

CABES-UNESCO COURSE

Strengthening Capacities and Knowledge
Sharing for Indigenous Peoples and Local
Communities' Engagement in Science-
Policy-Practice Interface in Africa



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Knowledge Sharing

Fostering inclusive dialogues and platforms is essential in strengthening the engagement of Indigenous Peoples and local communities, and their invaluable knowledge into science-policy-practice interfaces. This is a foundation element of implementing a whole-of-society and whole-of-government approach to conserving biodiversity as underscored by the Kunming-Montreal Global Biodiversity Framework (GBF).

With the aim of strengthening science-policy-practice interfaces, the UNESCO's Local and Indigenous Knowledge Systems (LINKS) Programme in collaboration with the Capacity Development for Biodiversity and Ecosystem Services Experts (CABES) delivered a two-day online course on *Indigenous Peoples and Local Communities in Science-Policy-Practice Interfaces in Africa*. This course aimed to raise awareness and build capacity regarding the importance of engaging Indigenous Peoples and local communities in science-policy-practice interfaces.

The course featured presentations from Indigenous and local knowledge holders and experts, highlighting how Indigenous and local knowledge enhances our understanding of biodiversity, guides conservation efforts, and shapes policies.

The course, [now available as a self-paced online course on the CABES website](#), orients participants on engagement strategies, methods, and tools for engaging Indigenous Peoples and local communities in science-policy-practice interfaces.



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Session 1:

Indigenous and Local Knowledge Systems

Indigenous and local knowledge, deeply rooted in cultural and linguistic contexts, provides invaluable insights into the interconnected relationship between humans and nature. Africa, with its vast diversity of over **2,000 languages**, serves as a testament to the richness of these oral traditions.

Preserving this knowledge is crucial, as it embodies collective wisdom, interconnected worldviews, and spiritual dimensions. Recognizing and including Indigenous and local knowledge is essential for addressing global environmental and cultural challenges in a sustainable and inclusive way.

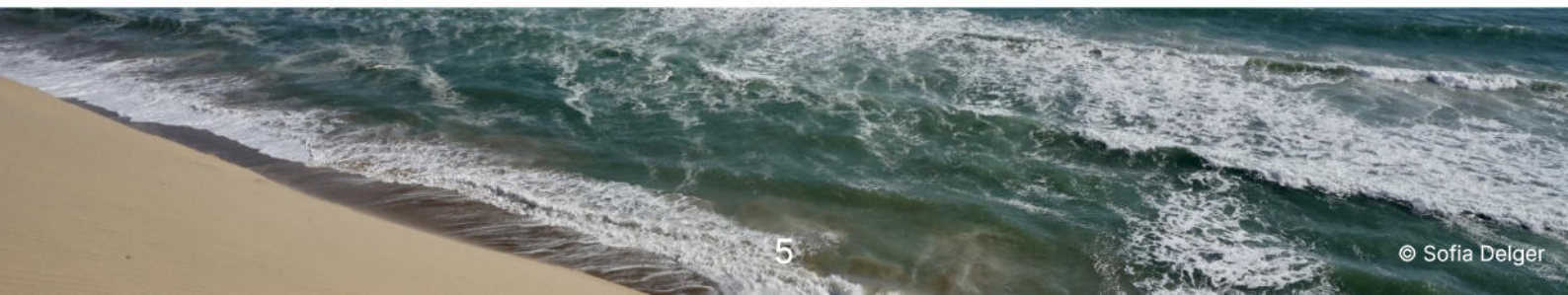


"Indigenous knowledge systems do not view humans as the most important entities in the living world. Humans are part of a larger system and have duties to landscapes and nature. Languages carry between 150 and 200 years of memory, and through oral traditions, songs, and rituals, knowledge is transmitted over vast areas and long periods."

"If we want sustainability, we must enable Indigenous, local and scientific knowledge systems to communicate. They provide not only complementary evidence but also governance frameworks essential for sustainability. Protecting Indigenous and local knowledge systems and rights is essential."

Nigel Crawhall

Chief of Section, LINKS programme
UNESCO



Case study

Zaï Technique, Burkina Faso

The case of Yacouba Sawadogo, a local farmer from Burkina Faso, known as "[The Man Who Stopped the Desert,](#)" demonstrates the value of traditional knowledge in addressing environmental challenges. Yacouba revitalized and adapted the Zaï technique, a traditional farming method involving small pits to capture water and organic matter, which improves soil fertility and promotes reforestation in arid areas. This approach highlights the need for traditional practices, intergenerational knowledge transfer, and local leadership in combating desertification and restoring degraded lands.



"Yacouba's work shows us that even in the harshest conditions, it is possible to restore life to the land. By leveraging traditional techniques and engaging communities, we can tackle soil degradation and adapt to climate change."

Loukmane Sawadogo
President
Association Arbres et Arbustes



Session 2

Engaging Indigenous Peoples and Local Communities in Climate Change and Disaster Risk Reduction

Indigenous Peoples and local communities hold vital traditional knowledge essential for adapting to and increasing resilience against climate change.

Indigenous practices, characterized by low-carbon lifestyles and circular economies, provide effective climate solutions and rely on traditional early warning systems. These practices include sustainable agricultural systems, [traditional fire management](#), water management, and safeguarding ecosystems, which act as carbon sinks and support ecosystem-based disaster risk reduction.

International environmental frameworks advocate for their inclusion, promoting respect for their rights and knowledge.

Ensuring the participation of Indigenous Peoples and local communities in policy and science dialogues fosters effective, innovative, inclusive, and equitable climate solutions. This collaboration supports synergies between traditional knowledge systems and formal scientific approaches to address climate change and enhance ecosystem resilience.



"Indigenous knowledge is not static; it is dynamic, adaptive, and deeply rooted in the relationship with nature, offering time-tested solutions that can inspire transformative action in the face of climate change."

Khalissa Ikhlef

Programme Specialist
LINKS, UNESCO

Traditional Land Management and Climate Adaptation, Tanzania

Maasai's traditional land management practices, including seasonal grazing and the preservation of sacred sites, are crucial for biodiversity and climate resilience.

Aligning land-related policies and protecting Indigenous land rights, and including their knowledge into conservation efforts is vital for sustainable environmental solutions.



"The Maasai land management system is designed to prepare the community to face different disasters. The Maasai's knowledge of seasonal patterns enables them to prepare during wet seasons for the hardships of the dry season."

"The misunderstanding and marginalization of Indigenous land management systems have often led to conflicts over land use, conservation policies, and resource governance."

Nailejileji Tipap

Gender and Public Relations

PINGO's Forum

Rationale of Engaging Indigenous Peoples and Local Communities in Biodiversity Science-Policy-Practice Interface

Traditional knowledge systems of Indigenous Peoples and local communities, recognized in frameworks like the Convention on Biological Diversity (CBD) and the Kunming-Montreal Global Biodiversity Framework (GBF), are dynamic and essential for biodiversity conservation. Through intergenerational transmission of knowledge and effective collaboration, these living systems provide adaptive solutions to global conservation challenges while safeguarding cultural and natural heritage.

CBD

Indigenous and local knowledge systems play a critical role in protecting and conserving biodiversity, as recognized in frameworks like the CBD. Article 8(j) of the CBD highlights the importance of recognizing, protecting, and promoting Indigenous and local knowledge as a key element in conserving biological resources. These systems enable Indigenous and local communities to monitor biodiversity, build resilience to climate change, and access financial resources to sustain their efforts.

"Indigenous Peoples have used traditional knowledge over centuries to conserve and protect biodiversity in areas where they live."



"The protection and promotion of Indigenous and local knowledge in ethical ways is crucial and important, and access to financial resources is essential for Indigenous Peoples to continue their work in biodiversity conservation."

Ramson Karmushu

Founder / CEO

My Indigenous Knowledge In Action
(MIKIA)



IPBES

The Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) plays a leading role in including Indigenous and local knowledge in biodiversity conservation and sustainable development. With nearly 150 member countries, IPBES strengthens the science-policy interface through comprehensive global, regional, thematic and methodological assessments that incorporate diverse knowledge systems—scientific, Indigenous and local. These assessments, including those on pollinators, land degradation, sustainable use of wild species and invasive alien species and their control,

highlight Indigenous and local practices, values, worldviews, customary governance systems, and sustainable resource management. Central to these efforts is the recognition of land rights, free, prior, and informed consent (FPIC) and equitable access and benefit-sharing (ABS) to support Indigenous and local communities. IPBES also pioneers innovative methodologies to ensure Indigenous and local knowledge is included, making findings accessible and beneficial for communities to advance their own initiatives.



"IPBES assessments aim to provide a comprehensive knowledge base for decision-making by bringing together science and Indigenous and local knowledge, and demonstrate the importance of participation, decision-making, management and governance by Indigenous Peoples and local communities."

Peter Bates

Project Officer

IPBES ILK Technical Support Unit, UNESCO

BES-Net

The Biodiversity and Ecosystem Services Network ([BES-Net](#)) strive to accelerate action and build capacity to tackle global biodiversity and restoration challenges.

It is jointly implemented by the United Nations Development Programme (UNDP), the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC), and UNESCO, with financial support from the German government through the International Climate Initiative (IKI) and SwebBio at Stockholm Resilience Centre. BES-Net aims to bridge the gap between science, policy, and practice by fostering constructive collaboration among diverse stakeholders and knowledge holders, including Indigenous Peoples and local communities. Through this inclusive approach, BES-Net drives transformative solutions and strategic actions.

The [BES-Net ILK Support Unit](#) at UNESCO LINKS, champions the engagement of Indigenous Peoples and local communities by ensuring their views and knowledge are included in all BES-Net workstreams: national ecosystem assessments, Trialogue processes and the BES Solution Fund.



"BES-Net amplifies the voices and knowledge of Indigenous Peoples and local communities by fostering constructive dialogues, collaboration, and effective engagement through community-led research and evidence-based action to ensure biodiversity solutions are inclusive, locally appropriate, and rooted in diverse knowledge systems."

Sofia Delger

Focal Point for the BES-Net ILK Support Unit in the Latin America and Caribbean Region, and for Communications

One of the key components of the BES-Net is the national ecosystem assessment led by the National Ecosystem Assessment (NEA) initiative at UNEP-WCMC.

"The aim of National Ecosystem Assessments is to synthesize and bring together available information from scientific, Indigenous and local knowledge systems to address key policy questions and support more inclusive, effective and sustainable biodiversity policies."

Noor Noor

Programme Officer
UNEP-WCMC



Case study

Weaving Traditional Knowledge into the Botswana's National Ecosystem Assessment

Botswana's National Ecosystem Assessment is an example of the inclusion of traditional knowledge in a scientific assessment of the state and trend of biodiversity and ecosystem services. Following a multiple evidence-based (MEB) approach, the assessment incorporates traditional knowledge as a cross-cutting theme across six chapters, alongside considerations of gender and governance.

Community dialogues serve as a foundation of this participatory process, bringing together diverse groups—women, men, youth, elders and leaders—to share insights on conservation practices, governance, environmental challenges, and the intergenerational transmission of knowledge.

These dialogues foster trust, uphold principles of free, prior, and informed consent, and capture localized perspectives that inform actionable policies and strategies.

While challenges such as language barriers, attendance issues, and bureaucratic hurdles remain, the process emphasizes the value of directly engaging communities in their contexts to ensure inclusive and effective biodiversity action.





"Community dialogues allow free expression within comfort zones, such as separate discussions for women, youth, and elders. Localized knowledge from communities offers evidence that is rooted in their environment and cultural protocols."

Nelson Tsealesele

Traditional Knowledge lead, Botswana NEA
Botswana University of Agriculture and Natural Resources



Principles and Protocols of Working with Indigenous Peoples and Local Communities

Free, Prior, and Informed Consent (FPIC) is a framework grounded in the UN Declaration on the Rights of Indigenous Peoples (UNDRIP), designed to protect Indigenous Peoples' rights over their lands, resources, and cultural heritage.

FPIC ensures that communities have the autonomy to give or withhold consent at any stage of a project. It operates on four core principles: voluntary and coercion-free consent, prior consultation before activities begins, clear and accessible information provided in the community's language, and decision-making processes that respect traditional systems.

While FPIC is essential for safeguarding rights and promoting sustainable development, it faces challenges such as external pressures and weakened community structures. Ensuring its effective implementation is key to fostering ethical engagement and empowering Indigenous and local communities to maintain control over decisions that impact their future.



"FPIC ensures Indigenous Peoples have the right to give or withhold consent to projects or policies affecting their lands, resources, and cultures. FPIC is not a one-off activity but an ongoing process throughout the lifecycle of any project or initiative."

Kanyinke Sena
Director

**The Indigenous Peoples of Africa Coordinating
Committee (IPACC)**

The Access and Benefit-Sharing (ABS) mechanism under the Nagoya Protocol ensures equitable sharing of benefits from genetic resources and traditional knowledge. Rooted in the CBD and reinforced by the GBF, it relies on FPIC, Mutually Agreed Terms (MAT), and benefits like financial support and knowledge sharing.

ABS plays a critical role in fostering conservation, sustainable resource use, and improved local livelihoods through community engagement and capacity-building initiatives.



"The ABS mechanism ensures that providers of genetic resources benefit fairly while contributing to global resource sustainability."

"Communities have the right to refuse resource use, and must be fully involved in benefit-sharing negotiations."

Inès Edwige Kohan Sea

Technical Adviser

GIZ



Interface of Indigenous and Local Knowledge with Scientific Frameworks

Indigenous Peoples and local communities manage substantial portions of the world's biodiversity, contributing to effective conservation outcomes through their deep-rooted knowledge and sustainable practices.

Inclusive platforms, equitable partnerships, participatory research, and Indigenous and local-led approaches are critical for fostering effective biodiversity conservation. Collaboration between scientific and Indigenous and local knowledge systems offers innovative and culturally relevant solutions which are useful for all involved to address conservation challenges.



"The value of diverse knowledge systems lies in their ability to provide multiple perspectives on complex environmental problems, leading to richer, more innovative and effective solutions to biodiversity loss and climate change."

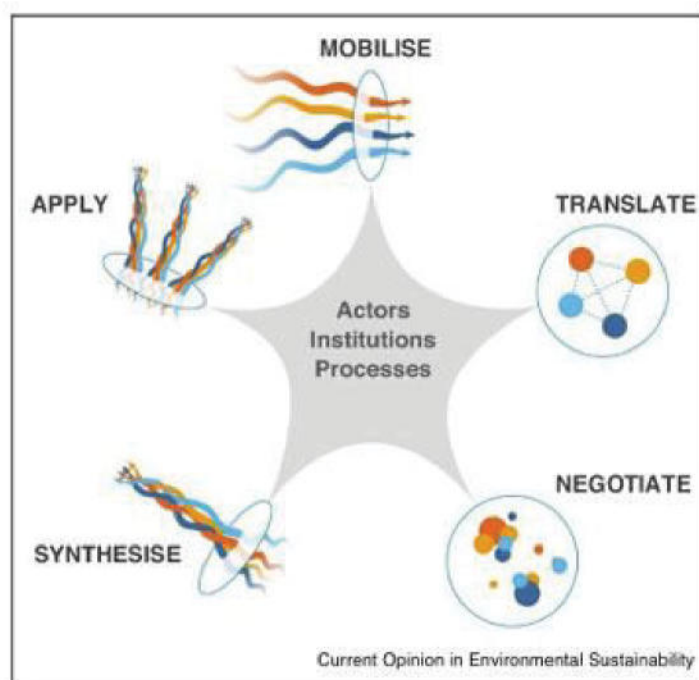
Joseph Karanja

Project Officer

BES-Net ILK Support Unit, UNESCO

The [Multiple Evidence Base \(MEB\) approach](#) connects Indigenous and local knowledge with scientific systems, prioritizing equity and respect for each system's integrity. It allows knowledge to be evaluated within its own context, avoiding reliance on scientific validation.

By fostering collaboration and recognizing Indigenous and local knowledge as equally valid, the MEB approach generates complementary insights and culturally appropriate solutions for biodiversity conservation, as demonstrated by the IPBES Assessment on Pollinators, Pollination and Food Production (2016).



"Different strands of knowledge, when brought together, create an enriched picture where all perspectives are equally valid and contribute to better solutions."

"Creating safe spaces where Indigenous and local knowledge holders lead discussions fosters trust, reciprocity, and equity in co-production processes."

Pernilla Malmer
Senior Advisor
SwedBio



Case study

Anchoring Multiple Evidence Base Approach, Malawi

The Malawi National Ecosystem Assessment, commissioned in 2020, includes scientific and Indigenous and local knowledge to inform biodiversity policies. Over 500 ILK holders have been engaged, including women and youth, emphasizing inclusivity through workshops and community-led data collection.

Successes such as fish conservation through community bylaws and cultural practices on Mbenje Island demonstrate the positive impact of traditional practices. Similar achievements have been documented in the Khulubvi sacred forest.



"In the Malawi National Ecosystem Assessment, Indigenous Peoples and local communities led the design of research methodologies, guided data collection, and shared their knowledge and worldviews on cultural and spiritual values tied to conservation. We've worked to address scientists' scepticism by emphasizing that scientific and Indigenous and local knowledge are complementary and equally valid."



Alice Kammwamba

ILK Coordinator, Malawi NEA
Lilongwe University of Agriculture
and Natural Resources



"The vast diversity of local languages in Malawi reflect the richness of Indigenous and local knowledge of biodiversity and ecosystems in Malawi."

Wellmam Kondowe

ILK Lead Author, Malawi NEA
Mzuzu University

Participatory Research Methods

The intersection of Indigenous and local knowledge with scientific research underscores the importance of participatory methods that respect Indigenous and local worldviews and practices.

The shift from the historical marginalization of Indigenous and local knowledge in research and conservation to its recognition by international environmental frameworks, such as the CBD and IPBES, has fostered knowledge co-creation.

Ethical protocols, such as FPIC, and inclusive research paradigms are essential for fostering equitable collaboration. Frameworks for regional and national databases are being developed to systematically preserve and share Indigenous and local knowledge.



"Research with Indigenous Peoples must replace research on Indigenous Peoples, ensuring their voices are heard and their methods respected at every stage."

"Indigenous knowledge isn't competing with scientific knowledge; it's complementary, offering insights that enhance our understanding of complex issues."

Mohamed Handaine

President

Indigenous Peoples of Africa Co-ordinating Committee (IPACC)

Case study

Participatory Mapping, Democratic Republic of Congo

Indigenous Peoples and local communities play a vital role in biodiversity conservation through participatory mapping, traditional practices, and intergenerational transmission of knowledge. Their deep connection to ancestral lands supports sustainable resource management.

Participatory mapping, guided by Indigenous and local knowledge, strengthens land rights despite challenges like technical and financial barriers. Traditional practices such as spiritual rituals, agroforestry, and sustainable hunting highlight the need to protect cultural heritage and maintain community ownership over traditional knowledge.



IPACC 3D mapping workshop
@ Diel Mochire Mwenge



"Indigenous Peoples' connection to their land, guided by their ancestors, is central to sustainable biodiversity management."

"Participatory mapping must be done with communities on the ground, not in air-conditioned conference rooms. It requires their leadership and knowledge to ensure its success."

Diel Mochire Mwenge

Senior Advisor

National Network of Indigenous Peoples of the
Central African Region (ANAPAC)

Dialogues: Platform for Facilitating Science-Policy-Practice Interface

The Biodiversity and Ecosystem Services Network (BES-Net) Dialogues bring together the three communities - science, policy and practice - in a participatory and constructive dialogue. Dialogues are multistakeholder events designed to foster dialogue and collaboration between policymakers, scientists, and Indigenous Peoples and local communities.

These discussions aim to enable shared action by building trust, mutual respect, and understanding through participatory and open communication methods.



"Dialogue, trust, and respect are the foundation for sustainable development and collaboration, grounded in the understanding that every knowledge system has equal value-a principle central to the success of Dialogues."

Alexandra Postrigan

BES-Net Partnership Development and
Facilitation Specialist
UNDP

The Dialogue approach integrates diverse, evidence-based perspectives by involving participants in agenda-setting and ensuring thorough preparation to foster shared experiences. Addressing challenges such as overcoming silos and confronting biases is essential to strengthening collaboration and achieving meaningful outcomes.



In 2024, [BES-Net organized a Regional Trialogue](#) in Central and West Africa, highlight the value and vital role of Indigenous and local knowledge as a foundation for sustainable development and biodiversity conservation in Africa.

Indigenous and local knowledge was recognized not only as an essential tool for sustainable practices and informed decision-making but also as a living narrative deeply rooted in identity and a profound connection to nature.

During this Regional Africa Trialogue, there was a strong emphasis on the importance of mutual respect, flexibility, and trust when working with Indigenous Peoples and local communities. The transformative power of participatory dialogues between scientists, policymakers, and communities creates shared visions that transcend differences and address ecological and social challenges. As Appollinaire OUSSOU LIO Atawé Akôyi stated "if we walk together, challenges become mountains that the horizon will soften."



"The wisdom of the elders is like a river; it flows quietly yet shapes the land it touches. To listen to the land is to hear the stories of those who have lived in harmony with it for generations."

"Working with Indigenous Peoples is like weaving a tapestry; each thread—be it knowledge, trust, or respect—creates something strong and beautiful."

Appollinaire OUSSOU LIO Atawé Akôyi
President
GRABE-BENIN



"The seeds of traditional knowledge, when sown in the soil of collaboration, grow into forests of shared understanding."

"True conservation does not begins with fences, but with bridges—bridges of trust, respect, and shared visions."

Soumah Mafoudia
Researcher
Université Félix Houphouët-Boigny

The Kenya National Trialogue

The Kenya National Trialogue (KNT) fosters collaboration among diverse stakeholders and knowledge holders to address biodiversity challenges and ecosystem services.

Its membership consists of three set of communities (science-policy-practice) and aims to enhance their interface in the uptake of IPBES assessments. It emphasizes the collaboration and partnership of scientists and Indigenous and local knowledge holders to develop practical solutions.

Key achievements include organizing walking workshops, reviving Trialogues after COVID pandemic, engaging youth through pollinator gardens and educational initiatives, and the publication of a [booklet](#), [photo essay](#) and documentaries focusing on Indigenous and local knowledge of [land management](#) and [pollinator conservation](#).



"Bringing together diverse knowledge systems is crucial to develop hybrid solutions that work."

"The Trialogue is a space where stakeholders can learn from each other, share knowledge, and develop actionable strategies."

Peris Kariuki

Senior Research Scientist
National Museums of Kenya





Indigenous and local knowledge plays a crucial role in ecosystem restoration and biodiversity conservation. Examples in Kenya include identifying key species with communities and documenting floral resources for bees. Moreover, involving youth is essential to ensure intergenerational continuity in environmental protection efforts.



"Indigenous and local knowledge is not just relevant; it is essential to complement scientific advancements."

"Biodiversity conservation starts with education and the engagement of young people, our future conservation champions."

John Samorai

Program Officer

Ogiek Peoples Development Program

The Way Forward

Moving forward, the insights and practices shared during this training are a call to action. Fostering the co-creation of knowledge between diverse knowledge systems is not only imperative but a practical necessity for a sustainable future. Stakeholders are encouraged to champion for policies that respect and mainstream Indigenous and local knowledge, fostering collaboration and advocacy for inclusive conservation practices.

Together, we can advance a vision of the world where cultural and biological diversity thrive in harmony, building a future that is equitable, resilient, and sustainable for all.



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