, spoke of the connection between languages, knowledges, wisdom, and the land: *‘Indigenous Peoples around the world have always said that our languages are voices of the land, that they have a direction to the land and that we learn through those languages’*. (UN Web TV video 2024).

Joji Carino (Ibaloi-Igorot), Senior Policy Advisor at Forest Peoples Programme, who has been instrumental in the implementation of community-based biodiversity monitoring, IPBES assessments, and implementation of the CBD, spoke about the opportunities and challenges arising from the KM-GBF and particularly from the JPoW. Carino highlighted how Indigenous Peoples have consistently called for culture to be recognised as one of the pillars of sustainable development along with the social, economic, and environmental pillars, and that self-determination and sustainable development are two sides of the same coin. (UN Web TV, 2024). She praised the efforts to include languages as part of the equation. Carino emphasized that Indigenous languages develop over time through effective land stewardship and represent a different world view from the current extractive models which are placing the planet at risk. The demise of Indigenous languages is an indicator of the loss of traditional

knowledge and the weakening of stewardship.

IPBES ILK TF – Paris, France

The IPBES Task Force on Indigenous and Local Knowledge noted that the second JPoW provides a framework to act on the critical connection between language vitality, culture, food systems, land tenure, ecosystem restoration, intergenerational solidarity, and biodiversity conservation.

The dialogue in June 2024 emphasized that the JPoW can be a check and balance on risks arising from the 30x30 land and sea conservation target. Indigenous Peoples have had diverse experiences with Protected Areas, with many having been adversely impacted, and having also experienced unsuccessful co-management. However, there are also examples of success Indigenous territorial custodianship, Indigenous-led conservation, and various co-management arrangements.

There is an important opportunity for dialogue between the Working Group on Article 8j (which was formalised into a permanent subsidiary body of the Convention at COP16) and the IPBES TF on ILK. This dialogue could help articulate both the programme of work on Article 8j and the new permanent subsidiary body, as well as the elaboration of the JPOW.

EMRIP – Geneva, Switzerland

The 17th session of the Expert Mechanism on the Rights of Indigenous Peoples (EMRIP) included a plenary session of the JPoW in the context of the International Decade of Indigenous Languages. The focus of discussions was on the interlinkages of biodiversity, languages, knowledge systems, health, and Indigenous food systems. Participants welcomed a more holistic platform where a range of issues in the nexus of biodiversity and human rights could be addressed.

EMRIP called for a ‘roadmap’ to be developed in full consultation with Indigenous Peoples, which would promote environmental sustainability; foster international, regional, and national cooperation; and improve access to funding which could support Indigenous-led conservation initiatives.

UNESCO and Indigenous leaders visit the Traditional Knowledge Digital Library at the Council of Scientific and Industrial Research, New Delhi

Credit: CSIR/TKDL



IIPFWH – New Delhi, India

The International Indigenous Peoples Forum on World Heritage (IIPFWH) is a network of Indigenous Peoples experts, organisations, and networks engaged in the 1972 UNESCO World Heritage Convention. Initially established in Kraków, Poland, in July 2017 during the 41st session of the World Heritage Committee, the IIPFWH has emerged as an important global network and reference body of Indigenous Peoples and heritage. IIPFWH has a close relationship with the IIFB and leading members participated in the preparatory meetings for CBD COPs 15 and 16.

IIPFWH met with UNESCO Secretariat, IUCN, ICOMOS, and ICCROM in New Delhi, ahead of the 46th WH Committee, to consider how their agenda and concerns related to the World Heritage Convention were relevant for consideration by the CBD and the JPOW. Indigenous leaders from Africa, Asia, the Pacific, Latin America, and the Caribbean participated in the one-day meeting, and a report was produced by an Indigenous rapporteur (Satau, 2024).

A recurring theme throughout the New Delhi workshop was the intrinsic connection between nature and culture in Indigenous worldviews. The workshop underscored the importance of Indigenous and Local Knowledge Systems (ILKS) in sustaining both cultural and biological diversity. Xavier Forde (Māori) presented a case study that highlighted “*kaitiakitanga*,” a concept of custodianship deeply rooted in living sustainably with the land. This concept involves intergenerational responsibility, contrasting with Western notions of controlled access to nature.

Chrissy Grant (Kuku Yalanji and Torres Strait Islander) reflected on her participation in the CBD COPs and the importance of synergizing the CBD and WH Convention processes, which often work in the same space but with different mechanisms. The workshop emphasized the necessity of a rights-based approach within the World Heritage framework, particularly regarding FPIC. Integrating human rights into conservation efforts not only protects Indigenous communities but also aligns conservation outcomes with the values of those who have maintained a harmonious relationship with their landscapes for generations.

The principle of FPIC, established by the UNDRIP and embedded in the CBD, was highlighted as a critical point that the WH Convention must also adopt in new nominations. For instance, in Colombia, Indigenous communities have successfully used FPIC to challenge state-led development projects that threaten their cultural heritage, as seen in the case of the Kogi people, who have been able to protect their sacred sites in the Sierra Nevada de Santa Marta.

Conclusion

The KM-GBF is an ambitious and coherent framework for addressing the multiple challenges driving a million life forms to extinction. The attention given by the KM-GBF, particularly in the annex of Nature and Culture and the JPOW, have been shaped by years of advocacy, research and the evidence provided by the IPBES Assessments and others. We find ourselves with a more robust framework to act at different scales to mobilise a multiple-knowledge approach, a rights-based approach to stewardship, and the potential to grow new understanding between diverse rights holders and duty-bearers in delivering a theory of change that sees culture and nature as two sides of the same coin, or perhaps two sides of the same leaf in this context.

The summary of the four global dialogues with Indigenous Peoples and the responsible multilateral entities tells us that Indigenous Peoples' advocates support the KM-GBF and the JPoW, and they believe results can be delivered. It is also evident that there are UN Member States which are attempting to implement the necessary changes and innovations which empower rural communities, and particularly Indigenous Peoples to be able to ensure sustainable use, conservation and monitoring of their respective territories.

It is less evident that financing will be made available, and while the KM-GBF has raised ambitions, UN budgets are being reduced. The multilateral system is experiencing substantial challenges, and the once bipolar global system is undergoing accelerating changes into a more multipolar system. Within those transformations, there are threats to the capacities of multilateral entities responsible for supporting treaty implementation. It could be argued that while the KM-GBF and the Paris Agreement show the value of multilateralism, other dynamics place in question a global rules-based system of universal human rights.

UNESCO, SCBD and IUCN remain fundamental actors in the synergy between cultural and biological diversity. UNESCO has over 2000 designated sites around the planet and has a mandate that covers tangible and intangible cultural heritage, education, biodiversity conservation, oceanography, and Indigenous and local knowledge systems. IUCN sets many of the norms and standards regarding protected areas and national conservation strategies, including how systems managers, site managers, and rangers are prepared for their work. While both UNESCO and IUCN are intergovernmental entities, IUCN has civil society voting members and a special recognition of Indigenous Peoples' Organisations in its governance mechanisms. SCBD is the convener of the processes that can see the mainstreaming and upscaling of Indigenous-led and local community recognition and actions to implement the KM-GBF.

IIFB, IIPFWH, UNPFII, EMRIP and the IPBES ILK Task Force are all highly influential networks of Indigenous Peoples advocates and technical experts that are wired into the multilateral system. The challenge ahead is to secure the political will and financial and human resources, as well as the types of relationships necessary to jointly guide a broad alliance of rights holders, duty bearers, extractive industries, and territorial custodians to share a joint vision of sustainability and to deliver sufficient changes in enough places to alter the course of humanity and the planet for a better future.

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How legal actions can help reimagine relationships with nature

Jacob Phelps^{a) b)}, Miaomiao Tian^{a) b)} and Rika Fajrini^{a) c)}

It is impossible to imagine a more sustainable future without also reimaging the ways in which formal institutions value nature. It is widely accepted that our policy and decision-making must better reflect the diverse, complex values that humans hold for nature.

Values for nature extend far beyond money and consumptive uses, and all humans are already intimately familiar with them: spending time outdoors enhances our wellbeing, and our connections to places and other species are often intrinsic parts of our lives and identities. Although often intangible, these values – often referred to as relational values – are key parts of living well, and help shape our relationships to nature and to one another.

Better recognising these diverse, relational values in our policies and decision-making is thus also key to imagining more sustainable trajectories.

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) has worked hard to encourage policy makers to engage with and recognise more plural values for nature. Yet, the various “interdependent relationships among humans and nature often go overlooked, delaying better environmental, social and public health outcomes”.

Instead, policy and management decisions are still regularly informed by the near-term economic benefits of exploitation. The orthodoxy of instrumentalist values and economic valuation continues to dominate public policy across contexts. Even calls to recognise the diverse values of nature often end in discussions about how to put a monetary price on them, as in the case of (largely failing) carbon and biodiversity markets. Multi-criteria and trade-off analyses have actively worked to better incorporate multiple interests in planning, but economic interests still often prevail.

Where mainstream policy processes fail to account for the relational values we care about, then legal actions may help force recognition.

Laws govern many of our interactions with one another and with our environment. However imperfect (and often even unfair), laws both reflect and shape many collective norms. And a range of criminal, administrative, and civil law actions within courts and government agencies have the power to compel compliance with these norms. Legal actions can punish, compel, remedy, review, stop, postpone, and interpret – and thus have unique power to shape the behaviour of individuals, companies and bureaucracies. In doing so, they can also send powerful social signals to society and decision-makers about what is and isn't acceptable, and about what does and does not matter.

Legal actions can also highlight that relational values matter.

a) Conservation-Litigation.org

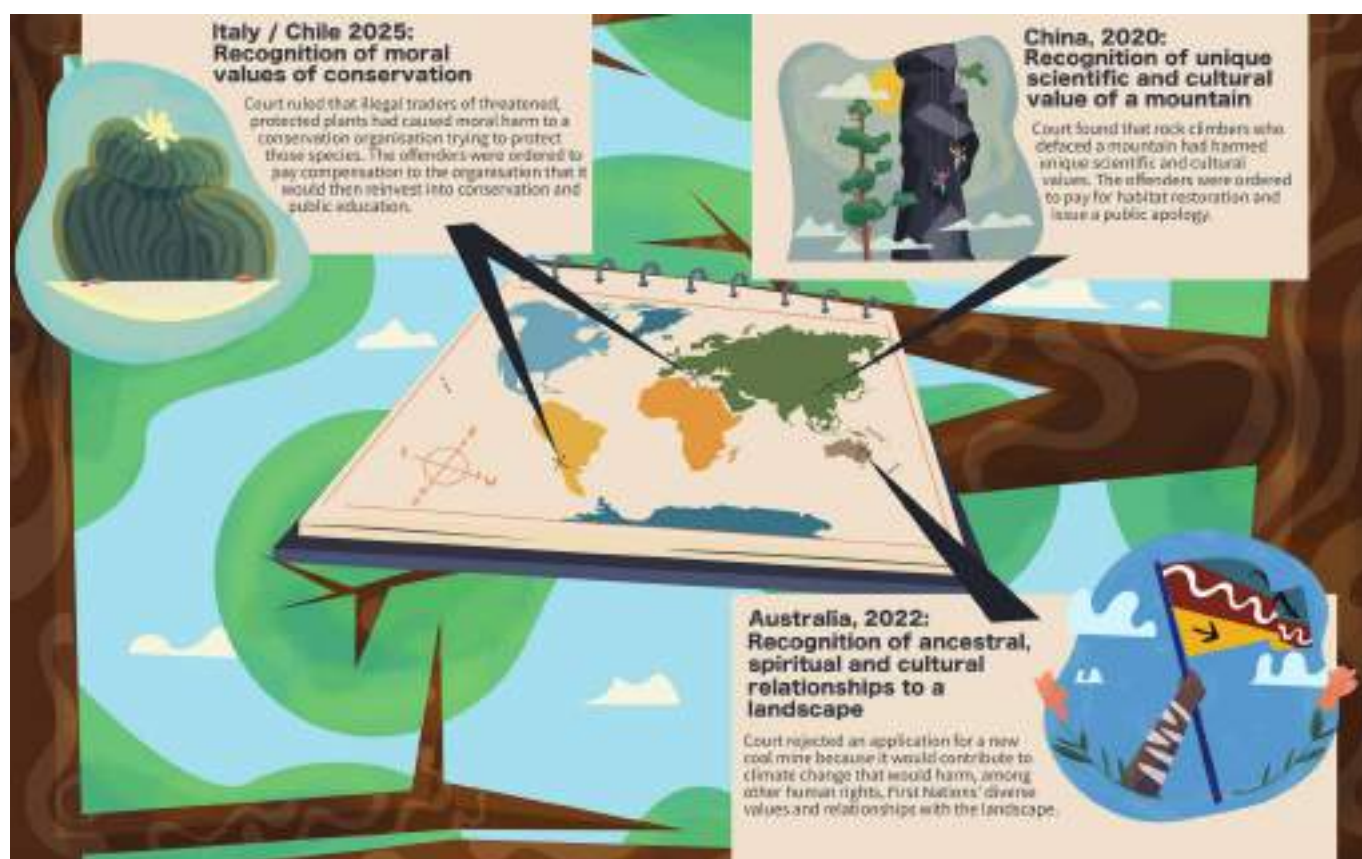
b) Lancaster Environment Center, Lancaster University, UK

c) Kyoto University, Japan

Strategic legal actions – in their many forms – can help reflect, protect, and restore our relational values with nature. In doing so, they help provide formal recognition that relational values are not only legitimate, but also legally protected. They can require policy makers to consider values in their decision-making. They can force agencies to protect sites with important societal values. They can demand that companies remedy harm they cause to the environment, including the harm to relational values associated with those harmed places and species.

Legal cases that reflect our values

There are a growing number of promising cases from around the world that show how legal actions can engage relational values. They provide a window into the existing efforts – and the future potential – of legal actions to help us “reimagine relationships”.



Cases around the world are upholding relational values to nature in many different ways. Credit: Jaclyn Schwwanke

In 2020, a court in Jiangxi province, China sided with prosecutors in a case against three rock climbers who ascended Python Rock outcropping on Sanqingshan Mountain. They were accused of drilling 26 holes into the granite to secure bolts and hooks into a mountain that is a Taoist sacred site and UNESCO World Heritage Site, a landscape of unique and significant scientific and cultural values. The defendants were found guilty of criminal damage, resulting in imprisonment and fines. Moreover,[1] the Court determined that the defendant’s actions violated the environmental rights and interests of the public, and they were held liable for remedying the harm they caused, ordered to pay approximately US\$859,800 towards that restoration. Interestingly, they were also ordered to issue a public apology through the media to help reflect the gravity of the harm they had caused to the public interest in this unique site.

In 2022, a Queensland, Australia, court sided with the NGO Youth Verdict in a case challenging the establishment of a new coal mine. The plaintiffs argued that the proposed

mine would harm a wildlife refuge and exacerbate climate change – violating human rights, notably the cultural rights of First Nations people. The case highlighted and recognised the importance of ‘Country’ – a concept that refers to not only to land, sky, and water, but also a range of ancestral, spiritual and cultural relationships intertwined with the landscape and linked to cultural practices, beliefs, and identity. During the case, witnesses provided evidence on how environmental change was being experienced through changes to their relationship with ‘Country’. The rejection of the mining permit was premised on a recognition of these diverse values.

In 2025, the Court of Ancona, Italy, sided with the prosecutor in a criminal case against two illegal wildlife traders. The defendants were found guilty of illegally importing hundreds of protected cacti plants from Chile to Italy for sale as ornamental plants. These unique, threatened plants were not only legally protected under the Convention in International Trade of Endangered Species of Flora and Fauna (CITES), but some of the individual plants were also found to be hundreds of years old. The court decided that the offence represented not only violation of the law, but also a broader type of harm: in addition to the criminal prosecution, the conservation NGO L’Associazione per la Biodiversità e la sua Conservazione joined the case as a civil party, claiming that the defendants had harmed its conservation mission. Their actions had offended the efforts and purpose of the NGO, and the court ordered that the defendants pay the NGO €20,000 for moral harm, which the NGO has stated it will reinvest into conservation of the species, including in Chile, and public education to help people understand the scale of the harm caused.

Legal protections, processes and standards vary widely across countries. However, these eclectic cases have one key thing in common: they have formally reflected humans’ diverse relational values with nature – something that other mainstream policy processes have often struggled to do.

Reimagining relationships

Legal action is no panacea, and most legal cases are imperfect: Plaintiffs often fail to access justice, values are not always explicitly stated, and processes and verdicts fail to reflect the depth of meaning implicit to relational values. Indeed, as with other formal institutions, courts have often focused narrowly on economic values, and have failed to engage and give voice to diverse voices and values. And in their verdicts, judges often rely on ordering offenders to pay compensation rather than exploring more creative types of remedies and meaningfully engaging with concepts such as restorative justice.

Nevertheless, these types of cases have something transformative about them and can serve as examples for expanded action. For example, the Australia case could have rejected the new coal mine purely based on the environmental harm that it would cause. Yet it also employed an understanding of that harm based on the viewpoints of multiple Australians, and considered diverse values for nature, including the different world views upon which those values are premised – voices and values that have historically been overlooked and marginalised. In China, legal action recognised that the harms caused to Python Rock mountain could not be fully reflected in monetary compensation or environmental restoration – something additional was needed to reflect the values that people hold for this sacred space: A public apology provided a low economic cost, but high restorative value to the injured relational values. In Italy, the Court recognised the trade in protected, threatened species was not only illegal, but also had further moral implications that deserved formal recognition.

If we are serious about reimagining our relationships with nature, then we must bring our formal institutions and our neighbours along with us. In some cases, this can be encouraged, incentivised and celebrated. In many others, change often requires a firmer, legal nudge.

Across context and countries, legal actions have played key roles in helping to advance policy and public views on issues such as civil rights and public health. We can again leverage legal actions to help do the same for how we recognise relational values to help reconfigure our relationships with nature.



Credit: Gabriel Ramos on Pexels

4.3

Relationships of renewal and moving into a reimagined future

The future of conservation lies not in control, but in connection – with each other, with ecosystems, and with the deeper wisdom that reminds us we are part of nature, not apart from it. This final section offers both reflection and action, blending philosophy, art, and embodied practice to help us step into a more reciprocal relationship with our planet.

Galeo Saintz's *Reigniting the consequential relationships at the core of conservation* calls us back to the bonds that define our humanity, ending with a powerful truth: "All of nature is waiting for us to finally become more human." Melanie Zurba's *Exploring human-environment connection through sculpture* dissolves the illusion of separation, using art to reveal our true relationships with the more-than-human world. Arowah Cleaver's *Interbeing* draws from Thich Nhat Hanh's teachings, guiding us through an exercise to dissolve the myth of isolation. Finally, in *Reconnecting with Mother Earth through the wisdom of Chinese body arts*, Master Zak Song and Liza Zogib in conversation show how movement and mindfulness can physically reconnect us to nature.

Together, these pieces don't just imagine a different future – they give us the tools to build it. The path forward begins with remembering. As Krishnamurti always said, 'We are the world, and the world is us'. The choice is how we honour that bond.

Chapter narrated by Liza Zogib, Elise Huffer and Galeo Saintz

Reigniting the consequential relationships at the core of conservation

Galeo Saintz^{a)}

Pangolin Conservation and Research Foundation (PCRF) lead ranger #oma Sao Xuma tracks a pangolin near Nhoma, Namibia. #oma mixes modern tools and techniques (such as smart phone cameras and radio telemetry) with traditional tracking knowledge passed down to him through generations. The result is that he is one of the most effective pangolin trackers in the area. His use of knowledge “passed down through generations” points to consequential relationships rooted in a deep personal history and connection to the land and its species, highlighting a synergy between traditional knowledge and modern tools.

Credit: ©Jason Houston



The defining task of conservation is now beyond simply the preservation of places and species. Leading into the future it rests on the urgent need to repair, respect, and reinterpret the inherent nature of our consequential and interdependent relationships with ecosystems, nature’s diverse lifeforms, each other, and with that what it means to become more human as we embrace and live in a manner that understands and demonstrates what interdependence and kinship on a small planet really mean.

It may be an unfamiliar term to many, but the concept of consequential relationship is one well known in psychology. It refers to connections that have a deep and lasting impact on an individual’s emotions, behaviour, and development. The impact of these relationships may not always be immediately apparent, despite having consequences for each party involved. Such relationships shape our identity, decision-making, and give us an inherent sense of belonging. We know that neglect or harm in relationships leads to trauma and dysfunction, and it is all too evident that the breakdown of our relationship with nature results in ecological degradation, biodiversity loss, and sometimes contributes to social conflicts, too. Recognising the dynamics of our consequential relations involved in conservation might be a useful key to unlock and restore connection, increase responsibility, and ignite deeper engagement with the natural world, to foster actions and policies that may extend beyond purely anthropocentric interests.

a) Co-Chair IUCN CEESP Task Force for Migration Environmental Change and Conflict

It is easy to acknowledge that there remain too many statistics, reports, and grim assessments that continue to pile up for our consideration, and that none should leave us with much optimism about the future of conservation. In places the evidence continues to remain staggering: biodiversity loss accelerates, ecosystems continue to unravel, and conflicts – be they social, economic, political or environmental in nature – intensify in the shadow of poverty, resource scarcity, greed, and the overshooting of our planet’s key ecological boundaries.

The report *Planet on the Move*, launched last year by IUCN, examines the intersection of migration, environmental change, and conflict, highlighting the movement of both humans and other species in response to planetary shifts in economic, social, and ecological dimensions and underscores the alarming displacement of humans and wildlife caused by environmental degradation amongst other diverse drivers, projecting that between 50 to 700 million people could be affected by 2050.

The report affirms that “traditional conservation methods are no longer adequate in isolation, conservation needs to plan for likely future conditions, not just present conditions, in order to be prepared for migrations associated with climate, development and demographic change”. The authors emphasise that “elements of the practice of conservation itself need to be reconceptualised to embrace a new network of partnerships outside conservation’s conventional areas of influence and at scales beyond its usual focus, in order to address migration, humanitarian and development needs without compromising biodiversity and nature”.

The Global Peace Index of 2025 records an unprecedented surge in global conflict – both intra- and inter-state – since World War II. In addition, the most recent Convention on Migratory Species similarly underscores the peril faced by migratory wildlife beset by habitat destruction and shifting climate patterns in their report *State of the World’s Migratory Species*. And finally the UNEP report *Making Peace with Nature* highlights that if we do not cease the war we are waging on Nature, the “consequences of human suffering, towering economic losses and the accelerating erosion of life on Earth” will continue unabated, heightening uncertainty, distress, and yes, justified fear.

Yet, I remain personally optimistic.

The times we live in, as turbulent and uncertain as they are, and which are shaped by environmental change, climate change, economic change, political change, technological change, and social change amongst so many others shifting and redefining the global commons, are calling on us to become more committed and more human in our response to them and in our actions. There is a rising tide challenging the way we have done things over the past century. The way we do things, the policies we develop come out of relationships.

Conservation as environmental peacebuilding

The findings of the endless reports and statistics and the changing dynamics of our time are a call to us to rise in our human qualities. An opportunity to reimagine how we engage with conservation and to lean into our relational responsibilities. I like to think of environmental peacebuilding in a slightly simple way: I like to think of it as the skills and capacity to build relationships of harmony, not only between people but in particular between people and other species, and nature at large – yes, with our incredible and remarkable ecological systems. This is because we live in a relational universe, physics, the biological sciences, complexity science, and systems science show us this, and we are being called, as ironic as it might sound, to be defenders of harmony within a web of complex relations.

Chris Fagan, executive director of Upper Amazon Conservancy (left), is seen here with Arlindo Ruiz Santos, president of the community of Dulce Gloria (centre), discussing access points and patrol plans near the Murunahua Indigenous Reserve in the Alto Púrus region, Peru. All of Chris's programs are designed to leverage local knowledge and support the independent goals and processes of local communities, highlighting the impact of relationships that leverage change through external organisations empowering through discussion and leveraging local knowledge, opposed to domination and control.

Credit: ©Jason Houston



Welcome to what could well be our task of the present and the future. Cultivating relationships of harmony is something that comes naturally to those conservationists who are drawn to building relationships with other species and places. For the peacemakers amongst us, it is about building bridges between communities, across boundaries, and most importantly linking worldviews, enhancing education that allows us to take courageous decisions into the future in a collective manner, that is deeply inclusive of all peoples and sectors active in any specific ecological region. I see the urgent need for national parks, protected areas, and the many diverse NGOs working across the conservation landscape to embrace a new kind of leadership – one rooted in stewardship of relationships, in proactive engagement with the tensions of the web of which we are a part. This type of leadership recognises the immense potential for disruptive and complex conflicts and goes about mindfully and proactively and preemptively, to mitigate the arrival of such conflicts.

Not doing so, I sense, will continue to see securitisation, militarisation, privatisation, and surveillance creep ever deeper into conservation efforts. Each one of these, despite their apparent necessity, and often urgent need, can inevitably alienate us all, especially local and Indigenous communities, as they deepen divisions of trust and create landscapes alien to our inherent human sentiments of coexistence. Embracing our expanded humanity means employing the best of science, the most efficient of technologies, the most inclusive of policies, and the most fearless of attitudes. If there is a task before us as conservationists, it is to become defenders of harmony within the complexity unfolding around us – to steward a multiplicity of relationships that sustain life rather than fragment it.

This work does require more than ecological expertise – it demands a multidisciplinary approach. Conservation is no longer an isolated endeavour behind fences and myopic about species; we are in a new era, one steadfastly demonstrated by the many diverse and new conservation efforts and approaches working to increase the global conservation estate. Many key projects seek to stitch together fragmented landscapes to allow for species movement, whilst others champion Indigenous knowledge inclusion and practice. A conservation that focuses on consequential relations embraces insights from the humanities, from engineering, political science, the financial sector and even the justice movements. Cleaning up and addressing injustices is part of the process. Including other ways of knowing

that reach back into the way our forefathers and ancestors understood the cosmos both heightens and deepens our actions. A language older than, and in many instances beyond, words speaks to relationships of care and awareness. We are in a time where we can move beyond rigid boundaries and exclusionary practices, to foster a conservation ethic that is relational rather than adversarial and territorial, inclusive rather than prescriptive. Reverential and service-driven rather than shaped by the constraints of economies and funding alone.

The role of harmony in conservation

The idea of harmony in conservation is not sentimentalism; it is a guiding principle for resilience, restoration, rewilding, and, ultimately, reverence for life. This sensibility can extend beyond ecology to the relationships that shape conservation itself, as we build bridges – between communities, across political boundaries, between competing worldviews. Such efforts ensure that our work sustains not only ecosystems but the social fabric intertwined with them.

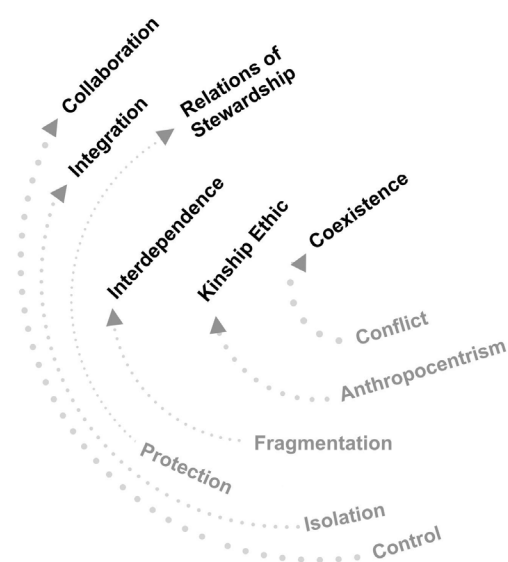
Yet, a significant tension remains. Conservation organizations increasingly find themselves stepping into the void left by failing and negligent governments in some places. They are forced out of necessity to keep the human demands in balance to provide access to jobs, food, water, sanitation, and education. This is not conservation’s function, nor should it be. The unrealistic expectation that conservationists should also solve systemic social issues risks undermining our core mission. However, recognizing and engaging with these realities in ways that cultivate local resilience and coexistence, rather than deepening dependency, is essential. Consequential relations are at the core.

The task ahead: A shift from control to collaboration

When environmental change manifests as drought, floods, extreme weather, or war, there are no quick fixes. The securitization and militarization of conservation have not emerged from malice but from desperation, where scarce resources, struggling communities, collapsing ecosystems, and corrupt and illegal trade shift us away from approaches that rely on trust, empowerment, and educated choices. The path forward is built by appreciation and recognition of key relationships that work and underpin an ethos of mutuality. Trust and also consequence is at the centre of such relationships of shared responsibility, embedding conservation within the larger fabric of human and ecological well-being. Relationships as if the planet and others mattered is key.

Transforming relational dynamics for a small planet

Source: Galeo Saintz



There is a battle before us, and I say it is not the one we expect. It is essentially cultural. Culture is our nature and our cultures up to now have all been shaped by our relations with nature. We can acknowledge that conservation itself is a culture, directly linked to and shaped by our own species' survival, shaped over eons by education, governance, rites, values and customary laws, including diverse forms of spiritual practice linked to the natural world. Today our culture is shaped in the corridors of power, in the policies we adopt, in the technologies that colonize our minds and can hold us captive and distanced from relationships at hand. Care for the planet is cultivated only when we are touched and when we allow that touch of nature to enter our diverse cultures again.

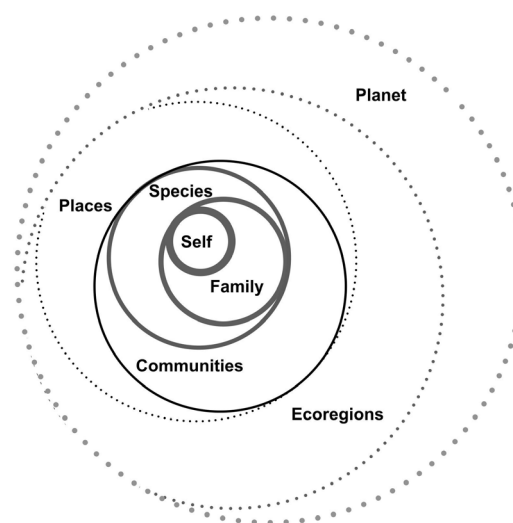
If we engage with nature intent on control, we must do so with eyes wide open and be willing to embrace the unintended consequences that we already see in so many places. The work we have in conservation is not to only prevent the loss of species and places – it is to ensure that as we face inevitable planetary challenges and changes, that we do so in a manner that deepens rather than diminishes our humanity and our own becoming as a species.

Returning to the heart of conservation

Harmony is not a prescription or recipe, it is an inherent human quality, one of extended awareness encompassing intellect, sentience, and open-heartedness. If conservation is to be more than a technical endeavour, if it is to be a force that sustains the diversity of life through our actions, we must through it return to the centre of what it means to be human, to our heart capacity. This is not about avoiding the brush of reality's complexity or being overly sentimental. It is about cultivating both presence and actions so conscious that they transform our tendency to fragment, polarize, and dominate. When across our diverse human cultures, we finally see ourselves as part of an integrated and consequential web of life rather than separate from it, we are more likely to act with care and foresight. Such a shift moves our conservation action from a reactive, control-based approach to one rooted in collaboration, empathy, and long-term ecological and social harmony. At their core, consequential relationships remind us that conservation is about more than policies or protected areas, but rather it is about how we relate to the living world and each other. When guided by care, collaboration, and responsibility, such relationships restore balance and ensure a future where both humanity and nature thrive, where our actions and policies remain informed by mutuality as much as by science.

Embedded holarchy
of relations from self to
planet

Source: Galeo Saintz

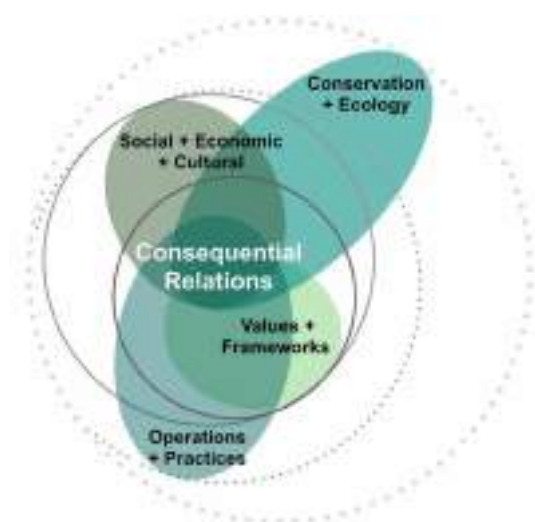


The opportunity at hand is to help move conservation policy beyond a transactional and mechanistic approach, so often seen in the mere designation of protected areas or enforcement of restrictions, but to begin to more confidently and widely embrace reciprocal, ethical, and long-term responsibilities we humans hold toward the natural world. Policies built on consequential relationships might result in actions that better recognize:

- Ecosystems and species are inherently and deeply interwoven, and disrupting one element creates cascading ecological and social impacts.
- Governance choices, human actions and values shape conservation outcomes, from locally applied stewardship traditions to global policy frameworks.
- Ecological dimensions are inseparable from social, economic, and cultural ones; this requires policies that address climate, migration, resource use, and environmental justice alongside biodiversity goals, and living within planetary limits.
- Conservation practice influences societies as much as it shapes landscapes, how we practice it and implement policies either leads to values of coexistence and trust or ones of conflict, exclusion and control.

Dimensions of consequential relations impacting conservation

Source: Galeo Saintz



I think our task is to hold hands more often, whether we are academics, policymakers, conservationists, or community leaders. In learning to hold hands, not just metaphorically, but in a way that genuinely opens our hearts to one another and other species, we begin to understand how human actions, our policies and relationships have consequential impacts on the environment and other species, and that these impacts are a consequence of both individual choices and large-scale policies directly linked to our cultures.

This work has only just begun. The future of conservation, and perhaps of humanity itself, depends on whether we can commit to such policy approaches and relationships of harmony. It depends on whether we can individually and collectively answer the call of the message seen written in graffiti on a wall in Switzerland: “All of nature is waiting for us to finally become more human”.

Exploring human-environment connection through sculpture

Melanie Zurba^{a)}

My artistic work aims to dismantle the false dichotomy between people and nature and explores the relationship between humans and the more-than-human world. My chosen medium is sculpture with clay and found materials. I find that working in sculpture allows me to develop a deeper connection with the subjects I am exploring and work more intuitively in a way that allows the natural materials to at least partially build the narrative that is behind the pieces. *more-than-human* was my first solo art exhibition, took place in 2025, and was held at The Craig Gallery in Dartmouth, Nova Scotia, Canada.



a) Associate Professor at Dalhousie University and Steering Committee member with the IUCN Commission for Environmental, Economic and Social Policy (CEESP).

Images of the works from *more-than-human*, as well as other images of author's sculptures, paintings, and public art can be found on melaniezurba.art.

Learn more about the author's research, which focuses on human-environment connection, wellbeing, equity and governance (often using arts-based approaches) on communityengagedcolab.ca

more-than-human exhibition by Melanie Zurba at The Craig Gallery

One of the works in the exhibition is titled *Holding*. It is a life size ceramic sculpture of arms and hands with dried hydrangea flowers emerging from the interiors of the figurative pieces. The hands are also holding moss and hydrangea petals representing a connection to and care for the land. Other pieces, such as *Interlaced* and *Fissured* are abstractions of human figurative forms that are stitched together with cord and in dialogue with organic material, specifically bark and driftwood. *Fruiting bodies* is a work that is a playful representation of human feet with mushrooms growing out of them – contemplating our interconnection with the fungal kingdom. The other two sculptures in the exhibition are *Pigeon* and *Belly rubs*. *Pigeon* invites the viewer to look at a species which was once celebrated by humanity as a carrier of messages, but is now largely disregarded or even detested. *Belly rubs* captures a moment that is emblematic of human and non-human connection – that between a person and their dog.



Holding, 2024 (ceramic, moss, dried hydrangea flowers)

Another example of a recent work is one that explores themes around colonization and environmental sustainability. The piece, titled *Chosen plant*, references old Victorian tea advertisements, the colonial history of tea, and the sustainability issues caused by tea production. *Chosen plant* contemplates jute as a crop that is heralded for sustainability and is potentially antithetical to tea production, which is often damaging to the land and involves the heavy use of pesticides. In the piece, the jute stem is growing out of the pot and breaking the cycle of production and consumption. The jute flower and buds obstruct the pouring. The jute rope is a symbol of holding the land together.



Chosen plant, 2025 (semi-porcelain ceramic, jute rope)

Interbeing

Arowah Cleaver

Reimagining relationships can come through questioning the absolute view of separation. The idea of relationship is traditionally seen as being something that connects two completely separate entities, whether individuals, groups, or concepts. We create a trinity: the subject, the object, and their relationship. In a more holistic view, we see the relationship between two separate things as being that which unites them. Instead of a trinity, a relationship creates a unity. This holistic view may be conceptually new but emotionally familiar. All of our relationships change us. We know that we would not be the person we are today without the most important relationships in our lives, whether that's parents, children, our partners, dear friends, teachers, favourite musicians, authors, or pets. We might come to define our own identity by those relationships, becoming a mother, father, parent, son, daughter, child, sibling, fan or student. And as we study the evidence of our experience, we may see how seemingly insignificant relationships went on to change the course of our lives. We see that we are our relationships.

This philosophy is beautifully encapsulated in the term 'interbeing' from Vietnamese activist, poet, and Zen Master Thich Nhat Hahn. It is a reframing of the Buddhist concept of no-self or emptiness, which posits that no thing exists which is not made of elements that are not itself; the flower is made of sunlight, rain, and the living organisms that formed the soil it took root in. This idea is also held in the term 'cosmovisions' in Indigenous South American thought, or 'ubuntu' in South African culture, which can be translated as "I am because we are". Increasingly, scientific thought is also coming round to this paradigm through systems thinking which holds the idea of symbiotic relationships, and that the relationships between different elements are what creates a system greater than the sum of its parts.

When we lose the idea of separation there are no longer steps that need to be taken towards equitable and collaborative dynamics; it becomes self-evident. If we realise that we are nature, we are simply conserving nature for our own wellbeing. We know that plastic pollution in our waterways becomes plastic pollution in our bloodstreams, and we know that nurturing soil health is nurturing the health of our own gut biome, our second brain. If we are a community, we are simply finding the best ways for us to live together. What is in the community's best interest becomes what is in our own best interest. Instead of objective worldviews where we are removed from the system, we see ourselves as an integral part of that system. This way we are truly in relationship with it.

The worldview of separation leads to relationships with unbalanced power dynamics. This creates power over, where there is domination, enforcement, or coercion. Traditionally, policy uses a power-over dynamic to be effective, even when it is intended in the best interests of those upon whom it is enforced. Policy might then be opposed through a power-under relationship, for example when local communities organise and fight back against policies with which they disagree. For both power over-and power-under dynamics, there is the idea of separation because we are dealing again with trinity: subject, object, and the power between them. Maybe for the sake of being "objective," the subject has conceptually taken

themselves out of the system. Besides seemingly practical or pragmatic reasons, separation may also be serving a function for the psyche. Our psyche or ego separates itself from that with which it does not want to identify or be unified.

Seeking to control is the psyche's way to separate itself from the feelings of chaos and discomfort that come with the flow of life. While the psyche may call for separation, interbeing shows this will not work because relationships mean we are always a part of the system we are in.

What interbeing facilitates is power with. This is because interbeing allows power within, a strength or quality of awareness. With this quality of awareness, which we may also call mindfulness, we may see where our psyche would resort to separation and we may call ourselves back towards connection. Power within means we become more grounded and open to relationships and being part of a system where we are not wholly in control, which are needed for finding power with.

Experiencing power with and within is a very different embodied experience from experiencing power over or under. To allow us space to explore this as an embodied experience, here is a short meditation/poem and suggested somatic exercise.

Guidelines: Allow yourself to find a relatively peaceful environment and sit in a comfortable position. Turn your attention to your breath going in and out, aware of if it is an inbreath or an outbreath. Allow a few breaths between each line of poetry, enough time to come back to your body.

Meditation on power with and power within nature

Breathing in, I know I am of the earth. My body is created by food from the earth. My body is 70 percent water that has circulated this earth for millennia. My parents were from the earth too. My body is perfectly created for this earth's temperature and atmosphere.

Breathing out, I am grateful for the earth.

Breathing in, I know that each time I step upon the earth, it is due to the combined mass of the whole earth creating the force of gravity that I am held upon the earth's surface.

Breathing out, I feel connected to the whole earth.

Breathing in, I know each time I step on the earth I step into my power. My power comes through my connection to the whole world, symbolised through my foot touching the earth. I feel my power as being unlimited, as big as this planet.

Breathing out, I feel supported and powerful.

Breathing in, I feel strength in myself and strength in my connections. I can stand as a mountain.

Breathing out, I feel no fear.

Somatic Exercise

Once you have taken your time reading or reciting this poem, you can try a somatic exercise.

- Walk very slowly in a calm place. This might be a circle in your room, or on an expanse of grass. If you are able to, walk barefoot.

- Feel each sensation of the foot touching the floor. If this is not available to you, you can use your hands to touch the ground or lie straight down on the ground, whatever works best for your body.
- As you feel the connection between yourself and the earth, notice a sense of power coming from the earth into you.
- Feel into that unlimited power. Feel within yourself that your power is both yours and not yours, and that it is both within and with.

The more we practice this, the more we can get used to bringing this into the realities of our lives, our personal relationships and our work.



Credit: Fanny Tricone

Reconnecting with Mother Earth through the wisdom of Chinese body arts: A conversation between Master Zak Song and Liza Zogib

Liza Zogib and Master Zak Song

We live in an era of profound disconnect – from nature, from each other, and from ourselves. As ecological crises deepen and societal tensions rise, many of us long for a way to restore balance, both within and around us. Traditional Chinese body arts – Kung Fu Wushu, Tai Chi, and Qi Gong – offer more than physical discipline; they are living traditions that embody the wisdom of nature, teaching us how to move, breathe, and exist in harmony with the world and with the perceived ‘other’.

In this conversation, Master Zak Song, a lifelong practitioner and global teacher of these arts, shares how their very origins are rooted in deep observation of the natural world. From the strikes of Tiger Style to the flowing movements of Tai Chi, each form channels the elements, the ways of animals, and the universal energy of *qi*. Here, Zak and I explore how these practices are not just fighting techniques or exercises but pathways to reconnection – helping us remember that we are not separate from nature, but simply an expression of it. In a time of deep fragmentation, these arts invite us very concretely back to the wholeness necessary for us to heal what we are destroying.

Practicing Tiger sword.

Credit: © Master Zak Song



Liza: Master Song, we're at a really difficult time in human history. There's chaos everywhere, compassion is failing us, there's injustice everywhere... so it feels really good to be here with you and to talk about things that are important at this time.

Zak: I'm really thankful to you for inviting me to speak about this topic. You can see the world really is in chaos so we have to make sure our minds are at peace. So, finding the peace within is really important at this kind of moment.

Liza: You are a master practitioner and global teacher of three distinct Chinese body arts, Kung Fu Wushu, Tai Chi (Taijiquan), and Qi Gong. Can you say something about how these practices were originally inspired by nature in their development?

Zak: Let's talk about Kung Fu first. How did Kung Fu start? So back then, thousands of years back, people worked in the fields, cultivating the land. The movements they used with tools to work the fields, inspired other movements and then gradually they were developed into forms, or martial arts like Kung Fu. The more they observed nature and animals, the more they were inspired to imitate them. This is where the animal styles come from. Tiger style, crane style and so on.

Same with Tai Chi. They observed nature and felt the elements. Like the water flows, the Yin and Yang in the universe. So that's how everything was inspired... because we are part of nature. We are with nature as One, connected together. And because we are connecting with nature during training, we are complete, whole.

Tai Chi is very directly linked to nature. Yin and Yang, day and night, the air we breathe, everything is connected to martial arts. So, when we practice, we're using the air element to practice. The fire element for instance is not that strong right now in winter time here in New Zealand, so I practice to keep the fire going in my body otherwise I'll freeze (laughs).

Liza: You mentioned how in Kung Fu Wushu, many styles are directly inspired by different animals. Can you give a few examples? And can you explain how the inspiration is internalized in your body as you practice these different styles?

Zak: In the history of Shaolin Kung Fu, they were observing the way tigers, for example, move, hunt, and get their prey. And that became a style. Then when they focused on the crane, who was moving with such elegance and grace, it also became part of Kung Fu. We cannot neglect that there is the Kung Fu (outer) side but also the inner side, the nature and the beauty. We really have to channel the animals, like the monkey being playful.

Liza: This is something that you practice so beautifully and I wanted to ask you when you're practicing for instance monkey style or mantis, what goes on in your body? How do those different forms manifest inside?

Zak: We talk about Mother Nature because we have to connect to the Mother Nature frequency. If I'm practicing tiger style, it's a very fiery form outside but when going within spiritually we have to make sure we connect to the universal energy, mother nature energy. So, in the form you still show the powerful tiger strike but at the same time connecting to the true energy, the true source.



Left: Tiger style Kung Fu Wushu / Right: Flowing like water - Tai Chi

Credit: © Master Zak Song

Liza: In Tai Chi, the principle 8 methods are related to the elements (water, fire, wood, metal, etc.), and in Zhang Sanfeng's treatise the *Taijiquan Jing*, it states '*...the body moves like water flowing in a great river, or like the rolling waves of a large ocean.*' One of your main teachings when we practice is 'flow like water.' Can you explain what this means, how we embody water or other elements in our movements, and the benefits on our minds and bodies?

Zak: We are nature. Our bodies, our bones, are made of the earth element. Fire is the warmth in our bodies, the air we breathe and the space we exist in. The water element is our blood – so when we are practicing Tai Chi I say 'flow like water.' Just like in life, if we come up against something strong, the water flows through or goes around. Same in life, when you meet fire with fire, there is conflict like we see in the world. So, it's about cultivating another way to be in Tai Chi, to be soft, flowing like water and not too stiff like a rock, otherwise everything is in conflict. This is very important at this moment.

Liza: Qi Gong is the powerful practice of generating, maintaining, restoring energy. That energy, or Qi, is the energy of the universe. We, as human beings, also simply part of the universe, are generated by the same energy. Can you tell us about this energetic interaction?

Zak: If we see everything as a manifestation of energy, we can understand how important this is. Everything is energy so good energy is very important and because thought – thinking – is energy as well, if we have a bad thought that's also energy and you can see the frequency in our bodies will change and we will get sick.

Liza: Everything you've been talking about, Zak, is how these practices are completely intertwined with nature and with the elements and with the energy of the earth but I think we can safely say that many people are feeling such a disconnect with nature and a disconnect with their inner selves, really. Can you say something about this and how these practices can help us to reconnect?

Zak: You can see in the modern world there's a lot of anxiety and depression. All of it is mainly the disconnection with nature, especially for people living in big cities. The technology is getting better and better but still people feel depressed because we're disconnected from our source.

We need to be careful with our egos. And when our egos become big, we cut ourselves off from Mother Nature. We feel that we have gotten better, not because of the air we breathe, but because of ourselves – like 'I'm number one!' No, it's everything I rely on from Mother Nature, so I'll be humble and grateful when I practice.

In these modern days all of the illness, mental and physical, is because we are disconnected from our source. We forgot who we truly are, where we really come from. And we forgot we are human *beings* not human *doings*.

Kung Fu is moving energy, moving art, and the reason I'm moving is because mother earth is supporting me: the air I breathe, the sunlight, the mother earth I'm standing on. If I'm practicing, I must respect, I am grateful.

Master Song, (English Name: Zak) an authentic and professional Kung-Fu/Wushu Master, is a genuine elite trainer and coach in New Zealand from Shaolin, China. He has been training, performing and teaching Kung-Fu/Wushu for 26 years and specialises in Traditional Shaolin Kung-Fu, Contemporary Wushu, Sanda (Kick Boxing), Qigong & Tai Chi.

Master Song has won numerous competitions/championships and taught many students of all ages from around the world (children/youth/adults), some of whom have also won international championships! He has also performed and participated in many world-renowned stage shows & TV programmes in China. He has been teaching students and running training classes in Christchurch, New Zealand, since 2013.

<https://www.mastersongkungfu.com>

We leave you with a final reminder – a cry of urgency to reimagine relationships from Zurysadai Hurtado Sandoval – a wonderful Colombian poet.

Un Mundo Mejor

Zurysadai Hurtado Sandoval^{a)}

Apu
Yemayá y Oshun
Agua
Riegas mi vida riegas mi alma

Mi alma ahora se encuentra en sequía
Hace cuánto no me riegas,
No he sentido, ni la sal, ni el dulce
De tus aguas frías

Por qué ahora frío son los días
De cómo nuestra alma se calcina
Se quema!! la tierra se quema!!
Y son fríos los días, ver toda nuestra agonía
Invade ahora mundo la melancolía
Congo, Haití, palestina
Que frío son los díaaas

Mientras nos desesperamos y morimos del calor
Todos quieren el nuevo iPhone ¿para que?
Y yo, yo solo quiero un mundo mejor
No, no creo que solo yo
En Congo, Haití, Palestina y lo que queda de Gaza
Queremos un mundo mejor

Aguaaa, Apu.
Yemayá y Oshun
Queremos ver gotas de agua viva caer
Queremos seguir la vida
Queremos vida
Para vivir en un mundo mejor.

a) Artivista from Cali
Colombia



Conclusion

The Moon Knows

Morgan Brimacombe^{a)}

The poem is about perseverance, despite moments of doubt and uncertainty. It is a reminder that we are never alone while working in this field, even if it may feel like it. We are always part of something bigger than ourselves.

We are stronger together. Keep doing the work.

From so far above,
I watch the city lights flicker,
Insignificant specks reaching skyward—
Each taillight, streetlamp, and patio light below,
Loyally aglow.

Together, steadfast,
They etch the skyline,
Woven with snow.
The moon—oh, how it glows,
A silver curvature,
Shining alone.

From up in the plane, I see them so clearly—
Each flicker, shimmer, and shake,
Holding their place,
More than they will ever know.
Warming their orbit of darkness,
To soften the edges of the night.

Merely a blanket from below,
Yet here, beside the moon,
I see how the beams
Gradually glow.
Despite their start and end,
They unite in purpose,
And extend to places they do not know yet.

The wise moon knows
Not to tell them to stop,
Despite their endless doubts.
The moon knows how little it takes
To push back the curtain,
To bolster a break.
So try, side by side,
To keep going—
Especially on those darkest of nights.

a) International Union for the
Conservation of Nature (IUCN)
Commission on Environmental,
Economic and Social Policy (CEESP)

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