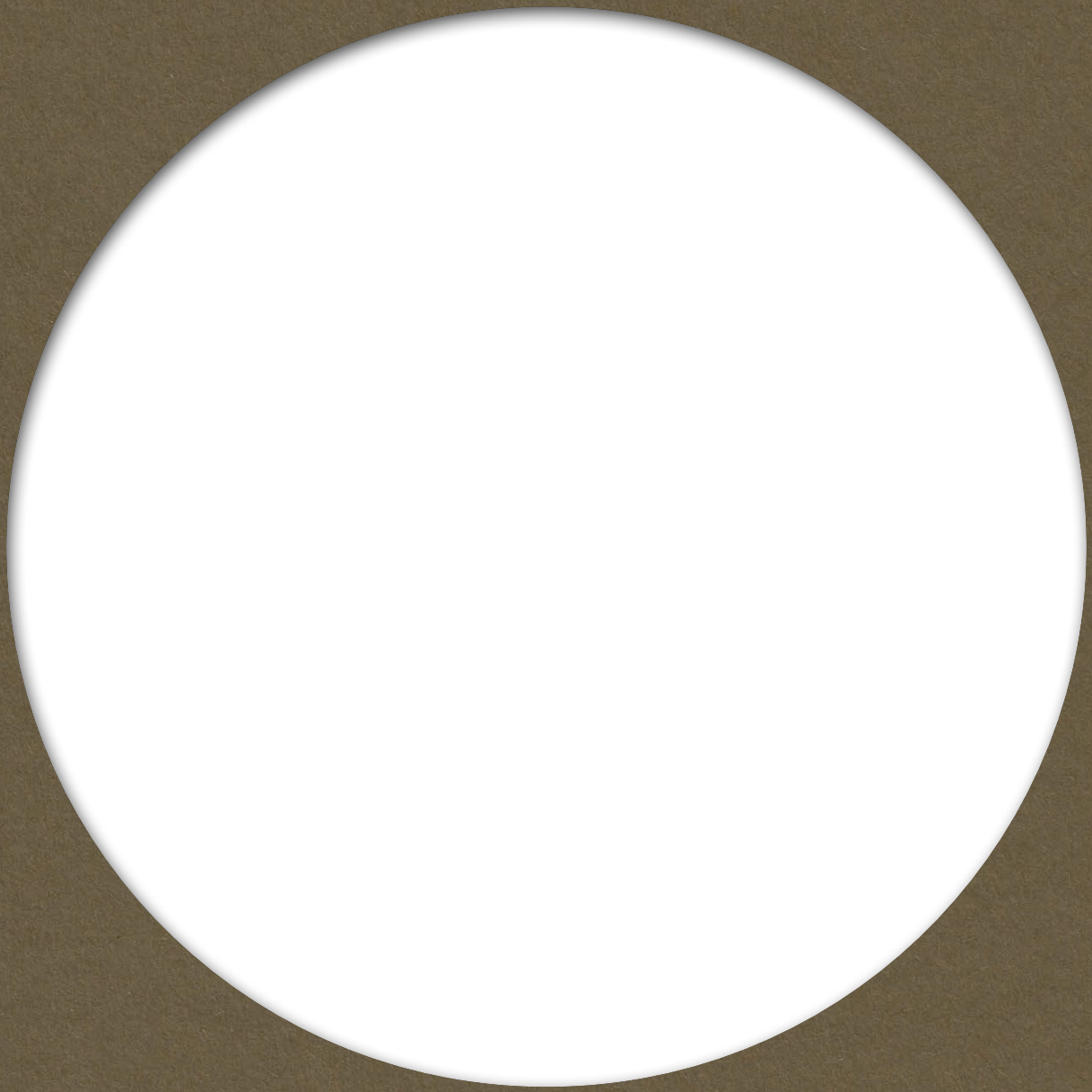


Local Biodiversity Outlooks 3

The vital contributions of Indigenous Peoples and local communities are central to the implementation of the Kunming-Montreal Global Biodiversity Framework





Cover image

Caption: Chamonpat Khunwat (left) and her friend catching pla rak kluay with a traditional method during a biodiversity monitoring activity

Credit: Thawatchai Chaipuang, Indigenous Media Network (IMN)

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Local Biodiversity Outlooks 3: The vital contributions of Indigenous Peoples and local communities are central to the implementation of the Kunming-Montreal Global Biodiversity Framework

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Dedication



This publication is dedicated to Donald Rojas Maroto. Donald was a member of the Brunka people, a citizen of Costa Rica, and studied business planning and management.

Donald was president of the National Indigenous Council of Costa Rica, a councillor of the Indigenous Council of Central America (CICA), a full representative on the National Biodiversity Commission of Costa Rica (CONAGEBIO), a member of the Consultative Committee of the Central American Integration System (CCSICA), an adviser to the Latin American Indigenous Fund (FILAC), a member of the Abya Yala International Indigenous Forum (FIAY), a member of the International Indigenous Forum on Biodiversity (FIIB), and President of the World Council of Indigenous Peoples (CMPI).

Donald was a political and technical leader on issues such as Indigenous rights, biodiversity, climate change, territoriality, traditional production systems, traditional Indigenous knowledge, ecosystem restoration and strengthening, as well as national political dialogue processes on Indigenous participation and Indigenous consultation mechanisms in the formulation of plans and programmes with an Indigenous perspective. He participated in various international forums organised by the UN, the OAS, SICA, the Convention on Biological Diversity, the Convention on Climate Change, and the International Convention on the Elimination of All Forms of Racial Discrimination. He played an active role as a member of the Committee on Local Biodiversity Outlooks 3, the findings of which are due to be published later this year, 2026.

For all his actions in support of and in the fight for the rights of Indigenous Peoples, we wish to pay tribute to our leader, mentor, brother and friend, Donald Rojas.

Ramiro Batzin
Co-president, International Indigenous Forum on Biodiversity
Agosto 2026

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Abbreviations

ABS	access and benefit-sharing
AIPP	Asia Indigenous Peoples Pact
CARE	collective benefit, authority to control, responsibility, ethics
CBD	Convention on Biological Diversity
CBMIS	community-based monitoring and information system
COD-ILK	Centres of Distinction on Indigenous and Local Knowledge
COBI	Comunidad y Biodiversidad
COP	Conference of the Parties
COP13	The thirteenth meeting of the Conference of the Parties to the Convention on Biological Diversity
CSU	customary sustainable use
DIHR	Danish Institute for Human Rights
DSI	digital sequence information
EHRD	environmental and human rights defender
FAIR	findable, accessible, interoperable and reusable
FPIC	free, prior and informed consent
FPP	Forest Peoples Programme
GBF	Global Biodiversity Framework
GEF	Global Environment Facility
GMO	genetically modified organism
HRBWG	Human Rights and Biodiversity Working Group
ICCA	Indigenous Peoples' and community conserved areas and territories
International IDEA	International Institute for Democracy and Electoral Assistance
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IIFB	International Indigenous Forum on Biodiversity
IP	Indigenous Peoples
ITTs	Indigenous and traditional territories
IUCN	International Union for Conservation of Nature
IWBN	Indigenous Women's Biodiversity Network
KMGBF	Kunming–Montreal Global Biodiversity Framework
LBO	Local Biodiversity Outlooks
LBO-2	Local Biodiversity Outlooks 2
LBO-3	Local Biodiversity Outlooks 3
LC	local community
NBSAP	national biodiversity strategy and action plan
OECM	other effective area-based conservation measures
PIKP	Partners for Indigenous Knowledge Philippines
RMIB-LAC	Red de Mujeres Indígenas sobre Biodiversidad para América Latina y El Caribe
SBSTTA	Subsidiary Body on Scientific, Technical and Technological Advice
TKI	traditional knowledge indicator
WIPO	World Intellectual Property Organization
WWF	World Wildlife Fund

Background

About this publication

This publication is the third edition of Local Biodiversity Outlooks (LBO), a series that centres the knowledge, experiences and contributions of Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs), including women and youth, in the implementation of the Convention on Biological Diversity (CBD) and its frameworks.

LBO-3 highlights the vital contributions of IPs and LCs to the implementation of the 2022 Kunming–Montreal Global Biodiversity Framework, which sets out commitments to be achieved by Parties to the CBD by 2030. It also examines the framework's limitations and the challenges emerging from its implementation. As an independent analysis, it aims to strengthen accountability of Parties for their commitments under the framework, and other international obligations, including human rights.

The first edition, produced in 2016, complemented the fourth edition of the *Global Biodiversity Outlook*. At the thirteenth meeting of the Conference of the Parties to the CBD (COP13), Parties requested a second edition. *Local Biodiversity Outlooks 2* was published in 2020 in collaboration with the Secretariat of the Convention on Biological Diversity, alongside the fifth edition of the *Global Biodiversity Outlook*.

Local Biodiversity Outlooks 3 (LBO-3) is an independent publication aligned with the CBD's global stocktaking processes. It foregrounds community-led research and documentation, drawing on 56 case studies from a wide variety of territories, knowledge systems and actions. Together, these case studies provide grounded evidence of how IPs and LCs are contributing to the conservation, sustainable use and governance of biodiversity.

LBO-3 has been produced through collaboration among:

- The International Indigenous Forum on Biodiversity (IIFB)
- The Indigenous Women's Biodiversity Network (IWBN)
- The Centres of Distinction on Indigenous and Local Knowledge (COD-ILK)
- Forest Peoples Programme (FPP)
- Red de Mujeres Indígenas sobre Biodiversidad para América Latina y El Caribe (RMIB-LAC).

Its production has been overseen by an editorial board comprised of Indigenous and community representatives from each of the seven socio-cultural regions recognised by the United Nations Permanent Forum on Indigenous Issues:

- Africa
- The Arctic
- Asia
- Central and South America and the Caribbean
- Central and Eastern Europe, the Russian Federation, Central Asia and Transcaucasia
- North America
- The Pacific

A management committee comprising representatives from each of the co-publishing organisations (IIFB, IWBN, RMIB-LAC, COD-ILK and FPP) oversaw resourcing and planning issues.

Overall coordination and management of the report was provided by a team based at FPP – Naomi Baird, Claire Bracegirdle, Joji Cariño, Gloria Jehovana Riofrio Espin, Frances Jenner, Susana Nuñez Lendo, Anouska Perram and Sally Taylor.

Methodology

LBO-3 is centred on community-led evidence in the form of case studies; a review of recent literature; and data from the Indigenous Navigator. It has been reviewed by subject-matter experts.

Case studies

Community-led evidence is at the centre of LBO-3. An open call for case study proposals in 2025 received a large number of submissions. These were reviewed by the Editorial Board and co-publishing institutions, who also identified and invited additional contributions to address regional and thematic gaps. Final selection was guided by the need to ensure balanced coverage across geographies and key issues relevant to the Kunming–Montreal Global Biodiversity Framework (KMGBF).

All case studies were newly developed for LBO-3 with the free, prior and informed consent of the communities involved. Authorship is held by each community, typically through a community organisation or named representative. In some cases, external organisations – including non-government organisations, networks, researchers or funders – supported the process and are acknowledged or included as co-authors, but the content and framing were decided by the community.

The case studies included in LBO-3 have been summarised for publication, with full versions available on the LBO website. Editing has been kept to a minimum to preserve the voices of contributors, and any substantive changes were reviewed and approved by authors. To avoid duplication, case studies already included in CBD-related reporting processes, such as Parties' Seventh National Reports, were not included.

Literature review

A targeted literature review of academic and grey literature, focusing on materials published since 2020, was conducted to support the analysis presented in LBO-3. Searches were carried out using OpenAlex, prioritising topics central to KMGBF implementation in relation to IPs and LCs. Selected publications were analysed and used to complement the research undertaken by authors across different sections of LBO-3.

Data from the Indigenous Navigator

LBO-3 is further informed by analysis of national and community survey data from the Indigenous Navigator. This data is additional evidence, based on the lived experiences of IPs, and supports the assessment of progress in implementing the KMGBF at national and local levels.

Review process

LBO-3 has been reviewed by subject-matter experts across relevant thematic areas, which has strengthened its accuracy and analytical depth.

Forewords

COD-ILK

The Centres of Distinction on Indigenous and Local Knowledge (COD-ILK) takes pride in co-publishing the 3rd edition of Local Biodiversity Outlooks (LBO3), and providing a platform for Indigenous Peoples and local communities to document and share directly stories about our living relationships with the natural world, and how our collective actions are central to the implementation of Global Biodiversity Strategy to 2050.

As a global network, COD-ILK supports community participatory research, cultural exchanges, inter-general transmission of knowledge, inter-cultural dialogue and policy engagement as strategic actions for collaboration and mutual support amongst Indigenous Peoples and local communities. By bringing our experiences together in Local Biodiversity Outlooks, we are learning from each other and collectively exploring our distinctive solutions and contributions towards addressing fundamental challenges of our times. Grassroots self-determined actions joined up through national, regional and international solidarity networks, are growing hope and diverse visions for the future.

By sharing LBO-3 more widely, we are also calling on all governments and all of society, to build a global solidarity movement for environmental justice, peace, and care for all peoples and all life on our Planet.

Joji Cariño (**Ibaloi-Igorot**)
Convenor, Centers of Distinction on Indigenous and Local Knowledge

FPP

The Kunming–Montreal Global Biodiversity Framework (KMGBF) represented a significant step forward for the recognition of the rights and contributions of Indigenous Peoples (IPs) and local communities (LCs) in relation to global efforts to halt and reverse nature loss. Now, four years on from its agreement, Local Biodiversity Outlooks 3 (LBO-3) asks: how well have these commitments been implemented?

LBO-3 shows that, although Parties are not currently on track to meet the goals and targets of the KMGBF, IPs and LCs continue to make critical contributions to the conservation and sustainable use of biodiversity. Bringing together 56 case studies spanning different territories, cultures, languages and ecosystems, the report shows communities maintaining diverse food systems, defending their territories against exploitation, strengthening customary governance and revitalising traditional knowledge.

These contributions cannot be separated from the rights and conditions that enable them. Secure rights to lands, territories and resources, recognition of customary governance and knowledge systems, meaningful participation in decision-making, and access to appropriate finance are essential to supporting IP- and LC-led action.

LBO-3 provides both evidence of what IPs and LCs are already achieving, and lessons for how the KMGBF can be implemented more effectively. It therefore serves to showcase how listening to, learning from, and supporting those communities, is vital to the work ahead in advancing conservation and sustainable use of biodiversity.

Tom Lomax
Director, Forest Peoples Programme

IIFB

The International Indigenous Forum on Biodiversity (IIFB) has played a key role in the recognition of the rights of Indigenous Peoples and local communities within the Convention on Biological Diversity (CBD), contributing to the adoption of the Kunming–Montreal Global Biodiversity Framework (KMGBF); to the new programme of work up to 2030 on Article 8(j) and other provisions of the CBD relating to Indigenous Peoples and local communities (IPs and LCs); and to the establishment of the subsidiary body on Article 8(j) and other provisions of the CBD relating to IPs and LCs.

These advances have contributed to the recognition of the traditional knowledge, innovations and conservation practices of IPs, as well as their essential role in the sustainable management of biodiversity. The adoption of these instruments represents a historic opportunity to consolidate respect for their rights and their effective participation in the global conservation agenda.

The KMGBF mainstreams human rights, gender and intergenerational inclusion, recognising the contribution of IPs and LCs to biodiversity conservation. Eight of its targets are directly related to these stakeholders, including participatory spatial planning (Target 1), the conservation of 30 per cent of the planet's biodiversity through protected areas, other ecologically significant areas and Indigenous and Traditional Territories (Target 3), the sustainable use of wild species (Target 5), the sustainable management and benefits derived from the use of wild species (Target 9), traditional knowledge associated with genetic resources (Target 13), funding for Indigenous Peoples (Target 19), access to information and traditional knowledge (Target 21) and access to justice and respect for human rights defenders (Target 22). Furthermore, the eight tasks of the Article 8(j) work programme reinforce these commitments and support their implementation.

The third edition of Local Biodiversity Outlooks (LBO-3) is a valuable tool for highlighting the vision, experiences and contributions of Indigenous Peoples and local communities to the implementation of these instruments, through concrete examples at the local and territorial levels. Furthermore, it promotes mutual learning, intercultural dialogue and the building of alliances to tackle current environmental challenges, contributing to a future where biodiversity conservation and human well-being advance hand in hand.

Ramiro Batzín (**Maya Kaqchikel**)
Co-president, International Indigenous Forum on Biodiversity
Saqb'e Centro de Distinción

IWBN

The Indigenous Women's Biodiversity Network (IWBN) is honoured to contribute to this third edition of the Local Biodiversity Outlooks (LBO-3). This report brings together powerful stories, lived experiences, and evidence that highlight the vital role Indigenous Peoples and local communities play in caring for the world's biodiversity. At a time when biodiversity loss, climate change, and growing inequalities continue to affect communities around the globe, these voices are more important than ever.

Throughout this report, we see the strength, knowledge, and leadership of Indigenous women. Across generations, Indigenous women have cared for the lands, waters, forests, seeds, and traditional knowledge systems that sustain both people and nature. They are leaders, knowledge holders, farmers, healers, and protectors of cultural and biological diversity. Their contributions are often made quietly and persistently, yet they are fundamental to the health and resilience of communities and ecosystems.

For Indigenous women, biodiversity is not an abstract concept. It lives in the seeds we save, the foods we grow and harvest, the medicines we gather, the languages we speak and the territories we continue to protect. The survival of biodiversity and the continuity of Indigenous cultures are deeply interconnected.

As global biodiversity commitments are implemented, Indigenous women must be fully recognised, respected, supported and included in decision-making. Their knowledge, innovations, and leadership are essential to effective conservation, human rights, cultural continuity and community wellbeing.

We are grateful to the many Indigenous women and communities whose experiences and wisdom have shaped this report. May the stories and lessons shared here inspire stronger action for biodiversity, gender equality and the rights of Indigenous Peoples.

Lucy Mulenkei (Maasai)
Co-founder, Indigenous Women's Biodiversity Network

RMIB-LAC

Contributing as a co-publisher to this edition of Local Biodiversity Outlooks (LBO) reaffirms our commitment to recognising the voices, knowledge, experiences and proposals of Indigenous women in the conservation and sustainable use of biodiversity.

For us, biodiversity cannot be understood in isolation from the territories, cultures, Indigenous forms of governance, and the spiritual and community relationships that Indigenous Peoples have built and maintained over generations. The experiences gathered during this process show that traditional knowledge is not merely part of our peoples' collective memory: it is a living system that guides the management of territories, strengthens resilience and makes a concrete contribution to the protection of biodiversity.

The experiences featured in this edition of LBO show us that Indigenous Peoples (IPs) are not merely custodians of a significant part of the planet's biological diversity. They are also bearers of their own systems of knowledge, governance and land management that continue to contribute to the conservation and well-being of their communities.

The case study of the Guna people of Dadnagwe Dubbir is a concrete expression of this reality: in the face of changes affecting marine and coastal ecosystems, communities are strengthening their knowledge, revitalising their practices and reaffirming their governance from within the territory.

Indigenous women play a fundamental role in this process. Their leadership links conservation with food security, health, the transmission of culture and the continuity of community life. Through oral tradition, intergenerational participation and knowledge built up and passed on collectively, women keep alive systems that are indispensable to the resilience of their territories.

Therefore, the implementation of the Kunming–Montreal Global Biodiversity Framework must recognise and strengthen these contributions. Targets 3, 19, 22 and 23 take on special significance when viewed from the perspective of the territories: effective conservation, full and effective participation, gender equality and equitable access to finance must translate into actions that respect the collective rights, Indigenous forms of governance and the priorities of IPs.

This LBO reminds us that solutions for biodiversity are not only to be found in the future: many already exist in the territories. Our collective challenge is to recognise them, respect them, strengthen them and ensure the conditions are in place for them to continue sustaining life for present and future generations.

Florina Lopez Miro (Guna)
Coordinator, Red de Mujeres Indígenas sobre Biodiversidad de América Latina y el Caribe (RMIB-LAC)

CBD Alliance

The Kunming–Montreal Global Biodiversity Framework (KMGBF) contains many bold commitments to IPs and LCs. It recognises their roles and contributions; seeks to ensure their full, effective, equitable and gender-responsive representation and participation in decision-making; emphasises the importance of their access to justice and the full protection of environmental human rights defenders, who are often Indigenous Peoples and local communities (IPs and LCs).

The challenge before us is to move from rhetoric to practice. Real transformational change is needed, to move beyond lip service. Realising these commitments in practice is crucial and necessary to address and reverse the biodiversity crisis.

At the same time, the KMGBF does not adequately address the root causes of biodiversity destruction which are systemic and structural in nature. At the heart of the problem lies a system that has been built and perpetuated by the rich and powerful, which prioritises their interests and profits over peoples and the planet. These vested interests drive the biodiversity crisis through biodiversity destructive and extractive activities such as industrial agriculture, oil and gas extraction and mining. At the same time, global elites shape the global economic and financial system and rules, and many nation states, especially in the Global South, face pressures to expand extractive activities in order to be financially stable.

IPs and LCs conserve and nurture biodiversity in spite of the power structures and systems that sometimes work against them. They are often on the frontlines of extractive industries and land and resource dispossession, while receiving the least recognition and the fewest resources to continue their work. Their rights are often violated.

As the key messages of Local Biodiversity Outlooks 3 (LBO-3) make clear, a paradigm shift is needed, and the structural barriers that continue to harm nature and people must be dismantled. In addition, there must be accountability for these harms.

LBO-3 is a vital and empowering report shaping our understanding of the way forward and pointing to the urgent action that we must take.

Lim Li Lin
Board member, CBD Alliance
Third World Network

CBD Women's Caucus

The biodiversity crisis is also a crisis of relationships: between people and nature, among peoples, and with those whose knowledge, care and leadership have sustained life for generations.

Indigenous women and girls, and women and girls from local communities, are among the foremost stewards of biodiversity's protection, restoration and sustainable use. Through the ways they care for territories, cultivate food systems, transmit knowledge and sustain their communities, they nurture relationships that have enabled people and nature to thrive together across generations. Yet they continue to face discrimination, exclusion from decision-making, insecure rights to lands, territories and resources, violence, and limited access to finance. These injustices are not separate from the biodiversity crisis. They are part of the same systems that perpetuate gender injustice, colonialism and the concentration of power.

Local Biodiversity Outlooks 3 (LBO-3) challenges the assumption that biodiversity solutions can be designed elsewhere and delivered to communities. Instead, it shows that many pathways towards living in harmony with nature already exist within Indigenous Peoples and local communities, where they continue to be practised, defended and renewed every day. Throughout these pathways, women's knowledge, practices, care and leadership are woven into the ways communities sustain biodiversity and their relationships with nature.

For the CBD Women's Caucus, this is why gender justice is not simply an outcome of effective biodiversity action; it is one of its preconditions. For the CBD Women's Caucus, this message is vital. Gender justice is not simply an outcome of effective biodiversity action; it is one of its preconditions. Biodiversity policies cannot succeed while the women and girls who sustain ecosystems, safeguard knowledge, defend territories and hold communities together continue to face discrimination, violence and exclusion. Creating the conditions for them to exercise their rights, shape decisions and continue caring for the biodiversity is therefore not peripheral to biodiversity action. It is fundamental to it.

LBO-3 reminds us that biodiversity cannot flourish where injustice persists, nor can justice be achieved while the living world continues to be degraded. The pathways illuminated throughout these pages offer not only hope, but direction for restoring the relationships between people and nature that make a just and thriving future possible.

Amelia Arreguin Prado
Coordinator, CBD Women's Caucus

GYBN

Since its beginnings, the Global Youth Biodiversity Network (GYBN) has looked to Indigenous Peoples and local communities (IPs and LCs) as teachers, elders, and wisdom-holders. They have been guiding lights for the biodiversity youth movement, as well as partners and allies in shaping a strong Kunming–Montreal Global Biodiversity Framework and in advancing the voice of rightsholders in the Convention on Biological Diversity. They continue to accompany young people around the world from local to global in the necessarily intergenerational efforts to move towards social-ecological justice and living in harmony with nature.

Local Biodiversity Outlooks 3 (LBO-3) shows again how Indigenous and local knowledge systems, values and practices light the way. As an Indigenous youth, I have experienced traditional knowledge as both worldview-shifting and deeply familiar. Every story and teaching from IPs and LCs carries a reminder from the ancestors on how to care for our home, and a warning of what happens when we do otherwise. By bringing these stories together, LBO-3 helps the world listen to and learn from what communities have known, practiced and defended through generations of struggle.

With its rich case studies and sharp analysis, LBO-3 presents powerful evidence of the critical roles and contributions of grassroots actors in stewarding the Earth. The message is clear: addressing biodiversity loss requires breaking oppressive barriers, ensuring accountability and transforming systems together. We must look to IPs and LCs, as well as women and youth, to show us the path of healing Mother Earth, for present and future generations.

Josefa Cariño Tauli (Ibaloi-Kankanaey Igorot)
Policy Co-ordinator, Global Youth Biodiversity Network

ICCA Consortium

The Kunming–Montreal Global Biodiversity Framework set ambitious commitments and marked a historic shift by recognising IPs and LCs as central actors in biodiversity governance. Four years later, the ICCA Consortium – a global movement association dedicated to the recognition and strengthening of territories of life – welcomes the third edition of the Local Biodiversity Outlooks (LBO-3).

LBO-3's stands out for the way it brings together voices, knowledge and evidence from IPs and LCs worldwide. It highlights the growing recognition of their rights and their vital contributions to conserving biodiversity, sustaining livelihoods and shaping policy transformation.

Despite this progress, many communities still face dispossession, criminalisation and exclusion from decision-making. These problems stem from unsustainable development models and conservation approaches that separate people from nature and fail to recognise IPs' and LCs' governance systems as legitimate and effective.

LBO-3 makes it clear that achieving the KMGBF goals requires more than implementation. It demands transformation: moving beyond business as usual, embracing approaches grounded in equity, rights, reciprocity and responsibility toward future generations, and addressing the structural drivers of biodiversity loss, including overconsumption, unequal economic systems and colonial legacies.

As the world advances toward the 2030 milestones and the 2050 vision of the Convention on Biological Diversity, we hope LBO-3 will encourage governments, donors, researchers and all actors to engage with IPs and LCs as rights-holders, knowledge-holders and leaders.

We congratulate all the communities, authors, editors and partner organisations who contributed to this important publication. May its findings inspire greater ambition, deeper accountability and meaningful collaboration to sustain the diversity of life on Earth.

Vololoniaina Rasoarimanana
Vice President, ICCA Consortium

Luis Guillermo Izquierdo
President, ICCA Consortium

Introduction



Caption: The biodiversity monitoring team hikes through the Managalas savanna, Papua New Guinea

Credit: Russel Wai, Landscape Alliance

The closing session of the 15th Conference of Parties to the Convention on Biological Diversity (COP15) in Montreal in 2022 lauded the adoption of the Kunming–Montreal Global Biodiversity Framework (KMGBF), its historic advances, and the abiding commitments of all actors to move quickly towards its implementation.

The International Indigenous Forum on Biodiversity (IIFB) expressed its own hopes in the following Closing Declaration (2022):

"Now that we have a clear guide for all countries, we must work quickly and efficiently for its implementation. From the depths of our territories, our ancestors and authorities are urging serious actions to protect our Mother Earth and all life on it, together with us."

How have those moments of lived global solidarity been translated into concrete actions by Parties to the Convention on Biological Diversity (CBD), and by the multiplicity of non-state actors?

Biodiversity and the importance of Indigenous Peoples and local communities embodying traditional lifestyles

"The idea of a Wilderness to be protected as such is flawed, as the continued use and interdependence on the land in question, through Sámi livelihoods, such as reindeer herding, small-scale agriculture, fishing and hunting, has ultimately formed the landscape into what we see in front of us today. In other words, without a Sámi presence, this imagined Wilderness would look vastly different today."

Sámi people, Norway 45

LBO-3 includes the contributions of both Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs), consistent with CBD Article 8(j) and COP decisions. The CBD has established a technical process to deepen understanding and provide clearer definitions of these two groups. This publication capitalises 'Indigenous Peoples', in accordance with the *UN Editorial Manual* (UN, n.d.). However, where we have reproduced text from elsewhere (for instance, the KMGBF), we have the kept the capitalisation as originally published.

LBO-3 aims to review progress in the implementation of the KMGBF, centring the perspectives of IPs and LCs, who are critical actors in global efforts to protect and sustainably use biodiversity. Most IPs and LCs have strong spiritual, cultural, social and economic relationships with their territories across both land and sea. As Indigenous leaders of the Gran Tescual in Colombia have said, *"Reclaim our way of thinking to reclaim everything."* (see case study 1).

IPs and LCs are agents of transformative change for sustainability (Reyes-García et al., 2026). Their cultural values – often maintained in the face of immense threats – hold the key to achieving the 2050 vision of a world living in harmony with nature. As the world faces a rapid and perilous decline in biodiversity, it is essential to listen to the custodians whose lifeways offer solutions to the crisis. The wisdom of IPs and LCs can light the way for change that all humans, as well as the non-human world, need.

Case study 1

Territory: Gran Tescual

Language: Tescual

Authors:

- Genith Quitiaquez and Vicente Ramiro Obando, Pasto Indigenous People, Gran Tescual Indigenous Reserve
- Rodrigo de la Cruz, Kichwa Indigenous People, Advisor

Caption: Spiritual harmonisation ceremony for the care of Mother Earth

Credit: Elizabeth Hernández



1 Pasto people, Colombia

The Indigenous Pasto community in the Andean-Amazonian region of the Gran Tescual Reserve in Colombia is exercising its collective right to self-governance over its territory through a process based on the motto *"reclaim our way of thinking to reclaim everything."*

For millennia – and now amid the dynamics of Colombia's internal armed conflict – we have resisted in our territories, defending human rights and life in all its forms. A fundamental part of this is strengthening alliances with other communities and partner organisations, united by a fabric of transformative resilience and active hope.

More recently, these alliances have led to the development of the Biodiversity and Climate Change Management Strategy: a collective, long-term response to the climate and biodiversity loss crises that restores the relationships between territory, biodiversity, culture, economy, and self-governance. Our community systems also recognise international and national regulatory frameworks, which is why our territorial planning tools align global discussions with local practice.

This strategy makes concrete contributions to the Kunming–Montreal Global Biodiversity Framework by:

- Recognising and strengthening Indigenous self-governance as the legitimate authority in the management of territory and biodiversity
- Integrating ancestral knowledge as the foundation for climate and ecological planning, moving beyond extractive or purely technical approaches
- Ensuring inclusive and intergenerational governance
- Defending the territory as a living entity, linking biodiversity with spirituality and culture, thereby contributing directly to Target 3 of the Global Biodiversity Framework for the 30 by 30 ambition from Indigenous territories
- Positioning the Pasto people as political actors on climate and biodiversity issues, with the capacity to influence at the local, national, and international levels

The Pasto Indigenous People of Gran Tescual are forging a path toward autonomy that draws on ideological diversity to ensure their survival. Our system of self-governance is based on transformative and care-based economies, which serve as the driving force that allows us to sustain life without relying on extractive models or markets that fragment our

collective territory. We exercise our own Indigenous environmental authority under Decree No. 1227 of 2024, which recognises Indigenous authorities as environmental authorities within their territories across all Indigenous territories in the Republic of Colombia.

How LBO-3 is structured

This publication is structured to correspond broadly with the KMGBF.

Following this introduction are the **key messages** and **recommendations**.

Chapter 1 sets out the background to the CBD and the KMGBF, and its monitoring framework, as relevant in particular to IPs and LCs.

Chapter 2 explains the cross-cutting approaches to implementing the KMGBF, which are set out in Section C of the KMGBF.

Chapter 3 examines the state of implementation so far, looking at the national biodiversity strategies and action plans (NBSAPs) and the seventh national reports (2026) submitted by Parties.

Chapter 4 examines efforts to reduce threats to biodiversity (Targets 1–8 of the KMGBF), focusing on land and sea tenure, conservation, spatial planning, restoration, relationships with species, pollution, and climate change.

Chapter 5 addresses how biodiversity contributes to meeting people's needs through sustainable use and benefit-sharing (Targets 9–13), including food systems, livelihoods, ecosystem services, and fair and equitable benefit-sharing.

Chapter 6 explores the tools and enabling conditions for implementation (Targets 14–21), including mainstreaming, finance, monitoring, and some of the structural drivers of biodiversity loss.

Chapter 7 examines two targets of cross-cutting and central importance to IPs and LCs, effective participation (Target 22) and gender equality (Target 23).

Each chapter includes case studies from IPs and LCs, providing supporting information and evidence.



Key messages

"Biodiversity is a clinical, technical term for this intricate inter-weaving of life that sustains us. We Indigenous Peoples say that we are related to this life; thus your 'resources' are our relations. It is all in how you look at it."

Chief Oren Lyons, Onandaga Nation and Haudenosaunee Confederacy (Lyons, 1997, quoted in Indigenous Peoples Major Group, 2019, p. iv)

Caption: A family fishes at the Djulkar Waterfall in Arnhem Land, Australia

Credit: Matthew Abbott, Panos Pictures

Key message 1: Indigenous Peoples and local communities are central actors in KMGBF implementation

"Inclusive conservation is not an abstract principle, but a practical pathway for securing land rights, protecting biodiversity, and restoring dignity and agency to Indigenous communities."

Il Laikipiak Maasai people, Turkana people, Kenya [47]

Indigenous Peoples and local communities, inclusive of elders, women and youth are central to conserving, protecting and securing biological and cultural diversity around the world. Customary lands of Indigenous Peoples and local communities cover 42 percent (5.5 billion hectares) of the world's land and harbour at least 36% of global key biodiversity areas (Food and Agriculture Organization, International Land Coalition and Centre de coopération internationale en recherche agronomique pour le développement, 2026). We are at the forefront of KMGBF implementation on the ground: nurturing reciprocal caring relationships with the natural world through traditional knowledge, collective actions and day-to-day defence of territories, lands, waters and ocean against environmental threats and biodiversity loss.

Our contributions can be secured by preventing harmful land and sea use change; legal recognition of customary land tenure; respect for our governance institutions and self-determined development plans; upholding free, prior informed consent; direct support for community-based mapping and monitoring systems; and equitable partnerships with governments and other actors committed to just and sustainable futures.

Key message 2: Customary sustainable use embodies our natural and cultural heritage, underpinning a healthy planet and healthy peoples

"You could say that food is medicine, eating is ceremony, and they are united by spiritual practices. This holistic understanding is the key to the sustainability of Indigenous Peoples and is a framework that can help to address many challenges both within countries and regions, as well as global goals related to food security, conservation, health and the well-being of the planet as a whole."

Selkup Peoples, Siberia (Shulbaeva, 2025, cited in COD-ILK, 2026)

Customary sustainable use practices of Indigenous Peoples and local communities (IPs and LCs) comprise longstanding reciprocal relationships linking nature's contributions to peoples and peoples' contributions to nature. These grassroots ecologies are living examples of the world's co-evolving natural and cultural heritage, manifesting mutual benefits arising from the sustainable use of biological resources and associated traditional knowledge.

Indigenous and local food systems are revitalizing diverse landscapes, seascapes and urban areas, addressing embedded drivers of climate change, biodiversity loss and soil degradation in dominant globalised industrial food systems. Practicing traditional occupations and associated recovery of heritage seeds, traditional foods and nutrition-rich diets led by women are important pathways supporting food sovereignty, resilient communities, healthy peoples and a healthy planet.

Customary sustainable use of Indigenous Peoples and local communities delivers multiple positive outcomes encompassing economic, social, ecological, cultural, food, health and other benefits for groups highly dependent on biodiversity and vulnerable to impacts arising from external interventions impacting their traditional territories and knowledge systems. Free, Prior and Informed Consent is a fundamental right to be complied with. The implementation of the KMGBF must nurture diverse values and grassroots collective actions leading to systemic change.

Key message 3: Structural barriers that harm people and planet must be dismantled at multiple scales

"What is needed is not only funding, but also changes that, given present inequalities and power imbalances, are quite difficult to achieve. In particular, the ǂAonin community aspires for changes in its relationships with public authorities, commercial entities, academic actors, non-profit organisations and donors, to regain actual autonomy and receive more empowering support."

ǂ Aonin people, Namibia [36]

The ability of parties to genuinely deliver on their joined up global commitments is a key test of multilateralism. Global governance structures embody deep power imbalances and short-term decision-making over the futures of peoples and the planet. The global consensus on the need for reform is undone by powerful actors who benefit from the status quo and systematically block structural change. Profit-driven neoliberal economic systems and powerful vested interests are barriers to achieving the vision and goals of the KMGBF. Implementation continues to rely heavily on insufficient voluntary measures, disclosure-based corporate accountability, market-based mechanisms, technical fixes, and extractive digital technologies.

Existing highly centralised political and economic structures and failed top-down bureaucratic and hegemonic governance approaches need to be dismantled and replaced by just and democratic systems of decision-making upholding diverse cultural values and the flourishing of life. Section C considerations foster democratic political space and provide cross-cutting guidance to move away from *"business as usual"* mindsets, institutional behaviours and routines of working in silos and piece-meal actions towards building on incremental reforms and leading to structural change.

Concerted efforts across whole of government and whole of society are urgently needed to overcome the drivers of biological and cultural diversity loss and the underlying causes of the social-ecological crisis and bend the curve towards recovery and flourishing of life by 2050.

Key message 4: Collective duty of care and accountability starts now!

"We have always been observers of our territories, attentive to their changes and transformations. Our knowledge goes beyond the measurement of nature. Monitoring is a practice of caring for life, born from memory and the deep relationship we maintain with the territories, the seas and the beings that inhabit them. "

Diaguita People, Chango People, Mapuche People of the Lafkenche and Williche territories, Kawésqar People and Yagán People, Chile [48]

Collective accountability for the implementation of the KMGBF commitments and other international obligations is essential for moving forward. Parties and all actors must establish robust and participatory planning, monitoring, reporting and review processes, including structures and mechanisms at the national and sub-national levels to hold Parties and other actors mutually accountable for collective progress in the implementation of the KMGBF, particularly the cross-cutting consideration of Section C.

IPs and LCs have been observing and monitoring nature and life in their communities for millennia and have been continuously adapting their local governance and management systems dynamically over time. Community-based monitoring and information systems, rooted in traditional knowledge and cultural indicators have also been adopting modern technologies and contribute important data to inform community life plans and to influence external interventions affecting their territories, including global and national sustainable development planning, and more recently the KMGBF and traditional knowledge indicators.

Monitoring the implementation of KMGBF commitments implies monitoring biodiversity, nature's contributions to peoples, people's contributions to nature, direct and underlying causes of change, and State obligations to respect, protect and fulfil human rights. Employing a human-rights based monitoring approach, with structural, process and outcomes indicators, would support the delivery of more complete social-ecological data, including on outcomes for people and nature. Greater support is needed for community-led monitoring and the use of traditional knowledge indicators by research centres and official data. The processes related to the KMGBF monitoring framework would be more transparent, legitimate and robust by welcoming independent submissions and reports from whole of society, and by making these available for NBSAPs and national and global reports.

Key message 5: Section C guides higher ambitions and meaningful ways of implementation across whole of government and whole of society

"Ultimately, the future of conservation in Indigenous territories may depend not on choosing between state authority and community governance, but on creating mechanisms through which both can work together."

Karen/Pga K'nyau people, Thailand [24]

A key advance in the KMGBF was in setting not only new goals and targets but critically, agreeing Section C considerations and globally agreed principles guiding implementation of the strategy towards transformative change. Understanding that implementation is not only about what but how, KMGBF embraces strategic thinking amidst rapidly changing developments, inter-linking multiple policy arenas and agendas for change. It states that *"The Kunming–Montreal Global Biodiversity Framework, including its Vision, Mission, Goals and Targets, is to be understood, acted upon, implemented, reported and evaluated, consistent with the following considerations."*

Section C calls for working across diverse value systems, combining whole- of-government and whole-of-society efforts, ecosystem-based and human rights-based approaches, and embedding contributions and rights of Indigenous Peoples and local communities, gender justice and inter-generational equity.

These considerations move us towards empowering self-determined collective actions of Indigenous Peoples, local communities and other custodians of lands and waters, including people of African descent, peasants, small-scale farmers and fishers, and pastoralists across the world. Harnessing the energies, goodwill and myriad commitments of individuals and all actors is essential for bolstering political will of governments and fostering favourable public support for bold, ambitious and synergistic implementation of the global agenda for change.

Key message 6: Strengthening global solidarity for transformative change

"Reclaim our way of thinking to reclaim everything."

Pasto people, Colombia [1]

The adoption of the KMGBF at COP15 was a high moment of global solidarity amongst all participants engaged in its extended negotiations. The Global Report on collective progress states that *"...the Framework has generated unprecedented global engagement, and has driven action, innovation, collaboration and learning experiences across all 23 targets. However, unless collective implementation accelerates rapidly, the 2030 targets and mission will not be achieved."* It further underlines that *"The whole of society approach can be a very effective, inclusive and cost-efficient pathway to strengthening implementation. The impacts on and reliance of different actors on biodiversity, the participation, rights and resource needs of indigenous people and local communities, women, youth and other actors, and the contributions that different actors are making or could make towards the Framework, are not yet being fully realized, accounted for and supported, or consistently reflected in planning, monitoring and reporting."*

The movement for transformative change is gaining momentum across the world. Diverse actors at multiple scales and timeframes are actively engaged in collective efforts to realising the 2050 vision of living in harmony with nature. Indigenous Peoples and local communities are animating our reciprocal relations with our lands, waters and ocean as critical foundations for securing all life and our common futures. We join all our friends and allies amongst them women, youth, persons with disabilities, non-government and civil society organisations, social movements, faith communities, academe, businesses, local and national governments, working for the health and well-being of peoples and planet.

We call for strengthened global solidarity towards transformative change.



Chapter 1
The CBD and the KMGBF – key points for Indigenous Peoples and local communities

"Indigenous peoples have used traditional knowledge to manage landscapes for centuries. As we face the interconnected biodiversity and climate crises, it is important to incorporate the traditional [pastoralist] mechanisms of Etamam and Akiriket into national biodiversity and land use policies to ensure the success of the KMGBF."

Karamojong pastoralists, Uganda [2]

Caption: Ngaremara community meeting, Kenya

Credit: IMPACT Kenya

The CBD and the KMGBF

"Indigenous peoples have used traditional knowledge to manage landscapes for centuries. As we face the interconnected biodiversity and climate crises, it is important to incorporate the traditional [pastoralist] mechanisms of Etamam and Akiriket into national biodiversity and land use policies to ensure the success of the KMGBF."

Karamojong pastoralists, Uganda [2]

The Convention on Biological Diversity (CBD) is one of three multilateral environmental treaties – collectively known as the Rio Conventions, the others being the UN Framework Convention on Climate Change and the UN Convention to Combat Desertification. The treaties were adopted by states across the world during the Earth Summit in Rio de Janeiro in 1992. In total, 196 states are Parties to the CBD.



Caption: Biodiversity Team Leaders on a monitoring trip, Managalas, Papua New Guinea

Credit: Russel Wai, Landscape Alliance

The CBD has three objectives (described in its Article 1):

- The conservation of biological diversity
- The sustainable use of its components
- The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources of the CBD.

From the outset, the CBD has recognised the roles of Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs) in conservation and sustainable use, particularly in Article 8(j) which is focused on traditional knowledge, and article 10(c) which is focused on protecting and encouraging customary sustainable use.



Case study 2

Territory: Kaabong

Language: Ngadodoso

Author: Pius Loupa, Karamojong Pastoralists, Rangelands Community Initiative Uganda

Caption: Akiriket council of elders viewing the intestines as a map to predict, decide actions and assign responsibility, at Loyoro sub county in Kaabong District

Credit: Pius Loupa

2 Karamojong Pastoralists, Uganda

For pastoralists in Karamoja, a region in north-east Uganda, the ownership and management of livestock is a key part of their livelihoods and linked to social prestige, trade and honour. This strong attachment to livestock is key to their sustainable management of lands and resources, as represented in the proverb:

"No shepherd would destroy where the herd feast from."

Karamojong pastoralists have developed traditional resource sharing mechanisms with their neighbours in Kenya, the Turkana people, to ensure the protection of their diverse shared natural resources. They do this through a mechanism called *Etamam*.

Etamam is a community-led governance process that facilitates dialogue around natural resource sharing while strengthening traditional systems of management. This process includes stakeholder meetings, community dialogues, negotiations over resource use, viewing of intestines and resource mapping. These are used to identify important areas that must be protected during livestock migration.

Etamam then establishes guidelines for mobility, rotational use of water and grazing zones, as well as the protection of *Akiriketa* (sacred sites) and cultural landscapes preserved for social and ecological needs. It also designates rules on biodiversity use, including community planning and monitoring of key areas to regulate access and prevent over-use.

Traditional governance structures, such as the Akiriket Council of Elders, play a vital role in formalising these practices. They have engaged in cross-border agreements and contributed to regional frameworks like the 2021 IGAD Transhumance Protocol, which supports safe livestock mobility across Eastern Africa and protects the rights of pastoralists to find adequate grazing for their livestock. This is becoming increasingly important as climate change has led to changes in grazing areas and water sources.

Indigenous Peoples have used traditional knowledge to manage landscapes for centuries. As we face the interconnected biodiversity and climate crises, it is important to incorporate the traditional mechanisms of *Etamam* and *Akiriket* into national biodiversity and land use policies to ensure the success of the Global Biodiversity Framework.

Yet, after more than 30 years, progress towards these objectives has been limited.

In 2022, Parties agreed on an implementation plan – the Kunming–Montreal Global Biodiversity Framework (KMGBF) – setting out 23 targets to be achieved by 2030. The targets are a milestone on the path towards four goals to be achieved by Parties by 2050, as part of the CBD's Vision of Living in Harmony with Nature.

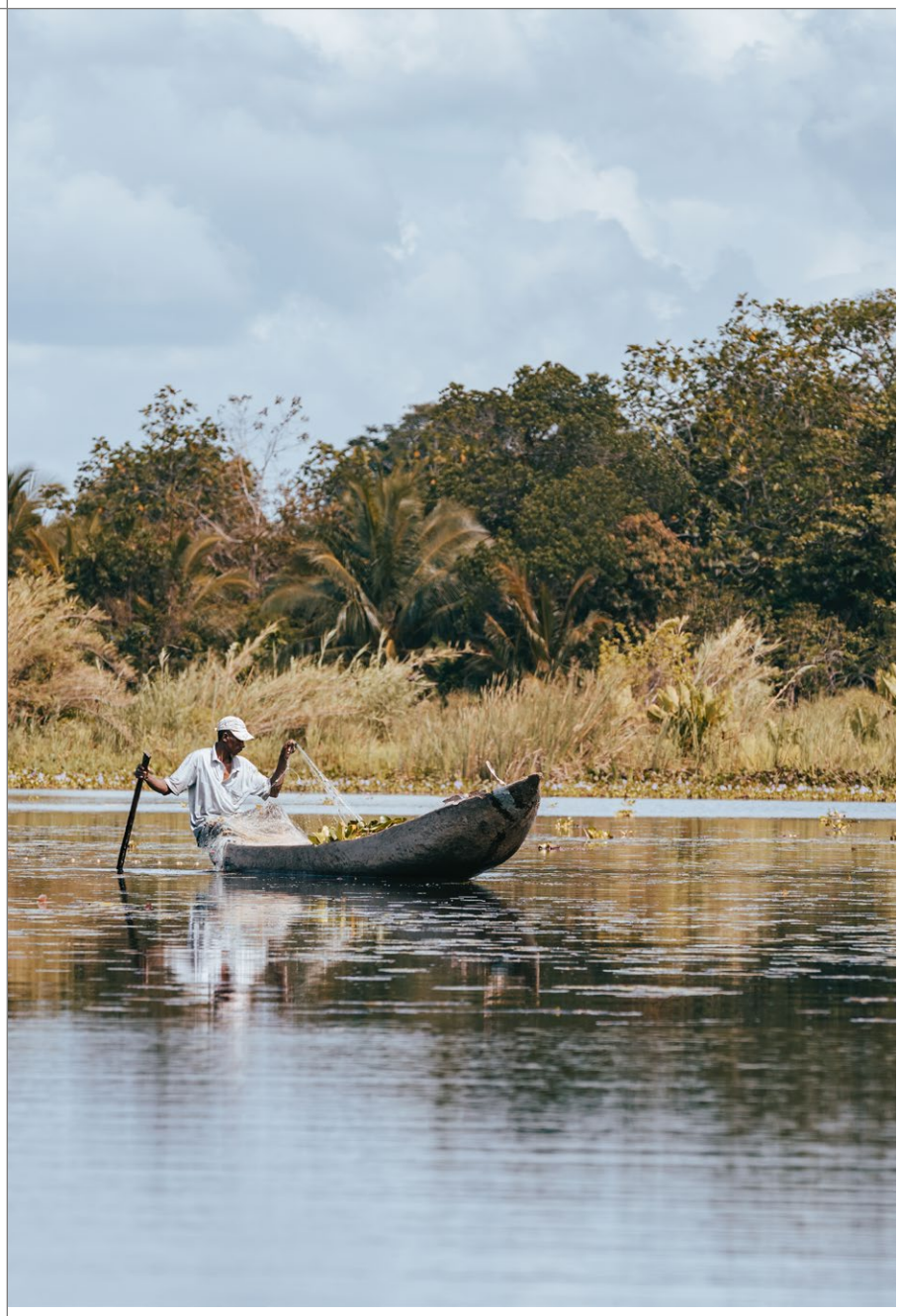
The four goals of the KMGBF reflect the CBD's objectives:

- Goal A focuses on protecting and restoring nature
- Goal B focuses on enabling humans to prosper with nature
- Goal C focuses on sharing benefits fairly
- Goal D focuses on investing and collaborating to achieve the other goals.

See Box 1 for more details.

Caption: A man fishes on a river in Madagascar

Credit: Artush



From the perspective of IPs and LCs, these goals continue to reinforce the conceptual separation of people (Goals B and C) and nature (Goal A). That said, the KMGBF made significant strides forward in respecting and protecting the rights and values of IPs and LCs – and of other groups who are often neglected or marginalised, including women, youth, persons with disabilities, and environmental human rights defenders – through incorporating cross-cutting considerations for implementation in Section C (see Chapter 2) and explicitly including human rights, and the rights of IPs and of LCs, in the text of many of the 23 targets.

1 The four goals of the Kunming–Montreal Global Biodiversity Framework

GOAL A: Protect and Restore

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; The genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

GOAL B: Prosper with Nature

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

GOAL C: Share Benefits Fairly

The monetary and non-monetary benefits from the utilisation of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

GOAL D: Invest and Collaborate

Adequate means of implementation, including financial resources, capacity-building, technical and scientific cooperation, and access to and transfer of technology to fully implement the Kunming–Montreal Global Biodiversity Framework are secured and equitably accessible to all Parties, especially developing country Parties, in particular the least developed countries and small island developing States, as well as countries with economies in transition, progressively closing the biodiversity finance gap of $700 billion per year, and aligning financial flows with the Kunming–Montreal Global Biodiversity Framework and the 2050 Vision for biodiversity.

COP decisions since the KMGBF was adopted in 2022

"It is clear that Indigenous and traditional territories constitute a key pathway for Indigenous Peoples' contribution to conservation, provided that their recognition is based on territorial rights, the strengthening of self-government, autonomy and governance."

Pasto people, Colombia [1]

Since the KMGBF's adoption in 2022, advances have been made in the CBD towards integrating the rights and values of IPs and LCs in the implementation of the KMGBF. At COP16 in 2024, Parties adopted Decision 16/4 on the Programme of Work on Article 8(j) and Other Provisions of the Convention Related to Indigenous Peoples and Local Communities to 2030. The programme of work provides an important implementation pathway for recognising the knowledge, innovations, practices, rights and contributions of IPs and LCs in biodiversity action. It also encourages Parties to engage IPs and LCs as on-the-ground partners in implementing the KMGBF, and urges their full and effective participation in preparing national reports and in developing, revising, updating and implementing national biodiversity strategies and action plans.

Also at COP16, Parties established the Subsidiary Body on Article 8(j) and Other Provisions of the Convention Related to Indigenous Peoples and Local Communities (SB8j), elevating the ad-hoc working group on this topic, created in 1998, to a permanent CBD subsidiary body. International Indigenous Forum on Biodiversity (IIFB) member Viviana Figueroa described the decision to institutionalise input to the convention from IPs and LCs – unique among multilateral environmental agreements – as "*making history*" (IIFB, 2024), while COP16 President Susana Muhamad described the move as settling a "*26-year historical debt in the CBD*" (Joseph, 2024). The inaugural meeting of SB8j took place in Panama in 2025.

COP16 also adopted Decision 16/6 inviting Parties to recognise the contributions of people of African descent, comprising collectives embodying traditional lifestyles.

Despite these developments, increased recognition in global policy has not consistently translated into meaningful inclusion in implementation and reporting. Limitations in mechanisms such as the Online Reporting Tool, alongside ongoing gaps in how Parties engage with IPs and LCs, mean that their contributions remain underrepresented in official assessments of progress. LBO-3 responds to this gap and also seeks to go beyond it, using IP and LC perspectives to assess the broader picture of the state of nature and the multiple crises in which our world is currently enveloped.

The KMGBF monitoring framework

"Community observations exist alongside, rather than within, formal monitoring systems. There is no formal mechanism through which local ecological knowledge is integrated into monitoring design or environmental decision-making."

Local communities, China [34]

At COP15 (2022), Parties to the CBD adopted a framework to monitor collective progress towards the KMGBF goals and targets (Conference of the Parties to the Convention on Biological Diversity, 2022).

This monitoring framework brings together a set of indicators selected by Parties to track priority areas. These indicators are intended to complement one another and, taken together, build a picture of change over time (Hébert et al., 2025). Each target has a set of accompanying indicators which Parties are expected to use in their reporting (Affinito et al., 2025). In recognition of Parties' different contexts and data availability, there is some flexibility in how Parties may apply the monitoring framework; for instance, only some indicators are mandatory (Affinito et al., 2025).

The different types of indicators in the monitoring framework are outlined in Table 1.

The monitoring framework has some weaknesses in practice, which are explored in Chapter 3. One important area for future work is the better integration of the traditional knowledge indicators (discussed below) into the monitoring framework. As the monitoring framework continues to be under review and will continue to be developed up to 2030 and beyond, there are still opportunities to shape it (Affinito et al., 2025).

Table 1: Indicator types in the KMGBF monitoring framework

Source: Secretariat of the Convention on Biological Diversity (SCBD) (2026)

Type	What it covers
Headline indicators	A set of high-level indicators aiming to capture the overall scope of the goals and targets of the Global Biodiversity Framework, which Parties are required to use in their reporting.
Binary indicators	A set of global-level indicators collated from binary (yes/no) and categorical responses providing a count of the number of Parties having undertaken certain activities relevant to a target, which Parties are required to use in their reporting.
Component indicators	Indicators that cover components of the goals and targets. They may apply at the global, regional, national and subnational levels and Parties can use them at their discretion.
Complementary indicators	Indicators for thematic or in-depth analysis of each goal and target, applicable at global, regional, national and subnational levels, which Parties can use at their discretion.
National indicators	Indicators used at the national or subnational level to complement but not substitute for the globally agreed indicators.

The traditional knowledge indicators

"The coastal Sámi regions have been severely affected by forced assimilation policies, which led many Sea Sámi to lose language, culture, and their ways of practising birgejupmi (sustainable management of nature's resources)."

Sámi people, Norway [45]

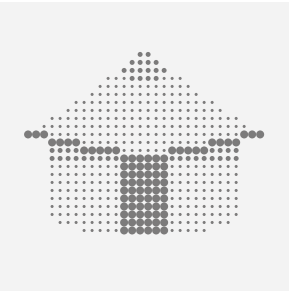
The traditional knowledge indicators (TKIs) are four indicators designed to track issues of fundamental importance to IPs and LCs – their languages, traditional occupations, lands and territories, and participation in decision-making (see Table 2). Since COP7 (2004) they have been progressively developed through a consultative process with IPs and LCs and the Ad Hoc Working Group on Article 8(j)). They are now included in the KMGBF monitoring framework. This represents an important step in better integrating the rights and interests of IPs and LCs in decision-making, as well as supporting an integrated approach to monitoring the socio-ecological system within the CBD.

While the four TKIs have been integrated into the relevant goals and targets within the monitoring framework, they are not all fully operational (in the sense that the methodology to be applied has not been agreed for all of them yet). Even those that are operational have not been widely used (see Table 3). The next step is to make them fully operational and widely used, including through further development and testing.



Linguistic diversity

Indicator adopted in the KMGBF monitoring framework: Index of Linguistic Diversity
Number: 21.CT.3
Target / goal: Goal B; Targets 21 and 22
Indicator type: Complementary
Status of methodology: Still under development



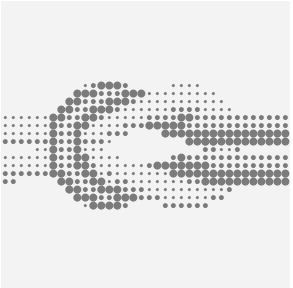
Traditional occupations

Indicator adopted in the KMGBF monitoring framework: Percentage of the population in traditional occupations
Number: 9.2
Target / goal: Target 9
Indicator type: Headline
Status of methodology: Still under development



Land-use change and land tenure

Indicator adopted in the KMGBF monitoring framework: Land-use change and land tenure in the traditional territories of Indigenous Peoples and local communities
Number: 22.1
Target / goal: Target 22
Indicator type: Headline
Status of methodology: More advanced



Participation

Indicator adopted in the KMGBF monitoring framework: Participation of Indigenous Peoples and local communities in decision-making related to the implementation of the Convention at all levels
Number: 21.CT.2
Target / goal: Targets 21 and 22
Indicator type: Component
Status of methodology: Still under development

Table 2: Inclusion of traditional knowledge indicators in the monitoring framework

Source: Conference of the Parties to the Convention on Biological Diversity, 2025, CBD/COP/DEC/16/31

The TKIs are important not only because they help recognise the contributions of IPs and LCs to biodiversity conservation and sustainable use, but because the issues they monitor are central to their self-determination, cultural continuity, livelihoods and collective rights. Each indicator is important and, together, they reflect conditions that are foundational to the lives and livelihoods of IPs and LCs. At the same time, they are also a practical monitoring tool that can support Parties, policymakers and others in assessing whether biodiversity actions are effectively supporting the rights and values of IPs and LCs.

More detail on each of the TKIs is spread through this report. See also:

- Box 9 The traditional occupations indicator
- Box 11 Linguistic diversity
- Box 16 Measuring effective participation
- Box 17 Measuring land tenure and land-use change

Although the TKIs have been notionally allocated to specific targets in the monitoring framework, they are in fact cross-cutting in that they are relevant to many of the KMGBF's goals and targets beyond those listed here. For example, the participation indicator is relevant across all goals and targets, while the land indicator is particularly relevant to Goals A and B and to Targets 1, 2, 3 and 10. As the Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) has highlighted, the TKIs are especially important for tracking whether Parties are implementing Section C of the KMGBF, which sets out the broader conditions for implementation, including a human rights-based approach (SCBD, 2024b, CBD/SBSTTA/26/INF/14). More work, capacity building and financial resources are still needed to further develop and implement all four indicators (SCBD, 2024a, CBD/SBSTTA/26/INF/11).

Community-led monitoring using the TKIs

IPs and LCs already play major roles in generating knowledge about their territories and the issues affecting them. Their monitoring may cover social, ecological, cultural, economic or other aspects of importance to them, or a combination of these. Examples include the Indigenous Navigator (Box 2) and the Ogiek community-led initiative combining traditional knowledge and scientific monitoring tools (case study 44).

Community-led monitoring provides valuable information for biodiversity governance and, at the same time, can strengthen the participation of IPs and LCs in biodiversity processes and reinforce their role as custodians of their lands and seas. For more discussion on community-led monitoring, see Chapter 6: Tools and solutions for implementation and mainstreaming the KMGBF.

Box 2

2 The Indigenous Navigator

IPs' monitoring of their rights is a key foundation for establishing sustainable, self-determined interventions to preserve, promote and protect biodiversity and the environment.

The Indigenous Navigator is an example of a community-based monitoring and information system that enables this. The original survey is targeted at monitoring the implementation of the UN Declaration on the Rights of Indigenous Peoples and the Sustainable Development Goals at national and community levels, and includes operational monitoring of the four traditional knowledge indicators.

New surveys on biodiversity, climate change and human rights, and environmental due diligence were added to the framework during 2026. The new biodiversity survey is designed to enable IPs to monitor respect for their rights as well as their contributions related to the KMGBF.

Case study 3 shows how IPs and LCs in Thailand have sought to advance their effective participation and the recognition of their values through documenting their customary sustainable use and customary tenure, reducing conflict and creating an opening to engage with government authorities.



Case study 3

Authors:

- Mr. Noppol Maipluang, Indigenous Media Network
- Karen/Pga K'nyau, Lahu, Akha communities
- Inter Mountain Peoples' Education and Culture in Thailand Association (IMPECT)

Caption: Village head Norrarit Rakkaona taking a tour of the forest conservation area in Ban Haui Chomphu

Credit: Rfu Bracher, Indigenous Media Network

3 Karen, Lahu and Akha people, Thailand

In the mountainous highlands of Thako Subdistrict in Chiang Rai Province, northern Thailand, lands form a complex mosaic of different realities. Spanning 387.5 square kilometres, the area is designated under several protected zones – including national parks and reserved forests – while simultaneously serving as the ancestral home of Indigenous and local communities such as the Karen, Lahu, Akha, and Yunnan Chinese. For generations, these communities have lived, farmed, and maintained cultural sites across this landscape, yet the lack of formal recognition of their land use has long produced uncertainty and conflict.

For example, Indigenous farmers worked under constant fear that their crops would be confiscated or destroyed if authorities deemed their farmland to be within conservation zones. Disputes have arisen not only between communities and state authorities, but also among neighbouring villages and within households, creating tension and undermining community cohesion.

In response, ten Indigenous villages in the Mae Tam watershed initiated a participatory community land-use documentation system. Beginning with dialogue and consensus-building, community members worked together to map their land, walking boundaries, recording local knowledge, and integrating this information with Geographic Information System (GIS) technology. This led to the creation of 4,346 community land-use documentation certificates.

The result was not a legal land title. However, community leaders recognised from the outset that documentation itself carries power, and the certificates have proved highly impactful. They have clarified boundaries, reduced conflicts by an estimated 95%, and strengthened local governance. At the same time, authorities are exploring how to incorporate elements of this process into future local regulations, demonstrating how community-generated data can contribute to formal governance mechanisms.

Supporting community land-use documentation and participatory mapping is about more than reducing disputes. It is about creating the conditions for meaningful co-governance between states and Indigenous communities – in the hope that government agencies will recognise community-based management systems grounded in collective stewardship and collective rights.



Chapter 2
Cross-cutting approaches to implementing the Kunming–Montreal Global Biodiversity Framework

"Indigenous women have limited access to formal decision-making forums and funding mechanisms. The failure to recognise women's knowledge not only leads to inequality, but also results in a significant loss of opportunities to tackle the climate and biodiversity crises. Their practices and knowledge offer concrete solutions based on sustainability, resilience and harmony with nature."

Guna People, Panama [6]

Caption: A member of Mujeres y Ambiente works the farm in La Carbonera, Mexico

Credit: Oscar Maskie

One of the significant advances of the Kunming–Montreal Global Biodiversity Framework (KMGBF) is the explicit integration of cross-cutting implementation approaches that support greater recognition of and respect for the rights, roles and values of Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs). These approaches are set out in Section C in the introductory sections of the KMGBF.

Section C sets out 18 distinct considerations through which the KMGBF as a whole should be *"understood, acted upon, implemented, reported and evaluated."* It includes several principles that have long been part of CBD processes – for example, the recognition of national circumstances and the application of the principles of the Rio Declaration – and others, such as the significant integration of human rights, that reflect key advances achieved by IPs and LCs during the negotiation of the KMGBF.

Many of the 18 considerations were heavily negotiated during the process of adopting the KMGBF. They were ultimately included in Section C precisely because they are understood to be cross-cutting – that is, they were relevant to all of the KMGBF goals and targets. They are, therefore, key elements against which implementation must be assessed.

All 18 considerations are relevant in some ways to IPs and LCs, and all 18 are used throughout this publication as a lens through which the implementation of the KMGBF may be analysed.

Some of the 18 considerations are especially important to IPs and LCs because they address concepts, themes and issues aligned with their human rights, knowledge, values, needs, challenges and aspirations. Several of these – including the whole-of-government and whole-of-society approach, the recognition of different value systems, and the integration of a human rights-based approach – also represent key wins for IPs and LCs in the KMGBF negotiations. This chapter focuses on explaining these key cross-cutting considerations.



Caption: Juostin Antun, a Shuar man, fishes by hand in Maikuaints, Ecuador

Credit: Ian Willms, Panos Pictures

Key cross-cutting considerations in the KMGBF for IPs and LCs

"Ultimately, conservation is not only about protecting forests; it is about sustaining relationships between people, land, and future generations. As one community youth leader reflected, "our elders protected these forests through tradition. Today we continue that responsibility, but we also see that our conservation efforts matter not only for our villages but for the world."

Naga peoples, India 16

The whole-of-government and whole-of society approach

Whole-of-government and whole-of-society approach

This is a framework for all – for the whole of government and the whole of society. Its success requires political will and recognition at the highest level of government and relies on action and cooperation by all levels of government and by all actors of society;

Source: Section C of the KMGBF

The whole-of-government and whole-of-society approach involves recognising IPs and LCs as key and equal collaborators – alongside governments and other societal actors – in the implementation of the KMGBF. It promotes a collaborative, bottom-up and multifaceted approach that makes space for diverse values and approaches, and respects human rights. It empowers IPs and LCs to continue with and strengthen their contributions to realising the vision of the KMGBF.

Case study 4 on the Indigenous-governed Integradora de Comunidades Indígenas y Campesinas de Oaxaca is an example of the vibrant multi-actor collaborations supporting KMGBF implementation which IPs and LCs are already part of. Shifting the paradigm towards a genuinely whole-of-government, whole-of-society approach will not only support existing actions, but will enable the flourishing of new collaborations and actions.

Case study 4

Territory: Tza cua, Gawi, Bexhutni Xia cui

Language: Zapotec

Authors:

- Elizabeth Shapira-Garza, Nicholas School of the Environment at Duke University
- Meredith Martin and Laura Arango, North Caroline State University
- Rosendo Pérez Antonio, Zapotec peoples, Integrator of Indigenous and Campesino Communities of Oaxaca (ICICO)



Caption: Inter-community experience exchange for bird monitoring, between La Trinidad Ixtlán, Capulálpam de Méndez Santa María Jaltianguis and San Miguel Abejones, in La Trinidad Ixtlán's Forest

Credit: ICICO AC, Elizabeth Shapiro-Garza, Nicholas School for the Environment at Duke University, North Carolina State University, La Trinidad Ixtlán

4 Indigenous and Campesino communities – Tza cua, Gawi, Bexhutni Xia cui people, Mexico

The state of Oaxaca, in southeastern Mexico, is a global biodiversity hotspot with high levels of endemism across cloud forests, pineoak forests, and tropical dry forests.

However, these ecosystems face mounting threats from climate change, altered fire regimes, illegal logging, poaching, agricultural expansion, and outmigration. With 76% of land under communal ownership, integrating traditional knowledge through participatory management is essential for conservation. Within the framework of Other Effective Area-based Conservation Measures (OECMs), biocultural conservation offers a vital pathway by combining local stewardship with ecological protection.

The Integrator of Indigenous and Campesino Communities of Oaxaca (ICICO), governed by sixteen Indigenous communities, supports this biocultural approach across more than 69,000 hectares of communally managed lands. ICICO supports Indigenous communities through technical assistance, capacity building in sustainable forestry and carbon offsetting, and facilitates participatory land-use and financial planning to guide collective decisions.

These efforts have led to the designation of community-conserved areas, sustainable management plans, and reforestation using native species. Revenues generated from timber and carbon projects are reinvested into conservation. They have also created employment, particularly for women and youth, while supporting local enterprises such as ecotourism, sawmills, and water bottling.

Crucially, these initiatives strengthen communities' own visions for social and ecological resilience, addressing challenges such as drought, wildfire risk, and limited employment, while reinforcing governance through assemblies and community service.

Building on a 20-year partnership with Duke University, the Researching Oaxaca's Socio-Ecological Systems (ROSES) was formed in 2022, bringing together interdisciplinary researchers to collaborate with communities to co-design studies aligned with Indigenous values and community conservation goals.

This has led to the advancement of diverse conservation initiatives, with communities launching a biocultural corridor project and conducting orchid conservation and tree diversity research in partnership with the ROSES group.

These collaborative efforts support Indigenous leadership and participatory management, thereby enhancing biodiversity conservation, forest resilience, and community well-being across the territories.

Case study 5 illustrates the links between IPs' territorial rights and the protection of biodiversity in Colombia, as well as the potential for, and challenges of, creating greater recognition and links between customary law governance systems and national legal orders for advancing rights-based biodiversity action.



Case study 5

Author: Comisión Nacional de Territorios Indígenas (CNTI)

Caption: View of the Sierra Nevada mountains of Gonawindua

Credit: Comisión Nacional de Territorios Indígenas (CNTI)

5 The National Commission of Indigenous Territories (CNTI), Colombia

One of the most emblematic examples of Indigenous territorial defence in Colombia is that of the Línea Negra, an ancestral territory formed and demarcated by the sacred sites of the four Indigenous Peoples – the Arhuaco, Kogui, Kankuamo and Wiwa – who inhabit the Sierra Nevada de Gonawindua.

This ancestral territory, covering approximately 1.7 million hectares and legally recognised since 1973, is the only one of its kind under Colombian law. It brings together terrestrial, coastal and marine ecosystems, Indigenous reserves, protected areas and cities, which highlights its immense cultural, spiritual, environmental and economic value, not only for the Indigenous Peoples who inhabit it, but also for Colombia and the world.

The diversity of stakeholders present within the Línea Negra requires coordination between Indigenous authorities and state bodies, including local councils, provincial governments and national agencies such as the Ministry of the Environment. For example, Indigenous authorities have succeeded in restricting tourism in Tayrona National Natural Park during certain periods so that the beings of nature can renew their energy in accordance with the ecological and cultural calendar of the four peoples.

As a result of decades of struggle and leadership by Indigenous Peoples and organisations, Decree 1500 was issued in 2008, identifying 348 sacred sites, guaranteeing the four peoples' access to them and involvement in decision-making that might affect their lives or their territory. Unfortunately, this decree was annulled in February 2026 on the grounds of procedural flaws. However, in May 2026 we secured the issuance of Decree 514, which re-establishes the recognition of ancestral territory and strengthens these safeguards.

In 1996, the National Commission on Indigenous Territories (CNTI) was established as a forum for dialogue and consultation between Indigenous Peoples and the Colombian State, with a view to monitoring and protecting Indigenous territorial rights. In response to the government's failure to guarantee access to information regarding Indigenous Peoples and their territories, we have developed four proprietary information systems – SIMA, SIG-I, SIMOSOF and SIVOSPI – which enable us to monitor both the status of territorial rights and the agreements signed with the National Government.

Using these systems, we constantly monitor Indigenous territories, identify their characteristics and document human rights violations. We also identify administrative delays and demand territorial protection against threats such as extractive projects or overlaps with other land-use designations and conservation areas. In 2023, following a report on these violations, we agreed with the Government on an inter-institutional roadmap to expand, regularise and restore territories. One of the most significant achievements of this roadmap was the expansion of the Kogui-Malayo-Arhuaco Reserve in 2025.

The CNTI and its member indigenous organisations continue to work to ensure the comprehensive protection of the ancestral territory of the Línea Negra. At the same time, we champion this case as a key benchmark for the recognition, identification and protection of the ancestral territories of Indigenous Peoples throughout the country.

The different value systems approach

Source: Section C of the KMGBF

Different value systems

Nature embodies different concepts for different people, including biodiversity, ecosystems, Mother Earth, and systems of life. Nature's contributions to people also embody different concepts, such as ecosystem goods and services and nature's gifts. Both nature and nature's contributions to people are vital for human existence and good quality of life, including human well-being, living in harmony with nature, and living well in balance and harmony with Mother Earth. The Framework recognizes and considers these diverse value systems and concepts, including, for those countries that recognize them, rights of nature and rights of Mother Earth, as being an integral part of its successful implementation.

Recognising and integrating diverse value systems is critical for implementation of the KMGBF. As the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) values assessment recognised, *"the causes of the global biodiversity crisis and the opportunities to address them are tightly linked to the ways in which nature is valued in political and economic decision-making at all levels,"* and policymaking approaches have often ignored the values of IPs and LCs (IPBES, 2022; Zinngrebe, 2023).

Many governments often give more weight to economic objectives than to biodiversity, human health and social goals (Lencucha, Kulenova and Thow, 2023; Sele and Mukundi, 2024). Biodiversity decision-making also still tends to privilege forms of knowledge and valuation that fit state planning systems, markets and scientific assessments (Carmona, Wong-Pérez and Nisi, 2026).

Case study 6 shows how, in Panama, the Guna people's relationship with the sea shapes their approach to marine governance. For the Guna, the sea is a 'living territory' connected to food, spirituality, collective identity and community organisation. This understanding informs how they care for marine ecosystems, how they transmit knowledge and how they develop protection measures.



Case study 6

Territory: Dad Naggue Dubbir, Gunayala

Language: Guna

Author: Florina Lopez Miro, Guna people, Red de Mujeres Indígenas sobre Biodiversidad de América Latina y el Caribe (RMIB-LAC)

Caption: A Guna woman peels plantains in her kitchen

Credit: Eddie Gerald

6 Guna people, Panama

The Guna people of Dad Naggue Dubbir, located in the Gunayala region of Panama, maintain an ancestral and intrinsic relationship with the sea, which they view not merely as a physical space, but as a living territory that sustains their food, spirituality, collective identity and community organisation. This relationship is based on their own systems of knowledge and governance built up over generations, grounded in respect for natural cycles, customary norms and collective decision-making.

In the Guna worldview, the sea (*Muu Billi*) forms an integral part of Mother Earth, and caring for it is guided by principles of balance, reciprocity and complementarity. These principles are embedded in and passed down through stories, tales and traditional lullabies, and are transmitted from generation to generation.

The Gunayala region faces many pressures, including from tourism, overfishing, plastic waste and unsustainable development. In response, a group of Guna women participated in a community-led process to systematise traditional knowledge as part of a project to recover and revitalise the Guna people's own systems for the protection of marine ecosystems, with an intergenerational and gender-sensitive approach.

This process was developed using Indigenous methodologies, creating spaces of trust, talking circles and intergenerational dialogues, in which grandmothers, wise elders, fishermen, young people, girls and boys participated. These spaces enabled the reconstruction of historical and collective memory regarding the significance of the sea, the traditional uses of species, the changes observed in ecosystems and the community norms for their care.

During these dialogues, the deep interconnection between marine ecosystems and other elements of nature became evident. Many marine species share names with terrestrial animals and plants, reflecting the interdependence of all living beings in our worldview. Our grandparents taught us that there are sacred sites that we must not disturb, as spirits live there who look after and protect us, but also react to any threat that destroys their habitat. In response, the women rediscovered knowledge of *'galus'* or *'birias'* – areas of great spiritual and ecological value – whose purpose is to protect the corals and reefs.

In Guna

Dad Naggue Dubir dule negwebur, Gunayala Banamayalagi. Danigudo muubillibogwa igar anna nigga sedanimardo, belagwa dagsurmardo demar binsa nabir nayob, Dagmala dulemar anmar aguedi, anmarga mas dagsi, negwebur ganiggid agala anmarga muubilli burbanigagwa. Demar agued dadagan nagan obesnade, demar sed, diwie dadgaed wisid, anmar saglamar namagardaed abali anna bulagwa onmaggedneggi igarmasi.

Nana baba igargine, muubillide nabgwanabogwa bassisuli, bela anna iddagbugwa, anna mussumussu iddage neg nuedi seega. Anmar igar mesismalad iggi muu agwelogoe. Anmarga obelenasddo, nanga wagdardad nosale burwigan ounae, saglamar namaggedba, nangan gasgi goe namaggedgine, dadgan muddigba wagganga gasgi ebbene neggusmalad inmardurgangi wilesmalad sunmagmadaed.

Gunayalagine bonigan daglesurmaladi dagleardo, eneganba negdagmaladad abbor negsabisado, saggi dumagan iagar sadde mied, blasddicomar laddamar milemaid we anmar daed suli, bar anmarga sergan obesad sasulibardo. We bonigan nosabbali, omega danagwen binsarmardo mer yoguegala anmar sergan igar obesmalad demar igi agwelege ganar igar nue mesergebe, narmagergebe igar mamai mer yogwega, neggweburmar ogannoemalaga, bela nue inmardurgan demar bugwad sabgubugwa mimigan danigoedga, massergan omeganga asig anmar addagoe.

Wegi egi arbalesa bag nan anmarga sogsad obesadba imaglesa, igi omaggeneggi sugmalege, bela anna iddagbugwa burwigana, sabbingana. Bela muugan, muugan igar wismala, uasolamad. We iddaglesa anmar ganar nan bab igar mesisad insaega gannar eba daega. Balamiega ibu obare muubilli agwed, igi demargi inmar durgan bugwa igi nue agwelesale ised wisi abelege. Daggegarba ibumar gwagmai galumarnai, igi nuegweburde igar semamoga.

We binsaed dagsamalgi ise dagleardo gunasdulemargala galudumagan nanaid demargi nabbaneggi bela anna idagbugdo mussumussu. Demargi inmar durgan e nugmala emala sabbimarbo geb inmardulaganbo we oyodo nabba sogwenad. Sergan anmarga odurdasnade galu dumagan mele ese warmagmalo, agine burba nueganbugwa anmarbin nagwelebugwa deggine be nue agwemarsullile sun neg uweleged nague. Omegan, igarmar yoggusmalad amismalad, muubilli agued, bia galu biriamar nanaid wemar burba niggad neg ganigid, nagwelebugwa mer bonigan uboega agwar billi dummagangi nanai.

A defining strength of the knowledge systems of IPs and LCs lies in their integration of ecological knowledge with their cultural values, spirituality, governance, language and collective responsibilities (Clapcott et al., 2018; Anbleyth-Evans et al., 2023). For example, across coastal societies, specialised marine lexicons, oral traditions, and cultural classifications reflect generations of ecological knowledge, customary law, ethical obligations, and stewardship practices. These linguistic systems not only name and classify species or ecosystems, but also transmit environmental knowledge, social norms and territorial identity across generations (Kurien, 1998; Abbas and Kaharuddin, 2022).

The human rights-based approach

Source: Section C of the KMGBF

Human rights-based approach

The implementation of the Framework should follow a human rights-based approach, respecting, protecting, promoting and fulfilling human rights. The Framework acknowledges the human right to a clean, healthy and sustainable environment;

Contributions and rights of indigenous peoples and local communities

The Framework acknowledges the important roles and contributions of indigenous peoples and local communities as custodians of biodiversity and as partners in its conservation, restoration and sustainable use. The Framework's implementation must ensure that the rights, knowledge, including traditional knowledge associated with biodiversity, innovations, worldviews, values and practices of indigenous peoples and local communities are respected, and documented and preserved with their free, prior and informed consent, including through their full and effective participation in decision-making, in accordance with relevant national legislation, international instruments, including the United Nations Declaration on the Rights of Indigenous Peoples, and human rights law. In this regard, nothing in this framework may be construed as diminishing or extinguishing the rights that indigenous peoples currently have or may acquire in the future;

Gender

Successful implementation of the Framework will depend on ensuring gender equality and empowerment of women and girls, and on reducing inequalities;

Intergenerational equity

The implementation of the Framework should be guided by the principle of intergenerational equity which aims to meet the needs of the present without compromising the ability of future generations to meet their own needs and to ensure meaningful participation of younger generations in decision-making processes at all levels

The integration of human rights was a key advance in the negotiation of the KMGBF. Multiple considerations in Section C of the framework relate to human rights, including the general requirement for a human rights-based approach and specific requirements in relation to the rights of IPs and LCs, gender and intergenerational equity.

A human rights-based approach requires ensuring that biodiversity action respects, protects and fulfils international human rights law. International human rights law includes all the main human rights treaties, instruments and jurisprudence, including the UN Declaration on the Rights of Indigenous Peoples; the right to a clean, healthy and sustainable environment; and the right to development. Rights must be respected both in processes – that is, *how* things are done – and in outcomes – that is, what the *results* are for different

individuals and groups (Office of the United Nations High Commissioner for Human Rights, A/HRC/61/36, 2026).

States are the primary duty-bearers under international human rights law and have the obligation to respect, protect, promote and fulfil the human rights of all people, including all collective rights of IPs and LCs. Some non-state actors – such as businesses and, in some circumstances, conservation organisations and funders (Newing et al., 2024; United Nations Environment Programme, 2024) – also have responsibilities to respect human rights; that is, they must refrain from causing or contributing to harm to people.

In practice, this requires integrating international human rights law into states' planning and implementation of the KMGBF. Examples of this are:

- Ensuring genuine participation from citizens, including IPs and LCs, women and youth, in decision-making
- Welcoming and integrating diverse values in decision-making
- Devolving decision-making to IPs and LCs (see Different value systems above, the Ecosystem approach described below, and Effective participation and gender justice in Chapter 7)
- Centring human rights outcomes in policy design and execution
- Building in effective accountability frameworks
- Taking proactive measures to counter discrimination and inequality.

Case study 7

Territory: Galiza

Language: Galego

Author: Joám Evans Pim, local community representative, Fundación Montescola

Caption: Carballeira do Ghandarón forest in Rois

Credit: Montescola



7 Local communities, Spain

Galicia, in north-western Spain, is home to one of Europe's largest systems of collectively governed lands. Around 700,000 hectares – about 22% of the region – are managed by approximately 115,000 commoner households through the institution of Montes Veciñais en Man Común (Community Common Lands). These territories host a significant share of the region's remaining biodiversity, traditional cultural landscapes and European Union priority habitats.

Despite their importance, these community-governed lands have long remained largely invisible in conventional conservation policies. Historically, European biodiversity conservation has been dominated by state-led protected areas, while local communities were often perceived as threats to nature rather than as custodians of it. Yet in Galicia, many valuable ecosystems have endured precisely because of long-standing community management, local ecological knowledge, and collective governance.

The Galician Network of Community Conserved Areas, formally established in 2024, was created to connect and give visibility to communities actively managing their lands for conservation and restoration. Emerging from an informal group formed in 2018, the Network now includes around 100 communities managing over 40,000 hectares. These lands encompass diverse ecosystems, from Atlantic forests and wetlands to mountain pastures and coastal habitats.

A key activity of the Network is its programme of peer-to-peer exchange visits, where communities share experiences, observe practices, and collaborate on challenges such as restoration, wildfire prevention, and governance. These exchanges foster social learning, innovation, and participation, including that of women and younger generations.

A major milestone was the publication of the Atlas of Community Conserved Areas, the first effort to systematically document these initiatives. Developed collaboratively with community members, the Atlas presents over thirty case studies and reflects the principle that communities are not only custodians but also producers of knowledge.

The Network is part of a growing global movement of community conservation, contributing to international recognition of Territories of Life (ICCAs). The Galician Network demonstrates that community conservation can also thrive in densely inhabited and highly modified European landscapes where collective governance remains active.

Respecting human rights means that states and other actors need to shift from their current approaches. In relation to IPs and LCs, for example, it will require centring IP-led and LC-led approaches in the protection and sustainable use of biodiversity, and recognising their contributions in national implementation strategies.

It also means addressing:

- Structural and systemic issues connected to KMGBF implementation, such as the ongoing violations of human rights associated with top-down approaches to conservation (see Chapter 3: Parties' reporting on implementation to date)
- The continued lack of recognition of tenure rights over lands and seas (see Box 4)
- The criminalisation of customary sustainable use (see Chapter 4: Reducing threats to biodiversity)
- Structural economic factors that continue to incentivise extractive activities that harm both nature and people (see Chapter 5: Meeting people's needs through sustainable use and benefit-sharing).

It also means integrating gender equality and intergenerational equity into decision-making, including through an intersectional lens. Gender is an important and complex dimension, as is strongly apparent from case study 8. Gender considerations in relation to Target 23 (Ensure gender equality and a gender-responsive approach for biodiversity action) are explored in more detail in Chapter 7: Effective participation and gender justice.

Case study 8

Territory: Sápmi

Language: North Sámi

Author: Anne Wuolab, Sámi people

Caption: Álddut, the reindeer cows that determine the herd. Frostisen reindeer grazing area, Sápmi (Norway)

Credit: Anne Wuolab



8 Sámi people, Sweden

A solitary reindeer bull with imposing antlers is often used as a shorthand for Sámi culture, as it is seen as a proud, powerful and majestic animal. To reindeer herders, however, reindeer bulls play a minor and often subordinate role within an actual reindeer herd.

The most important herd, the *áldoeallu*, is made up of reindeer cows, *njiŋŋelasat*, who function as leaders and organisers of the herd. While the *luovohasat*, the bulls, play an important and integral part in terms of reproduction and herd survival, they are insignificant at best when it comes to establishing herd unity in a way that supports the herd as whole.

In short, a reindeer herd teaches us that diversity is fundamental, while highlighting a crucial key lesson: a variety of roles, uses, needs, and power positions is not necessarily to be understood as a succession of gendered dichotomies but rather as a form of gendered complementarity.

As a reindeer herder and Sámi woman, I do not automatically draw a straight line between natural strength and masculinity, as my work with the reindeer herd is grounded in an alternative understanding of who is strong and how that strength best serves the collective. This perspective forms the foundation for feminism in Sápmi, which has an active focus on collective rights that benefit the entire community over individual gender-specific rights.

I choose to position myself within the reindeer herd, using it as a framework to address the field of Indigenous feminism. State-led regulations such as the *sameby* implicitly tell Sámi reindeer herders that they can only follow a system created by a majority society, even if this makes it very difficult for them to live sustainably from their herds.

Applying this to feminism in Sápmi seems apt. Although it is grounded in the Sámi collective worldview, where the right to live from the land is inseparable to the right to be a woman, it has also been influenced and shaped by the imposition of, and resistance to, colonial systems imposing external structures.

I once read that colonisation manifests as an inherently masculine phenomenon, and there may be truth to this. By revealing colonisation to be a heteropatriarchal structure (Kuokkanen, 2019) while connecting it to capitalism as a system, a solitary power structure becomes visible (Knobblock, 2022). What I mean by solitary in this context is a system that is neither collective nor grounded in solidarity – in direct contrast with both Sámi reindeer herding and Sámi feminism.

Intergenerational equity is also a key consideration. Many IPs and LCs, for example, prioritise engagement of youth, since fractures in the intergenerational transmission of knowledge and culture are linked with cultural integrity (Carroll et al., 2025). Case study 9 from South Africa explores how youth exodus has effects on cultural and biological diversity, and is a critical part of relation to cultural and territorial revitalisation.



Case study 9

Territory: Amabida

Language: isiMpondo

Authors:

- Mallika Sardeshpande
- Sustaining the Wild Coast (Mazibuy'emasisweni)

Caption: amaMpondo men preparing for a cultural celebration against the backdrop of a river mouth and the grassland-forest landscape mosaic

Credit: Travis Bailey

9 amaMpondo people, South Africa

Amadiba, on South Africa's Wild Coast on the Eastern Cape, is a land of natural beauty, a land of its Indigenous amaMpondo people, and a place of importance for conservation. Many plant and animal species naturally occur only in this area because of its unique location and bioclimatic conditions.

It is also one of the few places in South Africa where the local Indigenous People have remained on their land and retained their way of life and livelihoods. The amaMpondo people continue to grow their traditional crops seasonally, graze their livestock on communally owned land, and live in small homesteads across a grassland-forest mosaic.

However, this peaceful coexistence of people with nature is being tested. The community continues to protest mining, oil drilling and super-highway construction projects, as well as government and private capitalist interests. Not all threats are outside forces either. The land in Amadiba is seeing significant degradation due to the compounded effects of abandonment; as more youth leave for urban centres, fewer people tend the pastures, leading to water and wind erosion and the encroachment of invasive species.

"While we resist what we don't want, we also need to look at what we do want as a community, what we see as sustainable development."

Siyabonga Ndovela, community youth leader

In response, the community has developed key partnerships with South African NGOs and international environment programmes to co-design and develop initiatives on ecotourism, capacity building and agroforestry to protect their lands. As part of the agroforestry initiative, the community planted 2,700 local indigenous species in their villages, providing food, medicine, and ecological benefits such as soil stabilisation and carbon sequestration. The community now has full ownership of this agroforestry initiative and continues to monitor plant growth, which is contributing to valuable ecological data.

This agroforestry project has reinforced the transfer of Indigenous knowledge from elders to youth, strengthened food sovereignty, and is a prime example of community forestry and locally developed sustainable agriculture.



Caption: Totem pole and decorated wooden house at the Ksan Historical Village, a Gitxsan First Nation site in Hazelton, Canada

Credit: John Zada

The ecosystem approach

Source: Section C of the KMGBF

Ecosystem approach

This Framework is to be implemented based on the ecosystem approach of the Convention

The ecosystem approach (Convention on Biological Diversity (CBD), 2000; CBD, 2004) includes important principles for IPs and LCs, in particular:

- Recognising that people are part of nature
- Decentralising management to the lowest possible level of decision-making
- Incorporating traditional knowledge
- Involving IPs and LCs in decision-making in ways that recognise and compensate for power inequities.

It is therefore closely related to other cross-cutting approaches mentioned above that recognise and consider different value systems and integrate human rights.

Case study 10 explores how a shift to more locally led, collaborative approaches to conservation, based on customary governance and localised decision-making, is reaping benefits for people and nature in Nepal.



Case study 10

Territory: Bardiya, Kanchanpur, Kailali

Language: Tharu

Authors:

- Biswash Chepang, Chepang people, CIPRED
- Mankesh Gupta, CIPRED
- Pasang Dolma Sherpa, Sherpa people, CIPRED

Caption: Customary governance leaders of the Tharu Community (Bhalnansa) meeting in Laljhadi Rural Municipality of Kanchanpur district, Nepal

Credit: CIPRED

10 Tsumba and Tharu people, Nepal

For generations, Indigenous Peoples have managed their natural resources through customary governance systems which are deeply rooted in the traditional knowledge, values, and social norms of their ancestors. These self-governance systems have contributed to the sustainable management of ecosystems and biodiversity while also maintaining collective solidarity and self-determination practices.

Although government-led initiatives have long dominated formal conservation action, there is a growing recognition that community-driven systems are essential to achieve the milestones of the Kunming–Montreal Global Biodiversity Framework.

In Nepal, the *Shyagya* tradition of the Tsumba people in Tsum valley proves that local traditions can protect nature better than state laws. The *Shyagya* system is rooted in Buddhist principles of non-violence, and restricts killing any living beings, including activities like hunting, fishing, forest fires and honey extraction. The people believe that this builds a reservoir of positive karma that shields their valley from misfortune and brings about lasting peace and prosperity.

"Today, the Shyagya stands as a global model, showing that when a community treats nature with respect and non-violence, both people and wildlife can flourish together."

Nima Lama, Chairperson, Tsum Nubri Rural Municipality

The *Shyagya* tradition was legally recognised in 2023 after continued effort from Indigenous Peoples' organisations and NGOs.

Similarly, the *Barghar* system of the Tharu community in Nepal's Tarai region represents a traditional governance structure that integrates leadership, community decision-making, and sustainable resource management. *Barghars* (local leaders) oversee forest use, prevent over-exploitation, resolve disputes and maintain cultural practices, supporting both environmental stewardship and community cohesion. Despite formal recognition by several municipalities, *Barghars* remain almost completely unrecognised by authorities of forest regimes, national parks or conservation areas.

Overall, the *Shyagya* and *Barghar* systems demonstrate that conservation is most successful when grounded in Indigenous knowledge and practices. Strengthening legal recognition, promoting co-management, and empowering communities are essential to advancing sustainable and inclusive biodiversity governance.

The CBD and challenges facing global governance

"Indigenous Peoples' knowledge, innovations, practices and Indigenous science are frequently overlooked or undervalued in formal conservation, education and development planning."

Kirat people, Nepal [12]

The challenges in implementing the KMGBF cannot be viewed in isolation from the broader challenges facing global governance at this moment in history. A 2025 report from the International Institute for Democracy and Ecosystem Assistance (International IDEA) recorded the ninth consecutive year of decline in democracy across the globe, alongside broad declines in the categories of rights, rule of law and representation (International IDEA, 2025). These findings are echoed by other well-established organisations monitoring democracy and the rule of law (Nord et al., 2026; World Justice Project, 2025).

These trends affect both long-standing autocracies and well-established democracies, suggesting a structural phenomenon linked to the crisis of legitimacy of liberal institutions, economic inequality, political polarisation, and the digital capture of public space (see, for example, Berg-Schlosser, 2026; Chancel et al., 2026; Boxell et al., 2024). They are equally reflected in recent developments such as the withdrawal of states from a variety of multilateral treaties. There have been concerns about a growing risk of a crisis of multilateralism, which, if it develops, could pose a threat to the CBD and other multilateral environmental, development and human rights agreements (Thool, 2023).

Box 3

3 IPs and LCs and the High Seas Treaty

IPs and LCs who directly use areas of the high seas or depend on migratory species may be affected by governance of the high seas because of transboundary marine ecosystems, and ecological connections between coastal waters and the high seas (Rardon, 2022; International Indian Treaty Council, 2025; Hyolmo, 2025; United Nations, 2026).

The Agreement on Biodiversity Beyond National Jurisdiction, commonly known as the High Seas Treaty, was adopted in 2023 and entered into force in January 2026, after nearly two decades of negotiations. It is considered a significant advance in multilateral governance of the high seas.

The agreement brings some important advances for IPs and LCs. It recognises the value of traditional knowledge in environmental impact assessments, area-based management tools, and marine biodiversity conservation (Soto, 2023). It also establishes provisions for fair and equitable benefit-sharing from marine genetic resources and acknowledges rights reflected in the UN Declaration on the Rights of Indigenous Peoples. There is a current proposal to establish an advisory mechanism on IPs and LCs and traditional knowledge, and dedicate funding to support IP and LC participation, which would further strengthen these advances (Pacific Small Island Developing States, 2025).

While there are still some signs of progress through multilateral approaches, including for IPs and LCs – for example, the signing of the high seas treaty (see Box 3) – it cannot be ignored that the CBD, and many other multilateral environmental agreements, have a poor record of living up to their commitments. Most of the Aichi Targets (the 20 targets in the *Strategic Plan for Biodiversity 2011–2020*) were not met (Secretariat of the Convention on Biological Diversity (SCBD), 2020; FPP et al., 2016; FPP et al., 2020; Maney et al., 2024). The draft global report on collective progress towards implementation of the KMGBF shows that, globally, the world is not on track to meet the 2030 targets (SCBD, 2026).

More than ever, the ability of Parties to genuinely deliver on their commitments is a key test of whether the multilateral approach can work to bring about the real change needed to deliver a just and sustainable world living in harmony with nature. Significant challenges must be overcome. A report on the challenges for IPs due to the crisis of the UN human rights system identified:

"*... the central paradox of multilateralism in 2026: there is consensus on the need for reform, but the actors with the power to implement it are precisely those who benefit from the dysfunctional status quo and systematically block any significant structural change. (Urrejola, 2026).*"

This is a central challenge for the KMGBF, for IPs, LCs, women and girls, children and youth, persons with disabilities, environmental human rights defenders, and for all people globally who want transformative change for a just and sustainable world where people live in harmony with and as part of nature.



Caption: A ritual in the Ngaremara community, Kenya

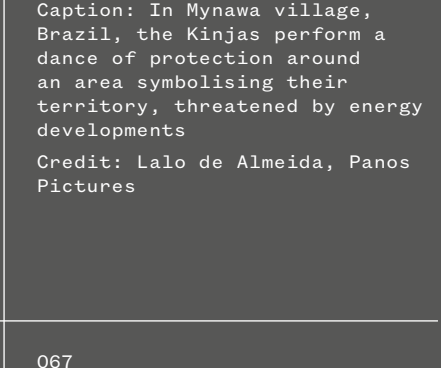
Credit: Nomad Footprints



Chapter 3
Parties' implementation to date

"Changes cannot be unilateral. They require mediated and facilitated relational work for all parties involved to understand the intricate layers of the issues at hand, to learn to see the situations from the others' perspectives, and to nourish relational qualities such as trust, care, and respect."

ǂAonin People, Namibia [36]



Caption: In Mynawa village, Brazil, the Kinjas perform a dance of protection around an area symbolising their territory, threatened by energy developments

Credit: Lalo de Almeida, Panos Pictures

The process for monitoring implementation

Each Party's implementation of the Kunming–Montreal Global Biodiversity Framework (KMGBF) is based on, first, revising and updating their national plans – called national biodiversity strategic action plans (NBSAPs) – and then submitting periodic reports setting out their progress in implementing their NBSAP. National reports on progress are based on a template provided by the Convention on Biological Diversity (CBD).

The CBD Conference of the Parties (COP) is responsible for overseeing progress towards the goals and targets. As part of this process, the Secretariat of the Convention on Biological Diversity (SCBD) reviews and synthesises all the NBSAPs and national reports to provide a global picture of progress. Non-state actors may contribute to this process, in particular through the CBD Online Reporting Tool.

The global progress report, and any further inputs by Parties, will be discussed and reviewed by Parties during COP17 in Armenia in October.



Caption: Mounting a camera trap near Lolwoot cave, an area rich in salt licks and frequented by elephants, Kenya

Credit: CIPDP

Assessment of national planning and reporting to date

"[Indigenous information] systems play a vital role in highlighting the ecological and environmental significance, the territorial significance, the threats faced by these Indigenous Peoples in relation to their territories and, of course, the opportunities and challenges facing these territories."

Comisión Nacional de Territorios Indígenas, Colombia 5

The SCBD has published various analyses of NBSAPs, which set the ambitions for implementation, as well as the progress in achieving these ambitions, as reported by Parties in their seventh national reports, which were due in February 2026 (although not all have been submitted).

At the time of finalising this publication, the Secretariat's draft report on collective progress has been shared for public comment. The draft, along with previous analysis by the Secretariat, shows serious deficiencies in the implementation of the KMGBF, and in particular the integration of the key Section C considerations outlined in Chapter 2: Cross-cutting approaches to implementing the Kunming–Montreal Global Biodiversity Framework.

Developing and revising national biodiversity strategies and action plans

Parties agreed to the full, equitable and inclusive participation of Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs) in biodiversity decision-making (CBD, 2022a, CBD/COP/DEC/15/6), including in the updating/revision of their NBSAPs. However, this is not happening in practice. The SCBD's analysis of 51 (of 196) revised NBSAPs submitted by end May 2025 showed that only 25% (13 Parties) reported engaging with IPs and LCs; and only 14 Parties reported engaging with youth (SCBD, 2026a, CBD/SBI/6/INF/5). Indeed, the reported level of engagement by IPs and LCs in developing NBSAPs is languishing at levels similar to those seen at COP10 in 2010 (SCBD, 2026a, CBD/SBI/6/INF/5 para 32). This analysis echoes the findings of other research (SCBD, 2024a; Weber et al., 2026).

As for gender, while many Parties reference gender in their NBSAPs, only around 25% report engaging women in their development (SCBD, 2026b, SBSTTA/28/2/Add.1), and only a small proportion of national targets address women's participation, their rights to land and resources, and women's leadership (NBSAP Accelerator Partnership, 2026). Analysis conducted in 2023 of 27 NBSAPs showed that the rights and knowledge of Indigenous women and women from local communities were largely absent (Forest Declaration Assessment, 2023), while more recent analysis (2026) found that while gender is often mentioned it is generally not reflected in implementation, leadership or resourcing structures (NBSAP Accelerator Partnership, 2026).

Looking beyond consultation and engagement, fewer than 10 Parties reported the involvement of (a) IPs and LCs, (b) women or (c) youth in the committee which developed the NBSAP. At the same time, nearly 50 Parties identified

IPs and LCs as key actors for implementing their NBSAP (SCBD, 2026a, CBD/SBI/6/INF/5). The discrepancy shows a worrying trend of devolving responsibility for implementation to IPs and LCs, including women and youth, without either consulting with them or enabling them to be a genuine part of decision-making.

Overall, the evidence suggests that many processes to develop NBSAPs have included very little participation by IPs and LCs, and, where there has been participation, national processes have continued to treat it as mere consultation rather than as the basis for shared agency and leadership (Buschman, 2022; NBSAP Accelerator Partnership, 2026).

Beyond participation in the development of NBSAPs, analysis of Parties' NBSAPs, national targets and reports suggests that Parties have generally addressed elements of the KMGBF related to biodiversity conservation and sustainable use more than those related to broader socio-economic issues, such as participation and means of implementation (SCBD, 2024b, CBD/SBI/6/4, para. 13).

IPs' own research and analysis highlight similar concerns. In 2026, the Asia Indigenous Peoples Pact (AIPP) published a policy brief summarising the results of a study examining IPs' engagement in NBSAP revision processes across 15 Asian countries (AIPP, 2026), with the following key findings:

- NBSAPs show increased recognition of Indigenous Peoples, but decision-making power remains limited
- Indigenous Peoples appear more frequently in NBSAPs and consultation processes, yet are rarely positioned as partners with defined roles, decision-making authority, or access to adequate resources
- Participation models constrain inclusion and effectiveness: Barriers related to language, location, timing, and format continue to limit the meaningful participation of Indigenous Peoples, especially women, youth, elders, and persons with disabilities, reducing the quality and representativeness of voices in biodiversity planning
- Gaps in rights implementation weaken KMGBF delivery: Insufficient recognition and operationalisation of Indigenous Peoples' rights, including land rights, undermine effective implementation, monitoring, and accountability under the KMGBF
- Indigenous-led initiatives can strengthen implementation outcomes: Indigenous-led initiatives align closely with KMGBF principles and improve conservation planning, but require formal recognition, power-sharing arrangements, and direct financing to be sustained and scaled (AIPP, 2026).

Similar concerns have been raised by IPs and LCs from countries in other regions.

National progress reports

Reporting on Section C

Section C in the introductory sections of the KMGBF sets out cross-cutting implementation approaches and considerations to support greater recognition of and respect for the rights, roles and values of IPs and LCs.

As Section C is fundamentally about how the KMGBF is implemented, effective reporting must include descriptions of how Parties are taking action with reference to these considerations. Given these are transformational objectives, Parties should expressly show how they are changing their approaches to respond effectively to these new commitments.

Section C has been very poorly reported on as part of the global review process. In fact, the national reporting template agreed by the COP is a tick-box exercise that provides limited space for effective reporting on Section C (CBD, 2022a CBD/COP/DEC/15/6; CBD, 2022b, Annex II). On the whole, national reports provide little insight into any changes in approach made by Parties based on Section C considerations. The draft global report from the Secretariat of the Convention on Biological Diversity (SCBD) states that "*Information on how Parties are addressing Section C of the Framework remains limited and inconsistent, making it difficult to assess progress on critical enabling conditions such as stakeholder engagement, human-rights-based approaches, traditional knowledge, gender and intergenerational equity, and policy coherence*" (SCBD, 2026b, SBSTTA/28/2/Add.1, p. 301). This lack of visibility limits both the sharing of good practices and lessons, and accountability for lack of implementation.

Reporting on the traditional knowledge indicators

The four traditional knowledge indicators (TKIs) are designed to track issues of fundamental importance to IPs and LCs – their languages, traditional occupations, lands and territories, and participation in decision-making (see Table 2).

Though they are better integrated into the KMGBF monitoring framework than they were in previous CBD strategic frameworks, this does not necessarily mean Parties use them in reporting. The TKIs were not used sufficiently by Parties in reporting on the Strategic Plan for Biodiversity 2011–2020 (FPP et al., 2016; FPP et al., 2020), and this remains the case under the KMGBF so far. In Parties' seventh national reports, uptake has been limited, even for the mandatory headline indicators (see Table 3).

Traditional occupations	19% of Parties have reported on the indicator (SCBD, 2026b, SBSTTA/28/2/Add.1).
Land use change and land tenure	Of the 26 headline indicators included in the monitoring framework, Indicator 22.1 has been the least used, with only 7% of Parties reporting on it (SCBD, 2026b, SBSTTA/28/2/Add.1).

Table 3: Uptake of headline TKIs in Parties' seventh national reports

Note: The above information reflects the analysis by the SCBD of the 129 national reports available up to 9 March 2026.

In addition, only 19% of Parties submitted data for headline indicator 9.2 on traditional occupations (see Box 9), and several Parties noted difficulties in identifying traditional occupations because they are highly location-specific (SCBD, 2026b, SBSTTA/28/2/Add.1). More than 10% of Parties stated that the indicator was not relevant to their national circumstances (SCBD, 2026b, SBSTTA/28/2/Add.1). This suggests that further work is needed to ensure that

Parties understand traditional occupations and have the capacity to monitor them (SCBD, 2026b, SBSTTA/28/2/Add.1).

The SCBD has also noted wider difficulties in assessing collective trends under Target 9 (Manage wild species sustainably to benefit people) because of gaps, variable data and methodological issues (SCBD, 2026b, SBSTTA/28/2/Add.1).

The lack of use of the headline and component TKIs contrasts with the positive self-reporting by Parties using binary indicators. For example, in relation to binary Indicator 22b (related to creating enabling conditions for inclusive and rights-based participation, including of IPs, LCs, women, youth and persons with disabilities), 62% of Parties (of 127 reporting) scored themselves high on progress (SCBD, 2026b, SBSTTA/28/2/Add.1). This contradicts evidence from IPs and LCs (see Chapter 6: Tools and solutions for implementation and mainstreaming the KMGBF), and from the analysis of the NBSAPs set out above.

In part, the lack of use reflects the fact that work to develop and operationalise the TKIs is still ongoing, and none of the four indicators yet has fully developed methodologies. However, there are also significant gaps in political will, capacity and resourcing (Affinito et al., 2025). More resources have been available for monitoring biophysical indicators than indicators relating to rights, participation or knowledge systems, severely impacting the ability to effectively use the TKIs. Many Parties may also require targeted capacity building and technical support to effectively understand and use the TKIs. These barriers need to be addressed if Parties are to make better use of the TKIs in reporting and meaningfully monitor the implementation of the KMGBF.

Reporting on other indicators of importance to IPs and LCs

Beyond the TKIs, several other indicators are of importance to IPs and LCs. Reporting on these to date also reveals weaknesses in Parties' implementation.

For example, evidence from national target-setting suggests that customary sustainable use (see Chapter 4: Reducing threats to biodiversity) remains unevenly recognised in Parties' plans. Despite the apparently positive picture painted by national responses on binary indicator 9.b, where 44% of Parties score themselves highly on their progress, to date only 53% of Parties have national targets related to respecting and protecting customary sustainable use under Target 5 (Ensure sustainable, safe and legal harvesting and trade of wild species), and only 47% have national targets related to protecting and encouraging customary sustainable use under Target 9 (Manage wild species sustainably to benefit people) (SCBD, 2026b, SBSTTA/28/2/Add.1)).

Parties' reporting of progress on access and benefit-sharing are similarly disappointing. Only 127 Parties responded to the questions related to binary indicator 13.b related to measures to ensure fair and equitable sharing of benefits from the use of genetic resources (SCBD, 2026b, SBSTTA/28/2/Add.1). Of these, only 10% of reporting Parties scored highly (4 out of 5) on their progress. A further 74% of Parties scored at a mid-level of progress, with many still in the early stages of development (SCBD, 2026b, SBSTTA/28/2/Add.1). Some Parties identified that their own limited progress in sharing benefits with IPs and LCs is a barrier to the sustainable management and use of wild species (SCBD, 2026b, SBSTTA/28/2/Add.1).

Weaknesses of the global review process

Beyond how Parties have conducted the planning and reporting processes, there are weaknesses in the CBD's global review process. As noted above, the current templates for reporting are insufficient for eliciting sufficient information about Section C, and need to be strengthened to allow proper monitoring of and accountability for these key considerations for implementation.

The process for including non-state actors has also been problematic. The principal avenue for non-state actors' contributions is through the CBD's Online Reporting Tool. The tool has been criticised as being inaccessible to many non-state actor groups because of technological barriers, its lack of user-friendliness, and the perception that organisations must be accredited to submit (United Nations Environment Programme World Conservation Monitoring Centre and FPP, 2026). A range of mechanisms is needed to enable and facilitate the contributions of non-state actors.

More broadly, the process of the global collective review is focused on generating quantitative global targets, but (unlike other international processes, including in human rights mechanisms), there is no systematic assessment of the quality of the reports provided by individual Parties, which could promote better compliance (Koh, Ituarte-Lima and Hahn, 2022).



Caption: Himba women return from collecting water in Epupa, Namibia

Credit: Ben McRae



Chapter 4 Reducing threats to biodiversity

KMGBF Goal A and Targets 1–8

"In the Guna worldview, the sea (Muu Billi) forms an integral part of Mother Earth, and caring for it is guided by principles of balance, reciprocity and complementarity. These principles are embodied and conveyed through stories, tales and traditional lullabies, and are passed down from generation to generation."

Guna people, Panama [6]

Caption: Department of Conservation staff and Ngāi Tahu elders release takahē into Top Mackenzie, Aotearoa New Zealand

Credit: Robin Hammond, Panos Pictures



This chapter explores the critical contributions that Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs) are making to achieving Goal A and Targets 1–8 of the Kunming–Montreal Global Biodiversity Framework (KMGBF), and the challenges they continue to face in doing so.

Goal A: Protect and restore

The integrity, connectivity and resilience of all ecosystems are maintained, enhanced, or restored, substantially increasing the area of natural ecosystems by 2050; Human induced extinction of known threatened species is halted, and, by 2050, the extinction rate and risk of all species are reduced tenfold and the abundance of native wild species is increased to healthy and resilient levels; Th e genetic diversity within populations of wild and domesticated species, is maintained, safeguarding their adaptive potential.

Targets 1–8

Targets 1–8 focus on reducing threats to biodiversity by addressing major drivers of biodiversity loss: habitat destruction, overexploitation, climate change, pollution and invasive alien species (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), 2019).

This chapter is divided into four sections:

- Caring for lands and seas – covering Targets 1–3
- Relationships with other species and other beings – covering Targets 4–6
- Pollution – covering Target 7
- Climate change – covering Target 8.

Caring for lands and seas

"In the Guna worldview, the sea (Muu Billi) forms an integral part of Mother Earth, and caring for it is guided by principles of balance, reciprocity and complementarity. These principles are embodied and conveyed through stories, tales and traditional lullabies, and are passed down from generation to generation."

Guna people, Panama 6

This section explores the roles and rights of IPs and LCs in relation to Target 1 (spatial planning), Target 2 (restoration) and Target 3 (conservation). Their contribution to and experience of these targets is intrinsically related to their relationship with their lands, seas and territories.

The territories of IPs and LCs are critical to reducing the loss of biodiversity. Across the world, these territories shelter a diversity of ecosystems, spanning both land and sea, including the high seas. Globally, their lands* cover *at least* 36% of the mapped terrestrial Key Biodiversity Areas (areas of global biodiversity importance) (World Wide Fund for Nature (WWF) et al., 2021; Oliva et al., 2025).

* This figure is derived from a study which considered terrestrial ecosystems only. It includes waters within terrestrial ecosystems but not marine or ocean areas.

Keeping territories in the hands of IPs and LCs is an effective and cost-effective way to protect biodiversity (Beattie et al., 2023; Benzeev et al., 2025; Teixidor-Toneu et al., 2025; Nikolakis, et al., 2026). More than half of the Key Biodiversity Areas on Indigenous and community territories are outside protected areas (WWF et al., 2021), and there is clear evidence globally that biodiversity decline is slower in the territories of IPs and LCs than elsewhere (IPBES, 2019; Fa et al., 2020; WWF et al., 2021; O'Bryan et al., 2021; Alves-Pinto et al., 2022; Estrada et al., 2022; Food and Agriculture Organization (FAO) and the Fund for the Development of Indigenous Peoples of Latin America and the Caribbean (FILAC), 2021; Sze et al., 2022; Virtanen et al., 2025; Nikolakis et al., 2026). While many studies focus on terrestrial environments, these patterns are evident also in marine contexts: many biologically important marine and coastal ecosystems overlap with territories governed or managed by IPs and LCs (ICCA Consortium, 2021; Stevens et al., 2024).

An important reason why the territories of IPs and LCs contribute to the protection of biodiversity is the relationships IPs and LCs have with their lands, seas and resources (Nikolakis et al., 2026). While these relationships differ between peoples, they are on the whole, relationships of balance, of reciprocity and of care (Natálio et al., 2026). Many IPs and LCs describe this relationship as one of stewardship or belonging, and see their role as one of caring for their places for the benefit of all beings, including future generations (see, for example, Basurto et al., 2023; Tholan et al., 2024).

4 The centrality of rights to lands, seas, territories and resources for IPs and LCs

IPs and LCs sustain, and are sustained by, their lands, seas and territories. Secure tenure supports the continued survival of their cultures, knowledge and identities. This deep interconnection is illustrated by the Māori word *whenua*, which means both 'land' and 'placenta' (Lindsay-Latimer et al., 2024). Many IPs and LCs who have been separated from their traditional territories face challenges in sustaining their ways of life away from the places that nurtured them, with effects that can reverberate through generations (Walls and Whitbeck, 2012). The centrality of land and sea territories to IPs and LCs is reflected in the inclusion of land tenure as one of the four traditional knowledge indicators (see Table 2 and box 17).

Respecting and protecting tenure rights – that is, the rights of IPs and LCs to lands, seas, territories and resources – is at the centre of supporting a rights-respecting, effective approach to the implementation of the KMGBF.

The territorial rights of IPs and LCs may have diverse legal bases in international law, but most often they are based on traditional possession or ownership under customary law. Their territories are usually areas where their peoples and communities have lived for generations, and sometimes millennia. Many IPs and LCs have an intimate relationship with their territories, hold deep local ecological knowledge, and have cultural traditions that enable them to live in balance, as part of nature, on their territories.

Yet, despite their long-standing connection to these territories and the fact that they clearly have a legitimate, priority claim to ownership, governments in all regions of the world, regardless of their wealth, systematically fail to recognise and title – fully or at all – the lands and territories of IPs and LCs.

This problem is widespread, but measuring its scale is not simple. National data on IP and LC tenure is often incomplete and unreliable (FAO, International Land Coalition (ILC) and Centre de coopération internationale en recherche agronomique pour le développement (CIRAD) et al., 2026). Comparing tenure rights across countries with vastly different systems is complex. Many national legal arrangements that claim to protect IP and LC tenure rights fall short – often substantially – of international law requirements. In addition, calculations may not distinguish between IPs and LCs, or may categorise them differently, making them difficult to compare.

Estimates of the total area of the Earth's surface under de facto IP and LC governance range from around 30% to 50% of terrestrial areas (FAO, ILC and CIRAD, 2026; WWF et al., 2021; ICCA Consortium, 2021; Garnett et al., 2018; Monterroso, Riamit and Baa, 2022). There is limited data for sea and ocean tenure (Tholan et al., 2024).

It is even harder to estimate how many territories have legal recognition, and over what area of land and sea. Estimates at national and local levels differ, and they can be hard to aggregate across different legal, political and cultural contexts. Differences in estimates often reflect different methods.

A recent report led by the FAO puts the figure at 8% of terrestrial areas (FAO, ILC and CIRAC, 2026); another from the Rights and Resources Initiative suggests 11% (RRI, 2023). However, global figures can sometimes include types of legal recognition that do not fully reflect rights under international human rights law. They are also significantly skewed by the higher degree of formal recognition of Indigenous territories in some large countries (such as Canada, Australia, Brazil and Mexico) (RRI, 2023), and there are important regional differences (FAO, ILC and CIRAC, 2026).

Again, there is a paucity of figures for tenure in marine areas, although there is broad recognition that, globally, tenure rights to marine areas are even more tenuous and poorly respected than those to lands (Jentoft et al., 2019; Muawanah et al., 2021; Tholan et al., 2024).

Advancing recognition is critical for achieving the goals and targets of the KMGBF. It is not only critical for ensuring rights are respected, but also an important way to combat biodiversity loss on land and sea. A recent study in Brazil found that restoration rates were higher on Indigenous lands than on private properties (Benzeev et al., 2025); many other studies globally have found reduced deforestation (Fa et al., 2020; FAO and FILAC, 2021; Sze et al., 2022; Virtanen et al., 2025), lower rates of land clearing (Alves-Pinto et al., 2021), positive outcomes for protection of species (O'Bryan et al., 2021; Estrada et al., 2022) or for biodiversity more generally in territories governed by IPs and LCs (Schuster et al., 2019; Parsons, Taylor & Crease, 2021; Turner, Cuerrier and Joseph, 2022; Dawson et al., 2024; Tholan et al., 2024).

These relationships translate into specific acts of care and rules of use which contribute to the protection of biodiversity. For example, in Haida Gwaii (Canada), the Haida nation governs their use of northern abalone (*Haliotis kamtschatkana*) using the principle of 'taking only what you need to eat' (Ojeda et al., 2025). In Chilean Patagonia, artisanal hake fishermen and seabirds – albatrosses and petrels – maintain a relationship of mutual sustenance: the fishermen benefit from the birds as indicators of fish shoals; the birds benefit from fish-processing discards (Ojeda et al., 2022).

Box 5

5 IP and LC governance of marine and coastal territories in practice

IPs and LCs govern customary marine territories and coastal ecosystems in diverse ways, making use of customary systems, seasonal closures, species-specific restrictions, and community-based enforcement. These systems regulate access to fisheries and marine areas for both community members and outsiders (Vierros et al., 2020; Conlu, 2022; Dawson et al., 2024; Jament and Arockyasamy, 2025; International Collective in Support of Fishworkers (ICSF), 2025; Rodriguez et al., 2025).

Communities often refrain from destructive fishing practices while promoting selective and small-scale fishing practices (McConnaughey et al., 2020; Bennett et al., 2021; Gawde and Ajithraj, 2022; Cure et al., 2024). Community governance systems often regulate the use of mangroves, and monitor or restrict extractive activities that could contribute to coastal erosion, biodiversity loss, and reduced climate resilience (Parsons, Taylor and Crease, 2021; Golebie et al., 2021).

Many territories are governed by customary institutions that IPs and LCs have adaptively developed over time, and which continue to evolve. Case study 11 is an example of holistic customary governance of territory by the Guna people in Panama. Other examples of customary governance of territory are provided throughout this publication; see, for example, case study 2 on traditional resource-sharing arrangements in Uganda and case study 10 on customary governance systems in Nepal.

Case study 11

Territory: Comarca Gunayala

Language: Guna

Authors:

- Jorge Andreve, Fundación para la Promoción de Conocimientos Indígenas (FCPI)
- Onel Masardule, Fundación para la Promoción de Conocimientos Indígenas (FCPI)

Caption: Seagrass beds in the Comarca Gunayala

Credit: Onel Iguairquilpiler Masardule



11 Guna People, Panama

The Gunayala Region, one of Panama's seven Indigenous regions, has an autonomous administrative system recognised by the state, within which the Guna people exercise their rights over land, the sea and governance. Their relative isolation has enabled this people to manage their natural environment in accordance with their cultural practices, based on the *Igardummad Uala* norms, under which natural resources and biodiversity form part of their collective heritage and are managed through their General Congresses.

The management of marine ecosystems is grounded in their worldview, customary norms and spiritual values, whereby the sea is not merely a productive resource but a sacred space integral to cultural and ecological life. For the Guna, spirituality is inseparable from nature: the territory is understood holistically, encompassing the sea, forests, mountains and the landscape, as a system intimately linked to the people's identity.

A central element of this management are the *Birias*, sacred spaces that serve as habitats for marine species such as fish, molluscs and crustaceans. These areas must not be disturbed, as they represent the 'abode of the forces of nature' and are essential for both biodiversity and human life. They serve as breeding grounds and refuges for species, including some that are endangered.

Respect for the *Birias* has enabled Gunayala to become one of the best-preserved regions in Panama, demonstrating that traditional environmental management can be highly effective. This approach shows that when Indigenous Peoples take the lead in managing their resources, biodiversity conservation and ecological balance are strengthened in a sustainable manner.

IPs' and LCs' initiatives to care for land and seas range from those that are formally recognised by states, such as Indigenous protected areas in Canada and Australia (Gould et al., 2021; Nelson and Reed, 2025) to those that are entirely autonomous and carried out without external support or recognition (Barnes et al., 2023; Dewan, Mulrennan and Georgekish, 2025). Initiatives also include shared governance models (such as those used by many small-scale fishers) and other diverse forms of co-management (Hill et al., 2020; Vierros et al., 2020; Quimby et al., 2023; ICSF, 2025). In some cases, these are continuations of ancestral traditions; in others, they reflect evolution and responses by IPs and LCs to the challenges and threats that their territories face.

Spatial planning, restoration and conservation – covered by Targets 1, 2 and 3 of the KMGBF – are areas where IPs and LCs already contribute to reducing biodiversity loss, restoring degraded ecosystems and protecting nature. These are explored below.



Caption: The Tajau Laut Village Youth Conservation Group in Malaysia remains committed to carrying out its coral management duties in the restoration area. This initiative not only restores the marine ecosystem, but also inspires the younger generation to protect its marine heritage

Credit: Junaidi Awang Bulat

Spatial planning

Target 1: Plan and manage all areas to reduce biodiversity loss

Ensure that all areas are under participatory, integrated and biodiversity inclusive spatial planning and/or effective management processes addressing land- and sea-use change, to bring the loss of areas of high biodiversity importance, including ecosystems of high ecological integrity, close to zero by 2030, while respecting the rights of indigenous peoples and local communities.

Customary institutions often have well-established procedures and rules for zoning and managing territory, including for sharing territories with neighbours (see, for example, case study 2 from Uganda), protecting areas that are critical for species reproduction (see, for example, case study 11 from Panama), and ensuring a balance between use and regeneration (see, for example, case study 26 from the Republic of Congo).

Many and diverse customary practices for spatial planning and sustainable management remain strongly embedded in the approaches of IPs and LCs. Case study 12 on the Kirat peoples' ritual mapping in Nepal shows an example of traditional spatial planning in practice.

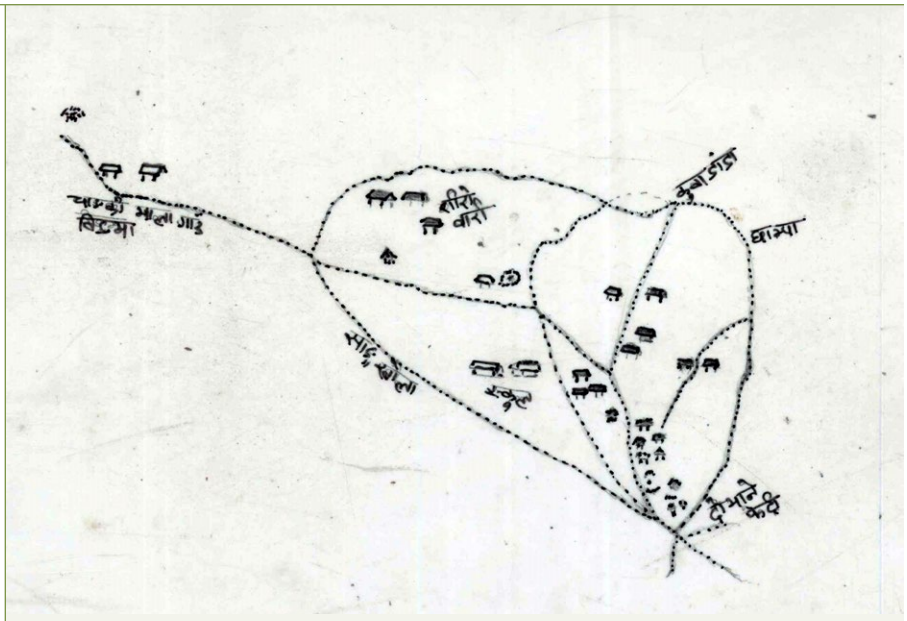
Case study 12

Language: Sampang, Bantawa, Thulung, Kulung, Nachiring, Mewahang, Bahing, Jerong, Khaling, Dumi, Limbu, Sunuwar, and more.

Author: Chatur Mani Rai Sampang, Kirat peoples, Indigenous Kirat Samarung Sampang, Indigenous Knowledge and Peoples Networks, Nepal Indigenous Forum on Biodiversity, Indigenous Peoples Society for Wetland Biodiversity Conservation Nepal

Caption: The ritual map, carried from the various villages and homes to the sacred site of Salpa, is a collective method of demarcation grounded in the authenticity of Kirat indigenous and traditional territories

Credit: KK Rai, WWF Nepal



12 Kirat Peoples, Nepal

Nepal is the ancestral home of many Indigenous Peoples, who speak over 120 Indigenous languages and make up 35% of the total population.

The Kirat peoples of eastern Nepal have unique Indigenous and traditional biodiversity knowledge systems, traditions and reciprocal symbiotic relationships with Nature and culture. They have a strong focus on animism, diverse Kirat Indigenous ontology; axiology, that everything in Nature possesses a spiritual essence. This provides the basis for a distinctive ritual mapping practice, through which communities identify and document their lands and territories in conversation with ancestral spirits and through religious sacred languages – of 32 distinct Kirat Indigenous dialects, 27 are still practiced in oral ritual traditions.

Ritual mapping is part of a collective and participatory process. Ritual specialists, such as *Nuwagire* (religious priests) have dialogues with spirits in dreams, in which the spirits share information about the demarcation of lands, waters and territories as well as providing messages for family leaders on how to protect their territories and resources, including biodiversity of biocultural importance. This oral ritual mapping process involves deep engagement with Indigenous knowing of lands, waters and territories; resources where spirits travel or are hidden.

Because these practices exist in oral forms, they are emotional, cosmological, spiritual, intangible and animistic, and lacking formal recognition they are at risk of being lost. However, there is ongoing MPhil research at Kathmandu University and they are also included in the 2026 academic curriculum at the same university. At the same time, Nepal's NBSAP National Target 24 is seeking to strengthen and document such practices with free, prior and informed consent (FPIC).

These practices also address a significant gap in biodiversity monitoring. Formal state monitoring systems often do not reach into the lands and territories of Indigenous Peoples and local communities, and community-level observation is rarely recognised as valid data. Indigenous community-led approaches, grounded in traditional knowledge , innovations, practices, Indigenous science, and customary and biocultural protocols can fill this gap while strengthening Indigenous customary governance, ritual mapping, collective information systems, and bio-cultural continuity.

Spatial planning by IPs and LCs can also make use of external mechanisms. For example, case study 13 from Paraguay describes how the Casuarina community of the Nivaclé people strategically used forest certification to protect and conserve parts of their territory, while also supporting livelihoods.



Case study 13

Authors:

- Faustina Alvarenga Perez, Guarani Occidental people, Articulación de Mujeres Indígenas del Paraguay MIP
- Graciano Ramírez, Nivaclé Comunidad Casuarina people

Caption: A group of young Nivaclé people from the Casuarina community practising the use of drones for territorial monitoring

Credit: Faustina Alvarenga, Articulación MIPY

13 Nivaclé people, Paraguay

The Casuarina community, part of the Nivaclé people, has been carrying out an outstanding land management initiative in the Paraguayan Chaco, a region characterised by high biodiversity and ecological fragility.

Faced with growing pressure on the forests resulting from deforestation, the expansion of livestock farming and the advance of agribusiness, the community has spearheaded a forest certification process through collaboration between technical experts and community members.

They began by identifying key species and forest uses using traditional Nivaclé knowledge, whilst forest inventories carried out by biologists provided detailed data on the state of conservation. This information helped to identify potential areas for forest certification, and the environmental management plan integrated both scientific and traditional knowledge. The entire process has included working sessions involving technical experts, community leaders, traditional knowledge holders, women and young people, which fostered the transfer of knowledge and capacity building.

The community now has 1,500 hectares of certified land designated as conservation priorities, where it carries out sustainable productive practices such as agriculture and the harvesting of non-timber forest products, without the intensive use of agrochemicals or extensive forest conversion. However, the challenge of identifying buyers and securing payments for environmental services remains.

Forest certification has emerged as a strategic tool that brings together community governance, ancestral knowledge and technical standards, thereby strengthening the conservation of native forests and livelihoods. Furthermore, adapted technologies, such as drones, are being incorporated, with the participation of young people and women in territorial monitoring.

This process has made it possible to strengthen territorial governance, conserve native forests, maintain and improve livelihoods, and highlight and reaffirm the role of Indigenous Peoples as key actors in the conservation and protection of biodiversity.

IPs and LCs carry out spatial planning both at territorial scale and beyond. For example, in the Kimberley region of Australia Aboriginal leaders from several neighbouring peoples are seeking to collaboratively manage, under first law (Indigenous law), the watershed of Martuwarra (the Fitzroy River) (Poelina, 2026).

Spatial planning by IPs and LCs can, however, be undermined by a lack of respect for territorial autonomy and rights (McGregor et al., 2023); for example, when IPs and LCs are absorbed as "*stakeholders*" – not rights-holders – in wider state-led spatial planning processes. These state-led processes are frequently top-down, often focus first on macro-scale planning, reflect tokenistic participation, and marginalise traditional knowledge (Milanese and Sibilla, 2025), undermining and overriding local, customary management approaches that have been fine-tuned over generations (Novellino, 2024).

Collaborative governance approaches that embody legal pluralism, mutual recognition of authority, respect for rights, effective participation and power-sharing can support more effective and rights-based spatial planning (Milanese and Sibilla, 2025; Tholan et al., 2024; ICCA Consortium, 2021; FAO, 2026). This also requires that national spatial planning processes be developed from the bottom up, as a mosaic of locally led planning that respects IP's and LCs' own spatial planning. Locally led processes can also enable greater direct participation of Indigenous and local community women who bring their distinct traditional knowledge (Milanese and Sibilla, 2025).

Restoration

Target 2: Restore 30% of all degraded ecosystems

Ensure that by 2030 at least 30 per cent of areas of degraded terrestrial, inland water, and marine and coastal ecosystems are under effective restoration, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity.

The UN Decade of Ecosystem Restoration 2021–2030 has renewed focus on actions to restore degraded ecosystems.

While IPs' and LCs' lands are on average in better condition than other areas (see above), many of their lands and waters are ecologically degraded. Sometimes they themselves have contributed to this, but in many more cases the degradation is linked to factors outside their control, such as climate change (Jones, 2019; Reyes-García et al., 2024), pollution (see, for example, case study 50 about glyphosate in the Robinson Huron Waawiindamaagewin territory in Canada), or destructive activities undertaken on their territories without their free, prior and informed consent (see, for example, Kennedy et al., 2023; O'Faircheallaigh, 2023).

Ecological degradation of IPs' and LCs' lands and waters often corresponds with the erosion of customary governance systems. This reflects the fact that the existence of healthy biodiversity on their territories is *because of* their continuous presence on and care for their territory, not in spite of it (Fletcher et al., 2021). For example, case study 9 from Amadiba, South Africa, describes how the exodus of AmaMpondo youth from the territory left fewer people to tend pastures, leading to increased erosion and encroachment of invasive species.

Ecosystem degradation can have significant impacts on IPs and LCs, such as contamination of food and water sources, harm to cultural and spiritual

practices, and health impacts (see, for example, Jones, 2019; O'Faircheallaigh, 2023; Reyes-García et al., 2024). Women and girls can face disproportionate impacts due to, for example, increased work burden, loss of income, or increased exposure to gender-based violence (Booker et al., 2022).

Many IPs and LCs are actively restoring degraded lands and seas, often as part of living their cultural values. For example, the Bajau people of Kampung Tajau Laut in Malaysia (case study 14) are restoring their coastal territories guided by their principle of *Gotong Royong*, or collective responsibility for their territory. Their commitment to restoration includes not only repairing any damage from their own activities, but also bringing territories back to health and life after harm by outsiders. Similarly, collaborative initiatives with the Sámi in Finland are using Indigenous knowledge and aligning with traditional Sámi land use to restore Arctic forests affected by intensive, state-promoted logging (Holmberg and Musta, 2025).



Case study 14

Territory: Kampung Tajau Laut

Language: Bajau

Authors:

- Joannie Jomitol, Kadazan people
- Junaidi Awang Bulat, Bajau people, Persatuan Penggerak Komuniti Desa Pelancongan Tajau Laut

Caption: A group of scuba divers from the Kampung Tajau Lat community carrying out Reef Star maintenance work in the Karan restoration area. This initiative ensures that coral growth remains healthy, whilst strengthening the marine ecosystem and protecting our marine biodiversity

Credit: Junaidi Awang Bulat

14 Bajau people, Malaysia

Kampung Tajau Laut is a Bajau fishing community on the coast of the Kudat peninsula, Sabah, Malaysia. For the Bajau people of Tajau Laut, the sea, mangroves, rivers and land are part of a single living system that the community is collectively responsible for.

This collective responsibility (the principle of *Gotong Royong*) is expressed through customary law, or *adat*, which ensures sustainable use of resources, balance between people and nature, and gratitude for what the sea and land provide. Through community consultation, these principles have been developed and documented into a set of core principles and rules which are practiced by the community.

Guided by these same principles, the community identified two connected problems affecting their livelihoods. Years of blast fishing had badly degraded the coral reefs, reducing fish stocks, and beach erosion linked to climate change was threatening homes and the fishing landing area. Restoring the coral reefs would address both concerns. Guided by their *adat*, the community set about restoring what had been damaged.

Initial community restoration practices started in 2014 with no outside support, but they continued to grow their ecotourism network and build connections with conservation organisations. This led to projects with WWF Malaysia and Sabah Parks from 2023, and in 2024 the community developed a coral adoption programme, through which tourists pay to adopt a coral restoration frame.

In 2025, Sabah Parks organised a mass coral planting event supported by the Tajau Laut community, which was the largest coral fragment planting ever carried out in the country.

The community has also begun discussions with government departments on formal recognition for both co-managing mangrove forests and for their coastal stewardship initiatives. Throughout these discussions, the community ensures that the data they collect is shared with partners under terms that keep ownership and decision-making within the community.

Restoration activities can also, however, violate human rights. For example, many restoration activities are carried out on IPs' and LCs' lands and waters without their effective participation and without their free, prior and informed consent. Of 648 restoration projects recorded in the Just Conservation database, over 60% involved exclusion, low-level consultation, or only limited participation by IPs and LCs (Martin et al., 2026). Sometimes these rights-violating restoration projects are promoted under the guise of "*nature-based solutions*" (Nelson and Reed, 2025).

Restoration may also not always mean the same thing to IPs and LCs as it does to others (see Elias et al., 2021; Shelton et al., 2024). It may violate rights when it is viewed exclusively from an ecological perspective without taking into account customary use practices and traditional knowledge. For instance, a review of over 5,000 restoration projects in the United States found a predominant focus on ecological objectives. Restoration priorities and approaches may also differ between men and women (Jurjonas et al., 2024 ; Shelton et al., 2024; Elias et al., 2022).

In contrast, restoration that is community-led or collaborative is not only rights-based but often more enduring and holistic, integrating food systems, use values and intergenerational transmission of cultural values with a healthy ecological landscape. Case study 15 from the Maragoli Hills in Kenya shows how restoration approaches based on collaboration, traditional knowledge and community leadership led to lasting improvements in ecological condition and a renewal of cultural values.



Case study 15

Territory: Maragoli

Language: Maragoli

Authors:

- Herman Bwabwa, Maragoli people, Gilwadzi Community Conservation Group CBO-South Maragoli
- Vincent Shitsama, Catholic Diocese of Kakamega-Catholic Justice and Peace Department

Caption: Community members learn about the region's forests

Credit: Catholic Diocese of Kakamega

15 Maragoli people, Kenya

"For many years, we watched outsiders come and go, each with promises to bring back life to our hills," shared an elder from the Maragoli Hills, her voice steady yet filled with memory. *"But the forest did not listen to them, because they did not listen to us."*

Her words capture the spirit of a land stripped bare by decades of deforestation and neglect. Once a thriving green haven in western Kenya, the 400-hectare Maragoli Hills experienced decades of deforestation, ecological decline, and cultural loss, compounded by external restoration efforts that excluded community voices and undermined local ownership.

Government and civil society interventions often failed because they restricted access to land, introduced non-native species, and overlooked traditional knowledge. For communities already facing land scarcity, these efforts felt like further dispossession. Resistance, therefore, was not to restoration itself, but to exclusion. When these land restoration efforts failed, it became clear they could not succeed without the participation of the people who call the hills home.

A turning point came when the Catholic Diocese of Kakamega, supported by the Global Greengrants Fund, adopted a listening-first approach. Elders, youth, and community members came together to share memories of the land – dense indigenous forests, flowing streams, and abundant biodiversity now largely diminished. These intergenerational dialogues sparked a collective commitment to restoration rooted in local knowledge and cultural values.

The community then developed and led a variety of projects, including creating a community nursery for indigenous fruit trees, reforesting degraded land and training community members on land management. Training programmes with schools, churches, and villages meant hundreds of community members were trained on restoration skills, ensuring that this work became self-sustaining and deeply rooted in community life.

Early results show the return of water flows, improved soil health, and expanding wildlife habitats, but just as importantly, restoration has strengthened community cohesion and local governance. The Maragoli Hills initiative demonstrates that when communities lead, ecosystems recover and thrive. As the community emphasises, true rehabilitation is not only about planting trees, but about restoring relationships between people, land, and future generations.

Target 3: Conserve 30% of land, waters and seas

Ensure and enable that by 2030 at least 30 per cent of terrestrial and inland water areas, and of marine and coastal areas, especially areas of particular importance for biodiversity and ecosystem functions and services, are effectively conserved and managed through ecologically representative, well-connected and equitably governed systems of protected areas and other effective area-based conservation measures, recognizing indigenous and traditional territories, where applicable, and integrated into wider landscapes, seascapes and the ocean, while ensuring that any sustainable use, where appropriate in such areas, is fully consistent with conservation outcomes, recognizing and respecting the rights of indigenous peoples and local communities, including over their traditional territories.

There is a long and well-documented history of human rights violations associated with area-based conservation (see Knox, 2025). Acknowledging this, Target 3 of the KMGBF explicitly requires area-based conservation to be practised in a way that is consistent with the rights and values of IPs and LCs (Human Rights and Biodiversity Working Group (HRBWG) et al., 2024).

Target 3 requires that the rights of IPs and LCs are recognised and respected in the creation of new protected areas and other effective area-based conservation measures (OECMs), as well as redressing the significant legacy of (ongoing) rights violations in existing protected areas and OECMs (Stevens et al., 2024).

Target 3 also creates a pathway for recognising the contributions made by IPs' and LCs' lands, seas and territories, whether or not these are formally categorised as protected areas or OECMs (see Box 6).

Box 6

6 Indigenous and traditional territories

Target 3 aims for 30% of lands and seas to be conserved and managed through *"protected areas and other effective conservation measures (OECMs), recognizing indigenous and traditional territories where applicable."* Most IP and LC representatives engaged in CBD negotiations consider that Indigenous and traditional territories are an independent, first pathway to achieving Target 3. Given the demonstrable contributions of IPs and LCs to conservation within their territories, it would clearly be valuable to include in the Target 3 a pathway that recognises their care for lands and seas that can also exist outside of protected areas and OECMs.

But what do we mean by "*Indigenous and traditional territories*", or ITTs? Under international human rights law, an understanding of the rights to lands, seas and territory is generally based on customary law ownership or traditional possession (regardless of whether this is formally recognised by states), or else the establishment or acquisition of other lands and seas (for example after dispossession, or under shared governance models among small-scale fishers) (see also articles 25 and 26 of the UN Declaration on the Rights of Indigenous Peoples).

ITTs in Target 3 should be understood in this way. This ensures that they are not a category externally imposed on IPs and LCs but reflect their traditions, territorial rights and aspirations. This would be consistent with a human rights-based approach.

The category must also be wide enough to enable monitoring of **violations** of territorial rights of IPs and LCs, both in Target 3 (for example where an IP or LC has been evicted from their territory for the creation of a protected area) and in the KMGBF as a whole.

Not all Indigenous and traditional territories, as understood in this broad way, would or should automatically be included in Target 3 reporting. As a starting point, the decision to include all or part of a territory in monitoring of Target 3 should always be based on the free, prior and informed consent of the IP or LC. In addition, it would be inappropriate to claim that an area is an ITT contributing to Target 3 if, within the area, IPs and LCs have been evicted from their territories without their free, prior and informed consent.

Noting the wording in Target 3 – *"recognizing indigenous and traditional territories, where applicable"* – one option may be for the current CBD process for providing guidance on ITTs to focus not on defining what ITTs **are** but on defining criteria for when it would be appropriate to report them as contributions to Target 3, and requiring Parties to monitor and report these contributions effectively.

Questions around the appropriate criteria remain to be discussed. Should reporting include a requirement for active conservation activities or outcomes? If so, how would this be demonstrated and by whom would it be judged? While many advocate for this approach, the same standards do not apply to protected areas, which do not need to demonstrate either actual conservation outcomes or compliance with human rights to be counted towards Target 3.

There are still many complex issues related to ITTs that will require negotiation and decision, particularly by SB8j and COP17. Whatever decisions emerge, they must align with and not undermine the territorial and other rights of IPs and LCs.

Despite Target 3, globally there has been little concrete progress in addressing human rights violations in area-based conservation since the KMGBF was adopted. Between 2020 and 2024, almost 2.4 million km2 (629,000 km2 terrestrial and 1.77 million km2 marine) of protected areas and OECMs were created (UNEP-WCMC and IUCN, 2024). Yet the areas under IP or LC governance increased by only 124,827 km2 (5.2%) (UNEP-WCMC and IUCN, 2024). Despite their obligations to respect rights, most Parties have provided limited information to enable any assessment of whether the rights of IPs, LCs and others have been respected in the creation of these new protected and conserved areas (UNEP-WCMC and IUCN, 2024).

Conservation governance in both terrestrial and marine environments continues to be state-dominated and based on highly centralised decision-making systems (Janakeeya Padana Samithi, 2023; Lyons, Mynott and Melbourne-Thomas, 2023). While efforts to improve *"inclusion"* in area-based conservation have been reported (Zhang et al., 2023), there has been no real shift in governance arrangements:

- Most protected areas and OECMs (62.8%) continue to be governed by state actors (UNEP-WCMC and IUCN, 2024)
- Only 9% of terrestrial and 0.07% of marine protected areas and OECMs (by area) are governed by IPs and LCs (UNEP-WCMC and IUCN, 2024)
- At the same time, an estimated 26% of state and private terrestrial protected areas and OECMs (ICCA Consortium, 2021; Stevens et al., 2024) overlap with IP and LC lands

There is increasing scientific evidence that conservation led by IPs and LCs delivers better social *and* ecological outcomes (Dawson et al., 2024; Smallhorn-

West et al., 2023; Huber et al., 2023; Sze et al., 2024). Clearly, implementation of Target 3 is continuing in the patterns of the past that reproduce colonial land- and sea-use management and violate or restrict the territorial rights of IPs and LCs (HRBWG et al., 2024; Knox, 2025).

Yet, while globally the signs of change in how protected areas and OECMs are governed are discouraging, there are pockets of progress. For example, in Australia, the first "*sea country*" Indigenous protected area – the Karajarri Jurarr Ngurra, in the south-west of the Kimberley region – was established in 2026 (Watt and McCarthy, 2026), and in Canada momentum has increased in the creation of Indigenous Protected and Conserved Areas (Mansuy et al., 2023).

Beyond these formal approaches, IPs and LCs continue to lead their own conservation initiatives. Their care for their lands and seas may not always be referred to or formally recognised as conservation, but their activities nonetheless make a significant contribution to achieving Target 3.

As the case studies throughout this publication and previous LBO editions show, many IPs and LCs are *already* governing key biodiversity areas effectively. One of the most effective ways of achieving Target 3 – and ensuring it is achieved using a human rights-based approach – is through enabling, supporting and recognising IP- and LC-led care for lands and seas (Dudley et al., 2022; Fajardo et al., 2026).

IP- and LC-led contributions can be deliberate actions by IPs and LCs to care for territories, but can also arise incidentally through their continued evolution of lifeways that maintain balance with nature. They may be formally recognised and/or supported within wider state systems or be entirely autonomous and carried out without external support (Robin et al., 2022; Ahammad et al., 2026).

There is great diversity in the ways in which IPs' and LCs' actions support conservation outcomes. Some IPs and LCs – such as the Guna in Panama (see case study 11) whose *birias* (sacred areas) serve as breeding grounds for sea life and must remain untouched – have traditional management approaches that inherently incorporate conservation. Others have consciously adapted traditions or embraced new modalities to enable them to conserve their lands and seas. For example, communities in Nagaland in India have developed community conservation areas (see case study 16).



Case study 16

Authors:

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Caption: View of Saramati Range, a vital biodiversity corridor from Angangba Village, Longkim, Tuensang

Credit: Angangba Community Conserved Area Committee and Kenono Foundation

16 Naga peoples, India

Every evening, a small group of villagers sets out on patrol along the banks of the Dikhu river, moving quietly through the forest with alert determination. Their task is to watch over the community forest and ensure that no one violates the village's conservation rules. Among them walks Ashong, a man from Ungma village, who once hunted in these same forests. Years ago, he would have carried a gun along these trails. Today, he walks the same paths with a different purpose: protecting the wildlife and forests he once pursued.

Ashong's story reflects a wider transformation taking place across many villages in Nagaland, a mountainous state in northeast India. In communities where hunting was once a common livelihood practice, villagers are increasingly taking on the role of forest guardians in response to declining wildlife populations, less reliable water sources, and increased hunting pressures.

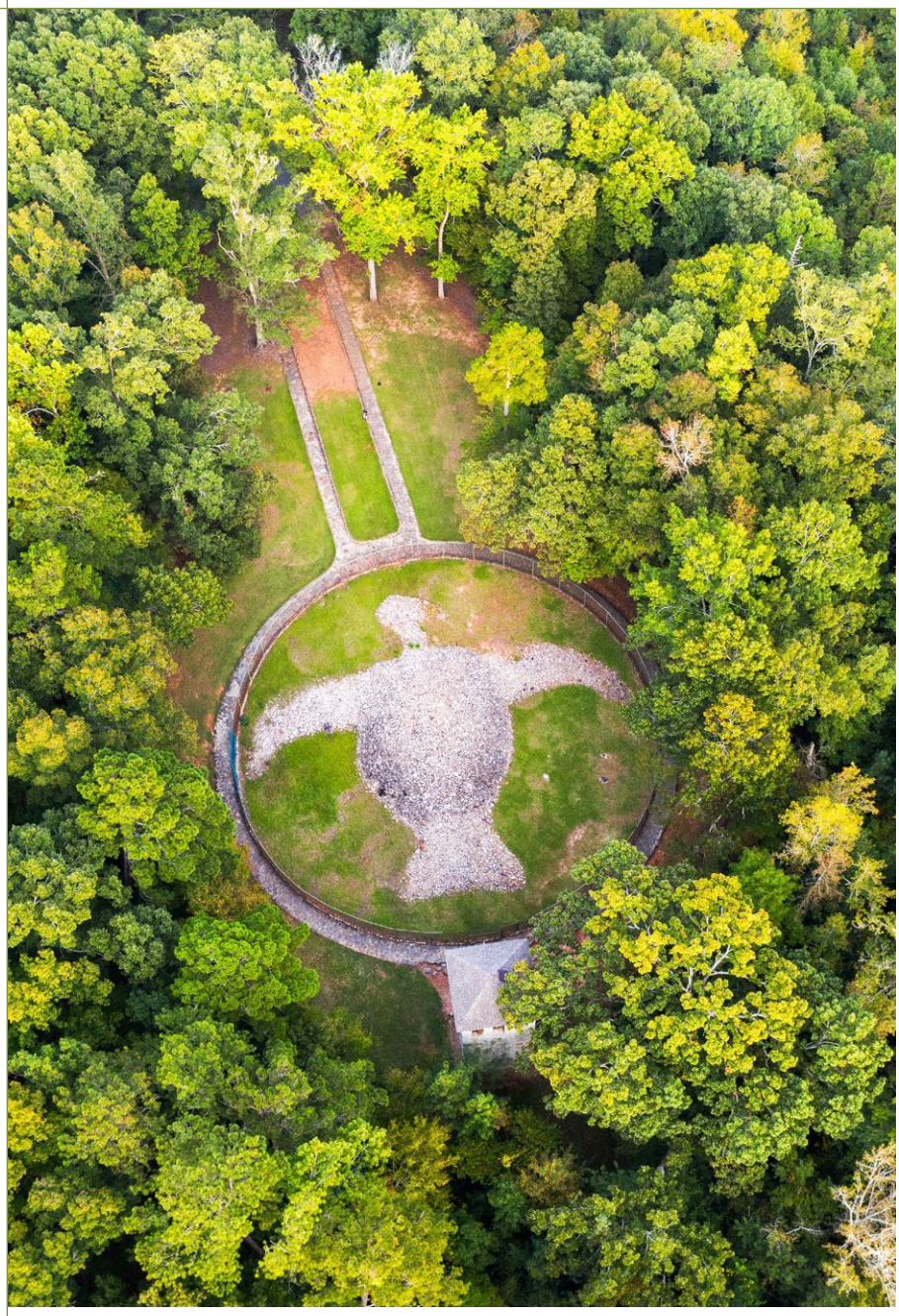
Many villages voluntarily established Community Conserved Areas (CCAs) – forest zones where hunting, logging and other extractive industries are restricted to allow ecosystems to recover. Unlike externally imposed conservation models, these initiatives emerged from local governance systems and are sustained through collective responsibility toward their land and future generations, rather than external enforcement.

Many of these CCAs developed in isolation, and recognising the need for collaboration and shared learning, community leaders and conservation practitioners established the Nagaland Community Conserved Areas Forum (NCCAF), which connects over 407 CCAs. As fragmented forests can threaten wildlife survival, the NCCAF promotes a landscape-level approach to conservation, with efforts made to protect ecological corridors. The forum also engages with policymakers to advocate for better recognition of community conservation within state-level environmental policy.

The experience of CCAs demonstrates that biodiversity thrives when local people remain at the centre of conservation and when their governance systems, knowledge, and rights are respected.

Ultimately, conservation is not only about protecting forests; it is about sustaining relationships between people, land, and future generations. As one community youth leader reflected, *"Our elders protected these forests through tradition. Today we continue that responsibility, but we also see that our conservation efforts matter not only for our villages, but for the world."*

IPs and LCs also contribute significantly to Target 3 through defending their lands and territories from destructive activities by states, businesses and other actors (see Chapter 5: Meeting people's needs through sustainable use and benefit-sharing). Supporting IP and LCs to protect their territories outside protected areas and OECMs can, therefore, be an important way of strengthening and expanding the total area of land and sea under sustainable management. Case study 17 from Russia explores 'territories of traditional nature use', a legal structure that enables IPs to secure and defend their ancestral lands and cultural traditions.



Caption: Aerial view of an ancient earthwork in Georgia, USA, built roughly 1000 years ago by the Indigenous peoples of the Eastern Woodlands

Credit: Sean Pavone



Case study 17

Territory: Republic of Sakha (Yakutia)

Language: Yukaghir, Evenk, Sakha, Even

Author: Viacheslav Shadrin, Yukaghir people, Council of Yukaghir Elders

Caption: A snowy landscape in the Republic of Sakha (Yakutia)

Credit: Michael Runkel

17 Indigenous Peoples of the North, Russia

In recent years, the Russian government has been placing increasing restrictions on Indigenous Peoples' practices and governance, which has led to a worrying rise in the criminalisation of Indigenous Peoples carrying out their customary sustainable practices.

Under these circumstances, one of the tools to protect Indigenous Peoples' rights is Territories of Traditional Nature Use of the Indigenous Peoples of the North, Siberia and the Far East of the Russian Federation (TTPs). These are specially protected areas established to protect and guarantee the right of Indigenous Peoples in the North to both preserve their ancestral lands and to maintain their traditional ways of life.

The first TTP was established in June 2003, and there are now 63 TTPs in the Republic of Sakha (Yakutia) in eastern Russia. When an Indigenous territory becomes part of a TTP, it gives communities the power to coordinate and establish limitations on companies that want to engage in intensive industrial development on their territories.

This has also led to social cooperation agreements, for example between diamond company ALROSA and the community in Olenek TTP, which resulted in companies needing to pay compensation to the district and contributing to taxes for the municipal budget.

Equally, there are now republic-wide forums on TTPs which have been held since 2022. This is a space for representatives of TTPs, scientists, experts, and industrial companies to share best practices, analyse the current situation, and develop proposals for future collaborations. Most importantly, these forums have led to the implementation of concrete measures aimed at developing traditional industries and protecting the lands of the peoples of the North.

There are still a number of issues that need to be addressed, including zoning, registration and recognition of TTPs in federal legislation, but the communities in the Olenek TTP continue to operate and address its main objective: preserving ancestral lands for future generations.

Relationships with other species and other beings

"As Native Hawaiians, we acknowledge a genealogical relationship with, and kuleana (inherent responsibility) to, the ocean god Kanaloa, which includes marine mammals such as whales and dolphins. Hawaiians are genealogically connected to these Kanaloa forms; they are our elder relations. Therefore, the kuleana of kia'i (guardian, caretaker) is our ancestral duty."

Kanaka Maoli people, Hawaii 20

Target 4: Halt species extinction, protect genetic diversity, and manage human–wildlife conflicts

Ensure urgent management actions to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through in situ and ex situ conservation and sustainable management practices, and effectively manage human–wildlife interactions to minimize human–wildlife conflict for coexistence.

Target 5: Ensure sustainable, safe and legal harvesting and trade of wild species

Ensure that the use, harvesting and trade of wild species is sustainable, safe and legal, preventing overexploitation, minimizing impacts on non-target species and ecosystems, and reducing the risk of pathogen spillover, applying the ecosystem approach, while respecting and protecting customary sustainable use by indigenous peoples and local communities.

Many IPs and LCs caring for their lands and seas have relations not only with the physical territory but also with the many beings who inhabit it. In the cosmovisions and knowledge systems of many IPs and LCs, human wellbeing and the wellbeing of other species is intricately intertwined (e.g. Tilot et al., 2021; Reid et al., 2022; Carrasco-Bahamonde et al., 2025).

IPs and LCs generally do not view other species with the same sense of separation as western culture (Jolly and Stronza, 2025). Many consider other species to be relatives who are part of their ancestry. For example, case study 20 explains how in Hawai'i, IPs consider whales and dolphins to be elder relations. Similarly, for the Baniwa and Enawene peoples of the Amazon rainforest, fish are ancestral kin, and through protecting them the people protect and honour their cultural history, identity, and connection to place (Tholan et al., 2024, p. 1).

In other traditions, it is believed that ancestors inhabit the bodies of animals or trees. For Kānaka ʻōiwi in Hawaiʻi, for example, *ʻaumākua* (ancestral spirits) can take the form of many different native plants and animals. These many forms (called *kinolau*) are physical manifestations of ancestors and are held sacred (Ohukani'Ōhi'A, Winter and Demotta, 2021).

These relationships often ground approaches that protect species, through both existing cultural norms and practices and/or through active species conservation efforts. For example, in Cameroon different clans in Baka communities are associated with particular animals, such as great apes, which they do not eat (Emini, Clarke and Long, 2023). Grizzly bears are considered relatives of the Haíłzaqv, Kitasoo/Xai'xais, Nuxalk, and Wuikinuxv nations of the west coast of Canada, which, alongside their relationship of stewardship with their territory, has shaped their efforts to protect this species–relative (Artelle et al., 2021).

Protecting and sustainably using wild and threatened species

At a global level, while IPs' and LCs' territories remain islands of high biodiversity value, they have not been immune to the decline of species (IPBES, 2019). IPs and LCs themselves are often extremely conscious of the reduction in species populations in their territory. For example, case study 22 describes how women in the Democratic Republic of Congo worked to reverse the impacts of invasive species on the *birombi* fish, and case study 16 describes how communities in Nagaland, India, changed their hunting practices in response to declining species populations.

Most IPs' and LCs' food systems, cultures and lifeways depend on the harvesting of wild species, including in some cases species classified as threatened (Baena et al., 2023; Lukawiecki, 2024). Their customary sustainable use practices are often adapted to ensure the ongoing range and vitality of species in their territory, including through supporting genetic diversity within a species. Customary practices are based on deep traditional ecological knowledge of the local environment, and are dynamic and adaptive. For example, case study 36 from Namibia mentions how the ǂAonin traditional knowledge allows them to pick the *!Nara* melon sustainably, whereas illegal harvesters do so in ways that prevent the plant from regrowing.

Indigenous and local community women often play a major part in supporting biodiversity through customary sustainable use, through their central roles in traditional food systems (Niko, 2025). For example, seed saving approaches by Dusun women in Sabah, Malaysia (case study 56), and by women of the seed-savers network in Kyrgyzstan (case study 31) support continued renewal of genetic diversity among local crop varieties. Case study 40 from the Philippines highlights how women are key drivers of the home gardeners' association in Baguio City.

IPs' and LCs' efforts to protect species often mix cultural, ecological, social and economic elements. For example, in Peru, having noticed a decline in turtle populations, the Wampis people have made specific efforts to protect the population of turtles in their territory, because of the important ecosystem function they play, their cultural and spiritual importance, and their importance as a source of food (case study 18).

Case study 18

Territory: Kankaim-Wampisa Nunke

Language: Wampis

Author: Nugkui Teresa Noningo Mauricio, Nación Wampis, Gobierno Territorial Autónomo de la Nación Wampis

Caption: A Wampis child with taricaya hatchlings in the San Juan community, Wampis territory

Credit: Neil Pinedo, Talento de la Cuencoa de Morona



18 Wampis people, Peru

The Wampis people in Peru established their own Autonomous Territorial Government (GTANW) in 2015 to lead their internal processes and strengthen the defence of their territory against present and future social, environmental and territorial threats.

As a result of a five-year collective process aimed at highlighting key thematic areas and corresponding policies, a central planning and guidance document known as the Common Vision for the Future (VCF) was drawn up. The VCF sets out the progressive implementation of short-, medium- and long-term actions to rebuild autonomy and achieve *Tarimat Pujut* (Good Living) for future generations.

One of the key components of this project is the management and restocking of populations of the aquatic turtles Podocnemis unifilis (taricaya) and Podocnemis expansa (charapa). Both turtle species, which are of great cultural, spiritual and dietary value to the Wampis, perform essential ecological functions in Amazonian ecosystems. However, they face threats such as habitat destruction, hunting, river pollution and the effects of climate change. These pressures have led to a significant decline in wild populations and have altered the communities' traditional practices, forcing them to rethink their strategies for use and conservation.

The project involves collecting and incubating the turtle eggs in safe areas and subsequently releasing the hatchlings back into the rivers. This has involved training 136 members of six riverside communities in turtle management, as well as in environmental education initiatives aimed at schoolchildren, young people and adults. Over the course of the three-year project, more than 10,000 taricaya hatchlings and 1,500 charapa hatchlings have been released, representing a significant contribution to the recovery of the natural populations of both species.

Other restocking projects are also underway involving the paiche fish (Arapaima gigas), an iconic Amazonian species which also acts as a key indicator of the health of aquatic ecosystems and constitutes an essential source of protein for local communities. Thanks to community-led management of the species, between 2023 and 2024 the paiche population increased from 81 to 236 individuals.

The measures implemented have helped to strengthen local governance, reduce pressures on biodiversity and lay the foundations for sustainable management that combines ecological conservation with food sovereignty and economic development.

In addition to biodiversity protection through customary sustainable use, there are many examples of IPs and LCs working to protect and sustainably use species in their territories in response to observed declines, although they may not categorise species as *"wild"* or *"threatened"* in the same way as outside conservationists (or Targets 4 and 5). These efforts are sometimes autonomous, sometimes collaborative, and sometimes supported by external actors.

Case study 19 describes how local communities in Benin have helped to conserve sea turtles, in collaboration with a local conservation NGO.



Case study 19

Author: Patrice Sagbo, local community representative, Réseau JINUKUN

Caption: A sign on Gran-Popo beach, Benin, raises awareness of the importance of protecting sea turtles

Credit: Sergio Hanquet, Biosphoto

19 Local communities, Benin

Sea turtles on the southern coast of Benin – olive ridley, leatherback and green turtles – face severe threats despite their ecological and economic importance. These peaceful, migratory reptiles rely on Benin's beaches for nesting, yet their survival is jeopardised by accidental capture in fishing gear, destruction of nests, predation by dogs and ghost crabs, and the poaching of adults, eggs and shells for consumption or sale. For years, these pressures pushed turtle populations toward alarming decline.

In response, local communities have become the driving force behind turtle conservation. Supported by the NGO Nature Tropicale, they have organised themselves into ecoguards dedicated to protecting nesting females, eggs and hatchlings. Their commitment stems from a deep understanding that safeguarding turtles means preserving the marine ecosystem and securing the future of generations to come.

Ecoguards conduct nightly beach patrols equipped with torches, data sheets, tongs, rings and measuring tools. When they encounter nesting turtles, they wait for the laying to finish, record measurements, guide the turtles safely back to the sea, and relocate eggs to protected enclosures. After roughly 45 days, hatchlings emerge and are released into the ocean – often with tourists observing or sponsoring individual babies. This ecotourism element not only raises awareness but also strengthens community bonds and provides small but meaningful financial support.

Awareness raising has been central to the conservation effort. Since the 2000s, sustained education campaigns by Nature Tropicale, combined with the involvement of police and local authorities, have significantly reduced destructive practices. Schools, media and community events – including a national Sea Turtle Day on 8 January – have helped shift public attitudes.

Today, Benin's coastal communities continue their voluntary, determined work, giving endangered sea turtles a renewed chance of survival.

State-based approaches to species protection, however, do not always respect the roles and rights of IPs and LCs. Despite Target 5 explicitly requiring that Parties respect customary sustainable use, many states have laws, policies and practices that do not differentiate customary sustainable use from any other harvesting and trade of wild species. For example, Alaska's approach to managing salmon does not distinguish between IPs and others, therefore requiring IPs to obtain a fishing permit to carry out traditional fishing (Parsons, Taylor and Crease, 2021). Criminalisation of IPs' and LCs' customary sustainable use activities relating to both wild and threatened species is also widespread (Lynch and Genco, 2022). Case study 20 describes the struggles of Indigenous Hawaiians to practice care and ocean burials for stranded marine mammals in accordance with customary beliefs, involving repeated criminalisation.

Case study 20

Territory: Hawai'i

Language: ʻŌlelo Hawaiʻi

Author: Roxane Keliʻikipikāneokolohaka, Kanaka Maoli people, Kia'i Kanaloa

Caption: Kiaʻi Roxane Keliʻikipikāneokolohaka with Kāmaui, a Blainville's beaked whale cared for by the network

Credit: Hilo Marine Mammal Response Network



20 Kanaka Maoli people, Hawaiʻi

Kiaʻi *Kanaloa* is a Native Hawaiian organisation comprised of cultural practitioners from across Hawaiʻi. It is grounded in a genealogical relationship with *Kanaloa*, the ocean god, and marine mammals such as whales and dolphins, which are regarded as elder relations. This connection establishes a *kuleana*, or ancestral responsibility, to act as *kiaʻi* – guardians and caretakers.

Kiaʻi *Kanaloa*'s mission to fulfill their ancestral duty obligations through caring for and advocating for *poʻe Kanaloa* (marine animals) lends to their vision of communities across Hawaiʻi being equipped with the knowledge, authority, and capacity to care for stranded marine life without fear of criminalisation. Community partnerships and capacity building are essential to both their mission and vision.

Initially welcomed by federal agencies, Kiaʻi *Kanaloa* contributed to integrating Hawaiian cultural protocols into marine mammal response efforts. In 2010–11, collaboration with the Hilo Marine Mammal Response Network demonstrated the value of blending Indigenous knowledge and practices with Western science. However, tensions emerged during the handling of a stranded whale, Kāmaui, when federal decisions from the National Oceanic Atmospheric Administration (NOAA) overrode local cultural authority, and did not respect agreed protocols.

Kiaʻi *Kanaloa* documented Kāmaui's mistreatment and the steps needed to rectify them in a letter to NOAA, which sparked backlash, criminalisation, and led to our exclusion from official response networks. Despite this, communities continued to rely on Kiaʻi *Kanaloa*. In 2014, the group led the culturally grounded care and at-sea burial of a stranded whale, Wānanalua. This resulted in federal charges under the Marine Mammal Protection Act, highlighting the lack of recognition for Native Hawaiian practices. After years of legal struggle, charges were dropped in 2018.

Between 2017 and 2023, Kiaʻi *Kanaloa* expanded its network and strengthened community capacity. In 2024, NOAA invited the group to formally lead and have authority over all responses on Hawaiʻi Island.

Guided by *kānāwai* (cultural edicts), collective strength, strategic alliances, and community empowerment, Kiaʻi *Kanaloa* continues to model a pathway for Indigenous stewardship. However, the increase in strandings in both Hawaii and across the world should concern all of us. Our *Kanaloa* are sending the message that our ocean systems are in trouble.

Criminalisation of IPs' and LCs' use of both wild and threatened species is often rationalised by species decline within their territories. Frequently, species decline is treated as adequate evidence that their practices are unsustainable, without consideration of wider factors or showing evidence of the impacts of their practices.

For example, following the establishment of the Chitwan National Park in 1973, traditional fishing by the Bote people was criminalised despite their sustainable hook-and-line practices. Community members were arrested and detained and their fishing practices made subject to licensing restrictions (Rai and Dhakal, 2024). These restrictions continue to significantly affect community members in 2025 (Adhikari, 2025).

Similarly, the Kitasoo/Xai'xasi in Canada were forcibly removed from their territories, prohibited from accessing their land and seas, banned from conducting stewardship practices, limited by state-imposed harvest quotas, and blamed for the decrease in species abundance (McLean et al., 2023).

In reality, species populations within the territories of IPs and LCs are affected by multiple external factors, such as the loss of habitat in their territories or surrounding areas due to land- and sea-use change, climate change, exploitative activities by business actors on or around their territories, and in-migration of settlers. These impacts by others on the ecosystem are often a major driver of species decline, which can then have a knock-on effect on activities IPs and LCs have carried out sustainably for millennia. Thus, while of course IPs and LCs also sometimes overexploit species, it is problematic simply to describe their practices as unsustainable without engaging in much deeper analysis of the broader context and underlying causes (see, for example, Malik, Borde and Ford, 2026).

Managing human–wildlife conflict and coexistence

Human–wildlife conflict is defined by the International Union for Conservation of Nature (IUCN) as *"struggles that emerge when the presence or behaviour of wildlife poses actual or perceived, direct and recurring threats to human interests or needs, leading to disagreements between groups of people and negative impacts on people and/or wildlife"* (IUCN, 2023). It continues to be a significant concern for many IPs and LCs, particularly in Africa and Asia. While often described in terms of its social and economic impacts, human–wildlife conflict is also closely linked to human rights, particularly those of IPs and LCs (Wosu et al., 2026). For example, in India human–elephant conflict is reported to have killed 1,713 people and 373 elephants between 2015 and 2018 (FAO, 2021).

Conflict between IPs and LCs and wildlife can sometimes be generated or exacerbated by broader land- and sea-use change that brings wild animals nearer to people. For example, Baka and Bakwele communities living in the Messok Dja forest block in the Republic of Congo report human–wildlife conflict to be a major concern, particularly repeated destruction of food crops by elephants. Most community members believe conflict with wildlife has intensified due to economic activities in the wider region – that is, logging or mining by external actors – which have displaced elephant and gorilla populations from more remote areas of the forests towards villages (Perram et al., 2022).

State approaches to managing wildlife, especially threatened species, can exacerbate human–wildlife conflict and disempower IPs and LCs. Laws and policies may limit the actions IPs and LCs can take to prevent wildlife from causing harm, but fail to deliver on just and effective compensation or prompt systems to address specific incidents (Sherpa et al., 2025a).

Human–wildlife conflict can also have important gendered dimensions, with women bearing a disproportionate burden in relation to impacts such as food security, changes to workload, physical and psychological wellbeing, and economic hardship (Ogra, 2008). Some evidence suggests gender-bias in state compensation paid for killings of humans by wildlife in Nepal (Sherpa et al., 2025b).

State approaches can sometimes undermine IPs' and LCs' own approaches to coexistence with wildlife, as well as the cultural values which support them. In Churchill, Canada, the Cree, Dene and Métis people have developed a relationship of coexistence with polar bears, based on principles of mutual respect (Miller et al., 2025).

In many areas, IPs and LCs have developed their own diverse customary rules and approaches to manage human–wildlife conflict (Stevens, Rawat and Satterfield, 2025). For example, the Il Laikipiak Maasai of Mount Kenya reduced bush-cutting on wider lands to ensure more fodder for wildlife, reducing the intrusion of wild animals searching for water, prey and pasture during drought (Vizina and Kobei, 2017).

Restrictions imposed on customary practices and access to parts of their territories, including blanket bans on killing threatened species, can leave communities defenceless and unable to use their skills to manage interactions with other species effectively. They can also entail a violation of human rights if they entail restricting or criminalising cultural traditions and customary sustainable use without free, prior and informed consent.

Managing invasive alien species

Target 6: Reduce the introduction of invasive alien species by 50% and minimize their impact

Eliminate, minimize, reduce and or mitigate the impacts of invasive alien species on biodiversity and ecosystem services by identifying and managing pathways of the introduction of alien species, preventing the introduction and establishment of priority invasive alien species, reducing the rates of introduction and establishment of other known or potential invasive alien species by at least 50 per cent by 2030, and eradicating or controlling invasive alien species, especially in priority sites, such as islands.

Invasive alien species are species that were not originally found in an ecosystem or geographical area – that is, they are not native to a given area – and which have effects on that ecosystem that are considered harmful by western science.

IPs and LCs, whose lifeways are closely connected to nature, can suffer significant impacts from invasive alien species (IPBES, 2023). The presence of invasive alien species in their territories is often linked to colonialism or other activities affecting their territories without their free, prior and informed consent (Wehi et al., 2023). Invasive alien species can negatively affect IPs' and LC's autonomy, rights, health, cultural identities and livelihoods (IPBES, 2023). For example, the invasive lionfish has caused significant damage to IPs and LCs in the Caribbean (FPP et al., 2020).

That said, recent research investigating the presence of alien species on IPs' lands found that, on average, and controlling for other factors, there are 30% fewer alien species on IPs lands relative to other lands (Seebens et al., 2024). The difference, according to both this and other research, specifically relates to IPs' management practices (Reyes-García et al., 2024). In addition, IPs and LCs undertake actions to manage invasive species. For example, case study 21 from India describes how communities living in the Nilgiri Biosphere Reserve are combatting invasive plants.



Caption: A dog rests beside a fresh catch of grayling at a Nenets camp on the Yamal Peninsula, Russia

Credit: longtaildog

Case study 21

Territory: Begur

Language: Bettakuruma

Authors:

- Renju K R, Bettakuruma people, Keystone Foundation
- Harshavardhini Angappan, Merab Manu, Vishnu N M, Keystone Foundation

Caption: Renju K R leading a nursery training

Credit: Vishnu N M



21 Bettakuruma people, India

Keystone Foundation is working with communities to manage invasive species in the Nilgiri Biosphere Reserve in India, which is renowned for its diversity of both nature and peoples. However, invasive plants have been introduced into this unique landscape, which grow and spread rapidly, overpowering native plants and disrupting the ecological balance.

Keystone Foundation is working with the communities who live on the land to co-design restoration and monitoring plans, as well as identifying members from the community who want to step into the role of 'Barefoot Ecologists'.

Experiences of Renju K R, Bettakuruma, a Barefoot Ecologist:

"My community, the Bettakuruma, understands that everything is interconnected – the soil, air, water, rain, native species, wildlife movements, and the overall ecological balance are all part of one living system.

"My work as a Barefoot Ecologist has trained me to combine the Traditional Ecological Knowledge of my community with scientific observation and field documentation – I walk the forest not just as a member of my community, but also as a responsible guardian.

"Our intention is not just to clear invasive species, but to recreate a healthy, diverse forest that supports both biodiversity and our community's future. With ongoing removal and restoration efforts, I have observed positive changes. Better light is reaching the forest floor, and native seedlings and understory plant diversity are slowly returning to the forest."

This community-based restoration project allows Indigenous Peoples like the Bettakuruma, Kattunayaka and Paniya to play a major role as key stakeholders in the initiative, creating sustainable, successful restoration projects with actors who are truly invested in the landscape.

"By sharing knowledge and working together, I see myself growing into a conservation activist who represents both community wisdom and ecological science, contributing meaningfully to the protection and restoration of our ancestral landscape."

Renju K R, Barefoot Ecologist

At the same time, it is important to recognise that IPs and LCs have a range of reactions to new species on their territories (Cariño et al., 2022) and may not always assess harm from non-native species in the same way as western science. Some IPs and LCs describe non-native species as "*newly arrived species*", and whether they are considered harmful or not can depend on multiple factors, including spiritual beliefs as well as how they behave and are experienced within the territories (Cariño et al., 2022).

For example, Hawaiian cultural practitioners harvest the inner bark of the hau plant for socio-cultural practices, such as making hula implements and making *imu* (underground ovens), and collect kukui leaves to make lei for cultural ceremonies, despite the invasive status of both plants (Wehi et al., 2023).

IPs and LCs may sometimes welcome non-native species into their territories as new friends, or as refugees from changing climatic conditions (Cariño et al., 2022). The new species may sometimes provide new livelihood opportunities. IPs and LCs may actively manage them to maintain ecological balance in their territories, or species may find their own balance. For example, relationships with *kiore*, the Polynesian rat (*Rattus exultans*) – a species originating in South-East Asia – differ among Māori in Aotearoa New Zealand. Many Māori value the species as a customary food source, an ecological indicator, and a provider of skins, which is uniquely integrated into Māori genealogy (*whakapapa*). In contrast, some Māori communities, such as the Ngātiwai, established nature reserves for its protection, demonstrating the trade-offs between cultural values and standard conservation goals (Mercier, Palmer and King-Hunt, 2022; Wehi et al., 2023).

IPs and LCs may also consider some species as alien and invasive that others do not. For example, non-local varieties of crops or genetically modified crops that are introduced by external actors and displace local varieties may be considered invasive alien species, even if not understood in this way by others. For more about this, see Chapter 5: Meeting people's needs through sustainable use and benefit-sharing. Case study 22 also provides an example of this from the Democratic Republic of Congo.

Case study 22

Territory: Bunyakiri-Kambaka

Language: Kitembo, Kibuluko

Authors:

- Balingene Narcisse, Bambuti-Bakanga people, Talent des femmes autochtones et rurales/ Maharifa ya wamama vijini ASBL
- Glorieuse Zania, Bambuti-Babuluko people, Talent des femmes autochtones et rurales/ Maharifa ya wamama vijini ASBL

Caption: Angelique Ipanga, a teacher and farmer, tends to manioc in Lukolela

Credit: Ollivier Girard, CIFOR



22 Bambuti-Bakanga and Bambuti-Babuluko peoples, Democratic Republic of Congo

In the Democratic Republic of Congo (DRC), local biodiversity has been severely disrupted by the introduction of genetically modified organisms (GMOs) and non-native species as part of humanitarian programmes set up following crises and armed conflicts in the region. These interventions, intended to address food emergencies, have, however, led to unexpected ecological consequences, including the disruption of ecosystems and the gradual disappearance of certain local species.

Against this backdrop, Indigenous women have seen their way of life profoundly affected. Yet, far from resigning themselves to this situation, they have developed strategies for resilience and biodiversity conservation based on their ancestral knowledge, thereby fulfilling their traditional role as guardians of biodiversity. They have promoted sustainable agroecological practices that conserve the land, reduce the impact of invasive species and protect the traditional species that form the basis of their cultural identity, diet and traditional medicine.

In the case of cassava, introduced species have replaced the local varieties cultivated for generations, which had not only nutritional value but also medicinal importance. In response, the women's organisation Talent de Femmes Autochtones et Rurales has reintroduced traditional cassava varieties, using cuttings obtained from elder women – the true custodians of traditional seeds – who had preserved two varieties valued for their medicinal potential and disease resistance.

Similarly, a tilapia distribution programme has produced fry known locally as *kavimba*, which feed on the eggs of the Birombi fish – a local species associated with solidarity and social cohesion, whilst also serving as a valuable food source. Using an integrated agroecological approach, the women have developed ecological fish ponds to restore food security and Birombi populations, whilst introducing local eels, which are natural predators of the *kavimba*.

The work of the Indigenous women of Bunyakiri-Kambaka in South Kivu demonstrates that traditional knowledge is essential, not only for ecosystem restoration, the management of invasive species and the protection of biodiversity, but also for strengthening social cohesion and culture.

Pollution

"We saw how the clean water from the river was beginning to harm us, as it was becoming polluted by activities in communities further upstream. Faced with the loss of our vegetation and our natural and cultural environment, we decided to take steps to conserve our oyster lagoon, rivers, mangroves, pools and ditches."

Nahua community, Mexico 23

Target 7: Reduce pollution to levels that are not harmful to biodiversity

Reduce pollution risks and the negative impact of pollution from all sources by 2030, to levels that are not harmful to biodiversity and ecosystem functions and services, considering cumulative effects, including: (a) by reducing excess nutrients lost to the environment by at least half, including through more efficient nutrient cycling and use; (b) by reducing the overall risk from pesticides and highly hazardous chemicals by at least half, including through integrated pest management, based on science, taking into account food security and livelihoods; and (c) by preventing, reducing, and working towards eliminating plastic pollution.

Pollution of land, water and air is a major threat to biodiversity (IPBES, 2019), and to the rights and health of IPs and LCs (Fernández-Llamazares et al., 2020; Leyton-Flor and Sangha, 2026).

IPs and LCs and their territories are disproportionately affected by pollution (see, for example, Chong and Basu, 2024; Cade et al., 2025), in part because highly polluting activities, such as agriculture, extractive industries (mining and oil and gas), urban growth, or industrial development, are frequently located on or near where they live (Fernández-Llamazares et al., 2020; Cade et al., 2025). This is not accidental – their territories are also disproportionately selected as sites for dumping of waste or pollutants because of their remoteness and the political marginalisation of IPs and LCs (Liboiron, 2021).

Mining and drilling for oil and gas affect many IPs and LCs, destroying habitat, contaminating soil and waterways, and exposing territories, people and other beings to toxic substances (Orellana, 2022; United Nations Environment Programme (UNEP), 2021). For example, an estimated 50% of Indigenous communities living in the Branco and Tapajós river basins in Brazil face *"extremely high"* risks of severe kidney and liver damage from mercury contamination (Global Alliance of Territorial Communities and Earth Insight, 2025).

The use of toxic chemicals for industrial agriculture and forestry is another major driver of pollution impacts on IPs' and LCs' lands and seas. The use of pesticides and overuse of synthetic fertilisers leaves toxic residues that infiltrate hydrological systems and often impact large areas of land and sea. For example, case study 50 from the Anishinaabek territory of Robinson Huron Waawiindamaagewin in Canada describes how forestry companies' use of glyphosate to prevent regrowth has had significant environmental and human rights impacts for the Anishinaabek.

Plastic pollution on both land and sea – and its upstream impacts of oil extraction – is an increasing concern for IPs and LCs (UNEP, 2021; Jacobs, 2025). It disproportionately affects fishing communities, island populations and marginalised urban populations (Puentes Riaño, 2024), which include many IPs and LCs. In Te Moananui in the Pacific, microplastics have been found in more than 25% of commonly consumed fish species (Fuller et al., 2022).

The impacts of pollution are compounded by the global issue of "*waste colonialism*" (Walters and Loureiro, 2020); that is, the export of waste, including polluting materials, from wealthy countries to poor ones. IPs and LCs in poorer countries often bear the brunt of these practices. Impacts of pollution are also compounded by violations of IPs' and LCs' rights; for example, when loss of lands, cultures and/or livelihoods causes an increased dependence on food imports with higher pollution impacts (Manglou et al., 2022; Fuller et al., 2022).

Case study 23

Language: Nahua

Author: Abril Laura Eloisa Valencia Lara, Indigenous community of El Pescador, Pajapan, Sembrando Semilla Sagrada AC

Caption: Women from the community collect red mangrove seeds for community reforestation projects

Credit: Abril Laura Eloisa Valencia Lara



23 Nahua people, Mexico

As the Nahua community of El Pescador, situated in Pajapan, Veracruz, on the Gulf of Mexico, we share a deep connection with our land, where the mangrove forest and Laguna del Ostión form the basis of our lives, culture and livelihood. We grew up in a natural environment where food was plentiful and there was game to hunt; we had more than enough of everything. We were united by a deep respect for our gods, and we treated illnesses with rituals and sacred plants. All this knowledge was passed down to us by our grandmothers and grandfathers.

However, we saw that things were beginning to change. Faced with the loss of our vegetation and our natural and cultural environment, we decided to take action to preserve our territory. We saw how the clean water of the river was beginning to harm us, as it was becoming polluted further upstream. We also saw that fish stocks were declining in the water bodies, that the river was shrinking, that the prawns were fleeing the area, and that places that had once been clean were becoming littered with plastic and various forms of rubbish carried down by the rivers.

As the community of El Pescador, we took matters into our own hands. We collectively established rules that were applied throughout the territory, reorganising our land into zones for use, conservation and restoration. We manage 1,175 hectares through our own institutions, assemblies and customary laws, with the aim of protecting biodiversity for the community's children and grandchildren.

Community action extended to the reforestation and conservation of mangroves, with 128 hectares set aside for restoration and ongoing efforts to replant red mangroves and remove plastic waste. Indigenous patrols monitor illegal logging, overfishing and pollution, whilst new breeding grounds have been established for species such as the blue crab.

Despite initial resistance and discrimination, our ideas took root and bore fruit, inspiring neighbouring villages to join a broader inter-community alliance known as 'the 13 communities of the lagoon', where agreements are established based on the self-determination of Indigenous Peoples and extend beyond a single community.

Although external pressures persist – such as climate change, proposed oil extraction and the poaching of blue crabs – we will continue to build our capacity and foster community cohesion through restoration and conservation activities within our sacred territory.

IPs and LCs are not passive victims of pollution. In many places they are leading the fight to stop or prevent polluting activities, to protect their territories and themselves (Fernández-Llamazares et al., 2020). For example, case study 23 shows how the Nahua community of El Pescador, faced with increasing pollution in their coastal territory, organised to clean, conserve and restore their waters.

Beyond being key agents in the fight against pollution, many IPs and LCs offer models – of, for example, food production, packaging and even mining – that enable humans to derive benefits without the harmful consequences of pollution. For example, case study 33 describes how communities in Sri Lanka are reviving traditional fishing practices that use sustainable methods. Many IPs and LCs also manage productive food systems without toxic pesticides (see, for example, case study 29 on potato production in Chile). They use natural forms of packaging instead of plastic, based on their traditions. And they have their own ways of governing ancestral mining to enable sustainable and non-toxic mineral use.

Climate change

"Locally led initiatives on the ground are labs that demonstrate how it is possible to address waste, food insecurity and the impacts of climate change with innovative circular systems that incorporate waste management, renewable energy and resilience."

Local communities, Antigua 38

Target 8: Minimize the impacts of climate change on biodiversity and build resilience

Minimize the impact of climate change and ocean acidification on biodiversity and increase its resilience through mitigation, adaptation, and disaster risk reduction actions, including through nature-based solutions and/or ecosystem-based approaches, while minimizing negative and fostering positive impacts of climate action on biodiversity.

Climate change is one of the main drivers of biodiversity loss. IPs and LCs are affected by the impacts of climate change directly but also through a multitude of indirect effects, many linked to impacts on biodiversity (Reyes-García et al., 2024).

Specific impacts on biodiversity reported by IPs and LCs include, for example, changes in abundance and location of species, as well as in species behaviour such as flowering or migration patterns (Cruz-Gispert et al., 2026). In coastal areas around the world, IPs and LCs have been reporting that climate-related impacts and disasters (such as cyclones, storm surges, salinity, coastal erosion, sea-ice loss, coral bleaching and wetland degradation) are becoming more frequent and severe (Intergovernmental Panel on Climate Change (IPCC), 2022; Rashid et al., 2023; Reyes-García et. al., 2024; Koundouri et al., 2025).

As well as reducing biodiversity, these changes can have serious implications for IPs' and LCs' wellbeing, affecting their food security, health, and cultural and spiritual practices (see, for example, Severo et al., 2025). Case study 24 describes how a Karen Indigenous community in Thailand has developed a biodiversity monitoring system to enable them to more adaptively manage their territory, in response to repeated climate-related disasters that have disrupted the ecological balance.



Case study 24

Territory: Mae Yamikee

Language: Karen

Authors:

- Mr. Noppol Maipluang, Indigenous Media Network
- Karen/Pga K'nyau people of Ban Mae Yang Min village
- Inter Mountain Peoples' Education and Culture in Thailand Association (IMPECT)

Caption: Maliwan Teja, a leader of a community research team, Mae Yang Mint village, Chiang Rai province, Thailand

Credit: Thawatchai Jaipuang, Indigenous Media Network (IMN)

24 Karen/Pga K'nyau people, Thailand

Before a child in the Karen Indigenous community of Ban Mae Yang Min in Chiang Rai tastes their first spoonful of rice, they are first fed fish. The community believes that this will allow the child to overcome hardship just as fish navigate strong river currents – with freedom and strength. This small fish – *pla rak kluay* – has historically been abundant in local waterways, therefore becoming a locally understood ecological indicator for clean and functioning aquatic ecosystems.

Yet over the past decade, climate-related disasters have increasingly disrupted the ecological balance. Flash floods, landslides, and severe flooding have struck the area at least four times within ten years, raising concerns among the villagers about the long-term survival of local biodiversity and the effectiveness of existing forest protection systems.

In response, Indigenous women, local knowledge holders, youth and community leaders set up a community-led biodiversity research initiative. They used digital mapping tools such as Mapeo to collect data over a two-year period on species abundance, ecological distribution, and risk of disappearance among plants and animals in the area. They documented at least 186 plant species and 66 animal species – including *pla rak kluay* – with results showing moderate to high biodiversity, but with visible signs that it is declining.

"Trees, plants, animals – there are fewer than before. That is why we need to continue protecting them."

Saengthong Khunwat, community researcher

For the Karen community, the forest is not just territory; it is an inherited living system upon which cultural survival depends. The village already enforces strict customary conservation rules to protect their lands, but like many Indigenous communities in northern Thailand, residents do not possess formal land titles or legal ownership over the forests and waterways they have cared for across generations.

In this sense, the story of *pla rak kluay* is not simply about fish. It is about how Indigenous communities continue to defend ecological knowledge, biodiversity, and collective survival amid climate uncertainty and contested governance.

Target 8 calls on Parties to combat climate change and support biodiversity through mitigation, adaptation and disaster risk reduction. Given the severe climate change impacts suffered by IPs and LCs, such action is critical both for biodiversity *and* to protect the rights of IPs and LCs. This requires a human rights-based approach, not only in biodiversity- and climate-related action, but in all national and global decision-making, since many IPs and LCs consider that climate change impacts cannot be separated from broader human-induced ecosystem degradation and unsustainable development pathways (see Box 7).

Box 7

7 Climate change and adaptation in marine and coastal ecosystems

The destruction of mangroves, coral reefs, intertidal rocky reefs, seagrass beds, mudflats and coastal forests reduces the natural protection these ecosystems provide against climate impacts (including storms, flooding and erosion) while undermining fish nursery habitats, carbon sequestration, and biodiversity conservation (Watts, 2025). Some "*blue economy*" and climate adaptation initiatives – such as large-scale coastal infrastructure, mining, port expansion, industrial aquaculture, tourism, and certain marine conservation models – deepen environmental and social vulnerabilities (see, for example, Alinsug and Alinsug 2026).

IPs and LCs are actively developing and implementing adaptation responses grounded in traditional knowledge, collective governance, and ecosystem stewardship. Many Indigenous and small-scale fishing communities are adapting their livelihoods and fishing practices to changing climate conditions. Indigenous observational knowledge about winds, ocean currents, tides, species behaviour and seasonal changes is contributing significantly to climate monitoring, disaster preparedness, and early warning systems (Galappaththi et al., 2021).

The approach in Target 8 includes using nature-based solutions; that is, "*actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human wellbeing, ecosystem services, resilience and biodiversity benefit*" (United Nations Environment Assembly (UNEA), 2022).

Many IPs and LCs practice forms of care and adaptive management that could be called nature-based solutions, although from their perspectives, it may be more appropriate to call them *culture-based solutions* (Nelson and Reed, 2025). As an example, case study 25 describes how Indigenous groups in Bangladesh addressed acute water shortages through adaptive management of their village common forest.



Case study 25

Territory: Plaing Thong (ဖလံထောင်) / Mong Circle

Language: Marma, Chakma, Tripura

Author: Rani Ukhengching Marma, Marma people, Office of the Mong Chief

Caption: The research team meets with traditional leaders and villagers who safeguard the Itchori Village Common Forest

Credit: Ukyanu Marma

25 Marma, Chakma and Tripura people, Bangladesh

Indigenous groups such as the Marma, Chakma and Tripura people from the Mong Circle, Chittagong Hill Tracts (CHT) in Bangladesh are combatting deforestation with a community-led forest management system called 'Village Common Forests' (VCFs): natural forests around their communities that they manage sustainably according to their traditional practices.

In line with the Indigenous belief that a spiritual entity guards natural resources, VCF regulations seek to minimise exploitation and promote biodiversity. They are run by committees elected by the Indigenous community, with collective rulemaking to safeguard the forest and its resources. Studies have shown that VCFs are more biodiverse than nearby government-managed forests.

However, these Indigenous practices are at risk due to increasing external pressures. Government schemes are encouraging non-Indigenous Peoples to settle in the VCFs, putting increased demand on resources, climate change is exacerbating an 'acute water crisis', and external land practices can have unintended negative effects. For example, residents of the Betchori and Dholochori VCFs reported that large teak tree plantations on the boundaries of their land have dried up water sources.

The Indigenous community in Kamalchhori, Khagrachari recognised that afforestation could restore their water source. By planting native species, they mitigated water insecurity, helped by a $10,000 donation, highlighting the importance of directly investing in Indigenous solutions. Contrastingly, NGOs gave the Rangamati VCF we visited technology to help improve water flow, but, with diminishing water in the creeks, this technology will soon become redundant.

Where Indigenous knowledge is supported, the water table can remain undisturbed and water sources continue. This shows the importance of direct funding for Indigenous communities whose knowledge and cultural practices are already supporting the conservation and sustainable use of biodiversity.

The research reveals a consistent pattern – when Indigenous communities have control over VCFs, forests thrive, water flows, biodiversity blooms, and cultural identity is preserved.

Yet, IPs' and LCs' rights are not always well respected in climate policy frameworks (see, for example, the Danish Institute for Human Rights et al., 2026) and can be violated by some types of climate actions by states and other actors. For example, their rights are often threatened by the green energy transition, and the associated increased production of solar panels, batteries and other products. Much of the coveted transition minerals needed for these products are located on their territories (Owen et al., 2023; Burton et al., 2024), and the rush to mine them frequently involves violations of IP's and LCs' rights (Finn and Stanton, 2022; Climate Rights International, 2024; Burton et al., 2024). Other *"clean"* energy options, such as hydropower, can have equally concerning impacts (Sharma and Sharma, 2025; Mangal, 2026).

The impacts of carbon markets – another climate mitigation strategy with implications for human rights – is discussed in Chapter 6: Tools and solutions for implementation and mainstreaming the KMGBF.



Chapter 5
Meeting people's needs through sustainable use and benefit-sharing

KMGBF Goals B and C and Targets 9–13

"For a long time, the economic activities of the Indigenous Peoples of the North – such as traditional fishing, reindeer herding, hunting, gathering, and dog breeding – were viewed as outdated practices incompatible with modern economic systems. However, the reality of traditional practices in Indigenous communities today highlights their deep sustainability and adaptation to local ecosystems and biodiversity, as they possess knowledge of the environment accumulated over generations."

Indigenous Peoples of the North, Russia [28]

Caption: Using long-handled crowbars to probe the marshy grasslands, Warddeken rangers hunt for turtles in Australia

Credit: Matthew Abbott, Panos Pictures



This chapter explores the critical contributions that Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs) are making to achieving Goals B and C and Targets 9–13 of the Kunming–Montreal Global Biodiversity Framework (KMGBF), and the challenges they continue to face in doing so.

Goal B: Prosper with nature

Biodiversity is sustainably used and managed and nature's contributions to people, including ecosystem functions and services, are valued, maintained and enhanced, with those currently in decline being restored, supporting the achievement of sustainable development for the benefit of present and future generations by 2050.

Goal C: Share benefits fairly

The monetary and non-monetary benefits from the utilization of genetic resources and digital sequence information on genetic resources, and of traditional knowledge associated with genetic resources, as applicable, are shared fairly and equitably, including, as appropriate with indigenous peoples and local communities, and substantially increased by 2050, while ensuring traditional knowledge associated with genetic resources is appropriately protected, thereby contributing to the conservation and sustainable use of biodiversity, in accordance with internationally agreed access and benefit-sharing instruments.

Targets 9–13

Targets 9–13 focus on managing wild species to benefit people, enhancing biological diversity in production systems, maintaining and restoring nature's contributions to people, supporting biodiversity in cities, and sharing benefits of genetic advances fairly and equitably (IPBES, 2019).

This chapter is divided into six sections:

- Protecting and enabling customary sustainable use – relating to Target 9
- Traditional occupations and livelihoods – relating to Targets 9 and 10
- Indigenous and local food and production systems – relating to Target 10
- Restoring nature's contributions to people and people's contribution to nature – relating to Target 11
- Urban biodiversity, cultural continuity and territorial justice – relating to Target 12
- Fair and equitable access and benefit-sharing – relating to Target 13.

Protecting and enabling customary sustainable use

"When culture and conservation align, the environment thrives naturally without the need for fences."

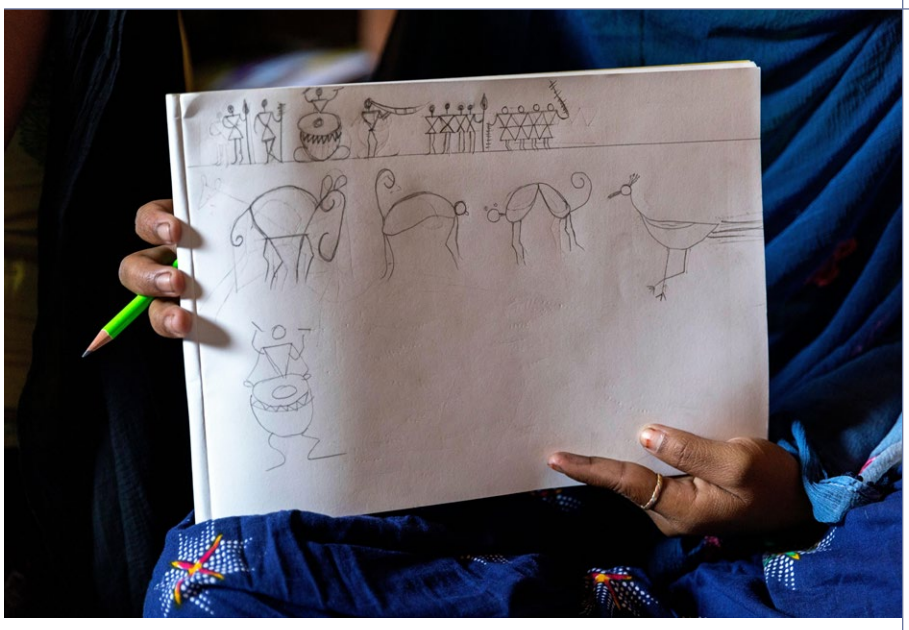
Tsumba and Tharu people Nepal 10

Target 9: Manage wild species sustainably to benefit people

Ensure that the management and use of wild species are sustainable, thereby providing social, economic and environmental benefits for people, especially those in vulnerable situations and those most dependent on biodiversity, including through sustainable biodiversity-based activities, products and services that enhance biodiversity, and protecting and encouraging customary sustainable use by indigenous peoples and local communities.

Customary sustainable use refers to the use by IPs and LCs of biological resources in accordance with customary laws, traditional knowledge, cultural practices and community governance systems that have developed over generations for specific places, species, seasons and ecosystems (Forest Peoples Programme, 2011; Food and Agriculture Organization (FAO) et al., 2021). Within the CBD, it is embodied by Article 10(c) and has been developed through various decisions and processes (see box 8).

Customary sustainable use is underpinned by relational values between IPs and LCs with their territories and the Earth more broadly, and guided by rules and practices related to when, where, how and by whom resources may be used, as well as by responsibilities to maintain balance in social, ecological and spiritual relationships. For example, case study 26 from the Republic of Congo illustrates how Baaka practices of dam fishing, honey gathering and wild yam harvesting combine ritual relationships with the forest, selective harvesting, rotation, replanting and rules that support the continuity of resources over time.



Caption: A young woman from the Lanjia Saora community learns to draw traditional animal symbols in Orissa, India

Credit: Matjaz Corel

Case study 26

Language: Baka

Authors:

- Jerôme Ambassa, Baka de la communauté autochtone de Zouoba
- Bernadin Yassine NGOUMBA, Responsable Plaidoyer Centre d'Encadrement Communautaire pour le Développement (CECD)

Caption: The yandi fire, which prevents bees from stinging whilst honey is being harvested in the Mbenzele community of Kabo and Pokola

Credit: Dalton Aweleka



26 Baka people, Republic of Congo

The traditional system of nature conservation and use practised by the Baka people of Zouoba village comprises various practices enriched by traditional knowledge passed down through generations. Each practice begins with the ritual *kossé* ceremony to ward off bad luck and offer words of blessing to the spirits of the forest.

Practice 1: Dam fishing

Baka women practise dam fishing for subsistence and as a cultural practice that plays a vital role in revitalising the forest. During the dry season, the women select specific spots rich in fish to build weirs. The weirs are constructed from mud, dead wood and leaves, enabling the collection of fish, crabs and prawns. The women select only mature, medium-sized specimens, whilst the young fish are automatically released back into the watercourse. Once the harvest is complete, half of the dam is carefully dismantled, and pregnant women in particular, as a symbol of fertility, throw leaves into the water to provide organic matter for the young fish to grow.

Practice 2: Sustainable honey gathering

Unlike dam fishing, honey gathering – known as *nado foki* in the Baka language – is an activity practised exclusively by Baka men from the village of Zouoba. They make a *pendji* to hold the honey, and begin by lighting a fire known as a *yandi*, made from leaves, to ward off the bees. The harvester climbs high up the tree using a *yenda* vine, carrying the *_yandi_* fire, the *pendji* container and an axe to open the hive. Only half the honey is harvested, leaving the wax and another portion of the honey to allow the hive to be repopulated. The tree from which the honey has been harvested can be used again for a new harvest the following year, thus ensuring the continuity of the resource.

Practice 3: Gathering wild yams

Gathering yams is not merely aimed at meeting the basic needs of the Baka people of Zouoba. The activity involves monitoring and supporting forest regeneration. Although it is an activity shared between men and women, women take the lead, identifying areas where the yams have reached maturity. The yams are then sorted: areas with lower density are enriched using forest leaves and humus. These areas are then placed under surveillance as 'food reserves' until the yams reach maturity. As for areas with a high concentration of yams, harvesting is carried out on a rotational basis to prevent over-exploitation. Harvested areas are replanted once harvesting is complete.

As mentioned above, customary sustainable use is recognised in the CBD through Article 10(c), which, alongside Article 8(j), helped establish customary use and traditional knowledge as issues of concern within the CBD (Girard, Hall and Frison, 2022; Kreiken and Arts, 2024).

The CBD *Plan of action on customary sustainable use*, endorsed by COP12 in 2014, calls for Parties to implement Article 10(c) with the full and effective participation of IPs and LCs (see box 8). The KMGBF marks a further shift by embedding customary sustainable use in the text of the targets: Target 9 calls on Parties to protect and encourage customary sustainable use by IPs and LCs, while Target 5 requires Parties to respect and protect it while ensuring sustainable, safe and legal harvesting and trade of wild species.

Box 8

8 Customary sustainable use in the Convention on Biological Diversity

Article 10(c) of the CBD requires Parties to: *"Protect and encourage customary use of biological resources in accordance with traditional practices that are compatible with conservation and sustainable use requirements."* This is a key provision of the CBD for IPs and LCs, whose diverse traditional knowledges and values and long-standing customary sustainable use practices embody the links between biological and cultural diversity.

The importance of customary sustainable use has repeatedly been recognised in CBD processes:

- In COP11 decision XI/14 (2012), Parties acknowledged that the implementation of customary sustainable use was "crucial in achieving the Aichi Biodiversity Targets and the Strategic Plan for Biodiversity 2011–2020"
- At COP12 (2014), Parties adopted the Plan of Action on Customary Sustainable Use, with the objective of promoting just implementation of Article 10(c) and ensuring the full and effective participation of IPs and LCs in implementation
- At COP16, customary sustainable use was made part of the Programme of Work of the Subsidiary Body on Article 8(j) (see COP decision 16/4).

In practice, however, although customary sustainable use is critical to the implementation of Target 9, its integration in NBSAPs and national reports has been minimal (see Chapter 2 above).

Customary sustainable use is important to IPs and LCs for meeting their material needs, but also for sustaining relationships between peoples, territories, knowledge systems and biodiversity. Traditional occupations of IPs and LCs such as fishing, hunting, gathering, harvesting, herding, farming, foraging and processing practices support food systems, livelihoods, health, cultural identity and intergenerational knowledge transmission (Abas, Aziz and Awang, 2022). Customary sustainable use also provides materials for medicines, clothing, weaving, home-building, crafts and musical instruments, and can make a material contribution to biodiversity conservation (Brittain et al., 2024).

Respecting and protecting customary sustainable use requires respect for and protection of IPs' and LCs' rights to lands, seas, territories and resources, including their rights to access, use and interact with wild species in their territories. It requires that they have security of customary tenure and resilient customary governance institutions. It can be weakened when customary practices are prevented, restricted, criminalised or stigmatised, interrupting the transmission of knowledge between generations. This is demonstrated in case study 27 from Sweden on Sámi pine bark harvesting, where past

restrictions, deforestation and changing social attitudes contributed to a break in the generational knowledge chain.

Case study 27

Territory: The Swedish side of Sápmi (North), Sábme (Lule), Sábme (Pite), Sábmie (Ume) Saepmie (South). Sápmi refers to the traditional homeland of the Sámi, the Indigenous people of northern Europe. Extending across Norway, Sweden, Finland, and the Kola Peninsula of Russia, Sápmi encompasses both a geographical territory and the cultural, historical, and social landscape of the Sámi people.

Language: The Sámi languages in Sweden are North Sámi, Lule Sámi, Pite Sámi, Ume Sámi and South Sámi. Today, nine living Sámi languages are spoken across Sápmi, although several are endangered to varying degrees.

Authors:

- Christina Storm Mienna, North Sámi, Laevas reindeer herding Sámi community, Giron/Kiruna area in Northern Norrbotten, Várdduo - Centre for Sámi research, Umeå university, Sweden
- Lena Maria Nilsson, Ume Sámi, forest Sámi, Máláge//Malå area in Northern Västerbotten
- Marja Labba, North Sámi people, Sirges reindeer herding community, Jáhkåmåhkke/Jokkmokk area in Northern Norrbotten
- Várdduo - Centre for Sámi Research, Umeå university, Sweden

Caption: A pine tree from which bark has been harvested

Credit: Krister Stoor



27 Sámi people, Sweden

Sámi society and ways of life have traditionally been based on the concept of a circular economy; a nomadic way of life that uses and reuses the resources at hand is one of the basic pillars of life for the community. However, the traditional knowledge and cultural practices of the Sámi are at risk of disappearing in the face of societal change and transformation.

In response to this, the Máhtut project was created, which aims to strengthen Sámi knowledge and skills by inviting Indigenous traditional knowledge holders to lead workshops related to traditional Sámi practices. Although based on Sámi knowledge traditions, the project aims to facilitate knowledge sharing across communities in Arctic and sub-Arctic Sápmi, ensuring that this knowledge can contribute to sustainable livelihoods and food systems for both Sámi and non-Sámi populations.

One workshop was led by Sámi elder Mikael Jakobsson and focused on the history and practice of pine bark harvesting. Dried pine bark has historically been used as a combustible material, in meat preservation through smoking, as a raw material in forms of Sámi handicraft traditions, and as a nutritional resource.

For example, the highly nutritious inner bark was harvested and added to (for example) reindeer meat soups among the Sámi people. It can also be dried, smoked in a *lávvu* (traditional Sámi dwelling) or fried in a pan until the flakes turn golden, when they can then be added to dishes. Different pine trees have a taste of their own, and many factors affect the taste of the tree such as vegetation growth, sunlight and hydration.

The workshop also included the three steps to gather pine bark with traditional tools and methods. First you choose the tree. Then you ask the tree for permission. Then, using a shark knife, you carefully scrape off the outer bark and use a different tool to remove the inner bark.

Sámi knowledge related to this practice has been disappearing, as in the 19th century the Swedish forest industry prohibited pine bark harvesting, disrupting the intergenerational transmission of related knowledge. Unlike the harvesting of wild berries and herbs, the collection of pine inner bark is not covered by the Swedish right of public access (*allemansrätten*), further limiting opportunities to maintain and practice this tradition. The decline of pine bark harvesting was also influenced by its association with periods of hardship and its reputation as a *"poor man's food,"* contributing to a loss of status and use. The Máhtut project aims to revitalise these practices and strengthen the transmission of related knowledge within Sámi communities.

The provision of this case study was co-funded by the European Union through the Interreg Aurora Programme.

In addition to the lack of progress in securing tenure rights, other barriers continue to hinder the protection and encouragement of customary sustainable use. Traditional ecological principles and knowledge about sustainability and conservation are often still ignored in many conservation and development policies and actions – such as the establishment of protected areas and the development of wildlife protection laws – many of which are still designed and implemented without effective participation of IPs and LCs. Equally, external pressures from mining, logging and infrastructure projects affect customary sustainable use.

Loss of language and culturally inappropriate education also affects customary sustainable use. Many education systems continue to be aimed at assimilating Indigenous cultures and languages into mainstream national systems and are imposing non-Indigenous languages on children (Adnyana et al., 2025; Zsögön, 2025). Out of 29 countries included in Indigenous Navigator National Survey Data between 2020 and 2025, fewer than half (12 countries: 41%) recognised Indigenous languages as official languages, or had measures to support transmission of traditional knowledge, languages, and practices to Indigenous youth (13 countries) (Indigenous Navigator, 2026, unpublished). Loss of language leads to loss of biodiversity knowledge because local concepts and terms cannot be expressed and explained through other languages as effectively (Frainer et al., 2020; Cámara-Leret and Bascompte, 2021). In addition, much Indigenous and local education, and transmission of cultural knowledge, must take place outside the classroom.



Caption: A woman teaches the Eskaya alphabet in Bohol, the Philippines

Credit: ruelleruelle

Traditional occupations and livelihoods

"For a long time, the economic activities of the Indigenous Peoples of the North – such as traditional fishing, reindeer herding, hunting, gathering, and dog breeding – were viewed as outdated practices incompatible with modern economic systems. However, the reality of traditional practices in Indigenous communities today highlights their deep sustainability and adaptation to local ecosystems and biodiversity, as they possess knowledge of the environment accumulated over generations."

Indigenous Peoples of the North, Russia 28

Traditional occupations are one way in which customary sustainable use is practised, maintained and transmitted across generations. Traditional occupations vary widely across cultures and include pastoralism, fishing, hunting, shifting cultivation, traditional crafts, gathering non-timber forest products, and harvesting materials for food, medicine, clothing, housing, tools and cultural practices. Many traditional occupations are linked to agriculture, aquaculture, fisheries and forestry, underlining strong linkages to both Target 9 and Target 10.

Traditional occupations are based on relationships between peoples, territories, knowledge systems and biological resources (International Labour Organization (ILO), 2023). Case study 28 illustrates how traditional practices among the Indigenous Peoples of the North remain grounded in inherited knowledge while also supporting contemporary livelihoods, local economies and cultural transmission.



Caption: A Bajau child diving in Sempora, Malaysia

Credit: ChinaImages



Case study 28

Territory: Kamchatka Peninsula

Language: Itelmen, Koryak, Kamchadal

Author: Center of Distinction on Indigenous Knowledge of the North

Caption: Dog sled race in Kamchatka

Credit: Alexander Piragis

28 Indigenous Peoples of the North, Russia

For a long time, the economic activities of the Indigenous Peoples of the North – such as traditional fishing, reindeer herding, hunting, gathering, and dog breeding – were viewed as outdated practices incompatible with modern economic systems. However, the reality of traditional practices in Indigenous communities today highlights their deep sustainability and adaptation to local ecosystems and biodiversity, as they possess knowledge of the environment accumulated over generations.

For example, the Indigenous communities of Kamchatka Peninsula provide a clear example of how traditional economic activities can promote the socio-economic development of the region and the Indigenous Peoples living there.

Breeding and training sled dogs preserves the continuity of centuries-old generational knowledge and strengthens communities' connection with nature. Kennels that promote sledding have contributed to the development of the local economy through ecotourism, sporting competitions and cultural events, and some have also organised a school to teach local children and tourists how to drive a sled (mushing).

Seal hunting holds deep cultural significance, as one of the traditional forms of resource use that has ensured our people's survival in harsh northern conditions. The skins are popular among artisans, who process the hides to create warm clothing, footwear and household materials specifically adapted to local conditions. This makes seal hunting part of a closed, zero-waste system and helps maintain self-sufficiency and reduce dependence on imported goods. This aligns with the traditional ecological and cultural ethics of Indigenous Peoples, in which resources are used sparingly and wisely.

Other traditional methods, such as leatherworking and carving reindeer antlers, bones and wood, preserve the symbolic language and identity of Indigenous Peoples, reflecting their worldview, history, connection to nature and cultural traditions. Handmade items using these techniques are in demand beyond the northern regions and have become an important source of income.

Integrating economic, cultural and environmental aspects of Indigenous Peoples' lives through sledding, seal-hunting and folk crafts have opened up opportunities for the economic and social development of Indigenous Peoples in the North.

Traditional occupations are not static – like cultures, they adapt over time while maintaining continuity with inherited knowledge, values and responsibilities. They can include *"modern"* occupations, use of technology and new innovations that draw on traditional knowledge and support the maintenance of cultural values and identity (ILO, 2023).

Box 9

9 The traditional occupations indicator

The importance of traditional occupations to IPs' and LCs' lifeways, to customary sustainable use, and to their long-term relationships with biodiversity is reflected in their inclusion as one of the four traditional knowledge indicators in the KMGBF monitoring framework. Target 9 includes headline indicator 9.2: Percentage of the population in traditional occupations.

At present, this indicator is difficult to measure. Labour statistics and standard systems for classifying work often do not reflect how IPs and LCs understand traditional occupations, especially where work is seasonal, unpaid, subsistence-based, collective, or embedded in wider cultural and territorial responsibilities.

National data, including labour force surveys, are often limited or insufficiently disaggregated, and IPs and LCs remain largely invisible in many national and global statistics (Expert Mechanism on the Rights of Indigenous Peoples, A/HRC/EMRIP/2025/2), 2025).

The International Labour Organization provides a global system for categorising labour statistics, and some work has been done to explore how traditional occupations could be mapped onto these categories (ILO, 2023). However, improving this indicator requires more than better disaggregation of national-level data. It also requires greater use of community-generated data that reflects how IPs and LCs themselves define, practise and value traditional occupations. For example, the Indigenous Navigator hosts data on this indicator gathered by IPs in 31 countries and from more than 500 communities since 2015 (Indigenous Navigator, 2026).

Many traditional occupations are closely linked to the ability to practice customary sustainable use, and many are also linked to the practice of sustainable agriculture, aquaculture, fisheries and forestry under Target 10. As with customary sustainable use, traditional occupations are under threat from the dispossession of IPs and LCs from their territories, restrictions imposed through protected areas, the management of wild and threatened species, wage labour and market pressures, and education systems that do not sustain traditional knowledge and languages.

The experience of Ch'orti' communities in Guatemala shows how economic pressures can weaken traditional occupations and knowledge transmission; limited local income opportunities have led many community members, especially men, to migrate for paid work, including in coffee and sugar cane production (FAO, Alliance of Bioversity International and CIAT, 2021). As traditional practices become less economically viable, fewer people develop specialist skills linked to community food systems, crafts and livelihoods (FAO, Alliance of Bioversity International and CIAT, 2021). Formal schooling can also contribute to this erosion where it does not support Ch'orti' language, knowledge or practices (FAO, Alliance of Bioversity International and CIAT, 2021).

Indigenous and local food and production systems as alternative models

"Our community does not simply care for seeds and land. We care for a way of life and for the balance between people and nature. When communities are trusted to care for their lands, they can protect biodiversity, strengthen food systems, and create sustainable livelihoods for future generations."

Dusun people, Malaysia [56]

Target 10: Enhance biodiversity and sustainability in agriculture, aquaculture, fisheries, and forestry

Ensure that areas under agriculture, aquaculture, fisheries and forestry are managed sustainably, in particular through the sustainable use of biodiversity, including through a substantial increase of the application of biodiversity friendly practices, such as sustainable intensification, agroecological and other innovative approaches, contributing to the resilience and long-term efficiency and productivity of these production systems, and to food security, conserving and restoring biodiversity and maintaining nature's contributions to people, including ecosystem functions and services.

Target 10 of the KMGBF responds to the unsustainability of dominant models of production and calls for renewed focus on 'biodiversity friendly' practices across agriculture, aquaculture, fisheries and forestry. For IPs and LCs, this is not a new agenda – their food and production systems already focus on agroecological principles that prioritise the long-term sustainability of their lands, waters and territories over profit (Wluka, 2023; Sánchez Cruz and Triana Solórzano, 2023; Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES), 2024a; Yáñez Rojas, 2025).

Many IPs and LCs have well-developed production and provisioning systems that are closely linked with biodiversity, including for food and other products derived from their territories, such as timber and production of textiles and fibres (Miller et al, 2022; Ureta Cifuentes et al., 2025). IPs' and LCs' food and production systems often combine production, health, spirituality, social relations and ecological care. They are not simply systems for producing food and other products, but ways of sustaining relationships between people, plants, animals, lands, waters and territories (FAO, Alliance of Bioversity International and CIAT, 2021; IPBES, 2024a; Walker et al., 2024). For example, the Andean *chagra* (plot of land) is not only a cultivated space – it is also a place where knowledge is passed on, relationships with the land are maintained, and ideas of living well are put into practice (Sánchez Cruz and Triana Solórzano, 2023).

These reciprocal relationships require active stewardship so that lands, waters, territories and resources can continue to sustain communities across generations. In many contexts, harvests are accompanied by rituals and ceremonies of gratitude (Yáñez Rojas, 2025). Aymara potato production in Chile (case study 29) shows how these relationships are sustained in practice, with native potatoes linking food sovereignty, seed diversity, spiritual obligations, women's knowledge and climate resilience.

Case study 29

Territory: Socoroma

Language: Aymara

Author: Hortencia Hidalgo Caceres, Aymara people, Red de Mujeres Indígenas sobre Biodiversidad para América Latina y El Caribe (RMIB-LAC)

Caption: Selecting potatoes

Credit: Jorge Peña



29 Aymara people, Chile

The village of Socoroma is situated in the commune of Putre, in the Andean foothills of northern Chile, at an altitude of approximately 3,000 metres above sea level. The region forms part of the ancestral territory of the Aymara people and is characterised by a rich cultural heritage, traditional farming systems and a close connection with local biodiversity.

Native potatoes, as the staple crop, are a cornerstone of Andean food sovereignty and the region's biodiversity. Their cultivation is closely linked to ancestral knowledge, such as the agricultural calendar, terrace farming techniques and rituals honouring *Pachamama* (Mother Earth). Agricultural terraces are well adapted to the rugged terrain and help to conserve soil and water, whilst the diversity of native potatoes ensures food sovereignty and climate resilience.

Seed selection and conservation, traditionally carried out by communities – particularly by women – is key to preserving genetic diversity. There are different varieties, shapes, colours and flavours that have traditionally adapted to extreme conditions such as droughts and frosts – conditions that are now becoming increasingly common as a result of climate change. In this context, the conservation of traditional seeds represents a political and cultural act in the face of agricultural homogenisation. This tuber symbolises life and history.

These traditional practices are accompanied by spiritual dimensions, such as the *Pachallampe* ritual, which means 'sowing in the earth', but its meaning transcends the literal: it involves the renewal of the bond between the community, the land and spiritual forces. It also strengthens social cohesion and the intergenerational transmission of knowledge through traditional principles such as *Ayni* (reciprocity between families), *Minka* (collective community work) and *Yanapa* (mutual aid).

Taken as a whole, this system not only ensures agricultural production but also constitutes a strategy for biocultural conservation and adaptation to environmental challenges, in line with the objectives of the Global Biodiversity Framework.

Many IPs' and LCs' food systems actively conserve and enhance biodiversity by utilising a wide array of wild, semi-domesticated and domesticated species (FAO, Alliance of Bioversity International and CIAT, 2021; Barwant et al., 2025). For example, the Lepcha and Limbu peoples in north-east India grow about

50 different crops and hold knowledge of dozens of wild edible and medicinal plants (Swiderska et al., 2022). Many such systems are adapted to seasonal cycles and local ecological conditions, rather than relying on external inputs to reshape the environment. Through indigenous crop varieties, landraces and agroecological practices such as intercropping, agroforestry and rotational cultivation systems, they can reduce the need for chemical inputs while maintaining diverse food sources. Practices such as *jhum* in India and *milpa* in Mesoamerica show how cultivation can work with forests and ecological cycles, rather than replacing them with monocultures (Yáñez Rojas, 2025).

The diverse food and production systems of IPs and LCs are increasingly recognised as important strategies for climate adaptation and resilience. IPs and LCs have long experience of adaptive management of their production systems, and their knowledge and practices offer important lessons for wider efforts to respond to biodiversity loss and climate change (Intergovernmental Panel on Climate Change (IPCC), 2014; Swiderska et al., 2022). Traditional crop varieties and landraces often contain traits that are important under changing ecological conditions, including tolerance to drought, salinity, pests and diseases (Barwant et al., 2025), which can reduce the risk of crop failure in increasingly variable and extreme climates. Similarly, their agroecological practices and agroforestry can reduce dependence on external inputs and can lower emissions (Bellon et al., 2017; FAO, 2021; Argumedo et al., 2021). Case study 30 from the Indian Sundarban shows how community-led restoration of indigenous rice diversity can strengthen food security, agrobiodiversity and climate resilience in a highly vulnerable delta ecosystem.



Case study 30

Territory: Sundarban

Language: Bengali

Authors:

- Bhaskar Deb Bhattacharya, Moipith village community
- Dipayan Dey, Malancha Dey, Chandreyi Sengupta, Aritra Mukherjee, Progyan Foundation for Research and Innovation

Caption: Germplasm conservation in the community seed bank via traditional methods at Tipligheri

Credit: Bhaskar Deb Bhattacharya

30 Local communities, India

The Indian Sundarban, a UNESCO-recognised deltaic ecosystem, is facing escalating climate threats due to sea-level rise, salinity intrusion and recurrent cyclones. Against this backdrop, the Progyan Foundation for Research and Innovation (PFRI), in partnership with local communities, initiated a pioneering programme in 2021 to restore and conserve indigenous rice varieties that are naturally adapted to such harsh deltaic conditions.

Through participatory on-farm trials, 54 traditional rice varieties (landraces) were assessed for climate adaptability, yield stability and economic performance. Nineteen types surpassed commercial hybrids during saline stress, reaffirming their value for sustainable agriculture in fragile delta ecosystems.

To preserve this genetic wealth, PFRI established a community seed bank, where farmers can access seeds to grow, and return seeds after harvest. Participation in the programme rose from 5% in 2021 to 27% in 2024 and covers over 42 acres of cropland. Women-led groups spearhead seed drying, labelling and germination testing, blending Traditional Ecological Knowledge with scientific validation by PFRI's research laboratory.

Local communities apply their traditional knowledge to the rice-growing process. Farmers keep indigenous rice varieties in the nursery for 5-15 days longer than high-yielding varieties, as it allows the plants to develop better osmotic stress tolerance. Dried neem leaves are used in the storage of both rice seeds and grains, as they are an organic pest repellent. Equally, certain rice varieties are conserved for their unique properties, such as perceived high iron content and benefits for managing illnesses such as diabetes.

This initiative not only revives ancestral cultivation wisdom but also generated micro-entrepreneurial opportunities through value-added aromatic rice marketing. A woman farmer asserted:

"The yield might be lower in landraces than high-yielding varieties, but as input costs are lower and the selling price is higher, the landraces are also highly profitable."

To scale these community-led successes, future support should focus on seed village programmes, as well as decentralised, government-subsidised processing units and stronger market linkages.

By integrating traditional genetic resources with modern agroecological methods, this programme reinforces food security, biodiversity and resilience in the region while ensuring equitable benefit sharing throughout. The PFRI model represents a replicable example of climate-smart, community-driven agriculture across South Asia's vulnerable coastal deltas.

IPs' and LCs' practices offer a critical and important alternative to the wider global food system, and especially industrial agriculture and fishing, which is a major driver of biodiversity loss. Large-scale monocropping, forest clearing for livestock grazing and feed production, concentrated animal production, and the heavy use of synthetic fertilisers and pesticides drive habitat loss, pollution, greenhouse gas emissions and the erosion of agricultural and wild biodiversity (IPBES, 2019). At the same time, industrial fishing is intensifying, with many IPs and LCs reporting declining fish stocks, biodiversity loss, degradation of mangroves and reef ecosystems, destructive fishing practices, marine pollution, and increasing illegal, unreported and unregulated fishing (Aini et al., 2023; Bennett, Morgera and Boyd, 2024).

Food systems account for around one-third of global greenhouse gas emissions (Agudelo Higuita, LaRocque and McGushin, 2023), and agriculture threatens 24,000 of the 28,000 species at risk of extinction (Wittman, 2023; Carlin, Arshad and Baker, 2023). These pressures are intensified by uneven patterns of global consumption, particularly high demand for animal products and other commodities in wealthy countries, which drives deforestation and land-use change in biodiversity-rich regions (Agudelo Higuita, LaRocque and McGushin, 2023; Burlingame et al., 2025).

The impacts of these extractive production systems are disproportionately felt by marginalised communities, including IPs and LCs (Wittman, 2023; Burlingame et al., 2025). The continued expansion of agribusiness displaces IPs and LCs from their lands and waters, while their communities face violence, criminalisation and threats when defending their territories (Rotz and Rück, 2024; Burlingame et al., 2025). In marine and coastal areas, industrial trawlers, commercial fishing fleets and encroachment into nearshore waters disproportionately affect IPs and LCs, including small-scale fishers, whose

livelihoods depend on coastal ecosystems (Environmental Justice Foundation, 2023; Arizona, Sari and Nizar, 2024; Lavoie et al., 2025; Schuhbauer and Sumaila, 2026).

Industrial agriculture models also promote cash crops, hybrid seeds and chemical inputs that reduce local biodiversity and IPs' and LCs' customary sustainable use (Regenerosity, 2025). In Kenya, for example, Tharaka leader Simon Mitambo explains that *"there has been a big push to promote hybrid seeds and chemicals which undermine soil and water; colonial seed and intellectual property laws threaten collective Indigenous seed systems; and the influence of multinational corporations means it is not possible to promote laws that support Indigenous food systems"* (Swiderska et al., 2022). As industrial production systems continue to expand, they replace IPs' and LCs' diverse, locally-attuned and self-sufficient food systems with practices that are less resilient and can threaten food security (Swiderska et al., 2022; Rotz and Rück, 2024). This dynamic is illustrated in Kyrgyzstan (case study 31), where women's groups are working to revive local seed varieties and reduce dependence on imported hybrid seeds.



Case study 31

Author: Madina Sadirdinova, "Dyikan Muras" Seed Savers Network of Kyrgyzstan

Caption: Exhibition of unique local vegetable varieties conserved and multiplied by the Dyikan Muras Seed Keepers Network. These traditional varieties demonstrate the richness of local agrobiodiversity and the importance of preserving farmers' seeds

Credit: Madina Sadirdinova

31 Local communities, Kyrgyzstan

Seeds have always been a focus of cultural and spiritual identity for Kyrgyz people. Although Kyrgyzstan was a large source of food production in Soviet times, after the regime collapsed, the country started to import seeds, often first-generation hybrids which are expensive and mean farmers need to buy them again each year. In an attempt to move away from this reliance on imported, expensive seeds, women's groups such as the Seed Keepers Network have been reviving their relationship with local seeds.

Local varieties are the result of farmers' many years of experience and observations. They have evolved under specific natural conditions, making them better adapted to the climate, resistant to drought and temperature fluctuations, and distinguished by their rich flavor and high nutritional value.

The network's main goal is to preserve and revive local seed varieties, prevent their extinction, and pass on living knowledge about agriculture. Preserving traditional seeds makes food systems more resilient to climate change and supports agricultural biodiversity. But this is not just about agriculture: it is also about culture, taste, memory, and food sovereignty.

Some members of the network organise their work around the principle of zero-waste production. The cycle begins with a seed, from which a vegetable grows. After the seeds are harvested, the rest of the crop is used for processing and food production, and the organic residues are returned to the soil as compost.

Seeds–vegetables–product–soil–seeds again: this approach minimises waste, preserves soil fertility, and builds a sustainable local production system. It is both an ecological practice and a contribution to soil restoration and the sustainability of agroecosystems.

The encroachment of industrial agriculture onto IPs' and LCs' lands, waters and territories also threatens their cultural survival. It prevents communities from fulfilling their responsibilities of care and stewardship and disrupts the intergenerational transmission of knowledge essential to their cultural identity and self-determination (FAO , Alliance of Bioversity International and CIAT, 2021; Sánchez Cruz and Triana Solórzano, 2023; Barberstock, 2025). Traditional diets are being replaced by imported, highly processed and calorie-dense foods contributing to non-communicable diseases such as diabetes (Barberstock, 2025; Barwant et al., 2025), while toxic runoff from synthetic fertilisers and pesticides contaminates local soils, rivers, wild foods and drinking water sources (Rotz and Rück, 2024; Burlingame et al., 2025).

Revitalising the diverse and sustainable food and production systems of IPs and LCs must, therefore, be a priority. Around the world, IPs and LCs are already leading the way, reclaiming ancestral crops, protecting seed diversity, restoring traditional culinary practices and strengthening food sovereignty (Yáñez Rojas, 2025). Case study 32 from the Philippines is an example of how IPs and LCs are actively seeking to recover and pass on their food and production traditions.

Case study 32

Territory: Cordillera Administrative Region

Author: Ana Kinja Tauli, Ibaloy - Kankana-ey Igorot people, Partners for Indigenous Knowledge Philippines (PIKP)

Caption: A participatory community cooking workshop with the youth using recipes from the cookbooks

Credit: Ana Kinja Tauli



32 Cordillera Indigenous Peoples, Philippines

For the Cordillera Indigenous Peoples, food is the everyday expression of their deep relationship with the land, which is the source of food and life. Indigenous knowledge and practices on sustainably producing the great variety of ingredients in their traditional diet have ensured the food security and survival of Indigenous communities for generations.

However, outmigration due to poverty, lack of land security and denial of basic services in the countryside has led to many youths migrating to cities, putting this generational knowledge at risk. Partners for Indigenous Knowledge Philippines (PIKP) therefore saw the need to document and revitalise Indigenous cuisine and recipes, accompanied by stories that explain their importance not just for Indigenous Peoples but also for wider society.

We documented these recipes through collaborations with Indigenous elders, women, youth, learning institutions, educators and others. One part of this was setting up food workshops, where knowledge holders were invited to cook traditional recipes and tell their stories. The documented recipes were published in two books, which were launched at events that included cooking demonstrations, some of them led by youth from the communities themselves.

"*Passing down Indigenous recipes grounds young people in who they are, where they come from, and the knowledge of their ancestors,*" said Jillie Basan, an Isnag from Kabugao who took part in the community food workshops.

We also collaborated with elementary and high schools to hold lively discussions with students about Cordillera Indigenous food systems and their related values. One notable reflection we got from a group of youth was how they realised each part of the process, from planting and harvesting to eating, has a story that comes with it.

Cordillera food traditions have valuable lessons for contemporary times, when people have become increasingly disconnected from the source of their food. They teach us the values of caring for the land by using only what we need and not wasting food, so everyone has their share and so that resources remain for future generations.

Importantly, their efforts are not only about producing food and other products; they also connect to community wellbeing, knowledge transmission and restoring IP and LC relationships with lands, waters, territories and resources. Case study 37 from Zhuoqing village in Taiwan shows how Indigenous-led revitalisation of traditional farming practices can support biodiversity conservation, cultural renewal and sustainable local economies.

Sustaining small-scale fisheries

IPs and LCs play a central role in sustaining small-scale fisheries across coastal, seafaring and island regions worldwide (Dawson et al., 2024). For many communities, fishing is not only an economic activity but also a way of life closely tied to culture, identity, food systems, and relationships with marine and coastal ecosystems (Hien et al., 2022; Quimby et al., 2023; International Collective in Support of Fishworkers (ICSF), 2025). In some communities, including seafaring peoples such as the Moken in Myanmar and Thailand, fishing and gathering are grounded in extensive knowledge of marine environments, currents, tides, species behaviour and seasonal cycles (Rardon, 2022; Islam, 2022; Andal, 2025).

Small-scale fisheries make important contributions to food security, livelihoods and local economies. Fish and other marine resources are accessible sources of protein and micronutrients, especially in coastal and island communities where alternative livelihoods are limited. Daily catches often support household consumption, while surplus fish and marine products are sold, exchanged or processed locally. Associated activities such as fish processing, boat building, transport and trade also support wider social and economic systems (COAST Trust, 2021; FAO, 2022; Bodwitch et al., 2024).

Community-based fisheries also demonstrate how biodiversity conservation, sustainable use, food security and cultural continuity are closely interconnected (Quimby et al., 2023; Bodwitch et al., 2024; ICSF, 2025). Many small-scale fishers use selective gear and low-impact methods that reduce bycatch and habitat damage, unlike industrial fishing operations (Mackay, Hardesty and Wilcox, 2020; Jament et al., 2023). Customary sustainable use practices help regulate harvesting pressure, protect breeding habitats, maintain ecological connectivity and support the regeneration of marine species (Oryza et al., 2018; Kitolelei et al., 2021; Quimby et al., 2023).

Women and family members play important roles within small-scale fisheries and coastal livelihoods, although their contributions are often under-recognised (Cormier-Salem, 2017; Chambon et al., 2023; Gul et al., 2024). Beyond harvesting, women commonly engage in fish processing, drying, marketing, shellfish collection, mangrove resource gathering and household food provisioning (Thomas et al., 2021; Bruckner and Paia, 2025). Women's roles in coastal stewardship are also important, particularly where mangroves, lagoons and nearshore ecosystems provide nursery habitats for fish and crustaceans (Kitolelei et al., 2022). Case study 33 from southern Sri Lanka shows how women's groups, alongside fisher cooperatives, youth networks and researchers, are helping to document traditional ecological knowledge and strengthen mangrove protection as part of wider efforts to revive traditional fishing practices.

Case study 33

Territory: Dakunu Palatha

Language: Sinhala

Authors:

- Konthasinghe Waduge Sanduni Himaya Waduge, local community representative
- Gayathra Charuka Bandara Aldeniyagoda Gedara, Oceans Unmined

Caption: Fishing activities at Udappuwa

Credit: Dinethri Rashmi, Ocean University of Sri Lanka



33 Local communities, Sri Lanka

The coastal belt of southern Sri Lanka is home to vibrant small-scale fishing communities, whose identities are deeply bound to the ocean and coastal ecosystem. However, the region faces intensifying pressures from overfishing, climate change, tourism expansion and coastal development, leading to declining fish stocks and mangrove loss.

Despite these challenges, coastal communities have been reviving and adapting ancestral fishing methods, community protocols, and habitat restoration activities to reinforce marine biodiversity, strengthen food security and sustain cultural identity.

Although fishing in southern Sri Lanka was historically governed by community norms and limited to gear types that minimise ecological impact, from the early 2000s and after the civil war, modern mechanised vessels using unregulated fishing gear led to a fast decline in fish stocks. Local incomes suffered, and younger generations saw fishing less as a livelihood and more as economic hardship.

In recent years, community groups, researchers from the Ocean University of Sri Lanka and youth volunteers have been documenting and highlighting the ecological values of traditional fishing practices. Through participatory surveys, fisher interviews and field observations, they have demonstrated that small-scale fishing methods create less bycatch, reduce habitat disturbance, and have more selective catches compared with certain mechanised fishing apparatus.

This recognition has helped shift the conversation from viewing traditional fisheries as outdated practices to understanding them as locally adapted systems of resource stewardship. Many fishers emphasise that they are based on social norms, seasonal observations and community agreements that help maintain long-term resource availability.

Across several coastal communities, fisher cooperatives, women's groups and youth networks have started working together to document traditional ecological knowledge and strengthen community awareness of sustainable fishing practices. Women's groups also play an important role in coastal ecosystem stewardship, particularly through mangrove protection and restoration activities in areas that function as nursery habitats for many fish and crustacean species.

These initiatives aim to support practices that have historically balanced livelihoods with ecological sustainability. By combining traditional knowledge with contemporary scientific perspectives, communities are creating opportunities to strengthen coastal resilience while maintaining cultural continuity.

However, small-scale fisheries are under growing pressure from industrial fishing (Said and MacMillan, 2020), coastal development (Okafor-Yarwood et al., 2020), tourism, climate change, infrastructure expansion and emerging *"blue economy"* projects (Ayilu, 2023). These pressures can alter marine ecosystems, displace fishing activities and affect different groups of fishers in uneven ways. Case study 34 from Nanri Island, China, shows how community observations can reveal biodiversity and livelihood changes linked to offshore wind development and wider coastal transformation.

Case study 34

Territory: Nanri Island, Putian City, Fujian Province, China (中国福建莆田南日岛)

Authors:

- Seona Park and Jing Yu, Climate Action and Resilience for Equity Lab, the Hong Kong University of Science and Technology (Guangzhou)
- Jianbo Yang, Nanri Budengyu Cultural Center

Caption: A view of aquaculture, fishing boats, offshore wind farms and ocean

Credit: Jing Yu



34 Local communities, China

Nanri Island in Fujian Province, China, has undergone rapid socio-ecological transformation since the late 2010s, driven by offshore wind development alongside broader infrastructure expansion and rapid tourism growth. Historically, local livelihoods were closely tied to marine ecosystems, with artisanal fishing and aquaculture guided by local ecological knowledge. However, Nanri's development has shifted ecological conditions and livelihood systems in ways that vary across locations and communities.

Community observations highlight both ecological decline and transformation. In nearshore and intertidal zones, residents report reductions in shellfish, seagrass, and key species such as mantis shrimp, alongside smaller organism sizes and declining economic value. A key concern repeatedly raised by aquaculture households is rising ocean temperatures. Five to ten years ago, abalone could be cultivated year-round, but now farmers have to adopt costly seasonal migration practices – transporting stock to cooler northern waters in the summer – to maintain production. These trends contribute to a growing perception of environmental instability.

At the same time, fishers also noted that the waters around wind turbines have calmer waters and weaker currents and appear to support increased fish abundance. This benefits pole-and-line fishers, but net fishers have been pushed further offshore, increasing working hours and reducing efficiency. In response to these changes, many households have diversified, combining aquaculture, tourism, and service-based activities.

These changes reflect the complex interaction of multiple drivers, including wind energy development, climate change, governance reforms, and economic diversification.

This case illustrates that local ecological knowledge provides in-depth knowledge of biodiversity change and localised environmental conditions that are not always captured in formal assessments. Integrating community knowledge into planning and assessment processes can ensure that ecological sustainability and local livelihoods are addressed together.

Restoring nature's contributions to people and people's contributions to nature

"My community, the Bettakuruma, understands that everything is interconnected – the soil, air, water, rain, native species, wildlife movements, and the overall ecological balance are all part of one living system."

Bettakuruma people, India [21]

Target 11: Restore, maintain and enhance nature's contributions to people

Restore, maintain and enhance nature's contributions to people, including ecosystem functions and services, such as regulation of air, water, and climate, soil health, pollination and reduction of disease risk, as well as protection from natural hazards and disasters, through nature-based solutions and/or ecosystem-based approaches for the benefit of all people and nature.

Human wellbeing depends on nature, but the ecosystems that support life, livelihoods and wellbeing are under immense strain. Target 11 of the KMGBF recognises this by encouraging Parties to restore, maintain and enhance nature's contributions to the wellbeing of all people.

In many IP and LC knowledge and value systems, people are understood to be part of the web of life. Relationships with nature cannot be one-way; humans have obligations to care for the lands, waters and beings that sustain them. Hunting, gathering, farming, fishing and restoration are not only economic or management activities, but expressions of respect, care and spiritual responsibility. For example, the Anishinaabe people in North America see water as living and sacred, moving through land, air and sky in processes of transformation and renewal (Nelson and Reed, 2025). This differs sharply from approaches that treat ecosystem processes, such as the water cycle, as neutral assets to be managed, valued or harnessed for human use. Case study [35] from China is an example of peoples' contribution to nature, showing how traditional rice farming enhances biodiversity and species protection.

Case study 35

Territory: 唐头村

Language: Mandarin

Authors:

- Sharong Fang, Tangtou village
- Binmin He, Qianjiangyuan National Park Administration
- Xiangying Shi, Shan Shui Conservation Center
- Yongrui Chen, Shan Shui Conservation Center

Caption: Villagers use traditional methods for the manual transplanting of rice seedlings

Credit: GoldenWorldStudio



35 Local community, China

Tangtou Village is an agricultural community with a long history. Located at the southwest corner of the proposed Qianjiangyuan-Baishanzu National Park, the village covers 1,314 hectares, with approximately 612 hectares within the national park.

Rice is a vital traditional staple crop and the village has about 25 hectares of paddy fields, and preserves festivals closely tied to rice farming, such as the Ancient Buddha Festival. Beyond cultural values, these rice paddies also serve a key conservation role in providing habitats for diverse birds, amphibians, insects, and benthic fauna, enriching species diversity around the evergreen broad-leaved forests in the national park.

In 2021, Tangtou village joined the Qianjiangyuan National Park Administration's Rural Contracted Land Easement Reform, which provides economic benefits to communities in key ecosystems to carry out eco-friendly agricultural practices. It includes technical training, scientific monitoring and support to market and sell relevant agricultural products. By 2025, nearly all Tangtou's paddy fields were under conservation, with monitoring results indicating a higher diversity of species than conventional paddies.

Camellia oil is another key industry in Tangtou, and the village has over 200 hectares of camellia forest, most of which are old, locally adapted trees growing naturally on hillsides. Villagers prefer these old trees, as they produce better tasting oil and more stable yields in the long term, require no fertilisers or pesticides, and only need weeding once or twice a year. New camellia trees, on the other hand, deliver high yields but require regular fertilisation, frequent weeding and rigorous pest control.

Efforts to strengthen agrobiodiversity have expanded since 2024, with support from multiple actors, with activities ranging from environmental monitoring to agri-tourism. The community has also been supported to transition to organic farming, which further improves biodiversity while increasing product value, boosting community income and steering local development from government subsidies to market-led sustainable growth.

In 2026, 67 hectares of Tangtou village outside the national park were recognised as an outstanding case of potential Other Effective Area-Based Conservation Measures (OECM), contributing to global biodiversity targets.

Many IPs and LCs consider efforts to revitalise and strengthen customary sustainable use and traditional occupations to be efforts to restore both nature's contributions to people *and* people's contributions to nature. For example, case study 36 describes how the ǂAonin people in Namibia came together to devise strategies to reverse the decline of the *!Nara* desert melon – an invaluable source of life in the desert and a cherished companion – after top-down conservation efforts failed to do so.



Case study 36

Territory: !Khuiseb/Kharib - ǂAonin !Hub

Language: Khoekhoegowab

Authors:

- Rudolf Dausab, ǂAonin people, ǂAonin (Topnaar) Community Association
- Damien Krichewsky, Forum Internationale Wissenschaft, University of Bonn

Caption: The !Nara desert melon, a plant that has accompanied the life and destiny of the ǂAonin clan for countless generations

Credit: Damien Krichewsky

36 ǂAonin (Topnaar) people, Namibia

"You cannot separate the ǂAonin people and the !Nara, we are one." These words are from a community member of the ǂAonin, one of the oldest Indigenous communities of current Namibia. They speak of the !Nara desert melon, that for the ǂAonin, is a cherished companion and an invaluable source of life in the harsh desert environment.

Since 1907, the ǂAonin's ancestral land in the Kuiseb river basin has been under various forms of nature conservation, with multiple attempts to evict the community. Arguing that a forced relocation would destroy their bond with the !Nara helped the community to safeguard their right to stay. Today, however, the area falls under two National Parks that severely restrict their traditional practices, including hunting and gathering.

Population growth near their territory has led to a rise in illegal harvesting of !Nara melons. Without the ǂAonin's traditional knowledge, these harvesters pick melons in a way that damages the plants and the more-than-human ecology that these plants sustain. However, the communities are unable to take action against them for fear of violence and subsequent risks of being arrested. By the time authorities are informed and possibly intervene, the illegal harvesters are long gone.

Large-scale water extraction to supply urban and industrial areas has also significantly lowered groundwater tables, impacting communities – who now must buy water – and !Nara plants, some of which have died from thirst.

As a result of these socio-ecological changes, the population, health and productivity of the !Nara has significantly decreased. Elders, leaders and community members are eager to change this trend.

One idea is to create a cooperative to harvest, process and trade !Nara products that would not only create more income for the community, but also help train community members on sustainable harvesting informed by traditional practice. They also wish to support the cultural expression of gratitude to the !Nara through a diversity of lively practices that interweave transmission and creation across generations.

For this positive dynamic to unfold, what is needed is not only funding, but also changes in inequalities and power imbalances. Such changes require mediated and facilitated relational work for all parties involved to understand the intricate layers of the issues at hand, to learn to see the situations from the others' perspectives, and to nourish relational qualities such as trust, care, and respect.

In Khoekhoegowab

"ǂAoni ǁaes tsi !Nara hais tsînats ge a |gora ǁoa, sida ge a |gui." "Nēdi ge mîdi ǂAonin /hûhâsib ǁani-e xu ra /khī te, ǂAoni ǁaes ge ǁîs ǂguro ǁaedi di /guis /nesi hâ Namibiab !kharaga !nagu !gao-!gao kai ǁaedi disa. ǁNapa -ī ge !Nara tsama-ǂûs xa ra !hoa-e, ǂAonin !nas !aroma, ǂgom-ǂgomsa tsî !khō -!khuni-e ǁoa ûib di /ausa ǁna /khom-ō-!na /gowa-!hūb !na.

Disi khoesa|ā tsî hû‖î kuriba xub, ge ǂAoni ǁaes di ǁgûsi !hub !Khuiseb !a-!nāb !na ǁgoeba, !kharaga ǂgae‡guidi di !hū ǂnûi‡gadi !na ge !kharu, ǂAonin |hûhasiba ǁgari-ǂûis di dītsâdi |kha gere !gû‖aese. ǂAonin |hûhasiba ǁgari-ǂûis ǁîna !Nara-ǂûs tsî ǁnā !nâu !hû-‖aeba xu nî |gora !khais di gowa ǂûisens ge ǁnapa hâs di ai‡hanuba ge ǁawo-‖awoba nî. Nētsēs ta nē !hū!âsa |gam !kharaga |gūru !hanakha !nâ ǁna !khais ge nē ǁaesa ǁîs di ǂūsi ǁnaetiga ûi‡ûisa disa kaise ra tsâ|khā !aus tsî harebasensa în ǁkhae-am he hâ xui-ao.

!Āo-am |kharigu di khoesi |arosen di ge ne !Nara-ǂûs di !nari haresage !aroma. ǂAoni ǁaes di |gau-ǂans osen da hare xui-aon ge nē hare-aona nē !Nara haide ra tsû-tsû tsî ǂkhôa nē haidi khoena ǂûma ǁoas kose. Xaweb ge ǂAoni |hûhasiba nē khoena aitsama !gôa!gon sa ra !ao, ǂkhawadib tsi mâsigu !aroma. ǂHanub sîsen-aon ga ǂan-ǂan he ǁaeb ain ge !nari hare-aona |nai ūbēsen-hâ.

Gai-|nōb di ǁgam |khuwu-ǂûis nē |kharibaxu kai !adi tsî xu-kuru !khaigu !aroma ge !hūb !nagāb ǁgam-e toa kai, nē !khais ge |hûhasiga tsâ-|kha ha -tari-e nesi ǁgam-e ni ǁama – tsî !Nara haidi |nîdi |nai ǁgâs xa ǁo-hâ de.

Nē khoesi tsî !aub |kharib di mâsigu di |kha-|kharasen di, khoesi |arosens, gē ǂurusib tsî mâ-oa ǁkhasib !Nara haidi diba gaise ge ū-ǁnâ. ǁAes di kain, ǂgae‡gui-aon, tsî |hûhasib ge gaise nē !gû-!gû |gauba ra dawa ǂgao.

|Gui ǂâi |gaub ge |Hû‖aresa ǂnubisa nē !Nara na nî hare, sisen‡âm tsî ǁamaxusa, nē !khais ge !nāsa marisi hō‡gas |guisa |hûhasiba mâ tide xawe |hûhasib ǁanina ǂAoni ǁaes di |gau-ǂans !nâ nî ǁkhā-‖khākhâi, ǂhanu |gaub ai !Narana hares tsî haina sâusa. ǂAoni ǁaes ge ǁkhadi !hao!nasise ganganxasiba !Naras ǁga ra ǁgau‡ûi ǂgao !kharaga !nâgu ûi‡ûigu !nâ-ū ǁîs di |ōmkhâis tsî ǂnuwi-khâisa nî !khomâisa sao!gonra surigu !nâ.

Nē !gâi mû‡ûib nî ī-‖khāgas ge marisi mâxo|khās |guisa ǂhâbasa tama hâ, xawe |khara-|kharasiga khoen-ûiga |gui !naxa kais tsî mî-am !nâs tsî |gaiba hoa |hûhasib !nâ ǂawa ǂoa kais |kha. Nē |khara-|kharasigu ge ǁnāmâ ǁaes tsi hoa mâsiga ra ǂorisase !khō-‖ae sîsenxasiba ra ǂgao|khā, nē-i nî nau-i di mû‡gaba xū xuna mû tsî saora khoe-i di mû‡ûi |gauba !gôa tsîb ǁnās |kha ǂgom!gâgub, sâub tsî !gôasiba ni hâga.

Target 11 also refers to nature-based solutions. IPs have raised concerns about the concept, arguing that it can reproduce a Western separation between people and nature, and imply a one-way relationship in which nature delivers services and solutions to humans (Roe, 2021; Nelson and Reed, 2025). Projects to restore *"ecosystem services"* designed through top-down, technocratic processes can sideline traditional knowledge and undermine relationships of care and responsibility (Roe, 2021). Because of this, some IPs and LCs prefer the term 'culture-based solutions', which reflects better how people, biodiversity, culture, ancestors, future generations and other beings are interconnected and mutually responsible (Nelson and Reed, 2025).

Case study 37 from Taiwan highlights how ending harmful agricultural practices, and restoring soil and water health, was intrinsically linked with the restoration of traditional ecological knowledge and the relationship between people and their territory. In short, IPs' and LCs' views, structures and practices are transformative and provide a model for a just and sustainable world (IPBES, 2024b).



Case study 37

Territory: Lamungan, Taluk, Saiku

Language: Bunun

Authors:

- Haisul Istasipal, Bunun Bean Co-op
- Tanivu Islituan, Bunun Bean Co-op
- Yu-Chun Chan, Bunun Bean Co-op, Tse-Xin Organic Agriculture Foundation

Caption: Elders and youth come together to introduce the traditional crops and hillside farming wisdom of the Bunun people to visiting university groups

Credit: Yu-Chun Chan

37 Bunun people, Taiwan

We are a collective of Indigenous Bunun farmers from eastern Taiwan, primarily based in Zhuoqing Village, on the edge of Yushan National Park, an area surrounded by forests and streams.

Colonial rule and modernisation profoundly transformed our environment and agricultural systems and resulted in the erosion of our Traditional Ecological Knowledge (TEK) and Indigenous practices. Our ancestors moved from high mountain forests to lowland valleys, shifting from self-sufficient, low-density polyculture and agroforestry to state-driven, market-mandated rice monoculture. The Green Revolution in the 1960s also led to the widespread adoption of synthetic pesticides and fertilisers.

The revitalisation of TEK began in 2013, where a youth returned to take over his family's rice paddies and mobilised farmers to abandon chemical inputs in favour of organic cultivation. The following year, Yushan National Park Foundation introduced the community to Tse-Xin Organic Agriculture Foundation, with whom we started a long-term partnership to revive TEK. We documented traditional farming practices, preserved traditional seeds and explored how these activities can support biodiversity, cultural revitalisation and sustainable land use.

In 2018, we established the Bunun Bean Co-op, a female-led collective that preserves Bunun agricultural heritage and stewards the local Satoyama landscape. This includes a mentorship programme where youth learn traditional farming practices from elders, and monthly garden-based workshops where we farm and dine collectively, sharing traditional Bunun cuisine.

To enhance habitat diversity and ecological connectivity, the farmers created ecological ponds, ditches and hedgerows from traditional crops. Our lands now support more endangered species and received Other Effective Area-Based Conservation Measures（OECM）certification in March 2026.

Today, this multi-generational group has evolved into a sustainable, Satoyama-based economic model. By hosting farm-to-table events, agri-food educational courses, and community exchanges, we have significantly enhanced both local and external support for the Bunun Satoyama landscape.

The ‘Zhuoqing Model’ stands as a benchmark for Indigenous-led biocultural restoration in Taiwan. By revitalising traditional knowledge to address contemporary sustainability challenges, we hope our experience provides a valuable framework for communities worldwide.

In Bunun

Ma’aq saam qai tastuluhlu,maisna haan Taivang silazan mungququma tu Bunun, ihaan Sihu sasaipuk minihumis tu Saviqludun tu sila asang, tupaun tu Saiku miqumis.

Ma’aq iti masuludun siin vanglaz tu dadangian,qaitu tis’uni qabasang saliladazu’an duma siduq saipuk a tinvaivi’in a dadangi’an siin is’ungququma. minsuuzin ata misdaukdaukin is’ukaan i mailantangus is’ungququma tu qansip.

Qabasang inaam tu maimadadaingaz maisna haan is’daza tu ludun,tun’lusqu munhaan bukzavan, maisna haan nanu tu is’ungququma, tis’uni tu muk’huvaiv i Koka tu dailaza,uvaivan pintasaun amin tu madanuq,ihaan 1960 tu painsanan pintasa’un amin tu madadanuq maitus masasanglav amin saduan, minsuzin amin a hiliu tu hi’hibulanin nii tu masial tu iu matas’i makusia.

Ihaan2013 tu painsanan, kitngaa musuqis makusia mailan tangus tu is’nguququma.tudip haiza tatini a minduduaz maisna nata musuqis mulumaq lasais madanuq, musasu madas asang tu taisis’aan makusia madingzav ukaan iu tu vunu madanuq.tudip, pakasainun 慈心有機農業發展基金會（Tse-Xin Organic Agriculture Foundation）papidangaz masnava maku’aq maku’uni masaningsing tu is’ungququma, kitngaa kilim palaslun tani.

Muqna ihaan 2018 painsanan, mapiduldul malkabainu tu tastuluhlu, az’az sia amin binanau’az a kuzakuza musasu madailaz i, is’ungququma, madas masnava mainduduaz, talbinau’az muskun minang mungquma, ma’un, muskun sina’ima.

Tis’uni na’asa mapisial masunu iskuzakuzati, madas mungququma tu taisis’aan siin munhaan pasnanava’an masnava taqu tu maku’aq lakaulkaul quma pisial siin masuaz, ihaan 2026 painsanan ti utaluan i sinsaunaskal OECM tu pai’ia.

Saulaupaku maqtu’in madauzungin a dailaz,maqtu’in kan’anak maisna haan minang, masuaz, sauhaan sina’ima muskun ma’un, madia amin a maisnanata tu siduq samasqing latuza tai’insun.

Maupati masial tu sinkuzakuza maqtu min’uni kanadaan, maqtu suqaisunin a mailantangus is’ungququma tu taiklas, is’titpung haan duma tu dalaq siduq, pinqansiap, imita Bunn tuza aikit’vaian is’ungququma tu taiklas.

Urban biodiversity, cultural continuity and territorial justice

"In contexts where communities are uprooted from their ancestral territories and Indigenous knowledge is neither properly transmitted nor documented, the threat of cultural erasure becomes very real."

Ibaloy - Kankana-ey people, Philippines 40

Target 12: Enhance green spaces and urban planning for human well-being and biodiversity

Significantly increase the area and quality, and connectivity of, access to, and benefits from green and blue spaces in urban and densely populated areas sustainably, by mainstreaming the conservation and sustainable use of biodiversity, and ensure biodiversity-inclusive urban planning, enhancing native biodiversity, ecological connectivity and integrity, and improving human health and well-being and connection to nature, and contributing to inclusive and sustainable urbanization and to the provision of ecosystem functions and services.

Target 12 focuses on improving biodiversity in urban areas by increasing access to green and blue spaces and improving urban planning. This is important both for maintaining and restoring nature in cities, and for supporting the health and wellbeing of people living in urban areas, including IPs and LCs.

Almost 74% of IPs live in rural areas, although there are significant regional variations, with higher percentages in Africa, Asia and the Pacific, and Europe and Central Asia (International Labour Organisation (ILO), 2019). In Latin America, the Caribbean and North America, the majority of IPs are urban dwellers (ILO, 2019).

The presence of IPs and LCs in urban areas has many different histories. In some cases, they were forced into cities through dispossession, displacement and assimilation policies designed to sever ties with their territories and cultures (Keovorabouth, 2024). In other cases, urbanisation expanded into their territories, transforming their territories into urban or peri-urban spaces. The construction of Indonesia's new capital city, Nusantara, for example, is rapidly urbanising the ancestral territories of the riverine Balik people, disrupting their access to the river and reshaping their relationships with water, livelihoods and cultural heritage (Swara et al., 2025). IPs and LCs have also moved to urban areas for education, employment, professional opportunities or income, particularly where rural livelihoods have been weakened by poverty, environmental degradation or resource extraction (Keovorabouth, 2024).

There is often a perception that IPs and LCs living in cities are *"less authentic."* However, while living in urban areas may sometimes distance IPs and LCs – especially younger generations – from traditional practices, foods, languages and territories (FAO, Alliance of Bioversity International and CIAT, 2021; Yáñez, Bayres and Migueletto, 2025), urbanisation does not automatically mean the loss of IP and LC identities, knowledge or relationships with place. Many IPs and LCs living in urban areas retain their cultural values, relationships with nature and connections to their territories, while also remaking identities and communities in new places. For example, case study 38 describes the Five Islands Organic Egg Farm in Antigua, a youth-led local initiative to use circular production practices to reduce chemical inputs, waste and pollution while strengthening food security and community learning.

Case study 38

Authors:

- Ruth Spencer, local community representative, Marine Ecosystems Protected Areas (MEPA) Trust
- Tasha Goldberg, local community representative

Caption: Egg boxes from the Five Islands Organic Egg Farm in Antigua, which produces around 800 eggs a day

Credit: Marlon Jeffers, Belmont Studio



38 Local communities, Antigua

The world is full of challenges, as well as solutions. The Five Islands Organic Egg Farm in Antigua demonstrates how locally led, youth-driven initiatives can address global challenges such as food security, waste management and climate change through innovative, circular practices, building synergies across convention processes.

After receiving the Global Environment Facility's (GEF) Small Grants Fund, two youths from the Five Islands community established the Five Islands Organic Egg Farm, starting with 300 chicks imported from Barbados. This has now grown to over 1,800 chickens who produce an average of 800 eggs a day.

A core principle of the farm is sustainability through circular systems. Waste is minimised and repurposed wherever possible: wood shavings used in chicken pens absorb waste and are later transformed into natural fertiliser, improving soil health without chemical inputs. Egg cartons are reused, and a delivery van has even been converted into a cooling facility. The farm avoids reliance on imported, genetically modified feed and grows its own natural feedstock using climate-smart techniques, reducing environmental damage and greenhouse gas emissions while strengthening resilience to supply disruptions. The farm is also furnished with climate-smart equipment such as solar panels, an inverter air conditioning unit and a water pump.

The group plans to incorporate a biodigester unit that would process the organic waste from the chickens and convert it into cooking gas, reducing the need to burn wood and improving air quality and environmental health. A future goal of the project is to expand the collection of food waste from local hotels to integrate into chicken feed and biogas.

Beyond production, the initiative prioritises community engagement and education. It provides training and mentorship to at-risk youth and hosts tours and workshops for schools, daycare centres and the wider public, promoting awareness of sustainable agriculture and waste reuse.

The farm has the vision and desire to scale up its practices to benefit the whole community in Antigua, illustrating how a people-centred approach to food security can help achieve global goals.

Despite their considerable populations in urban areas, IPs and LCs are often excluded from urban planning (Walker, Wilcox and Awatere, 2025). Cities are rarely designed with them in mind (Besen et al., 2025) and urban planning has often contributed to the erasure of pre-existing place names, cultural sites and territories. On arrival in cities, many IPs and LCs are pushed into under-resourced, low-income areas and provided with housing that conflicts with their cultural needs for communal living (Keovorabouth, 2024). They also face disproportionately high levels of homelessness and precarious living conditions (Besen et al., 2025).

Access to urban nature can be especially important for maintaining cultural practices and knowledge systems. Through language revitalisation, urban gardening and food initiatives (see case study 40), artistic expression, ecological restoration, political organising, and networks of solidarity and kinship, IPs and LCs are reclaiming visibility and shaping the ecological and cultural lives of cities (Brablec, 2025). Examples include Māori pan-tribal urban organisations in Aotearoa New Zealand (Kukutai, 2013) and Métis and Inuit housing cooperatives in Canada (Peters and Andersen, 2013). Case study 39 from Bogotá, Colombia, shows how Indigenous women displaced by armed conflict are maintaining their Amazonian food knowledge, strengthening their financial autonomy and defending their rights in an urban context.



Case study 39

Territory: Uitoto mɨnɨ ka nofiko

Language: Uitoto

Author: Clemencia Herrera, Uitoto people, Corporación Cultural Ecológica Mujer Tejer y Saberes (MUTESA)

Caption: Women from MUTESA harvesting on the chagra (farm)

Credit: MUTESA

39 Uitoto people, Colombia

The Amazon, regarded as the ecological lungs of the world, faces constant threats in the context of environmental globalisation. It suffers from deforestation, extractive industries and agricultural practices unsuitable for the rainforest. Here, the role of women as long-standing carers and guardians of these territories – drawing on their own knowledge and wisdom for the care, use, management and control of the environment – has been overlooked.

The MUTESA organisation, drawing on its political and entrepreneurial strength, creates spaces for political participation that enable Indigenous women to exercise their economic autonomy and participate effectively in strengthening their rights and advocacy.

One of MUTESA's most successful initiatives is the Copoazu restaurant, which serves traditional Amazonian cuisine. Located in the city of Bogotá, Colombia, it reflects the scents, colours, flavours and knowledge of the rainforest, teaching and educating city dwellers. With a staff made up of Indigenous women who are victims of the armed conflict and have been displaced, the restaurant enables them to maintain a connection with the rainforest, nature and their culture.

MUTESA carries out various activities aimed at strengthening the economic autonomy and political participation of Indigenous women and their families. La Chagra Soberanía is a communal farm that offers women the opportunity to manage their own economies based on their ancestral knowledge systems. Furthermore, MUTESA runs twelve enterprises nationwide, now organised as a network of Indigenous restaurants, which fosters an economy for life by preventing discrimination in the workplace, such as identity-based discrimination and rejection simply because they are different.

The 'Education with Dignity' programme has also awarded scholarships to more than 1,000 adult Indigenous women, enabling them to access education and strengthen their academic knowledge. It is worthwhile for women to receive an education, as this enables them to advocate for and defend their rights.

The MUTESA corporation, operating autonomously, will continue to strengthen its activities with the aim of expanding its political, environmental and territorial advocacy. This process and its follow-up will have a positive impact on the conservation of Amazonian biodiversity and will safeguard the life plans of Amazonian peoples, ensuring their *buenvivir*, or 'living well'.

Implementing Target 12 requires more than increasing parks, green corridors or blue spaces. Where urban areas have been built on or expanded into the territories of IPs or LCs, states should recognise these histories and support continued access to culturally important places, restitution where possible, and meaningful participation in urban biodiversity governance. This also requires urban planning to make space for IPs' and LCs' knowledge and values, which have often been sidelined or erased (Walker, Wilcox and Awatere, 2025). When urban planning ignores Indigenous and local place names, cultural sites, territories and knowledge systems, it can deepen exclusion from urban nature and weaken cultural connection and practice (Walker, Wilcox and Awatere, 2025).

By contrast, where IPs' and LCs' knowledge and governance are recognised, urban restoration can support both biodiversity and cultural continuity. In Chile, for example, architectural guides have been co-produced with Mapuche and Aymara communities to ensure their needs are considered in the design of public space (Besen et al., 2025). These actions transform urban areas from sites of colonial erasure into spaces for the cultural continuity of IPs and LCs, demonstrating that their lifeways are not confined to a rural past but are part of dynamic, adaptive futures. Case study 40 from Baguio City in the Philippines shows how Indigenous home gardening in urban spaces can support food security, agrobiodiversity, women's leadership and the transmission of Indigenous values.



Case study 40

Territory: Baguio City

Language: Ilocano, Ibaloy, Kankanaey

Author: Aisah Mariano, Kankana-ey-Ibaloi people, Partners for Indigenous Knowledge Philippines (PIKP)

Caption: Joy, a member of Baëng Home Gardeners Association, shares this photo of her fresh harvest from her ba-ëng in Happy Hollow, Baguio City

Credit: Joy Dizon

40 Kankana-ey-Ibaloi people, Philippines

What began as a passionate interest in home gardening during the pandemic has blossomed into a fully-fledged movement for community learning on Indigenous food systems and women's empowerment in food sovereignty.

In Baguio City, Philippines, a growing number of home gardeners use creative, eco-friendly methods to grow food in small or unused spaces, using recyclable and organic materials and harvested rainwater. In 2023, Partners for Indigenous Knowledge Philippines (PIKP) began working with these home gardeners, gathering their experiences and insights on their role in revitalising Indigenous food systems in the city.

The home gardeners began inviting family members, friends, and neighbours, and this eventually led to the formation of the *Ba-ëng* Home Gardeners Association. *Ba-ëng*, in the Ibaloy language, means home garden for growing food. The community they built not only brought food to their tables and strengthened food security, it also fostered the continuity of Indigenous values such as *binnadang*, helping one another; the culture of *ayyew*, living thriftily and avoiding waste; and *kasiyana*, maintaining a positive outlook despite challenges, among others.

Women, particularly mothers, have emerged as key drivers of household food security through home gardening, preserving heirloom crops, sharing seeds and growing medicinal plants. According to the *Ba-ëng* members, most home gardeners inherited their knowledge from their parents, with maternal figures playing a central role in passing down traditional practices.

"Us grandmothers, we [farm] at home and invite our grandchildren to help us because they are curious. It can be 'fun gardening'. Let us make farming fun," says Brigit Piok, a member of the *Ba-ëng* association.

Their efforts help preserve agrobiodiversity, reduce dependence on monoculture and synthetic chemicals, and ensure soil health, now and for future generations.

The *Ba-ëng* Home Gardeners Association has also participated in workshops in the city and abroad. Sustainability fairs organised by the local government provided the members with opportunities to sell surplus produce from their *Ba-ëng*, turning their efforts into livelihood.

In caring for both the environment and the people in their community, the women of the *Ba-ëng* Home Gardeners Association are leading biodiversity conservation, one garden at a time.

IPs' and LCs' knowledge and values must also shape urban ecological restoration. This requires more than consultation or cultural recognition after plans have already been made. IPs and LCs should be involved as planners, decision-makers and leaders from the beginning, shaping how urban green and blue spaces are designed and governed. Without this, even participatory approaches can reproduce exclusion (Swara et al., 2025). Urban restoration can be more transformative when it is grounded in IPs' and LCs' own knowledge, values and cultures (Walker, Wilcox and Awatere, 2025). In Aotearoa New Zealand, for example, urban Māori restoration activities bring together ecological restoration with storytelling, *karakia* (prayer) and *waiata* (song), helping to restore nature and cultural knowledge at the same time (Walker et al., 2024). Culturally grounded co-design can also support housing and public spaces that reflect IPs' and LCs' histories, identities, knowledge systems and ways of living (Walker, Wilcox and Awatere, 2025; Besen et al., 2025).

All of this means assessing urban green and blue spaces differently. Biodiversity indicators alone are not enough (Salvo-Tierra and Ruiz-Valero, 2025). Urban restoration should also be judged by ecological function, equitable access, cultural use, community wellbeing and its support of IPs' and LCs' rights and stewardship responsibilities (Walker et al., 2024). A park, river corridor or restored wetland may increase vegetation cover or species counts while still excluding the communities whose histories, knowledge and relationships are tied to that place. By contrast, when IPs' and LCs' knowledge systems shape the design and management of urban ecosystems, restoration can help repair artificial divisions between people and nature, and turn cities into spaces of cultural continuity and environmental justice (Walker, Wilcox and Awatere, 2025).



Caption: A man canoes on the Amazon

Credit: SL_Photography

Fair and equitable benefit-sharing

"By integrating traditional genetic resources with modern agroecological methods, restoring indigenous rice varieties reinforces food security, biodiversity and resilience in the region while ensuring equitable benefit sharing throughout." "

Local communities, India [30]

Target 13: Increase the sharing of benefits from genetic resources, digital sequence information and traditional knowledge

Take effective legal, policy, administrative and capacity-building measures at all levels, as appropriate, to ensure the fair and equitable sharing of benefits that arise from the utilization of genetic resources and from digital sequence information on genetic resources, as well as traditional knowledge associated with genetic resources, and facilitating appropriate access to genetic resources, and by 2030, facilitating a significant increase of the benefits shared, in accordance with applicable international access and benefit-sharing instruments.

Access and benefit-sharing (ABS) refers to the fair sharing of benefits arising from the use of genetic resources, digital sequence information (DSI) and associated traditional knowledge. These resources and knowledge can contribute to medicines, natural pesticides, foods, crop varieties and other products. IPs and LCs who protect, sustain and transmit biodiversity and traditional knowledge should receive fair benefits when these resources and knowledge are used by others.

Target 13 of the KMGBF aims to strengthen ABS for genetic resources, DSI and associated traditional knowledge. ABS requires legal, policy and administrative measures that:

- Respect the principle of free, prior and informed consent
- Ensure users of traditional knowledge and genetic resources abide by the agreed terms
- Provide capacity building, so that IPs and LCs can develop community protocols, access technical and legal support, monitor benefits, and strengthen their role in benefit-sharing arrangements.

Policy developments

Target 13 builds on existing ABS rules and rights protections, including those in the CBD – in particular in the Nagoya Protocol on Access and Benefit Sharing (Nagoya Protocol, 2010) – and in the UN Declaration on the Rights of Indigenous Peoples. Since COP15 (2022), Parties have also been working to address the use of DSI, which sometimes generates benefits from genetic information without new physical access to the original resource. The new programme of work on Article 8(j) of the CBD provides further support by encouraging practical measures such as community protocols, knowledge exchange, dialogue between providers and users, technical and legal support, and learning from IPs' and LCs' own experiences of benefit-sharing.

The Cali Fund is a key development for sharing the benefits of DSI. Agreed in principle at COP15 and operationalised in 2024 at COP16, the fund is a mechanism under the CBD for sharing benefits from the commercial use of DSI of genetic resources. It is intended to receive contributions from sectors that use and profit from DSI, including pharmaceuticals, biotechnology, cosmetics, agriculture and related industries. Although contributions are voluntary, Decision 16/2 sets out proposed company contributions of 1% of profits or 0.1% of revenue, creating an important precedent for industry responsibility in biodiversity finance (Reitmeier and Makowska-Curran, 2025). The fund is administered by the UN Multi-Partner Trust Fund Office, with resources to be distributed to developing countries and IPs and LCs. At least 50% of the funds are earmarked for direct disbursement to IPs and LCs, including to support self-determined conservation efforts and community priorities (Reitmeier and Makowska-Curran, 2025).

The 2024 WIPO Treaty on Intellectual Property, Genetic Resources and Associated Traditional Knowledge is also relevant, particularly in relation to patent disclosure. However, its protections remain limited. The treaty sets a relatively low floor, and weak consequences for non-compliance risk, leaving existing imbalances in the patent system largely intact (Samal, 2025).

States that become parties to the WIPO treaty can strengthen implementation by adopting disclosure requirements that go beyond the minimum standards, linking patent applications more clearly to compliance with ABS rules, strengthening due diligence in patent offices, and supporting IPs and LCs to understand and protect their traditional knowledge where appropriate.



Caption: Garo people working a paddy field in Birishiri, Bangladesh

Credit: Mahmud Mahmud

Limitations of current frameworks for access and benefit-sharing

A major limitation of current ABS frameworks is that benefit-sharing is often framed in transactional and market-based terms. Under the CBD and the Nagoya Protocol, ABS has frequently been understood as a *"grand bargain"*, whereby users gain access to genetic resources and associated traditional knowledge, while providers receive monetary or non-monetary benefits intended to support conservation and sustainable use (Kreiken and Arts, 2024). This framing can help address historical patterns of extraction, but it also risks treating genetic resources and traditional knowledge as commodities to be traded (Kreiken and Arts, 2024). Even where ABS procedures are formally in place, they may focus on access permissions, disclosure requirements and negotiated benefits while doing too little to protect the deeper relationships between IPs and LCs and their lands, waters, territories and resources (Girard, Hall and Frison, 2022). For many IPs and LCs, this is a serious concern because traditional knowledge is not simply an asset with market value. It is connected to their lands, waters, territories, cultures, responsibilities and lifeways, many of which cannot be reduced to negotiated benefits or commercial exchange (Bavikatte et al., 2010).

This market-based framing also obscures the inalienable dimensions of traditional knowledge and genetic resources (Kreiken and Arts, 2024). For many IPs and LCs, genetic material is not an inert resource that can be separated from the living systems, territories and relationships that sustain it. *"Hereditary material is sacred to us,"* noted the IIFB in a 2021 statement on DSI. From this perspective, genetic resources and DSI are connected to the reciprocal relationships of care that underpin IPs' and LCs' knowledge and value systems (International Indigenous Forum on Biodiversity (IIFB), 2021). Treating them primarily as tradable assets risks separating knowledge from the cultural, spiritual and territorial relationships that make it possible. It can also clash with cosmologies in which the natural world is not understood as something that can simply be owned, priced or exchanged (Kreiken and Arts, 2024). While benefit-sharing may be necessary to address exploitation, it cannot substitute for the protection of IPs' and LCs' rights to lands, territories, cultures and self-determined ways of life, which are the foundations for the use of knowledge to be fairly negotiated.

A further limitation is that ABS frameworks are often unclear about the meaning of 'fair benefit.' The Nagoya Protocol identifies different forms that benefits may take, including monetary payments, shared research and capacity building. However, these categories can be abstract, making it difficult for IPs, LCs and users to agree what benefits are appropriate, sufficient or genuinely fair (Beumer and Roskam, 2026). In practice, benefits agreed through ABS arrangements may not correspond to the value, profits or wider advantages that users gain from genetic resources or associated traditional knowledge. This creates a risk that benefit-sharing becomes a negotiated minimum rather than a fair return for the knowledge, resources and stewardship that made those benefits possible.

A human rights-based approach requires a broader understanding of benefit-sharing than is often found in ABS frameworks. For IPs and LCs, benefit-sharing must be understood alongside rights recognised in the UN Declaration on the Rights of Indigenous Peoples, including rights to self-determination; free, prior and informed consent; lands, waters, territories and resources; customary law; cultural heritage; and traditional knowledge. This means that IPs and LCs must be able to decide collectively whether access should take place at all, on what terms, and with whom their genetic resources, traditional knowledge and other know-how are shared (Girard, Hall and Frison, 2022). Benefit-sharing should, therefore, help address systemic power imbalances and historical injustices, rather than simply compensate communities for the use of their knowledge and resources without their free, prior and informed consent.



Caption: The Kashiri mural, designed by Davis Torres in collaboration with the Shipetiari community in the Peruvian Amazon. The mural covers the walls of the community's main communal hall and was painted by Davis, artist Felix Alejo Gutiérrez and several members of the community, including Rufina, Rani, Verónica, Javier, Germán, Mary Luz, Javier Keimari, Mariela, Martha, Ángel, Jorge, Terri, Roger, Rolando, Driscella and othersa

Credit: Davis Torres, Xapiri Ground

Implementation of access and benefit-sharing

Despite the various policy developments, increased benefits for IPs and LCs have not always materialised in practice. Early approaches to ABS often focused more on encouraging IPs and LCs to participate in conservation and development projects designed by others than on protecting their genetic resources and traditional knowledge from unauthorised commercial use (Girard, Hall and Frison, 2022). This reflected a wider tendency to treat IPs' and LCs' knowledge and practices as useful inputs for conservation, rather than recognising their inherent authority, rights and decision-making power over the resources, knowledge and territories.

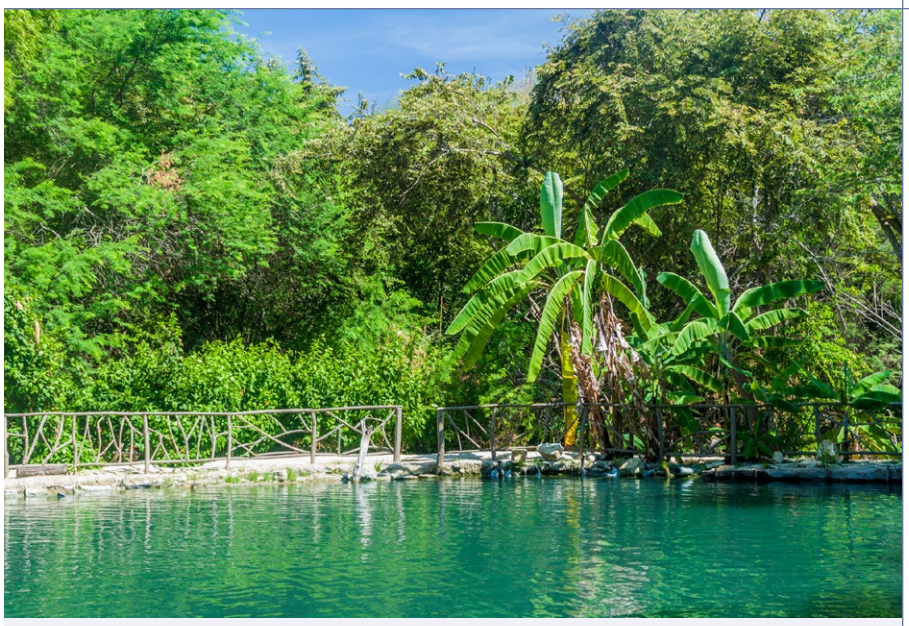
Regulatory barriers remain among the most common obstacles to Target 13 implementation, with many Parties still lacking dedicated ABS frameworks or struggling to make existing measures operational (Secretariat of the Convention on Biological Diversity, 2026). Some countries have developed more detailed systems. South Africa, for example, has ABS regulations, model contractual clauses and procedures for mutually agreed terms, and has reported both monetary and non-monetary benefits for stakeholders providing access to genetic resources and associated traditional knowledge (Knight et al., 2023). Bhutan has also developed ABS agreements involving traditional knowledge holders, researchers and private partners, including benefit-sharing through premium prices, profit-sharing and contributions to a national ABS fund (United Nations Development Programme (UNDP), 2025). However, other countries continue to rely on outdated, fragmented or incomplete frameworks. In Mozambique, for example, existing policies and regulations pre-date the Nagoya Protocol, research permits do not yet include clear ABS clauses, institutional responsibilities remain unclear, and access to genetic resources is not yet consistently subject to prior informed consent (Knight et al., 2023).

Even where ABS frameworks exist, implementation can be weakened by fragmented institutional responsibilities; limited coordination between ministries and competent authorities; unclear procedures for prior informed consent and mutually agreed terms; and weak systems for monitoring compliance. Without clear checkpoints, tracking mechanisms and enforceable consequences for non-compliance, ABS measures may remain largely procedural and fail to generate meaningful benefits for IPs and LCs (Knight et al., 2023; UNDP, 2025).

Community protocols

Community protocols can help address some of these ABS implementation gaps by enabling IPs and LCs to set out, in their own terms, how external actors should engage with them (Girard, Hall and Frison, 2022). Rather than functioning only as technical access documents, these protocols can identify community decision-making procedures; customary laws; values; authorities and expectations for free, prior and informed consent; mutually agreed terms; and benefit-sharing. They can also help clarify that access to genetic resources and traditional knowledge is not only a matter of negotiation with researchers, companies or governments, but is connected to wider relationships with lands, waters, territories, cultures and responsibilities. In this way, community protocols can support more equitable negotiation conditions and help ensure that ABS arrangements are shaped by IPs' and LCs' own rights, priorities and governance systems.

Case study 41 from Ecuador shows how a community protocol can strengthen territorial governance, regulate access to traditional knowledge and ensure that decisions about research, consent and benefit-sharing remain under community authority.



Case study 41

Language: Kichua

Author: Rodrigo de la Cruz, Pueblo Indígena Kichua/Kayami, Foro Indígena de Abya Yala (FIAY)

Caption: Sulfur pool, Agua Blanca

Credit: Mathess

41 Kichua/Kayami people, Ecuador

The community of Agua Blanca, situated in Ecuador's coastal dry forest, has developed community governance mechanisms to protect biodiversity, its territorial rights and its traditional knowledge.

The community's decision-making bodies have collaboratively developed a conservation programme focused on the conservation and reforestation of the landscape. This has helped to restore ecosystems and attract migratory birds. The community regulates the use of flora and fauna, compiles inventories of medicinal plants and strengthens traditional knowledge, whilst integrating land rights and ensuring the inclusion of older people, women and young people to promote sustainable development.

The community has also developed a community protocol, the 'Territorio de Vida Señorío de Salangome', which positions the community as a central and responsible decision-maker in the management of its biocultural heritage. Its main objective is to regulate access by third parties – such as researchers or companies – to traditional knowledge, particularly that relating to medicinal plants, whilst ensuring respect for the community's collective rights and self-determination.

A fundamental element of the protocol is Free, Prior and Informed Consent (FPIC). This mechanism requires any interested party to provide clear, accurate and comprehensible information on the objectives, methods and potential impacts of their activities before commencing any process. The final decision rests with the General Assembly, the community's highest authority, which assesses proposals with the support of a technical committee. Without this formalised consent, no research may be undertaken on the biological and genetic resources associated with traditional knowledge.

The protocol also regulates the sharing of benefits, stipulating that these must be collective and mutually agreed. Monetary benefits are managed through a community fund earmarked for local projects, whilst non-monetary benefits include technology transfer, training, capacity building and the development of initiatives such as botanical gardens or the processing of medicinal plants.

Furthermore, the protocol incorporates monitoring and oversight mechanisms, enabling the community to assess compliance with the agreements, including research timelines, respect for authorised knowledge and the effective distribution of benefits. The Assembly may even suspend projects or demand compensation if the agreed terms are breached.

In summary, the Agua Blanca community protocol represents a comprehensive tool that brings together territorial rights, biodiversity conservation and the protection of ancestral knowledge, strengthening local governance and aligning with international standards of justice and sustainability.



Caption: Biodiversity Team Leaders set up a sound recorder in the Managalas Conservation Area, Papua New Guinea

Credit: Russell Wai, Landscape



Chapter 6
Tools and solutions for implementing and mainstreaming the Kunming–Montreal Global Biodiversity Framework

Targets 14–21

"The word 'Satyagraha' refers to 'truth force': non-violence is an essential part of this methodology. The objective of Satyagraha is justice; it does not hinge on loss or gain, for and against, but all sides coming together for better outcomes."

Bhils tribal communities, India [53]

Caption: A Kayapo surveillance team prepares a boat to monitor the Pixaxa River from one of the territorial monitoring bases of Bau village, in the Bau Indigenous Territory. The inhabitants of Bau village make a living from the collecting of forest products such as Brazil nuts and 'cumaru' (tonka seeds) and they established monitoring stations to try and prevent illegal mining, logging and fishing on their lands

Credit: Lalo de Almeida, Panos Pictures

Targets 14–21 set out key tools and enabling conditions for implementing the Kunming–Montreal Global Biodiversity Framework (KMGBF), including knowledge, finance, monitoring and accountability. Together, these targets are intended to shape how biodiversity action is governed, resourced and delivered in practice.

This chapter examines how Parties' commitments are being translated into practice across four areas:

- The integration of IPs' and LCs' values into all decision-making related to biodiversity – relating to Target 14
- The role that traditional knowledge plays in biodiversity governance – relating to Target 21
- How implementation mechanisms such as locally led monitoring and reciprocal capacity building are supporting Indigenous Peoples and local communities embodying traditional lifestyles (IPs and LCs) – relating to Targets 20 and 21
- Whether there has been sufficient attention to the structural causes of biodiversity loss, such as environmentally harmful subsidies and overconsumption, and whether some of the KMGBF's proposed solutions, such as market-based biodiversity finance, are alleviating or exacerbating the issue – relating to Targets 15–19.



Caption: Karlina Erngsen works in the Great Greenland Tannery. Karlina is a skilled seamstress trained in crafting traditional Greenlandic national dresses (kalaallisuut)

Credit: Jonas Kako, Panos Pictures

Integrating Indigenous Peoples' and local communities' values in decision-making

Target 14: Integrate Biodiversity in Decision-Making at Every Level

Ensure the full integration of biodiversity and its multiple values into policies, regulations, planning and development processes, poverty eradication strategies, strategic environmental assessments, environmental impact assessments and, as appropriate, national accounting, within and across all levels of government and across all sectors, in particular those with significant impacts on biodiversity, progressively aligning all relevant public and private activities, fiscal and financial flows with the goals and targets of this framework.

Target 14 of the KMGBF seeks to ensure that the different values of biodiversity are integrated in all laws, policies, processes and decision-making related to biodiversity. It includes two particularly important elements. The first of these is the recognition that decision-making related to biodiversity should not be narrowly construed to only environmental laws and policies, but is relevant across a wide range of decision-making processes across all sectors, including relating to economic planning, resource allocation, decisions on developments, tax and finance policy etc. The second key element is the recognition that decision-making should be informed by multiple values – including the values of IPs and LCs.

In this sense, Target 14 has close links to implementation approaches in Section C, in particular the need to integrate different value systems (see Chapter 2, the different value systems approach) and the whole-of-government and whole-of-society approach, which recognises the cross-sectoral and cross-societal nature of the approach needed (see Chapter 2, the whole-of-government and whole-of-society approach).

It is also closely linked to the effective participation of IPs and LCs in biodiversity decision-making (see Chapter 7), as effective participation requires accommodating diverse values in decision-making. Consultation alone is not enough if dominant valuation systems remain intact (Pereira and Saramago, 2020; Coscieme et al., 2020; DePuy et al., 2021; Moon and Pérez-Hämmerle, 2022; Rickard and Ludwig, 2025). IPs' and LCs' worldviews, governance systems and responsibilities to territory need to shape biodiversity policy and planning from the outset (Goolmeer, Skroblin and Wintle, 2022; Zurba and Papadopoulos, 2021; Dawson et al., 2024).

This means changing how decisions are made, by:

- Increasing the influence of IPs and LCs in local, national and global decision-making related to biodiversity
- Increasing the devolution of local decision-making power to IPs and LCs, by granting them greater autonomy and control of territories.

Including IPs and LCs' values in decision-making is essential to achieving the KMGBF, and in ensuring the respect for human rights. Unfortunately, governments still often ignore IPs' and LCs' values in decision-making, as was noted in the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) values assessment (IPBES, 2022). Faced with this, many IPs and LCs continue to develop their own approaches that are consonant

with their values, as an autonomous exercise of their rights and values and as a means to influence government decision-making. For example, case study 42 from the Philippines describes how IPs from four ancestral domains in Besao conducted participatory mapping of ancestral domains (territories) to update their own Ancestral Domain Sustainable Development and Protection Plan.

Case study 42

Territory: Besao

Language: Kankanaey

Author: Jose Amian Tauli, Ibaloi-Kankanaey people, Partners for Indigenous Knowledge Philippines (PIKP)

Caption: Members of Payeo village gather around a map of their village to identify important places

Credit: Ella Cariño



42 Kankanaey people, Philippines

The Kankanaey people of Besao, in the Cordillera region of northern Luzon in the Philippines, have long safeguarded their lands through Indigenous resource management systems. However, climate change and expanding agriculture have hastened the loss of land and water resources.

In response, representatives of Besao partnered with Partners for Indigenous Knowledge Philippines (PIKP) to conduct land-use mapping of Besao's four ancestral domains. The aim was to use the maps to update their Ancestral Domain Sustainable Development and Protection Plan in response to the threats to their territory.

Participatory mapping is a valuable tool that helps communities better understand their local environment. Maps can visually depict land uses within a community and illustrate how different land uses interact and potentially cause environmental harm.

Community representatives supported the creation of separate maps for each domain, which were then shared in community-based workshops. Here, community members identified and marked land uses, community sites and culturally significant areas. After a round of feedback from communities, the maps were presented at a municipal level forum, where participants shared insights from the mapping activities and discussed how the maps can be used to better manage and protect the territories and reduce biodiversity loss.

Important insights from the maps:

- 51% of the land area is managed under the *Batangan* system, where access and use are regulated according to a traditional set of rules
- 37% of the land area is designated as Indigenous and Community Conserved Areas (ICCAs), where livelihood activities are not allowed and access is restricted to conserve high-biodiversity forests and watersheds.

Living close to the land, the Indigenous People of Besao have a deepened understanding of their community's situation and have gained knowledge to protect their community. Building their capacity with new tools such as land-use mapping strengthens their existing traditional practices and can help them plan better initiatives to safeguard their community.



Caption: A Mentawai woman harvesting wild durian on Siberut island, West Sumatra, Indonesia

Credit: Nataliia Milko

Traditional knowledge in biodiversity governance

"As governments and conservation actors seek pathways to achieve global biodiversity goals, supporting Indigenous-led territorial governance and monitoring systems offers an effective and equitable approach to conserving biodiversity while sustaining community livelihoods and cultural heritage."

Dusun people, Malaysia [56]

Target 21: Ensure that knowledge is available and accessible to guide biodiversity action

Ensure that the best available data, information and knowledge are accessible to decision makers, practitioners and the public to guide effective and equitable governance, integrated and participatory management of biodiversity, and to strengthen communication, awareness-raising, education, monitoring, research and knowledge management and, also in this context, traditional knowledge, innovations, practices and technologies of indigenous peoples and local communities should only be accessed with their free, prior and informed consent, in accordance with national legislation

Target 21 of the KMGBF reflects the growing recognition of traditional knowledge in global, national and local biodiversity governance. It focuses on access to biodiversity-related knowledge and explicitly refers to the "*traditional knowledge, innovations, practices and technologies*" of IPs and LCs. The establishment in 2024 of the Subsidiary Body on Article 8(j) at COP16 is a further signal of the growing acknowledgement of the importance of Indigenous and local knowledge systems (Kutubul and Siddiquee, 2020; Convention on Biological Diversity (CBD), 2021).

At present, however, policy spaces remain dominated by forms of knowledge that are easier to standardise and scale (Loch and Riechers, 2021; Rathakrishnan, Aboo Talib Khalid and Daud, 2025; Nelson and Reed, 2025; Aguirre-Gutiérrez et al., 2026). Traditional knowledge, in contrast, is place-based, adaptive, and rooted in long-term relationships with ecosystems.

What traditional knowledge can bring to biodiversity governance

Traditional knowledge has important insights to offer biodiversity governance and can strengthen decision-making when respectfully and sensitively engaged with. It can also complement other knowledge systems (Tengö et al., 2014; Malmer et al., 2020; Martin et al., 2025). IPs' and LCs' knowledge systems contain extensive ecological observations accumulated over generations. In coastal, marine and island regions, for example, traditional knowledge contributes to the conservation and sustainable use of marine biodiversity

through detailed understandings of species behaviour, ocean currents, seasonal cycles, underwater ecosystems and ecological change (Oryza et al., 2018; Hill et al., 2020; Kitolelei et al., 2021; Dawson et al., 2024; Danial, Amat and Dino, 2024; International Collective in Support of Fishworkers, 2025). In South Asia, some Indigenous fishers associate a blue-green ocean colour with productive marine ecosystems and fish abundance, while Indigenous knowledge of seasonal upwelling linked to the southwest monsoon is used to understand shifts in marine productivity and biodiversity distribution (Jament, 2026, personal correspondence). Such knowledge can contribute to ecosystem monitoring, climate adaptation and biodiversity conservation, provided that its use respects IPs' and LCs' rights, priorities and knowledge governance systems.

Case study 43 from Guatemala is an example of how IPs develop their own indicators to monitor biodiversity, food systems and climate impacts in ways grounded in their own values, governance systems and knowledge.



Case study 43

Territory: Balam Juyu and Panab'aj Ya'

Language: Kaqchikel

Authors:

- Ramiro Batzín, Maya Kaqchikel people, Centro de Distinción Saqb'e
- Juan Cusanero, Maya Kaqchikel people, Centro de Distinción Saaqb'e

Caption: Balam Juyu

Credit: Ramiro Batzin

43 Maya Kaqchikel people, Guatemala

Balam Juyu and Panab'aj Ya' constitute a biocultural complex of ancestral importance to traditional ways of life in the centre of Guatemala's Kaqchikel volcanic range. Several communities live around this biocultural complex; through their governance, they preserve a traditional way of life centred on food production based on intercropping maize, beans and squash, alongside an agrodiverse range of native species. All of this is underpinned by a rich cosmogonic vision, cultural values, a system of knowledge and practices of historical and ancestral significance.

This system has been deteriorating due to the erosion of social fabric, the impacts of climate change and pressure from national policies. These factors threaten the integrity of natural and productive resources, governance and traditional ways of life, making it necessary to strengthen Indigenous knowledge systems.

The Saqb'e Centre of Excellence has addressed these challenges by developing a set of biocultural indicators, which include sacred values, current traditional norms, forms of self-organisation, traditional practices and the state of territorial spaces.

The information gathered through these indicators supports the traditional monitoring of Indigenous food systems and reinforces the transmission of Indigenous knowledge within the community. Based on the belief systems and worldviews of the Kaqchikel Maya, the indicators also support community-led measures to conserve land, safeguard food security and adapt to the effects of climate change.

In Kaqchikel

B'alam Juyu' chuqa' Panab'aj Ya' jun nimaläj qak'ayib'al k'aslemal chuqa' qach'akulal ri qati't qamama', k'o ruk'ij pa ri qach'ab'äl Kaqchikel pa nik'aj ruk'u'x ri cadena volcánica richin Ixim Ulew. Chuqaq' re nimaläj qak'ayib'al re', e k'o jalajöj tinamït ri tajin nikichajij chuqa' nikito' ri rub'eyal k'aslemal ri qati't qamama', ri nib'an pa ruk'ux ri tikonem richin qawa', rik'in rujunamil ixim, q'inek', kumatz' chuqa' jalajöj chik taq tico'n ri e k'o pa qatinamït. Ronojel re' xaq pa ruk'ux ri qach'akulal, ri q'ijila' taq tzij, ri qeta'oj, ri qachomanik chuqa' ri qab'anoj ri e k'o ruk'ij pa qak'aslemal richin ojer taq k'ij.

Ri rub'eyal k'aslemal re' tajin nitz'iläx roma ri nisaqär ri ruk'ux k'aslemal pa tinamït, roma ri rujalojil ri kaj chuqa' ri ruwach'ulew (cambio climático), chuqa' roma ri taqonel taq na'oj ri amaq'. Re taq k'ulel nikib'an k'ayewal chi kij ri qachoch'ulew, qawach'ulew richin tikonem, ri qachajinem chuqa' ri qojer taq rub'eyal k'aslemal. Rumal re', k'atzinel niqaq'ët chuqa' niqak'oji' ri qeta'oj, qachomanik chuqa' qab'eyal qayon.

Ri Kachoch Ajk'alb'e Saqb'e xusamajij jun cholb'äl richin ajk'utunel ri qak'ayib'al k'aslemal chuqa' qach'akulal, richin nichajïx chuqa' nito' re taq k'ayewal. Chikixo'l re ajk'utunel re', e k'o ri lok'oläj taq rajawal, ri taqonel rub'eyal k'aslemal ri k'a e k'o na, ri rub'eyal qamolojri'il, ri qojer taq b'anoj chuqa' ri ruk'aslemal taq qachoch'ulew.

Ri etamab'äl ri nimol pa tak re ajk'utunel re', nikito' ri rub'eyal qachajinem richin ri qawa' taq qatinamït Maya, chuqa' nikik'oji' ri qak'exoj etamab'äl pa kikojol ri winaqi' richin ri tinamït. Pa ruk'ux ri qach'akulal chuqa' qachomanik ri Maya Kaqchikel, re ajk'utunel nikito' chuqa' ri taq nuk'uchu'j ri nib'an pa tinamït richin nichajïx ri qachoch'ulew, ninimarisäx ri qawa', chuqa' richin niqab'an qachojmirisaxik chuwäch ri rujalojil ri kaj chuqa' ri ruwach'ulew.

Bringing different knowledge systems together

Approaches that help bring different knowledge systems into meaningful and respectful dialogue include the Multiple Evidence Base approach (Tengö et al., 2014) and relational science approaches (see Box 10). There are also examples of IPs and LCs leading the integration of traditional knowledge and western scientific approaches; for example, case study 44 from Kenya describes how the Ogiek people are monitoring biodiversity combining traditional knowledge with new tools.



Case study 44

Territory: Chepkitale

Language: Koony language, Ogiek dialect

Author: Phoebe Ndiema, Ogiek people of Chepkitale, Chepkitale Indigenous Peoples Development Programme (CIPDP)

Caption: Ogiek community monitors observe a herd of elephants on a transect walk

Credit: Kesis Isaac

44 Ogiek peoples, Kenya

The Ogiek of Chepkitale, Indigenous hunter-gatherers of Mt. Elgon in western Kenya, maintain a deep relationship with their ancestral highland ecosystem. For the Ogiek, this is an ancestral territory inherited through generations, where livelihoods depend directly on the health of the ecosystem. The community has traditionally managed resources such as honey, bamboo, grazing areas, and medicinal plants through customary rules guided by the Council of Elders.

Although the Ogiek have long acted as custodians of this biodiverse landscape, they have also experienced periodic evictions and have been viewed as a threat to the forest. External conservation management systems were carried out without recognising Ogiek governance; although they monitored wildlife and forest conditions, they sometimes missed subtle environmental changes that the community observed.

In response, the Ogiek developed a community-led biodiversity monitoring system that combines Traditional Ecological Knowledge with scientific tools. Monitoring emerged as both an internal need – to guide sustainable resource use – and an external one, to demonstrate the effectiveness of Indigenous conservation practices. The process began with community-wide discussions, where elders emphasised that monitoring should follow customary priorities such as bamboo health, wildlife corridors, salt licks, and fire-prone areas.

Roles within monitoring reflect community structure. Youth conduct field observations, walking long distances to track wildlife, grazing conditions, and water sources. Women focus on bamboo monitoring due to its ecological and cultural importance, while elders validate and interpret findings in line with seasonal cycles and customary knowledge. Traditional practices such as tracking and oral reporting remain central, complemented by tools like camera traps, transects, quadrats, and the Co-Mapeo mobile application, which allows communities to retain control over their data.

Monitoring is directly linked to action. Findings are discussed collectively, leading to decisions such as restricting grazing in stressed areas, delaying bamboo harvesting, or adjusting livestock routes to protect wildlife corridors. This approach ensures that monitoring is not extractive but embedded in daily management.

The initiative has strengthened ecological understanding, enhanced governance, and revitalised intergenerational knowledge sharing, demonstrating that conservation is most effective when communities lead, observe, and act based on their own knowledge systems.

Box 10

10 A relational science approach to marine governance

Relational science refers to approaches to knowledge that understand humans, marine species, ecosystems, and spiritual worlds as interconnected and interdependent rather than separate entities (Kineman, 2011; David-Chavez et al., 2024; Kenter et al., 2025). In many IP and LC knowledge systems, the ocean is not viewed simply as a resource or economic space, but as a living relationship involving responsibilities, reciprocity, respect and care. In some coastal Indigenous worldviews, the ocean is regarded as a relative, ancestor, or mother who sustains life and to whom humans hold reciprocal obligations (Jament and Arockyasamy, 2025; Jiang, 2025). For example, whales are regarded as ancestral beings and kin by Māori communities in Aotearoa New Zealand (Elmahdy et al., 2025).

In relational approaches, environmental indicators are often interpreted collectively rather than in isolation, enabling adaptive responses to ecological change while maintaining ecosystem balance. Relational science is also practice-based and continuously renewed through fishing, navigation, stewardship, and everyday interaction with marine ecosystems.

Caption: A fisherman empties his net, Madagascar

Credit: Elen Marlen



Revitalising traditional knowledge

When ecosystems are threatened, so too is the cultural survival – and, therefore, the traditional knowledge – of the IPs and LCs who live there (Rai and Dhakal, 2024; Bruckner and Paia, 2025). Their knowledge systems are not merely sources of information for conservation. They are inseparable from collective identity, customary law, territorial responsibilities, spiritual relationships, livelihoods, language, and self-determined governance. Recognising these knowledge systems without recognising the custodians – and their territories, rights, and governance institutions that sustain them – renders them extremely vulnerable, and risks reducing living systems of care to extractive and devalued policy inputs.

Case study 45 illustrates how the erosion of Indigenous Sea Sámi knowledge systems has contributed to ecological imbalance.



Case study 45

Territory: Sápmi

Language: North Sámi

Author: Marit J. Michelsen, Sámi peoples, The Saami Council

Caption: Njuorjjonáhkki (North Sámi) tanned seal skin

Credit: Birgejumpi, Árvu AS

45 Sámi people, Norway

Birgejupmi is a North Sámi word that roughly translates to *"ways to manage."* It embodies the principle of only taking what you need, not exploiting nature's resources, and ensuring the ability to harvest again in the future. It connects to the Sámi way of understanding wellbeing, self-sufficiency and community.

The coastal Sámi regions have been severely impacted by forced assimilation policies, which led many Sea Sámi to lose language, culture and their way of practicing *birgejupmi*.

Seals have always been a vital resource along the Norwegian coast, reflected in the landscape, culture, and traditions of seal hunting and craftsmanship. Sea Sámi communities are now revitalising their knowledge of traditional seal hunting and craftsmanship, known as *duodji*. Reconnecting with Sámi knowledge promotes responsible use of natural resources and is *birgejupmi* in practice.

The Birgejupmi Project aims to strengthen community engagement, Indigenous Peoples' knowledge and environmental decision-making in Arctic coastal regions in Sápmi and Kalaallit Nunaat (Greenland). Through it, Indigenous Peoples' knowledge holders have arranged courses on traditional seal hunting and craftsmanship. In one course, two Inuit knowledge holders from Kalaallit Nunaat taught Sámi participants about seal slaughtering, sealskin preparation and sewing, as well as meat preparation and cooking, sharing techniques still used in Canada and Alaska.

Over the past 40–50 years, Sea Sámi self-management of resources has been restricted by Norwegian authorities, leading to ecological imbalances in the ecosystems. In the Porsanger fjord (Northern Norway), locals have noticed that there are too many seals and that seal health is deteriorating. The overpopulation of seals, combined with other factors, has caused ecological disruptions, including the disappearance of fish from the seabed.

It is critical that the cultures and traditional knowledge of IPs and LCs are not lost, and that where negative impacts have already been experienced, IPs and LCs are supported to revitalise and strengthen their knowledge systems on the ground. These knowledge systems are key to developing successful, place-based approaches to protecting, restoring and sustainably using ecosystems.

Biodiversity and linguistic diversity

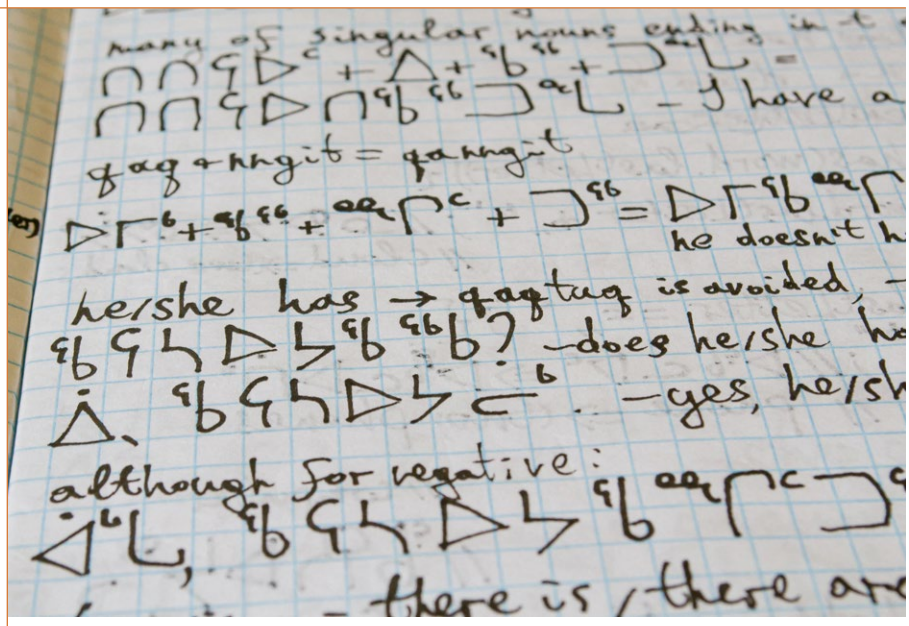
The world is rapidly becoming less linguistically diverse. Of the world's estimated 7,000 documented languages, almost 50% are considered endangered, threatened by social and economic changes and by the failure of dominant powers to support their continued transmission (Bromham et al., 2022). Recent estimates suggest that, without intervention, the world will lose one language a month (Bromham et al., 2022).

Language is an important way in which culture and traditional knowledge are held, transmitted and renewed across generations. IPs' and LCs' languages often contain cultural values and traditional knowledge (Terralingua, 2017). Kwakwaka'wakw people member and researcher Andrea Lyall explains that her community's Kwak'wala language, *"describes 'how the forest works' by explaining what a place or plant looks like and what places or plants can be used for"* (Terralingua, 2017).

The endangerment of Indigenous languages is critically important to IPs and LCs for two reasons: language is a repository of traditional knowledge, and it affects their cultures, histories, identities and self-determined futures. Research from Amazonia shows how closely language, biodiversity and traditional knowledge can be connected, with the loss of threatened Indigenous languages estimated to reduce the regional knowledge pool on native plant uses by 26% (Cámara-Leret, Roehrdanz and Bascompte, 2026).

Research also shows that knowing an Indigenous language is connected to feelings of belonging and collective identity (Hill et al., 2025). As Rapa Nui language teacher María Virginia Haoa explains, *"it is through our language that we show who we are. If our language disappears, the whole socio-cultural foundation of our community of speakers is put at risk"* (Šopova and Rollán Ortega, 2025).

Many IPs and LCs are, therefore, working hard to revitalise their languages in order to keep their connections to their cultures and ancestors alive, as described in case study 46.



Caption: Handwritten notes for learning Inuktitut grammar, Canada

Credit: Oleh Yatskiv



Case study 46

Territory: Republic Sakha (Yakutia)

Language: Yukaghir, Evenki, Even, Chukchee, Dolgan, Sakha

Author: Viacheslav Shadrin, Yukaghir people, Council of Yukaghir Elders

Caption: Evenk family in national costumes at the celebration of the Reindeer. Iengra, Neryungri District, Yakutia, Russia

Credit: ASB63 / iStockPhoto

46 Evenk people, Russia

In the village of Tyanya, in the Western Sakha (Yakutia) Republic in Russia, a project to preserve the Evenk Indigenous language is underway. Evedy Umuk (Language Nest) was launched in 2024, and its main mission is to preserve the language and cultural heritage of the Evenk Indigenous People for future generations.

As part of the project, systematic language instruction was organised for three target groups: preschoolers, schoolchildren and adults. Special attention was paid to intergenerational interaction, with activities such as competitions set up to bring the community together and strengthen linguistic traditions.

In the summer of 2025, a language camp for Indigenous schoolchildren was organised in the village. This provided an environment where children can immerse themselves in the language and explore the rich world of Evenk Indigenous traditions in an informal setting. The camp's work yielded tangible results: all the children showed a noticeable improvement in their spoken Evenk Indigenous language skills and a strengthened interest in their native culture.

Four students and two teachers from the project also attended TUREN-2025, an international event that focuses on the preservation, scholarly study, and revitalisation of the endangered Indigenous languages of East Asia, especially Evenki (Russia) and Oroqen (China). The opportunity to present themselves and their culture on such a significant international stage became a motivation for children to continue studying the Evenk language.

A key achievement of the project was the establishment of close interaction between the young participants and the elders – the custodians of the Evenk Indigenous People's language and culture.

Despite the challenges posed by globalisation, the Evedy Umuk project continues its vital mission to preserve the unique Indigenous language and traditional knowledge of the Evenk people.

11 Linguistic diversity

Maintaining cultural diversity and traditional knowledge is a key component of the wellbeing of IPs and LCs globally, but culture and traditional knowledge can be difficult to measure directly. 'Trends in linguistic diversity' is one of the four traditional knowledge indicators used to monitor the implementation of the KMGBF and, because of the close relationship between language, culture and traditional knowledge, it is also used as a proxy for trends in IPs' and LCs' cultural diversity and traditional knowledge.

However, speaker numbers provide only a partial picture of the status of Indigenous languages. A broader assessment of language vitality would include, for example, whether children are learning the language, the proportion of speakers within the wider population, where the language is used, whether it is being used in new domains such as digital media, and whether materials exist for language education and literacy.

Knowledge sovereignty

Greater recognition of traditional knowledge increases the risk of it being documented, shared and used by outsiders without free, prior and informed consent, or community control. Historically, the knowledge held by IPs and LCs has been exploited, particularly by colonial administrations, the scientific community and the private sector (Robinson and Jefferson, 2026). Exploitation remains a risk; for instance, Indigenous Navigator national country submissions for 2020–2025 show that 22 of 28 responding countries reported incidents of misappropriation or unauthorised use of cultural heritage or traditional knowledge since 2008 (Indigenous Navigator, 2026, unpublished).

Importantly, Target 21 includes a safeguard: traditional knowledge should be accessed and used only with the free, prior and informed consent of IPs and LCs. However, such safeguards are rarely reflected in national legal systems, which often fail to protect traditional knowledge from misuse or exploitation (Forest Declaration Assessment, 2023). This was borne out in the analysis by the Asia Indigenous Peoples Pact (AIPP) of Asian national biodiversity strategies and action plans (NBSAPs), which found that IPs are described in NBSAPs as contributors of knowledge rather than rights-holders (AIPP, 2026). Within parts of the scientific community, increasing emphasis on open data, where not aligned with Indigenous data sovereignty principles, may create risks for IP and LC knowledge governance, consent and data use (Carroll et al., 2020; Dewan, Mulrennan and Georgekish, 2025; Flores et al., 2026).

Including traditional knowledge in national biodiversity planning without IP and LC control over how their knowledge is used risks continuing the same exploitative practices that have shaped mainstream engagement with traditional knowledge.

Strengthening implementation by IPs and LCs: community-led monitoring and reciprocal capacity building

"Supporting community governance, facilitating peer-to-peer learning, and creating appropriate legal and financial mechanisms for community conservation are essential elements of achieving global biodiversity goals."

Local communities, Spain 7

Delivering the goals of the KMGBF requires that implementation mechanisms be accessible to IPs and LCs. This section focuses on two such mechanisms that can strengthen IP and LC leadership, but only when designed around their rights, knowledge systems, institutions and priorities:

- Community-led monitoring
- Capacity building.

A further important factor is direct access to biodiversity finance, which is addressed in the section on biodiversity finance below.

Community-led monitoring

For many IPs and LCs, monitoring is part of their relationships of care with lands, waters, territories and resources. Community-based monitoring and information systems (CBMISs) build on traditional knowledge, may incorporate other tools and technologies, and are governed and led by IPs and LCs. They can support community decision-making, strengthen evidence for land and resource claims, document environmental change, and make rights violations more visible. Case study 47 from Ngaremara, Kenya, shows how community-led monitoring systems can support biodiversity governance while also strengthening evidence for land rights and legal recognition.



Caption: Biodiversity Team Leaders install a camera trap in the Managalas Conservation Area, Papua New Guinea

Credit: Russel Wai, Landscape Alliance

Case study 47

Territory: Turkana Community of Ngaremara, Isiolo County

Language: Turkana

Author: Vivian Silole, Il Laikipiak Maasai people, IMPACT Kenya

Caption: The women of Ngaremara during a biocultural mapping exercise

Credit: Nomad Footprints



47 Turkana people, Kenya

Across Africa's rangelands, Indigenous pastoralist communities are advancing new approaches to conservation that centre rights, culture, and lived relationships with land. In Kenya's Mid-Ewaso Ng'iro River Basin, the Turkana community of Ngaremara offers a compelling example of how Indigenous-led data and governance systems can strengthen land tenure security while supporting biodiversity conservation.

Through participatory processes involving elders, women, and youth, the community co-created biocultural maps documenting both their past and present relationships to land, illustrating changes over time in settlement patterns, biocultural resources, grazing areas, sacred sites, seasonal movements, and ancestral relationships to their territories. These maps were complemented by seasonal calendars, oral histories, and evidence-based research, enabling the community to mobilise their knowledge to strengthen self-organisation, land governance, and resource management.

During a recent Historical Land Injustices (HLI) ruling, the Ngaremara community presented both historical and contemporary biocultural maps as evidence. Among all HLI cases in Isiolo County, Ngaremara's stood out for achieving a breakthrough outcome. The maps provided credible, place-based evidence of longstanding occupation, governance, and biodiversity stewardship, bridging Indigenous and traditional knowledge and legal recognition in ways previously unavailable to the community.

As a result, Ngaremara has regained access to culturally significant areas, including ritual sites (*Emunyen Akwan – udongo ya wasichana*) and ancestral burial grounds. The case illustrates how biocultural data systems can translate Indigenous memory into enforceable rights, while reinforcing conservation rooted in cultural continuity and self-determination.

A CBMIS can also inform wider assessments of biodiversity, IP and LC rights, traditional knowledge, and implementation of the KMGBF. Research shows that local people can monitor their territories with accuracy comparable to that of scientists; in Panama, for example, Indigenous monitors have produced more accurate environmental information than government services (Voisin, Doviaza and Quintero, 2025). Long-term traditional knowledge can also detect ecological changes across broader time scales, challenging the shorter monitoring cycles often used in formal scientific systems (Cure et al., 2024). Box 12 describes some of these dynamics in marine and coastal territories.

12 Community-led monitoring in marine and coastal territories

For generations, IPs and LCs have monitored marine and coastal ecosystems, accumulating ecological knowledge with a depth of temporal and spatial specificity that formal scientific programmes rarely achieve. This knowledge can complement scientific monitoring because different systems observe at different scales, over different timeframes, and through different relationships with place. Excluding traditional knowledge from global ocean monitoring systems is, therefore, both inequitable and scientifically damaging, with consequences for ocean governance and management (Proulx et al., 2021).

In marine contexts, community-based monitoring and information systems can include locally defined indicators that standard scientific protocols do not capture. Active initiatives in at least 12 countries are generating data on biodiversity health, climate change impacts and the implementation of international agreements. For example, in Mexico, two decades of community conservation by fishing cooperatives and the Comunidad y Biodiversidad (COBI) have supported 26 community reserves covering more than 500 km² across three ecosystems. Standardised community-generated data on 268 species has underpinned almost 100 scientific publications, while community reserves have surpassed federal protected areas in biomass, showing the scientific and conservation value of locally led monitoring (Villaseñor-Derbez et al., 2022).

In Aotearoa New Zealand, increased use of *rāhui*, customary Māori temporary fishing closures, functions as a monitoring and response system. A study of the New Zealand regulatory framework found that less than half of regional authorities had implemented mandatory marine habitat protection measures, while *rāhui* emerged as the most dynamic protection mechanism. This shows that customary practice can precede formal recognition (Urlich, White and Rennie, 2022).

The CBD has recognised the value of CBMISs. Decision 15/5 invited Parties and relevant organisations to support CBMISs and their contributions to the KMGBF monitoring framework, and Decision 16/31 recognised their importance for biodiversity knowledge, data and information. However, this recognition is not yet fully reflected in national and global reporting. The CBD remains a state-led process, and it is largely up to Parties whether and how data generated by IPs, LCs and other non-state actors is included.

Greater effort is still needed to support IPs' and LCs' own monitoring initiatives and to adapt reporting systems to work with community-generated evidence, rather than placing the burden on communities to produce data in formats that can be easily scaled up. The central problem is not the absence of data, but the lack of institutional recognition and of mechanisms for bringing community-generated evidence into formal reporting and planning systems (Farhan Ferrari, de Jong and Belohrad, 2015; Eicken et al., 2021).

This must be done in ways that respect Indigenous data sovereignty; free, prior and informed consent; and the CARE Principles for Indigenous Data Governance (collective benefit, authority to control, responsibility, ethics). Many monitoring systems require data to follow the FAIR principles (making data findable, accessible, interoperable and reusable). These principles can be useful, but when applied uncritically to traditional knowledge they risk overlooking historical injustices, power imbalances and questions of control. The CARE principles help address this gap by shifting attention from the usability of data to the rights, interests and self-determination of the peoples connected to it (Carroll et al., 2020). Without such safeguards, monitoring in

IPs' and LCs' territories can become another source of extraction rather than a tool for community governance.

The KMGBF monitoring framework contains few gender-specific indicators, and gender-disaggregated data is limited (Elias et al., 2024; CBD Women's Caucus, 2026). These gaps weaken the gender-responsiveness of biodiversity policies and limit recognition of women's actions and knowledge. Yet, IP and LC women are already producing biodiversity data and leading monitoring efforts grounded in their own knowledge systems and relationships with their territories. As Shruti Ajit from the CBD Women's Caucus explains, *"the real gap lies not in the absence of evidence, but in translating these efforts into influence within national and global policy spaces"* (International Institute for Environment and Development (IIED), 2026; CBD Women's Caucus, 2026). Case study 48 from Chile shows how Indigenous women's biocultural monitoring supports territorial governance, biodiversity protection and the defence of coastal spaces.



Caption: Kawésqar artist María Luisa Renchi Navarino (K'en), of Puerto Natales, Chile, says: "This piece embodies the concept of Os, our life force. The plant used in this creation is more than just a raw material - it is a living being that grows in the wetlands of the Kawésqar territory, natural spaces that require protection and respect. Each knot in the weave represents the fabric of our Kawésqar identity"

Credit: María Luisa Renchi Navarino (K'en)



Case study 48

Author: Red de Mujeres Originarias por la Defensa del Mar

Caption: Indigenous women carrying out participatory mapping exercises for community-based biocultural monitoring

Credit: Red de Mujeres Originarias por la Defensa del Mar, Graciela Escorza P.

48 Diaguita, Chango, Mapuche Lafkenche-Williche, Kawésqar and Yagán Peoples, Chile

For us, as Indigenous Peoples, we have always been observers of the territories, attentive to their changes and transformations. Our knowledge goes beyond the mere measurement of nature. Monitoring is a practice of caring for life, rooted in memory and the deep relationship we maintain with the territories, the seas and the beings that inhabit them.

When we talk about community-based biocultural monitoring, we are referring to a form of participation that responds to local people's needs for information on the state of the territory, its species, common goods, trades and practices. It has become a practical tool for governance, enabling communities to sustain territorial processes, defend their coastal areas, safeguard biodiversity and play an active role in decisions that affect their territories.

From this perspective, for us, monitoring is not merely about measuring or recording. It is a way of observing and understanding what is happening in the territories through our own knowledge and ways of living. In this process, community-based biocultural monitoring strengthens traditional knowledge as the foundation of Indigenous science and our own knowledge systems, promoting intergenerational participation and broadening ways of understanding the territory beyond traditional approaches. We combine ancestral knowledge with technical tools in order to defend the sea, protect community life and safeguard practices that sustain our relationship with the environment.

This approach is grounded, first and foremost, in the Indigenous Peoples' own knowledge, which guides the way we observe, understand and care for our territories. It is nourished by knowledge passed down from generation to generation, which forms an essential part of our identity as peoples. During monitoring, this knowledge is combined with technical tools to strengthen our collective capacity to understand and protect the territory.

These actions reaffirm the value of the community knowledge that guides our practices of care and our collective decisions. This involves understanding the territory as a living space, woven from history, memory, spirituality and relationships that we must safeguard.

Reciprocal capacity building

Target 20: Strengthen capacity-building, technology transfer, and scientific and technical cooperation for biodiversity

Strengthen capacity-building and development, access to and transfer of technology, and promote development of and access to innovation and technical and scientific cooperation, including through South-South, North-South and triangular cooperation, to meet the needs for effective implementation, particularly in developing countries, fostering joint technology development and joint scientific research programmes for the conservation and sustainable use of biodiversity and strengthening scientific research and monitoring capacities, commensurate with the ambition of the goals and targets of the framework.

Target 20 recognises that capacity building, technical cooperation and knowledge-sharing are needed to implement the KMGBF. Capacity building is often understood as a one-way process in which governments, scientists, NGOs or other well-resourced actors transfer expertise to communities. In practice, biodiversity governance and research have long depended on IPs' and LCs' knowledge, values and expertise, as discussed above in the section on traditional knowledge. Capacity building should, therefore, be understood as reciprocal learning, grounded in respect and collaboration, strengthening the technical capacities of IPs and LCs when requested, while recognising that IPs and LCs can build the capacity of governments, researchers and NGOs (Correia, Alexis and Dulic, 2024).

Case study 49 from Papua New Guinea shows how biodiversity monitoring can be a process of shared learning, with community biodiversity team leaders being trained in scientific monitoring methods, while their knowledge is improving biodiversity research and helping to address the limits of automated species identification.



Caption: Bekroti Mekragnotire dives into the Pixaxa River to catch a turtle for food in the Bau Indigenous Territory, Brazil

Credit: Lalo de Almeida, Panos Pictures



Case study 49

Territory: Managalas

Language: Ese, Barai, Omie of the Baraic branch

Authors:

- Rhett D. Harrison, Landscape Alliance
- William Unsworth, Landscape Alliance
- Managalas Conservation Foundation

Caption: Biodiversity Team Leaders recording the serial number of a sound recorder set up to record bird and mammal calls

Credit: Russell Wai, Landscape Alliance

49 Indigenous peoples, Papua New Guinea

The Managalas Conservation Area covers 214,696 ha of largely pristine rainforest and is home to 22,000 people from 152 clans in eight different language groups. The clans of Managalas have committed all of their land to the conservation area. While this is a great win for conservation, it does mean that there will be compromise going forward between managing livelihood activities, such as the cultivation of gardens and traditional hunting, and realising conservation goals. The community's vision is one of a sustainable landscape that meets their needs and protects their traditional rights while protecting its biodiversity in perpetuity.

Current information on the biodiversity of Managalas is very limited: a handful of published sources, a few unpublished reports and species records in the Global Biodiversity Information Facility. Nevertheless, these scant records indicate that Managalas supports a highly diverse rainforest. A detailed survey of the biodiversity of the plateau is needed for both conservation planning and to establish a system for monitoring, reporting and verification for biodiversity credits. Hence, Landscape Alliance and the Managalas Conservation Foundation are working together with Map of Life to establish a baseline for community biodiversity monitoring, which has involved training a group of Biodiversity Team Leaders (BTLs), selected from across the eight language groups. The monitoring protocols cover camera trapping, passive audio monitoring, eDNA, permanent vegetation sample plots and Local Ecological Knowledge (LEK). Each of these methods provides largely complementary information.

When it is completed, the camera trap and passive audio monitoring survey will be the largest study of its kind. However, the volume of data generated creates its own problems, so AI-powered species detection is being used – but given the lack of biodiversity studies from PNG, the models are struggling to identify many species. The BTLs and a network of biologists are helping to identify images and calls and improve the AI-powered automatic detection. For example, where the automated detection identified just one unknown species of forest Wallaby, the team has been able to separate them into four distinct species.

Addressing the structural causes of biodiversity loss

"The peaceful coexistence of people with nature is hard won, and tested time and again. The amaMpondo people have resisted colonist attempts to resettle them, and more recently, have continued to fend off capitalist interests from government and private agencies."

AmaMpondo people, South Africa [9]

Addressing biodiversity loss requires more than expanding conservation efforts. It requires action on the economic, technological and consumption-related systems that continue to drive environmental harm (Pereira et al., 2026). The KMGBF includes targets aimed at addressing these drivers, including for:

- Reforming harmful incentives (Target 18)
- Shifting unsustainable consumption patterns (Target 16)
- Strengthening corporate accountability (Target 15)
- Managing technological risks (Target 17).

However, implementation continues to rely heavily on incremental reforms, voluntary measures, disclosure-based accountability and market-based mechanisms, rather than the deeper changes needed to transform the economic and political structures underpinning biodiversity loss (IPBES, 2024; United Nations Environment Programme (UNEP), 2026).

Harmful incentives

Target 18: Reduce harmful incentives by at least $500 billion per year, and scale up positive incentives for biodiversity

Identify by 2025, and eliminate, phase out or reform incentives, including subsidies, harmful for biodiversity, in a proportionate, just, fair, effective and equitable way, while substantially and progressively reducing them by at least 500 billion United States dollars per year by 2030, starting with the most harmful incentives, and scale up positive incentives for the conservation and sustainable use of biodiversity.

One of the most urgent challenges in addressing biodiversity loss is reforming the incentives that continue to drive environmental destruction. Environmentally harmful subsidies are government payments or forms of public support to industries that harm the environment, including through direct payments, tax breaks and price supports (Nasi, 2025). Recent analysis estimates these subsidies at US$2.4 trillion per year, including US$1.1 trillion for fossil fuels, US$0.4 trillion each for agriculture and water, US$22–$35 billion for fisheries, and additional support for transport and construction (UNEP, 2026).

Target 18 seeks to address this, but progress has been limited; recent analysis concludes that the subsidies have increased by US$900 billion compared with levels before the KMGBF was agreed (BloombergNEF, 2025). Some countries have begun identifying harmful subsidies, but efforts to repurpose these toward biodiversity-positive activities have so far been limited (Nelgen, Charré and Pacheco, 2024; BloombergNEF, 2025). Parties were expected to identify environmentally harmful subsidies by 2025, and many have missed this deadline.

Environmentally harmful subsidies are part of broader economic systems that prioritise short-term growth, extraction and industrial expansion over ecological sustainability, health and collective wellbeing. By shielding environmentally harmful sectors from their full social and ecological costs, these subsidies reinforce patterns of production and consumption that drive biodiversity loss while transferring environmental burdens onto affected communities and ecosystems. Although these are estimated at 2.5% of global gross domestic product (Nasi, 2025), they are only part of the wider financial flows that continue to harm biodiversity, which were estimated at US$7.3 trillion in 2023 (UNEP, 2026).

Target 18 also calls for the scaling up of positive incentives for biodiversity – measures designed to encourage activities that protect, restore or sustainably use biodiversity. This creates an opportunity to redirect public support away from activities that damage ecosystems and toward actions that support community-led conservation, restoration and sustainable use.

However, positive incentives are not automatically equitable or rights-based. Many biodiversity-positive incentives and nature-based solutions remain contested, especially where they are implemented without strong safeguards, fail to respect IPs' or LCs' rights, or prioritise external objectives over local priorities (Prado, 2025). Conservation incentives have faced criticism for imposing market-based approaches on communities whose stewardship is grounded in customary governance systems, restricting access to IPs' and LCs' territories, distributing benefits inequitably, and failing to deliver promised social or ecological outcomes. Overall, IPs and LCs often have limited roles in decision-making over nature-based solutions and conservation incentives (see, for example, Hendrickson and Corbera, 2015; Tran et al., 2016; Smith et al. 2019; McBurney et al., 2023; Bremer et al. 2023; Montero-de-Oliveira et al. 2023), reducing the likelihood that these schemes will reflect their needs and priorities. These examples point to a wider issue: finance labelled as biodiversity-positive can still cause harm if IPs and LCs do not control it, if rights protections are not built into its conditions and requirements, or if it undermines rather than strengthens their governance (Bolaños et al., 2025; Corson, Hodson and Gray, 2025).

Some IPs and LCs have nevertheless found ways to engage with incentive schemes on their own terms (Forest Peoples Programme, 2020), while others move away from conditional incentives altogether. Preliminary research from a pilot with Asháninka and Yánesha communities in Peru found that unconditional cash transfers reduced people's reliance on logging as a means to support themselves (Lama Hyolmo and Abulu, 2025).

Target 19: Mobilize $200 billion per year for biodiversity from all sources, including $30 billion through international finance

Substantially and progressively increase the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, in accordance with Article 20 of the Convention, to implement national biodiversity strategies and action plans, by 2030 mobilizing at least 200 billion United States dollars per year, including by:

(a) Increasing total biodiversity related international financial resources from developed countries, including official development assistance, and from countries that voluntarily assume obligations of developed country Parties, to developing countries, in particular the least developed countries and small island developing States, as well as countries with economies in transition, to at least US$ 20 billion per year by 2025, and to at least US$ 30 billion per year by 2030;

(b) Significantly increasing domestic resource mobilization, facilitated by the preparation and implementation of national biodiversity finance plans or similar instruments according to national needs, priorities and circumstances;

(c) Leveraging private finance, promoting blended finance, implementing strategies for raising new and additional resources, and encouraging the private sector to invest in biodiversity, including through impact funds and other instruments;

(d) Stimulating innovative schemes such as payment for ecosystem services, green bonds, biodiversity offsets and credits, benefit-sharing mechanisms, with environmental and social safeguards;

(e) Optimizing co-benefits and synergies of finance targeting the biodiversity and climate crises;

(f) Enhancing the role of collective actions, including by indigenous peoples and local communities, Mother Earth centric[†] actions and non-market-based approaches including community based natural resource management and civil society cooperation and solidarity aimed at the conservation of biodiversity;

(g) Enhancing the effectiveness, efficiency and transparency of resource provision and use.

More money is widely seen as necessary for meeting the goals and targets of the KMGBF. The current biodiversity funding gap has been estimated at an average of US$711 billion per year (Deutz et al., 2020), and Target 19 of the KMGBF calls for the mobilisation of at least US$200 billion per year by 2030. BloombergNEF (2025) estimated that annual finance flows to biodiversity reached US$313 billion in 2024, although these gains continue to be undermined by subsidies and financial flows that harm nature. Marine and coastal conservation remains particularly underfunded, despite the importance of ocean ecosystems to biodiversity, food security, climate resilience and the territories and livelihoods of many IPs and LCs (Deloitte, 2021).

[†] Mother Earth-centric actions: Ecocentric and rights-based approach enabling the implementation of actions towards harmonic and complementary relationships between peoples and nature, promoting the continuity of all living beings and their communities and ensuring the non-commodification of environmental functions of Mother Earth.

The focus, however, should not just be on how much money is available for biodiversity but on what kinds of finance are being mobilised, how and by and for whom. There is a significant shift evident in the KMGBF towards mobilising private finance – despite its limited contribution to positive biodiversity action to date and limited evidence that it can achieve the outcomes required (Carter et al., 2026; Kedward et al, 2023; Gonon et al., 2024). Target 19 envisages the development of new markets and financial instruments through which biodiversity can be measured, priced, traded or used to generate financial returns. This includes mechanisms such as biodiversity offsets, biodiversity credits, blue bonds and debt-for-nature swaps. Experience from climate finance suggests that IPs and LCs have not reliably benefitted from market-based mechanisms (Carter et al., 2026; Brunner and Enting, 2014; Colenbrander, Dodman and Mitlin, 2017), and similar barriers are likely to arise in biodiversity markets (Biodiversity Credit Alliance (BCA), 2023).

Private finance is often presented pragmatically as necessary because the funding gap cannot be filled by constrained public funds (Kedward et al., 2023; Gonon et al., 2024). However, private finance also has significant limitations – it flows only where there is an expected return on investment, leaving unfunded important but unprofitable work to protect biodiversity – including much of that done by IPs and LCs – and reproducing extractive business models and financialisation in biodiversity action (Christiansen et al., 2025; Kedward et al., 2023, Carter et al., 2026, Bigger et al, 2021; FPP, 2025). It is essential that efforts to close the biodiversity finance gap also ensure more public (not just private) funding for biodiversity. This is linked to broader shifts in incentive structures and corporate accountability, addressed under Targets 15 and 18, as well as changes to global financial architecture, actions which are critical to increasing the amount of public biodiversity finance available (Kedward et al, 2023; Gonon et al., 2024; FPP, 2025).

A further critical element is whether finance is reaching IPs and LCs directly. In addition, because of the risk that biodiversity finance – both public and private – will be used to support projects that harm IPs and LCs, it must be accompanied by strong safeguards (United Nations High Commissioner for Human Rights, 2026). Current funding mechanisms do not consistently meet these standards (Survival International, 2025).

Direct access for IPs and LCs to biodiversity finance

Target 19 (point (f)) recognises the collective actions of IPs and LCs. This creates an important opportunity to direct biodiversity finance toward the communities already conserving, restoring and sustainably using biodiversity. Yet, despite their contributions, IPs and LCs receive only a small share of biodiversity finance and often have limited control over how funds are designed, governed and used.

Structural barriers continue to limit direct access to funding. IPs, LCs and their organisations often face language requirements, complex accreditation processes (Karmushu and Sorsby, 2025) and burdensome reporting processes that are not designed for grassroots organisations (Monterroso, 2025). As a result, biodiversity finance remains dominated by intermediaries, with less than 2.5% estimated to reach IPs and LCs directly (Karmushu and Sorsby, 2025). Box 13 discusses how biodiversity finance in the marine and coastal context often does not reach IPs and LCs governing marine and coastal ecosystems.

13 Finance and IPs' and LCs' governance of marine and coastal ecosystems

Financing for IPs and LCs, including small-scale fishers' organisations, can support their effective and equitable forms of marine and coastal governance (for example, see Radwin, 2022 and Puentes Riaño, 2024). This is a matter of environmental justice, but also a practical condition for conservation: communities need resources to govern, monitor, restore and defend the marine and coastal ecosystems on which they depend.

However, existing financial assistance often fails to reach small-scale fishing communities, particularly if they lack formal recognition, secure marine tenure or the administrative capacity required by funding mechanisms. More funding is therefore not enough; it must respond to the realities and priorities of IPs and LCs living in marine and coastal areas, including small-scale fishers.

This finance must be rights-based, give particular attention to historically excluded groups such as women and youth, and strengthen the rights of marine and coastal rights-holders, including their tenure rights. Marine tenure should not be understood only as property or access rights. It includes the relationships that peoples and communities maintain with the sea, including their governance systems, traditional knowledge, spiritual and cultural ties, and the legal protections needed to sustain these relationships. When the rights of communities who inhabit and depend on the sea are not guaranteed, their vulnerability increases and their capacity to respond to biodiversity loss is reduced. In some contexts, marine conservation efforts can also undermine existing tenure rights (Inter-American Court of Human Rights, 2026).‡

Funding initiatives should also reflect the holistic nature of territory, including the connections between land and sea. Many financing mechanisms still operate through fragmented categories that fail to recognise the ecological and territorial connections between inland, coastal and marine areas. This creates gaps for peoples and communities whose lives, governance systems and territorial relationships depend on both land and sea. Financing mechanisms should therefore support integrated approaches that reflect the interdependence of ecosystems and the territorial realities of IPs and LCs.

‡ An example of how marine conservation policies can undermine existing tenure rights can be seen in Cayos Cochinos, Honduras, where the creation and management of the Marine Natural Monument imposed restrictions on access and artisanal fishing by the Garífuna community, despite their ancestral occupation of the territory. The Inter-American Court of Human Rights concluded that these measures were adopted without prior consultation and violated collective property rights and the right to participate in the governance of the protected area.

The Global Biodiversity Framework Fund 'aspires' to allocate 20% of its budget to IPs and LCs (Global Environment Facility (GEF), 2023), but its ability to deliver on this commitment remains uncertain. Analysis of current projects suggests it has not yet been realised (Survival International, 2025). IIED has similarly found that while between 24% and 30% of funding disbursed under the 6th and 7th funding rounds of the GEF was aimed at IPs and LCs, there was only minimal evidence of local involvement (Karmushu and Sorsby, 2025).

At stake is whether biodiversity finance enables IPs and LCs to shape funding priorities, make implementation decisions and govern resources through their own institutions. Without this shift in power, funders risk continuing to position IPs and LCs as stakeholders or beneficiaries rather than as rights-holders with authority over their territories, knowledge systems and futures. Where funding does not align with IPs' and LCs' own priorities, governance systems and territorial plans, it risks undermining rather than supporting their stewardship (Ravikumar et al., 2023; Kachali, Dawson and Loos, 2024; Kalman et al., 2024). IPs, LCs and civil society organisations have, therefore, increasingly called for direct access mechanisms, which would enable funding to: flow directly to their representative institutions; be governed according to their priorities; and

remain flexible, long-term and accessible (Monterroso, 2025). Several IP and LC organisations have also started to set up their own funding mechanisms, such as those connected through the Shandia platform (Global Alliance of Territorial Communities, 2024). These efforts are particularly important for people who face additional barriers to funding, including gender minorities, youth and disabled people.

There are signs that funding trends may be beginning to shift. The GEF's 8th funding round provided US$25 million in grants directly to IP organisations through the Inclusive Conservation Initiative, supporting activities such as those described in case study 47 (GEF, 2026). Building on this, GEF's 9th funding round plans to direct 20% to IPs and LCs GEF, 2026).

Addressing the barriers that IPs and LCs face requires more than a single funding model. Different IP organisations, communities and representative institutions have different needs, capacities and preferences, and varied funding modalities are needed to address these (Esmail et al., 2023; McLaren et al., 2025). Trusted and legitimate intermediaries and allies can still play useful roles where they provide technical support, reduce administrative burdens for IP and LC partners, and remain accountable to them (Baracat et al., 2023; Godio, 2025). Biodiversity finance must go beyond being aimed at IPs and LCs; it must strengthen their self-directed action.

Respecting human rights in finance flows

Increased biodiversity finance flows, and particularly private flows with less oversight, may also pose risks to IPs and LCs. Biodiversity credits and offsets are one of the more visible manifestations of this to date.

Proponents of biodiversity offsets claim that their aim is to conserve or restore ecosystems in one location to compensate for damage done in another. However, the assumption that equivalence can be made between negative and positive biodiversity impacts, or between ecosystems, is flawed. Biodiversity offsets are frequently ineffective, characterised by low accountability and high vulnerability to external pressures such as forest fires (Wilson, 2025).

Biodiversity credits are a newer mechanism through which biodiversity outcomes are quantified and translated into units that can be bought and sold. They have often been compared to carbon credits, but biodiversity is more complex to measure and less easily reduced to a single metric (Ducros and Steele, 2022; Carter et al., 2026).

Emerging guidance for the biodiversity credit market has emphasised the importance of engaging with IPs and LCs, noting that projects should respect free, prior and informed consent (FPIC); be rights-based; and involve IPs and LCs in governance, including decisions about whether projects should proceed (Taskforce on Nature-related Financial Disclosures, 2024; World Economic Forum, Biodiversity Credit Alliance and International Advisory Panel on Biodiversity Credits, 2025). However, IPs and LCs are marginalised within many national legal frameworks and economies, and sustained effort will be needed to ensure they have meaningful decision-making power and influence (Baker and Smith, 2025). For instance, only about half of providers of voluntary biodiversity credits have established comprehensive FPIC protocols (Kim et al., 2025).

Investors should recognise that developing biodiversity credits without IPs' and LCs' involvement is likely to be unworkable, given that many of the world's most biodiverse places overlap their lands and territories (Ducros and Steele, 2022). The design of biodiversity credits also involves judgements about ecosystem value that may not reflect how ecosystems are understood, governed or valued by IPs and LCs.

Market-based approaches such as those described above may pose direct threats to the territorial rights of IPs and LCs, especially where tenure is insecure or where IPs and LCs are marginalised within national legal and economic systems. By creating new financial value attached to ecosystems, biodiversity markets may increase pressure on IP and LC territories, incentivising land grabbing, territorial enclosure or exclusionary conservation practices (Gutierrez, 2026; Jurjonas, 2026). They may also reinforce existing inequalities (Kedward et al., 2023), where investors are unfamiliar with customary tenure or shared governance systems, where community governance institutions are not supported to manage new financial flows, or where projects prioritise returns over local needs and priorities. Increased finance is, therefore, not inherently positive: without secure rights, FPIC, strong safeguards, community control and accountability, market-based approaches may deepen rather than reduce existing power imbalances (Ducros and Steele, 2022; McLaren et al., 2025; BES-Net, 2025).

Corporate accountability and environmental justice

Target 15: Businesses assess, disclose and reduce biodiversity-related risks and negative impacts

Take legal, administrative or policy measures to encourage and enable business, and in particular to ensure that large and transnational companies and financial institutions:

(a) Regularly monitor, assess, and transparently disclose their risks, dependencies and impacts on biodiversity, including with requirements for all large as well as transnational companies and financial institutions along their operations, supply and value chains and portfolios;

(b) Provide information needed to consumers to promote sustainable consumption patterns;

(c) Report on compliance with access and benefit-sharing regulations and measures, as applicable;

in order to progressively reduce negative impacts on biodiversity, increase positive impacts, reduce biodiversity-related risks to business and financial institutions, and promote actions to ensure sustainable patterns of production.

Businesses and financial institutions contribute significantly to biodiversity loss (IPBES, 2026). Target 15 of the KMGBF requires Parties to take steps to encourage all businesses to monitor, assess and disclose their impacts on biodiversity – and *ensure* that large and transnational companies and financial institutions do so – while encouraging more sustainable production practices and respecting the rights of IPs and LCs, including through participation in decision-making and access to information.

However, Target 15 largely relies on businesses disclosing information about their impacts on biodiversity. Target 15 does not necessarily require businesses to take meaningful action to address these impacts and reduce biodiversity loss that is linked to their activities (International Union for the Conservation of Nature International Policy Centre, 2023). The extent to which requirements are placed on businesses, and how strong they are, may therefore vary significantly across national regulatory frameworks and corporate governance systems.

Many IPs and LCs are threatened by industrial expansion on their lands, waters and territories. In the Amazon, mining concessions overlap almost 10 million hectares of IP and LC lands, while in the Congo Basin oil and gas blocks overlap 38% of community forests (Global Alliance of Territorial Communities and Earth Insight, 2025). Across 64 countries, almost 60% of IPs' lands are estimated to be at risk from industrial expansion (Kennedy et al., 2023). Indigenous Navigator national surveys for 2020–2025 also show the scale of the problem: 27 of the 28 countries surveyed reported incidents of land grabbing, settlements or resource extraction without FPIC since 2008 (Indigenous Navigator, 2026, unpublished).

Similar pressures are affecting marine and coastal ecosystems, where blue economy and infrastructure projects increasingly overlap areas governed and used by IPs and LCs, as shown in Box 14.

Box 14

14 Impacts of the growing blue economy

Across many regions, the rapid expansion of the blue economy and coastal infrastructure projects – such as large-scale port developments, tourism, industrial aquaculture, shrimp farming, pearl farming, offshore wind, sand extraction, and proposed deep-sea mining activities – are increasingly occupying coastal and marine areas traditionally governed and used by IPs and LCs, including small-scale fishers (Ramli and Waskitho, 2023; Louey, 2026; Gutzmann et al., 2026). In many cases, these projects proceed without meaningful consultation, FPIC, or adequate environmental and social impact assessments. They often privilege state and private-sector interests over customary marine tenure systems, reinforcing unequal power relations and weakening IPs' and LCs' governance institutions.

Pressures on the marine and coastal territories of IPs and LCs are also closely connected to inland extractive and infrastructure projects occurring across river basins and watersheds. Mining, mega dams, deforestation, and industrial agriculture can alter sediment flows, nutrient transport, hydrological systems, and water quality, with downstream impacts on estuaries, mangroves, fisheries, coral reefs, and coastal biodiversity (Zhang et al., 2022). For example, in the Philippines, mining in upland and mountainous areas of Palawan has affected downstream coastal ecosystems through sedimentation and pollution entering coastal waters through river systems (Jament, 2026, personal correspondence). These impacts can undermine community-managed marine areas and fish conservation zones, showing that decisions taken inland can directly affect marine tenure, customary fishing practices and coastal governance. Large dams can reduce sediment and nutrient flows, which can contribute to mangrove degradation, coastal erosion, declining fish abundance, and disruption of customary fishing practices.

Ridge-to-reef governance approaches that recognise the ecological and territorial connections between inland and marine areas are therefore critical (Vierros et al., 2020). Environmental and social assessments must also look beyond the impacts of individual projects to consider cumulative pressures, unequal power relations, marine tenure rights, and the wider structures that limit IPs' and LCs' ability to govern and protect their territories.

IPs and LCs already play a central role in holding businesses to account. Community-based monitoring initiatives, such as those carried out by IPs in Cambodia's Prey Lang, Preah Rokar and Sorng Rokha Vorn wildlife sanctuaries, illustrate both the value and the limitations of these efforts (Argyriou and Theilade, 2025). Communities have documented widespread illegal logging, mining and violence linked to large-scale corporate actors (Argyriou and Theilade, 2025). While this data provides detailed, place-based evidence of

environmental harm, it rarely translates into national policy action and can expose community members to significant risk (Argyriou and Theilade, 2025).

As research on social accountability has shown, transparency and community voices alone are rarely sufficient to challenge powerful actors where underlying legal, political and economic systems continue to permit harmful activities (Fox, 2015; Larson, Sarmiento Barletti and Heise Vigil, 2022). This dynamic is illustrated in case study 50, which highlights efforts by Anishinaabek elders to halt glyphosate spraying.

Case study 50

Territory: Anishinaabek Aki

Language: Anishinaabemowin

Authors:

- Susan Chiblow, Anishinaabe, Garden River First Nation, University of Guelph
- Caroline Recollet, Anishinaabe, Wahnapitae First Nation, Traditional Ecological Elders

Caption: A member of the Robinson Huron Waawiindamaagewin holds a sign protesting glyphosate spraying on their lands during a Day of Action

Credit: Chris Ricker



50 Anishinaabe people, Canada

The Anishinaabek of the Robinson Huron Waawiindamaagewin rely on the lands for medicines, food, clothing, knowledge, language and culture. We understand that the loss of one species affects the entire ecosystem. The loss affects the entire circle of life. Every piece of the lands holds responsibilities to all life. We honour the lands through ceremony for continuing to provide us with life.

The Traditional Ecological Knowledge (TEK) Elders are from First Nations in the Robinson Huron Waawiindamaagewin. In 2013, they came together to discuss concerns with aerial spraying of glyphosate in the forests. They have witnessed the destruction to the lands by aerial spraying and are demanding a moratorium.

Glyphosate is a chemical used in forestry operations applied through aerial spraying to control re-growth of the natural forest after logging operations. The forestry companies then plant monocultures affecting biodiversity such as birds, plants, animals, and insects that do not return to these areas.

The TEK Elders are addressing the moratorium in multiple ways: they have done several Days of Action events to increase awareness, have written letters to governments, drafted a position paper, and gained a supporting resolution from the Robinson Huron Ogimaak (leadership). In 2019, the TEK Elders presented a submission to the United Nations Special Rapporteur Baskut Tuncak detailing the human rights implications of the management and disposal of hazardous substances and toxic waste linked to glyphosate. But these activities have not been enough to stop the aerial spraying.

The TEK Elders' experience shows that communities can mobilise, provide evidence, and pursue multiple policy avenues – and still face barriers when the underlying approval systems continue to authorise harmful practices. Aerial herbicide spraying is therefore both an environmental concern and an environmental justice concern tied to Treaty relationships, human rights, and the ability to practice Anishinaabek ways of life.

Increased transparency can create opportunities for dialogue, redress and improved benefit-sharing, but it does not automatically lead to accountability. Ensuring that IPs and LCs can access information, influence decision-making and hold businesses to account requires stronger legal and policy frameworks (Human Rights and Biodiversity Working Group, 2022; Human Rights and Biodiversity Working Group, 2024; Indigenous Peoples Rights International, 2026), including NBSAPs that set clear expectations for businesses to respect human rights and undertake human rights due diligence in line with the UN Guiding Principles on Business and Human Rights (United Nations Office of the High Commissioner for Human Rights, 2011).

Overconsumption and uneven responsibility

Target 16: Enable sustainable consumption choices to reduce waste and overconsumption

Ensure that people are encouraged and enabled to make sustainable consumption choices including by establishing supportive policy, legislative or regulatory frameworks, improving education and access to relevant and accurate information and alternatives, and by 2030, reduce the global footprint of consumption in an equitable manner, including through halving global food waste, significantly reducing overconsumption and substantially reducing waste generation, in order for all people to live well in harmony with Mother Earth.

Unsustainable consumption is a major driver of biodiversity loss. Over 90% of land-related biodiversity loss and water stress, and around one-third of greenhouse gas emissions, are linked to the extraction and processing of biomass, including food, timber and fisheries (Ellen MacArthur Foundation, 2025). At the same time, consumer expenditure continues to grow globally (Atabaki Fard Tehrani, Sarkar and Shetranjiwalla, 2025), much of it associated with non-essential consumption and high levels of waste. Addressing biodiversity loss therefore requires a fundamental shift in how resources are produced and consumed.

Target 16 addresses this by calling on Parties to ensure that people are "*encouraged and enabled to make sustainable consumption choices*", including through supportive regulatory and policy frameworks, improved access to information, and education. However, global consumption patterns are highly unequal. High-income countries drive a disproportionate share of biodiversity loss, including through the import of commodities linked to deforestation and land-use change (Cabernard et al., 2024).

These disparities raise important questions for the equitable implementation of Target 16. While all countries share responsibility for reducing biodiversity loss, their obligations are not equal. Countries with the highest consumption

footprints, and whose consumption patterns drive biodiversity loss beyond their own borders, have a particular responsibility to transform production and consumption systems and support biodiversity action in the countries where the loss of biodiversity occurs. However, Target 16 does not specify what this should look like in practice, nor how unequal global consumption should be addressed at national or international levels (Lehmann et al., 2026).

At the same time, the values and ways of life of many IPs and LCs point toward alternative approaches to production and consumption (IPBES, 2024). While concepts such as the circular economy are relatively recent in mainstream policy debates, they are deeply embedded in the worldviews of IPs and LCs. As Kara-Kichwa researcher Nkwi Flores explains, "*For Indigenous communities, the principles of circularity and reciprocity are not abstract concepts but lived realities*" (Barriga and Sarkar, 2024).

Two case studies illustrate how traditional knowledge, innovation and local livelihoods can support sustainable production systems that conserve biodiversity while strengthening local economies. Case study 51 from Mexico shows how women in La Carbonera are combining traditional knowledge, conservation and entrepreneurship in land-based production systems. Case study 52 from Tonga shows how small-scale, women-led *mabé* pearl farming can support economic empowerment while encouraging care for marine ecosystems.



Case study 51

Territory: La Carbonera, Querétaro

Author: María Janet Arteaga Ordaz, Mujeres y Ambiente SPR de RL de CV

Caption: A woman works on the farm

Credit: Óscar Maskie

51 Local communities, Mexico

Like Indigenous Peoples, rural communities also possess traditional knowledge associated with their territory, such as the use of medicinal plants with health and beauty benefits, or techniques for soil and water conservation that have been passed down from generation to generation.

For the past 70 years, on the land now used by the organisation Mujeres y Ambiente for its activities, the Balderas Moreno family has been tending their maize fields and growing vegetables and medicinal plants. They are currently collaborating with academic groups and NGOs to evaluate and improve their techniques, particularly in the cultivation of maize and aromatic and medicinal plants. For example, one of the species they work with is arnica, which attracts pollinators and whose roots help to stabilise the soil. In this project, the group works with small-scale farmers (mostly women) who, on an individual basis, implement measures in their farming systems to prevent soil erosion, such as windbreaks lined with plastic bottles.

Work is currently underway on the joint design of the site through hydrological management of the land to improve production in both the *milpa* system (growing squash, beans and maize together) and the cultivation of aromatic and medicinal plants. This not only helps to conserve the soil, water and biodiversity of the environment, but also contributes to the preservation of traditional knowledge associated with the plants. For example, initial results from this joint design show that the terraces built over 70 years ago were constructed with almost perfect precision in relation to the contour lines, which has prevented further erosion in the area.

Mujeres y Ambiente is contributing to the local economy by selling its products in the cosmetics sector and has taken part in international workshops to discuss its soil conservation practices.

Case study 52

Author: Makelesi Kioa, local community representative, Vava'u Pearl Farming

Caption: A mature oyster just picked from the hanging basket

Credit: Faka'anaua Lākai



52 Local communities, Tonga

The Kingdom of Tonga is a Pacific Island nation whose communities depend heavily on marine and coastal ecosystems for food security, livelihoods and cultural identity. The major income sources for Tongan women are heavily concentrated in the informal economy, particularly in handicraft production, small scale agriculture and marine aquaculture – including *mabé* pearl farming.

Mabé pearl farming is distinctive to Tonga, creating dome-shaped 'half pearls' by attaching the nucleus of the pearl onto the inner shell of the oyster so it develops a flat back. *Mabé* pearl farming doesn't need as much technical knowledge, time or initial investment as other forms of pearl production, making it an attractive form of income production for women in Tonga.

Faka'anaua Lākai started *mabé* pearl farming as her family's main source of income after she became a single mother of five, and quickly began making and selling jewellery from the pearls. She is a member of the Vava'u Pearl Association, where she sells her jewellery and offers free tours to educate visitors on how the pearls are grown, harvested and designed. *Mabé* pearl farming has not only given her greater financial independence, but also empowered her as a woman and mother, giving her a sense of pride and security.

Mabé pearl farming provides economic opportunities while also encouraging environmental conservation and community involvement. The success of pearl farming depends on healthy marine ecosystems, so through the women's daily work, they monitor water quality, protect lagoon habitats and apply Traditional Ecological Knowledge to ensure that pearl production does not harm the surrounding environment.

For women such as Faka'anaua, pearl farming has also enabled her to participate in community decision-making, advocating for the protection of the marine ecosystems that sustain their livelihoods.

This demonstrates how Indigenous women's economic empowerment through *mabé* pearl farming is directly linked to their role as custodians of Tonga's marine and coastal environments.

Target 17: Strengthen biosafety and distribute the benefits of biotechnology

Establish, strengthen capacity for, and implement in all countries biosafety measures as set out in Article 8(g) of the Convention on Biological Diversity and measures for the handling of biotechnology and distribution of its benefits as set out in Article 19 of the Convention.

Technological approaches to reducing biodiversity loss can pose new risks if not carefully governed. Target 17 focuses specifically on biosafety, aiming to prevent or minimise the potential adverse impacts of biotechnology, including of genetically modified organisms (GMOs), while ensuring that benefits are shared fairly and equitably.

If released without strong regulation and testing, GMOs can have significant environmental and social impacts. These include the spread of modified genes into traditional crops, reduced genetic diversity, and increased dependence on external inputs. For IPs and LCs, such impacts can undermine traditional food systems, livelihoods and cultural practices; for example, in the Democratic Republic of Congo, GMOs introduced through humanitarian programmes have disrupted local ecosystems (see case study 22). Effective implementation of Target 17 therefore requires strong biosafety frameworks, respect for FPIC, and meaningful participation of IPs and LCs in decision-making.



Caption: A Quechua community celebrates Pachamanca in the Sacred Valley, Peru

Credit: Al Gonzalez

Target 17 addresses only part of the wider problem of technological risk. Deep-sea mining – the extraction of minerals from the seabed – is increasingly promoted as a solution to the climate and biodiversity crises, even where its impacts on ecosystems and affected communities remain uncertain. Although it is not covered by Target 17 in the same way as biotechnology, the threat it poses underscores the need for precautionary and rights-based approaches to biodiversity governance. Proponents argue that deep-sea mining is an 'environmentally friendly' alternative to terrestrial mining and necessary for a rapid transition to renewable energy (The Metals Company, 2026). These claims are disputed, including in relation to future mineral demand (Amon et

al., 2022a), and sit uneasily with growing scientific concern that the practice poses serious risks to ocean ecosystems (Deep Sea Mining Campaign, 2020). The failed Nautilus Minerals project in Papua New Guinea shows how these risks can materialise for coastal communities (see Box 15).

Box 15

15 Nautilus Minerals and deep-sea mining in Papua New Guinea

Commercial deep-sea mining in the coastal waters of Papua New Guinea was first proposed by Canadian company Nautilus Minerals. The experimental mining would have taken place about 30 km from New Ireland, directly threatening the livelihoods of local fisherfolk (Rosenbaum, 2011). The project was granted an operating licence without the free, prior and informed consent of nearby coastal communities. This resulted in a concerted grassroots campaign, including legal action, championed by the local Alliance of Solwara Warriors (Deep Sea Mining Campaign, 2017).

Thanks to this campaign, and under financial pressure, Nautilus went into administration in 2019 with creditors, including the Papua New Guinea government, losing hundreds of millions of dollars (Deep Sea Mining Campaign, London Mining Network and MiningWatch Canada, 2019). Despite the bankruptcy, former Nautilus shareholders have taken over the lease and continue to pressure for mining to start without the consent of local communities (Marx, 2025).

The Alliance of Solwara Warriors is now campaigning to get the mining licences cancelled, to finally end the threat of extraction that hangs over them.

Major uncertainties remain about how deep-sea mining impacts could be avoided or mitigated, how long affected ecosystems would take to recover, and whether recovery would be possible at all (Amon et al., 2022b; Glover et al., 2026). Opening a new frontier for extraction would also undermine efforts to move towards more circular and less extractive economies. For IPs and LCs in marine and coastal territories, deep-sea mining also threatens cultural, spiritual and livelihood oceanscapes that have been maintained through navigation, fishing, trade and customary governance over thousands of years (Timmer et al., 2026).



Caption: Hilda Antun carries fire into the jungle to use to harvest crops in Maikuaints, Ecuador

Credit: Ian Willms, Panos Pictures



Chapter 7
Effective participation and gender justice

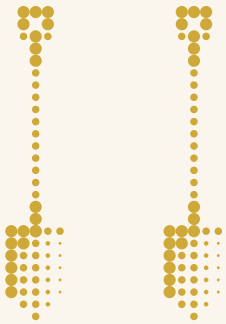
Targets 22 and 23

"Across many Indigenous territories, environmental decisions are still shaped by colonial laws and policies, and Indigenous Peoples are too often missing from decision-making tables, or their concerns are not adequately addressed."

Anishinaabe people, Canada [50]

Caption: Juana Mamani, secretary of a network of women leaders defending Lake Titicaca's waters, looks out over Capuchina Bay in the Coata community, Peru, where women are leading cleanup efforts and pressing authorities to restore the polluted lake

Credit: Musuk Nolte, Panos Pictures



Targets 22 and 23 – focused on effective participation and gender equality respectively – are targets of central importance for IPs and LCs. While they are included in the KMGBF in the section on tools and solutions for implementation, in reality they are cross-cutting and relevant for all the targets of the KMGBF.

Effective participation is a core part of many Section C considerations, including the human rights-based approach, the integration of different value systems, the whole-of-government and whole-of-society approach, and the ecosystem approach (see Chapter 2). Two of the traditional knowledge indicators – related to participation and land tenure – are connected to Target 22, in recognition of its cross-cutting nature.

Gender equality and gender justice is a cross-cutting human rights concern for IPs and LCs, in particular (but not only) Indigenous and local community women. Because of their cross-cutting relevance, although included in this chapter, consideration of effective participation and gender justice is also spread throughout all the chapters of this report.

This chapter examines in more detail how Parties' commitments are being translated into practice across these two areas:

- Effective participation, including in relation to access to justice and IP and LC environmental human rights defenders – relating to Target 22
- Gender justice and gender-responsive approaches to implementation of the KMGBF – relating to Target 23.

Participation

Target 22: Ensure participation in decision-making and access to justice and information related to biodiversity for all

Ensure the full, equitable, inclusive, effective and gender-responsive representation and participation in decision-making, and access to justice and information related to biodiversity by indigenous peoples and local communities, respecting their cultures and their rights over lands, territories, resources, and traditional knowledge, as well as by women and girls, children and youth, and persons with disabilities and ensure the full protection of environmental human rights defenders.

The CBD has long been considered more progressive than other multilateral environmental agreements in recognising the participation of IPs and LCs (Richardson, 2001; Firestone et al., 2005). Target 22 is a critical target to support participation and access to justice for IPs and LCs, including for women and girls, children and youth, and persons with disabilities. It also requires Parties to ensure the protection of environmental human rights defenders.

In practice, numerous barriers continue to limit the full and effective participation of IPs and LCs in national and international biodiversity governance processes (Marion Suiseeya, Zanotti and Haapala, 2022), including hard to reach meeting locations, insufficient resources to support engagement, language barriers, discriminatory attitudes (Zurba and Papadopoulos, 2021; Forest Declaration Assessment, 2023; Asia Indigenous Peoples Pact (AIPP), 2026). Participation is also an unspecific term that is often interpreted differently by states and IPs and LCs (Liboiron and Cotter, 2023).

Even when the value of IPs' and LCs' traditional knowledge and cultural values is recognised by external actors, there are often gaps in translating this recognition into effective participation in decision-making. In India, for example, biodiversity-related policy frameworks recognise the importance of traditional knowledge but provide limited guidance on how IPs and LCs should participate in marine planning, biodiversity assessments, and conservation decision-making (Ganeshan, 2022; United Nations Educational, Scientific and Cultural Organization (UNESCO) Intergovernmental Oceanographic Commission and UNESCO Local and Indigenous Knowledge Systems, 2024). Similarly, the National Policy on Biodiversity of Sri Lanka (2024) acknowledges traditional knowledge in biodiversity conservation and climate adaptation, but offers few concrete pathways for implementation (Ministry of Environment, 2024).

Many have also highlighted the limited participation of IPs and LCs in global climate, ocean and pollution governance processes, as well as insufficient recognition of their rights, knowledge systems and decision-making authority (Raoul Wallenberg Institute, 2024; Jacobs, 2025).

More fundamentally, participation alone does not necessarily translate into decision-making power (Bullock et al., 2023). While participatory processes may create space for dialogue or information-sharing (Fan and Sung, 2020), they often leave unchanged the underlying power structures that marginalise IPs and LCs, creating a "*participatory illusion*" (Larson, Sarmiento Barletti and Heise Vigil, 2022; Rathakrishnan, Aboo Talib Khalid and Daud, 2025). This gap is evident, for example, in how most NBSAPs have been developed in practice (see Chapter 3: Parties' reporting on implementation to date). Without addressing these structural inequalities, participation risks remaining superficial (Arney et al., 2023).

Despite the barriers to the effective participation of IPs and LCs' and the inclusion of their values in decision-making, they continue contributing to local, national and global biodiversity action, supporting and seeking to influence these processes. For example, in the Philippines, a coalition of Indigenous organisations developed the country's first Indigenous Peoples Biodiversity Strategy and Action Plan (Indigenous Peoples and Biodiversity Coalition, 2024; Centers of Distinction on Indigenous and Local Knowledge, 2024) through an Indigenous-led process independent of the NBSAP. This was later recognised as a key contribution to Target 22 in the country's seventh national report (Republic of the Philippines, 2026). Similar contributions can be seen in Peru and Costa Rica, where IPs have supported national biodiversity planning processes (Brittain et al., 2024).

Many IPs and LCs also actively seek engagement with government, even when there is limited space or limited response from government, in order to realise their right to effective participation in decision-making. For example, the Amidava case study 53 from India describes how the Amidava village sought permission to harvest bamboo they had planted and cared for on common land through letters to authorities, and then through collective and non-violent action when there was no response.

Case study 53

Territory: Shamlaat (common lands)

Language: Bhili

Author: Varsha Rathore, Ram Lal people, Seva Mandir, Van Uthan Sansthan

Caption: Women return from a monthly self-help group meeting, where members contribute to shared savings and discuss social concerns, working together to find fair solutions

Credit: Manish Shukla



53 Bhils tribal communities, India

In Udaipur in northwestern India, common forest land is 73% of the total land. Common forest land is a primary source of livelihood and a crucial element in shaping the identity of the local Bhils tribal communities. As per their custom, village elders control land on behalf of the community and address land disputes.

However, state land and forest laws, policies and reform processes have overlooked tribal peoples' customary practices and communal land ownership customs. Consequently, conflicts over forests and agricultural land are common and arise mainly from boundary disputes in shared forest areas and during the collection of *nistar* (usufruct – the rights of local communities to gather non-timber forest produce and other natural resources) from the commons.

Since 2003, the Amivada village in the Phalasia *tehsil* (subdistrict) has been protecting a 16-hectare section of common land, on which they began growing bamboo. Once a degraded, rocky and barren space, after 15 years of hard work by the villagers, it became a forest of bamboo.

In 2016, the bamboo was ready to be harvested. However, the continued lack of clarity over who owns this common land meant they were unsure if harvesting it would lead to conflict. They requested permission through the Van Utthan Sansthan (VUS), a network of Village Forest Protection and Management Committees (VFPMCs). VUS was established in 1997 and is now a federation of community forest governance institutions that collectively safeguard community forest resource rights, lands, and natural resources.

VUS sought permission from the government to harvest, but they did not receive a response for two years.

The village community in Amivada, with support from VUS, therefore decided to launch a *Satyagraha* by harvesting the bamboo, and 14 other villages took part in the initiative to show solidarity.

The word Satyagraha refers to 'truth force': non-violence is an essential part of this methodology. The objective of *Satyagraha* is justice; it does not hinge on loss or gain, for and against, but on all sides coming together for better outcomes.

Before the *Satyagraha*, a press meeting was held where it was announced that the villagers would harvest the bamboo whether they received permission from the government or not. This proved effective, as the Forest Department issued the required permission letter later that evening, and all 15 villages harvested the bamboo without fear of reprisals from the government.

Box 16

16 Measuring effective participation

Many Parties now recognise that protecting the world's remaining biodiversity will require IPs and LCs to be included as equal partners. This requires reversing their historical marginalisation in environmental governance and ensuring their full and effective participation in biodiversity-related decision-making.

IP and LC participation is considered a key indicator of the respect for IPs' and LCs' rights and values. It should include participation at all levels, including participation in local and territorial decision-making, as well as participation in wider regional, national and global processes. Effective participation is not merely being included – it means greater autonomy for IPs and LCs in territorial decision-making, including guaranteeing free, prior and informed consent, as well as ensuring IPs and LCs have a real influence within wider decision-making processes.

Participation has now been included as an indicator in the KMGBF monitoring framework, but the methodology for tracking this requires further development. At present, Parties report on this by answering a set of questions about whether there are policy, legislative and administrative frameworks and monitoring efforts in place to ensure IPs' and LCs' full and effective participation.

This way of measuring participation does not adequately assess and report on the quality of and barriers to participation by IPs and LCs. It also focuses only on the process and does not adequately assess whether participation has been effective and meaningful.

Box 17

17 Measuring land tenure and land-use change

The centrality of rights to land, territories (including waters) and resources is reflected in the inclusion of land tenure and land-use change as one of the four traditional knowledge indicators in the KMGBF monitoring framework.

This is a headline (mandatory) indicator for Target 22, since it is of cross-cutting relevance for IPs and LCs. The indicator is intended to track two distinct parts:

- IPs' and LCs' customary land tenure
- Land-use change on IPs' and LCs' lands.

Notably absent from the wording is any acknowledgement of sea and ocean tenure; this, and the better integration of communities' own data, are key areas for further negotiation and development.

Land tenure seeks to measure the extent of lands and territories customarily owned or governed by IPs and LCs, and assessing whether people feel secure in their tenure.

Data for this indicator can be drawn from global[§] and national datasets on land tenure, and community-generated data. However, as explained in box 4 in chapter 4, it is hard to assess customary tenure at a global scale. Data is currently available for more than 130 countries, but many datasets do not adequately reflect customary tenure or community definitions of territory, and to date there has been limited integration of IPs' and LCs' own data.

Land-use change seeks to measure changes in how land is being used within the territories of IPs and LCs. For example, it might track deforestation in lands identified as belonging to IPs and LCs. As currently developed, it does not seek to identify the cause of any land-use change; that is, whether it was caused by IPs and LCs, or by violations of their rights.

§ See, for example, LandMark, Global Forest Watch and the ICCA Registry.

Access to justice

Access to justice is an essential part of ensuring a human rights-based approach and also supporting effective participation. Rights cannot be realised if IPs and LCs have no practical way to challenge decisions affecting their lands, territories and resources; seek remedies; or defend their rights safely (Parker and Ryan, 2026).

Case study 54 from Nepal describes the impacts of lack of access to justice on the Bojheni community, after their right to free, prior and informed consent was not respected.



Case study 54

Territory: Mustang, Marpha, Bojheni, Shakarapur Municipality

Language: Thakali language, Tamang language

Authors:

- Neha Hirachan, Thakali Indigenous community, Jho Media
- Dil Maya Tamang, Tamang Indigenous community, Bojheni

Caption: A community member protests with a sign reading 'You can't kill us in the name of development'

Credit: Neha Hirachan

54 Tamang people, Nepal

In the Bojheni (Lapsiphedi) village in Shankharapur municipality in the northeast Kathmandu valley in Nepal, the Tamang community have been resisting the government's hydroelectric transmission line and power station project, which has been constructed without the community's free, prior and informed consent.

In Bhojheni, sacred forests, rivers, and hills are not just resources, they are deities and form part of religious practices. The area where the project is constructed was Indigenous Tamang communal land, considered an ancestral third space to protect their traditions, customs and the togetherness of their community.

The project began without informing or consulting the community, and their protests were met with police carrying out arrests, threatening people at gunpoint and causing injuries to at least a dozen people. Nevertheless, the project continued. Community member's concerns were not met with meaningful mediation or conflict resolution, but rather criminalisation, intimidation and coercive tactics that aimed to dismantle collective action and fragment the community.

Closed-door negotiations, meetings held in forests, and "*understandings*" or MoUs signed without the full participation of community members created deep divisions. Community members, leaders and media also came under pressure to accept compensation, shifting the conversation away from collective rights and toward individual payouts for harm. Perhaps the fragmentation of the Bojheni community is the biggest loss caused by this 'development'.

This project raises serious concerns regarding the lack of recognition and active dismissal of the collective rights of Indigenous Peoples. The hostility during its construction and protests is forever etched on the community's memory as the start of Bojheni's fragmentation through displacement, intimidation and forceful surrender.

This experience shows that biodiversity conservation cannot be separated from cultural survival. Free, prior and informed consent (FPIC) and Indigenous land governance systems must be recognised in all biodiversity-related policymaking, including safeguards against displacement and dispossession.

Access to justice includes more than the courts: it requires access to information, protection from intimidation and criminalisation, recognition of collective rights, and accountability where public or private actors violate those rights (Bille Larsen et al., 2021; United Nations Office of the High Commissioner for Human Rights, 2022; Indigenous Peoples Rights International (IPRI), 2026). Case study 55 describes how community-based mapping and monitoring in Malaysia has provided evidence and information that has supported the community's access to justice.

Case study 55

Territory: Inigaan Mai, Piolitan, Pogun Kinoyonon

Language: Murut Tahol, Dusun Tindal and Dusun Bundu

Author: Gordon John Thomas, Dusun Tatana people, PACOS Trust

Caption: A community member tests water quality as part of local efforts to protect the ecosystem

Credit: Vailin Binti Abun



55 Kadazandusun, Dusun and Murut Tahol communities, Malaysia

Across Sabah, Indigenous Peoples (Orang Asal) have long managed their territories through customary governance systems and Traditional Ecological Knowledge. However, many remain insufficiently recognised in formal land-use planning, leaving communities vulnerable to logging, plantation expansion, and other forms of resource encroachment.

In response to these challenges, Kadazandusun, Dusun and Murut Tahol communities in Sabah, supported by PACOS Trust and community partners, are using community-based monitoring and mapping to document their territories, strengthen customary governance, and contribute to biodiversity conservation.

Participatory community mapping processes combined Indigenous and Local Knowledge with modern technologies such as GPS and Geographic Information Systems (GIS), creating accurate spatial records that document both ecological and cultural values. Maps have helped communities identify and protect high conservation value areas, sacred forests, and critical water catchments. In several villages, mapped information has been used to highlight threats from logging and plantation expansion and to advocate for stronger protection measures.

Community-based biodiversity monitoring used digital tools such as KoboCollect to collect information on plant, animal and water conditions and patterns, and integrated these with ecological signals known by elders. This created a locally owned evidence base that allows communities to track environmental changes over time and respond to emerging threats, which in turn has strengthened customary governance systems by informing Community Protocols. These protocols establish rules on natural resource use, including fishing, forest use and land management, supported by customary enforcement mechanisms such as *sogit* (customary fines). Violations can be addressed through community institutions and Native Courts, reinforcing local accountability.

This process has also increased community confidence when engaging with government agencies and external actors.

Several lessons have emerged from the initiative:

- Community ownership of data is essential
- Indigenous and Local Knowledge is a critical foundation for biodiversity monitoring
- Inclusive participation strengthens outcomes
- Community-generated evidence can bridge important biodiversity gaps.

As governments and conservation actors seek pathways to achieve global biodiversity goals, supporting Indigenous-led territorial governance and monitoring systems offers an effective and equitable approach to conserving biodiversity while sustaining community livelihoods and cultural heritage.

Ensuring access to justice is also an important part of protecting environmental and human rights defenders (EHRDs), who face significant risks of criminalisation, physical violence and assassination, with IPs disproportionately affected (Scheidel et al., 2020; Bille Larsen et al., 2021). At least 146 EHRDs were killed or disappeared in 2024 (Global Witness, 2025a). Box 18 describes some of the pressures facing IP and LC EHRDs in marine and coastal contexts.

Box 18

18 IP and LC ocean defenders

Ocean defenders are individuals, communities and organisations that work to protect marine and coastal ecosystems, biodiversity, and the rights of people who depend upon them (Bennett et al., 2023; The Ocean Defenders Project, 2026). They play critical roles in conserving biodiversity and advancing sustainable ocean governance, including by monitoring marine species and habitats, supporting community-based fisheries management, conserving critical ecosystems (such as mangroves and coral reefs), and generating knowledge that informs conservation and environmental justice (Bennett et al., 2022). Many of them are IPs and LCs.

They frequently mobilise in response to growing pressures on marine ecosystems, including industrial and illegal fishing, coastal development, pollution, extractive industries, climate change, and other large-scale blue economy initiatives (Bennett et al., 2022; Ertör, 2023; Blythe et al. 2023; Morea, 2026). By addressing threats that degrade marine habitats, undermine customary marine governance systems, or restrict access to customary fishing grounds, ocean defenders make important contributions to the implementation of the KMGBF.

Pressures on marine ecosystems often create risks for IPs and LCs seeking to defend their customary marine territories, coastal livelihoods and associated human rights against unsustainable development and resource exploitation. Ocean defenders frequently experience intimidation, criminalisation, legal harassment, violence, surveillance, and exclusion from decision-making processes (Alliance for Land, Indigenous Environment and Environmental Defenders, 2023; Bennett et. al., 2023; Forst, 2024). In many marine and coastal contexts, ocean-dependent communities remain excluded from effective protection and safeguarding mechanisms because states do not formally recognise them as IPs. This lack of recognition can limit their access to collective rights, participation in decision-making, tenure protections, and environmental defender support frameworks (Bennett et al., 2022; Barume, 2025). As a result, the people protecting the ecosystems often face significant risks, while there is limited accountability for public and private actors responsible for environmental degradation, biodiversity loss and associated human rights impacts (Bennett, Morgera and Boyd, 2024).

While trends in the killings of EHRDs is an indicator for Target 22, it is not mandatory that Parties report on it. Out of the five countries with the highest number of killings and disappearances in 2024 (Global Witness, 2025b), only two – Mexico and Brazil – stated in their seventh national reports that they monitor the protection of EHRDs. Without effective remedies and protection for defenders, commitments to participation and rights remain difficult to realise in practice (IPRI, 2026).



Caption: Jonas Mura, leader of the Mura people, stands beside a natural gas well valve in the Gaviao Real Indigenous Territory, Silves, Amazonas, Brazil, where expanding oil and gas development is putting increasing pressure on Indigenous land and communities

Credit: Lalo de Almeida, Panos Pictures

Gender justice

"As a reindeer herder and Sámi woman, I do not automatically draw a straight line between natural strength and masculinity, as my work with the reindeer herd is grounded in an alternative understanding of who is strong and how that strength best serves the collective. This embodied knowledge remains largely unseen, yet is essential for sustaining life in Sápmi."

Sámi people, Sweden 8

Target 23: Ensure gender equality and a gender-responsive approach for biodiversity action

Ensure gender equality in the implementation of the Framework through a gender-responsive approach, where all women and girls have equal opportunity and capacity to contribute to the three objectives of the Convention, including by recognizing their equal rights and access to land and natural resources and their full, equitable, meaningful and informed participation and leadership at all levels of action, engagement, policy and decision-making related to biodiversity.

The biodiversity crisis, and actions to counter it, have different impacts on women and girls than they do on men and boys. Among women, Indigenous and local community women also face different, and often disproportionate, impacts, because of their direct dependence of nature and the intersectional discrimination and structural barriers they face as both IPs and LCs and women. On the other hand, Indigenous and local community women often make different and specific contributions to biodiversity. In general, the gendered dimensions of biodiversity conservation continue to be overlooked (Hartmann and Pearson, 2024; West et al., 2026).

An example of gendered impacts in a biodiversity context is when Indigenous women and girls are exposed to sexual violence from rangers patrolling protected areas that have been imposed on their territories (Bracegirdle and Haworth-Lee, 2024). Other structural inequalities – for example, in participation, access to land and resources and decision-making – also undermine gender equality and women's rights (Rights and Resources Initiative 2023; Wilton Park, 2024; Rathakrishnan, Aboo Talib Khalid and Daud, 2025; Network of Indigenous Women in Asia, 2025). Box 19 illustrates some of the ways in which gender inequality is visible in the governance of marine and coastal ecosystems.

Box 19

19 Inclusivity in the governance of marine and coastal ecosystems

The participation of IPs and LCs in the governance of marine and coastal biodiversity is not uniform. Gender, age and intergenerational position determine who has access to marine territories, who produces ecological observations, who participates in decision-making and who is recognised as a legitimate knowledge-holder.

Indigenous and local women play central roles in caring for coastal ecosystems, but their contributions remain largely invisible in marine and coastal governance, which has historically been designed around masculinised categories: fishermen, permit-holders, ship owners and boat owners. This framework excludes the activities carried out mainly by women – such as intertidal foraging, fish processing and shellfish harvesting – as well as the specific ecological knowledge underpinning these activities (Solano et al., 2021).

This exclusion is not merely statistical; it is political and epistemic. In 22 coastal communities across five marine regions of Mexico, it was documented that women participate throughout the entire fisheries value chain, yet gender inequality systematically limits their representation in decision-making, access to technology and marketing networks (Pedroza-Gutiérrez et al., 2024).

Despite these barriers, Indigenous and local women, and young people, are actively defending and protecting the sea (Bennett et al., 2022). In Chile, women from the Diaguita, Chango, Mapuche Lafkenche-Williche, Kawésqar and Yagán peoples, through the Network of Indigenous Women for the Defence of the Sea, are articulating a vision that connects spiritual, cultural and ecological dimensions, influencing Indigenous marine conservation management (Arce, Vargas and Coñuecar, 2023).

Many Indigenous and local community women can also suffer harm as a result of impacts on their community's collective rights. Most identify secure collective tenure rights as a key foundation for the enjoyment of many of their other human rights (see Box 20). The discrimination they face as IPs or as members of LCs is also a central challenge of gender equality (Committee on the Elimination of Discrimination against Women, 2022). Case study 8 also illustrates this further, exploring the perspective of a Sámi woman on gender equality within her culture.

Box 20

20 Tenure and the rights of women

An important consideration in relation to tenure is the interaction of gender equality with rights to lands, seas, territories and resources of Indigenous women and other women living in settings where territories are governed collectively.

Recent participatory research carried out by FPP (Dominguez, 2026) with Indigenous and local community women has highlighted that one of their core priorities is securing collective rights to territory – for both men and women. They consider collective rights to territory to be critical to their wellbeing. Their territories are central to their identity; their practice of their culture and spirituality; their right to food, water and health; and many other rights.

When collective territorial rights are violated – and particularly when customary owners are dispossessed (in whole or in part) of their ancestral territories – women and girls are subjected to different, gender-specific impacts in addition to those that are experienced on a collective level.

Restricted access to the natural resources and lands on which their traditional livelihoods depend, together with the broader social disruption that dispossession brings, can create economic dependency and expose women and girls to exploitation and abuse, contribute to the breakdown of family and kinship structures and, in some cases, expose women to gender-based violence perpetrated both by external actors and from within their communities.

Indigenous and local community women may also face gender-based discrimination by their own people and within their own communities; this can be reflected, for example, in inequitable governance structures. Inequalities of this kind may have cultural roots or may stem from colonial or other external influences that have embedded gender hierarchies (Desmarais, 2025).

Resolving the complex and highly contextualised causes of gender inequality will not be achieved with a one-size-fits-all approach. A rights-based approach reinforces the agency of Indigenous and local community women and girls, and requires that Parties support these women's own initiatives to advance gender equality and gender justice within their communities, and at local, national and global levels. This approach is supported by women themselves (Dominguez, 2026).

Indigenous and local community women are also leading many efforts to support implementation of the KMGBF. For example, case study 56 describes an Indigenous women-led initiative in Malaysia to conserve local seeds and promote and train women in sustainable agriculture practices. Other case studies highlighting women's roles include 55, 11, 40, 52, 8, 22, 56, 39 and 18).



Case study 56

Language: Dusun

Authors:

- Alice Mathew, Dusun people, Indigenous Women's Biodiversity Network (IWBN)
- Irene Mositol, Dusun people of Kampung Bundu Tuhan, DumoWongi
- Anjelen Daransun, Dusun people of Kampung Tiong Karanaan, Kokoriu

Caption: A Dusun woman tends her crop. Through their daily stewardship of land and seeds, Indigenous women help sustain the rich biological and cultural diversity of their communities

Credit: Alice Mathew

56 Dusun people, Malaysia

In Sabah, Malaysian Borneo, Indigenous Dusun women have created two complementary initiatives that safeguard biodiversity, honour tradition and embrace innovation.

Kokoriu: Safeguarding seed varieties

In the Dusun community of Kampung Tiong Karanaan, caring for land, seeds and forests remains closely tied to community wellbeing. Kokoriu, meaning 'supply' in the Dusun language, is an initiative that works with smallholder farmers, women and youth to strengthen community resilience through agroecology, seed sovereignty, leadership development and local enterprise.

At the heart of Kokoriu is a community seed bank that also serves as a community learning space and conservation facility. Not only does it identify, collect, regenerate and safeguard the traditional seed varieties that are disappearing from local farming systems, but it is also a hub for seed exchange. Exchanging seeds helps maintain diversity and ensures traditional varieties are not lost in the hands of a single farmer or family.

Kokoriu's work is guided by the Dusun principle of *gompi guno*, meaning use and care. This philosophy recognises that people and nature are interconnected, and that the sustainable use of natural resources must go hand in hand with their conservation.

DumoWongi: Traditional knowledge and innovation

Established in 2019, DumoWongi, meaning a pleasant-scented farm in Dusun, has grown into an Indigenous women-led social enterprise that combines sustainable production with innovation in the highland community of Bundu Tuhan.

The initiative connects women in the community and provides them with training, planting materials, and ongoing support in sustainable cultivation practices. Women then grow crops within their own spaces, allowing them to generate income while balancing family and community responsibilities. Once harvested, the produce is collected and processed into a range of value-added products, including fresh herbs, herb salts, dried herbs, superfood powders, and edible flowers supplied to local markets.

DumoWongi demonstrates how Indigenous women are adapting knowledge and practices to meet contemporary challenges while remaining connected to the values that have long guided their relationship with the land.

Together, Kokoriu and DumoWongi demonstrate that biodiversity conservation is not only about protecting nature. It is also about supporting the people, knowledge, and relationships that make conservation possible.

In Dusun

Id Sabah, Borneo Malaysia, pipapaharo o koonduan tulun sandad do duo goos piniamung montok momogompi kopogisuayan mogiigion poimpasi id pomogunan, mamantang koubasanan tinungkusan om popoindalan do inovasi.

Kokoriu: Momogompi mogisuusuai linsou

Id komuniti Dusun Kampung Tiong Karanaan, agirot pionitan do kopomogompian tana, linsou om gouton do koumoligan koposion diolo. Kokoriu i roitan nogi do 'bekalan' nopo nga goos diolo montok mogiuhup do manaananom id kabun, koonduan om sukod wagu do popogirot kasangalan diolo maya agroekologi, kosongonuan kopio di linsou, kopoingkakatan koburuon koluguanan om kopogonuan laba sandad.

Lugu toponsol nopo do kokoriu nga tinimungan linsou i kihontolon sabaagi liwang pambalajaran komuniti om longkod pomogompian. Suai ko mongintutun, monimung, popobibit om momogompi mogisuusuai linsou di tumimpuun tumalup id kooturan pananaman sandad, osiliu nogi do longkod pogialan-alanan do linsou. Mogiolon-olon do linsou nogi nga koponguhup do popotindohoi kopisuayan koubasanan tinungkusan moi amu atagak id nigitan sosongulun toiko paganakan momuumutanom.

Goos do Kokoriu pinotunud do puralan nigitan do Dusun roitan do **gompi guno** i kirati do *"gunoon om tamangan."* Kotumbayaan diti mangakun do tulun om posorili sandad nopo nga mionit om nuru do mihuyud o kopomogunoon toud sandad do goos kopomogompian potilombus.

Dumowongi: Koilaan koubasanan sandad om goos kawawagu

Pinoharo ontok di toun 2019, Dumowongi kirati do "*Dumo owongi*" minungkalad sumiliu pogonuan sosial binuruanan do tondu tulun sandad. Pinopiamung do kopoosilan potindohoi miampai goos kawawagu komuniti konuluhon Bundu Tuhan.

Kigoos do popiromut do koonduan komuniti om manahak do tituduk, rooromu tanom om sokodung potilombus id gama pananaman di otindohoi. Mananom nogi i koonduan id dumo diolo moi kaanu asil di lobi ogumu miampai monoguang tonggungan paganakan om komuniti. Asil tonomon diolo maan timungo om siliho do piipiro kosilihon di kigatang miagal ko herba olidas, herba silaon, herba kinoring, bubuk taakanon ogumu kosononggon (**superfood**) om bunga di milo akanon om nogi pataranon. Popokito o Dumowongi do poingkuro woyo koonduan tulun sandad momoguno toilaan om noubasanan diolo do monoguang pogumbalan miampai woyo toluud di tinanud mantad pogulu montok mongulud tana.

Kokoriu om Dumowongi popokito do kopomogompian mogisuusuai mogiigion sandad id pomogunan nopo nga kaanu do moningolig posorili sandad om nogi kopohompit do goos monokodung tulun ginumuan, toilaan om piromutan di kagampot do hontolon kopomogompian.

Evidence shows that women's empowerment and leadership contribute to more effective and equitable biodiversity outcomes (Baker-Médard et al., 2023; Wilton Park, 2024), and there is some positive evidence of support for IP and LC women's leadership; for example, half of the countries assessed under the Indigenous Navigator between 2021 and 2025 had policies or programmes to promote capacity building and leadership of Indigenous women (Indigenous Navigator, 2026, unpublished).

Despite this, Target 23 is one of three targets with least progress to date, as identified by the draft report on collective progress (Secretariat of the Convention on Biological Diversity, 2026, p. 13). There is a need to substantially increase the attention and progress in this area to achieve the KMGBF – ensuring justice for 50% of the world's population is essential to delivering not only on gender targets, but on genuinely embracing human rights-based and whole-of-society approaches.



Recommendations

"Now that we have a clear guide for all countries, we must work quickly and efficiently for its implementation. From the depths of our territories, our ancestors and authorities are urging serious actions to protect our Mother Earth and all life on it, together with us."

International Indigenous Forum on Biodiversity

Caption: Eli Ristin Skum picks flowers growing near her home in Kvalsund, Hammerfest, to make lemonade. Harvesting and using local plants is an important part of Sámi culture and heritage

Credit: Andrea Gjestvang, Panos Pictures

Recommendations from LBO-3 for the whole of government and the whole of society

Indigenous Peoples and local communities are central actors in KMGBF implementation and need full support to scale out and tackle the biodiversity loss crisis more widely and effectively.

- Recognise, respect, protect and support the roles and contributions of IPs and LCs, and their customary tenure rights to their land and sea territories
- Develop clear guidance that enables Indigenous and traditional territories to be included as part of the implementation of Target 3, where appropriate
- Conduct human rights assessments on all existing protected areas and OECMs and remedy violations – including by restitution of territories in appropriate cases
- Prioritise Indigenous- and community-led conservation and restoration initiatives in both policy and funding
- Develop spatial planning approaches that work from the bottom up and respect the self-determination rights of IPs and LCs
- Actively engage IPs and LCs, women, youth and persons with disabilities in climate change policy and its implementation, including through support for IP and LC culture-based solutions
- Recognise and respect the role of IPs' and LCs' customary governance in managing wild species
- Prevent and ensure effective accountability for harms to IPs and LCs and their environment caused by pollution.

Customary sustainable use practices underpin healthy relationships with nature. Fostering reciprocal relationships with nature is a key step towards systemic change, and Indigenous Peoples and local communities are already embodying this.

- Promote and protect customary sustainable use through laws, policies, action plans and funding
- Prioritise and support the contributions of IPs' and LCs' food and production systems to sustainable agriculture, aquaculture, fisheries and forestry
- Recognise and include IPs and LCs living in urban areas, and their traditional knowledge, in urban planning and revitalising nature and culture in cities
- Ensure use of biotechnology, and of other new technologies, is based on the precautionary principle and with the free, prior and informed consent of potentially affected IPs and LCs.

Structural barriers that harm people and planet must be dismantled. Fresh and courageous mindsets and actions are needed to end "business as usual" and harmful actions by powerful actors who are blocking structural change.

- Substantially increase direct finance to IPs and LCs, including women and youth, ensuring IPs and LCs can decide on the use of this funding
- Ensure market-based biodiversity financing, such as biodiversity credits, is subject to strict human rights conditions
- Disincentivise economic activities that harm biodiversity and human rights, including through cutting subsidies to harmful industries and putting in place effective preventative and accountability frameworks for harms caused by business.

Mutual accountability by all actors underpins collective progress and success of the KMGBF. This includes robust planning and monitoring from Parties and complementary community-led monitoring data and reporting.

- Put in place genuinely accessible and effective accountability frameworks for harms to biodiversity and human rights at local, national and global level, including within the processes of the Convention on Biological Diversity
- Develop and fund tailored protection systems for environmental human rights defenders, including Indigenous and community defenders, and monitor violations of their rights
- Increase recognition, support and funding for community-based monitoring and information systems, to strengthen monitoring, decision-making and accountability related to biodiversity and human rights
- Increase efforts to develop, improve and support methodologies to operationalise the traditional knowledge indicators
- Expand the land tenure and land use change indicator in the KMGBF monitoring framework to explicitly incorporate waters, sea and ocean tenure
- Improve national reporting on the cross-cutting considerations in Section C by including human rights, gender and intergenerational equity, the whole-of-government and whole-of-society approach, different value systems and the ecosystem approach
- Require Parties to include customary sustainable use plans in national biodiversity strategic action plans and reporting.

Ways and means of implementation: not only *what*, but *how*. Incorporate diverse value systems and empower self-determined collective efforts of Indigenous Peoples and local communities and all of society, not rely on Parties alone.

- Make targeted and active efforts, supported by adequate funding, to increase participation by IPs and LCs, women, youth and persons with disabilities in biodiversity-related decision-making processes from local to global levels
- Make the values of IPs and LCs central to decision-making, to enable decision-making at all levels that supports biodiversity and human rights
- Engage in and support wider collaborations for mutual capacity-building between IPs and LCs and actors including from government, academia, business and civil society.

Global solidarity is essential to achieve transformative change. Only by joining hands with diverse allies across the globe can we achieve the goal of living in harmony with nature by 2050.


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"Indigenous Peoples' knowledge, innovations, practices and Indigenous science are frequently overlooked or undervalued in formal conservation, education and development planning."

Kirat people, Nepal

Caption: Rangers Benjamin Campion and Nathanial Maliwanga Wilson check paperwork on their way to search for crocodile eggs near Ramingining, Australia

Credit: Matthew Abbott, Panos Pictures

Introduction

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Chapter 1

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Chapter 5

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Chapter 6

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Chapter 7

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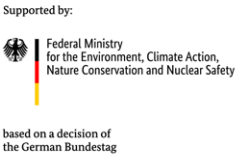
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The success of the Kunming–Montreal Global Biodiversity Framework depends on the contributions of Indigenous Peoples and local communities. Local Biodiversity Outlooks highlights their central role and examines whether their rights are being respected in the implementation of the Framework.