

Report

First indigenous and local knowledge dialogue workshop for the IPBES assessment on the sustainable use of wild species

6-7 May 2019, UNESCO Headquarters, Paris



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The text in sections 2 and 3 represents an attempt to reflect solely the views and contributions of the participants in the dialogue. As such, it does not represent the views of IPBES or UNESCO or reflect upon their official positions.

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1. Introduction

1.1. This report

This report is from the indigenous and local knowledge (ILK) dialogue workshop for the IPBES assessment on the sustainable use of wild species (the “sustainable use assessment”), which was held from 6-7 May 2019, at the UNESCO Headquarters, Paris. The workshop aimed to enhance the participation of indigenous peoples and local communities (IPLCs) in the early stages of the assessment, discussing key themes, questions and approaches for the assessment.

The report aims to be a written record of the dialogue workshop, which can be used by assessment authors to inform their work on the sustainable use assessment, and also by others who may be interested in the subject of sustainable use of wild species and ILK. It can also be used by dialogue participants who may wish to review and contribute to the work of the sustainable use assessment going forward.

The report is not intended to be comprehensive or give final resolution to the many interesting discussions and debates that took place during the workshop. Instead, it is intended as a written record of the discussions, and this conversation will continue to evolve over the coming months. For this reason, clear points of agreement are discussed, but also, if there were diverging views among participants, these are also presented for further attention and discussion.

The text in sections 2 and 3 represents an attempt to reflect solely the views and contributions of the participants in the dialogue. As such, it does not represent the views of IPBES or UNESCO or reflect upon their official positions.

The agenda and participants list for the dialogue are provided in annexes 2 and 3.

1.2. The sustainable use assessment

1.2.1. Background

The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) is an independent intergovernmental body established to strengthen the science-policy interface for biodiversity and ecosystem services for the conservation and sustainable use of biodiversity, long-term human well-being and sustainable development. In 2018, IPBES launched the sustainable use assessment.

1.2.2. Objectives of the assessment¹

The objective of this thematic assessment is to consider various approaches for enhancing the sustainable use of wild species within the ecosystems that they inhabit, and to strengthen related practices, measures,

¹ Taken from the scoping report for the sustainable use assessment in IPBES/6/INF/8
https://ipbes.net/sites/default/files/ipbes-6-inf-8_en_0.pdf

capacities and tools for their conservation through such use. The assessment will focus on the sustainability of the use of wild species, and will recognize the inherent interdependencies between the use of wild species and its wider socio-ecological contexts.

The assessment will be solution-oriented, with the overall aim of identifying challenges and opportunities to establish or further strengthen measures and conditions that ensure and promote the sustainable use of wild species, while halting their unsustainable use. Relevant dimensions of the sustainable use of wild species will be analysed, and the status of and trends in the sustainable use of wild species will be assessed along with direct and indirect drivers of change.

The assessment will further explore future scenarios for the use of wild species and the consequences for wild species. It will also examine the range of challenges, opportunities and policy options for the further enhancement of the sustainable use of wild species. The timeframe of analyses will cover current status, trends up to 2020 (going back as far as 50 years) and plausible future projections, with a focus on various periods between 2030 and 2050.

1.2.3. Rationale of the sustainable use assessment²

There is a need for a comprehensive assessment of the status and trends of the use of wild species, and of possible future scenarios of such use, in terms of the sustainability of current use in its socio-ecological context. Also needed is an assessment of the status and trends of the direct and indirect drivers that affect that sustainability. The assessment will take into account the multiple worldviews, knowledge systems, cultural traditions and values that operate within different socio-ecological contexts.

The use of wild species is of critical importance to all communities. The assessment provides an opportunity to address good quality of life, including the needs of IPLCs. For many countries the very essence of the cultures and livelihoods of their people is based on the natural resources to which they have access and the ecosystems of which they form a part. Many species are also used by populations outside the countries where they are located – for example, through international trade and tourism.

There is a general desire to protect wild species from extinction and decline, especially in the case of the most visible mammal and bird species. The use of these species is regarded, and publicly criticized, as a major cause of their decline. If improperly managed the use of wild species can lead to extinction, yet the sustainable use of wild species can also be a driver for long-term conservation. The sustainable use of wild species, rather than non-use, is an important aspect of sustainable and socioeconomically just conservation of species.

The assessment will yield options for policy scenarios and governance pathways that could promote the conservation of biodiversity and the maintenance of socio-ecological functions such as nature's contributions to people. The assessment will contribute to the development of a strengthened knowledge base relating to both the concept of sustainable use of wild species and the direct and indirect drivers of unsustainable practices and ways of countering those practices. It will focus both on existing policy

² Taken from the scoping report for the sustainable use assessment in IPBES/6/INF/8 (https://ipbes.net/sites/default/files/ipbes-6-inf-8_en_0.pdf)

instruments and policy support tools and on their effectiveness and will catalyse the development of additional policy support tools and methodologies.

1.2.4. Timeline for the sustainable use assessment

IPBES launched the sustainable use assessment in 2018 and it will be completed in 2022. Key milestones include:

- December 2018: Launch of the assessment and first author meeting
- 20-21 May 2019: **First ILK dialogue workshop** (Paris, France)
- August-October 2019: First order draft review period
- October 2019: Second ILK dialogue workshop
- November 2019: Second author meeting
- April-June 2021: Second order draft review period
- May 2021: Third ILK dialogue workshop
- July 2022: Completion and launch of the assessment at IPBES 9

1.3. The first ILK dialogue workshop for the sustainable use assessment

1.4.1. Background

The participation of IPLCs is essential to the process of developing the sustainable use assessment, as IPLCs possess significant knowledge on the wild species that surround them. This includes knowledge about their habitat, seasonal availability, behaviour and interactions with the environment, other animals and humans. IPLCs often use wild species for subsistence and other purposes, and have management strategies and institutions that govern their sustainable use. The identities, cultures and livelihoods of IPLCs are often deeply intertwined with the use of wild species.

1.4.2. Objectives of the dialogue workshop

A dialogue workshop was organized at UNESCO headquarters in Paris on 6-7 May 2019 to facilitate the participation of IPLCs in the early development of the sustainable use assessment, and to facilitate the explicit and coherent cross-cutting incorporation of ILK views and IPLC needs into the assessment.

Objectives of the dialogue workshop included:

- Exploring how the sustainable use assessment could be useful to IPLCs;
- Developing recommendations from IPLCs for specific topics and areas of focus for the assessment;
- Refining a series of key ILK questions, which will help shape a narrative for the assessment and direct the collection, analysis and synthesis of information;
- Beginning to develop case studies of relevance to the assessment;
- Determining key experts who could contribute to the assessment as contributing authors or as participants in future dialogue workshops and review processes; and
- Identifying resources and sources of information that could be used in the sustainable use assessment.

1.3.1. Context of the dialogue workshop

The operating principles of IPBES include the following:

*Recognize and respect the contribution of Indigenous and local knowledge to the conservation and sustainable use of biodiversity and ecosystems.*³

To this end, IPBES set up a task force on ILK, which is a group of experts tasked with developing procedures and methods for IPBES work on ILK. The task force is supported by a technical support unit on ILK based at UNESCO in Paris.

The “[IPBES approach to recognizing and working with indigenous and local knowledge](#)”, developed by the task force, was approved by the IPBES plenary at its 5th session, in 2017. This sets out principles by which IPBES should approach working with ILK.

Progress and lessons learnt on approaches and methods were also made during the previous IPBES assessments (on Pollinators, Pollination and Food Production, four Regional Assessments and Global Assessment of Biodiversity and Ecosystem Services, Land Degradation and Restoration).

The task force has also developed draft methodological guidance on ILK in IPBES, which aims to provide further detail and guidelines on how to work with ILK and provides guidance for an IPBES participatory mechanism for working with IPLCs, particularly in IPBES assessments.

The approach and methodological guidance describe a series of activities for working with ILK and IPLCs, including:

- IPLC authors and contributing authors in IPBES assessments;
- An ILK liaison group (a group of authors with a specific mandate to work with ILK) for each assessment;
- Developing key ILK questions to frame each chapter and an overall narrative for the assessment;
- Literature reviews for ILK (peer reviewed and grey literature);
- Face-to-face dialogues with IPLCs (specifically at the start of the assessment process, and then for the reviews of the first and second order drafts);
- Online call for contributions and library of materials;
- Communication and outreach, particularly of assessment findings;
- Catalyzing new research with and by IPLCs.

The ILK dialogue workshops are therefore part of this series of activities for working with IPLCs and ILK throughout the assessment process.

1.3.2. FPIC

Free, prior and informed consent principles are central to IPBES work with IPLCs. These principles were discussed with participants of the dialogue, to ensure that participants were fully informed of how their information would be used, and so they had opportunity to raise questions and concerns, and eventually to consent to its use. A draft of this report was also sent to participants for validation.

³ UNEP/IPBES.MI/2/9, App. 1, para. 2d

2. Overarching Recommendations from the Dialogue⁴

2.1. Introduction

After presentations on the aims, timelines and structure of the assessment, participants discussed a wide range of issues relating to the sustainable use assessment. Overarching themes from these discussions are presented below in the following sections:

- Key areas of focus for the sustainable use assessment;
- Challenges for the sustainable use assessment around ILK;
- Process and methods for IPLC participation;
- How IPLCs could benefit from the sustainable use assessment; and
- Products and tools from the sustainable use assessment.

2.2. Key areas of focus for the sustainable use assessment

Participants highlighted the following key themes and issues for consideration by the sustainable use assessment. These are further elaborated in the more detailed chapter discussions presented in section 3.

2.2.1. The importance of ILK for sustainable use

- IPLCs possess detailed knowledge about the biodiversity that surrounds them, allowing them to practice sustainable use. However, this may be understood or expressed differently than it would be by researchers or policymakers.
- For IPLCs, sustainable use may also be conceptualized differently. Often the focus is the sustainability of the relationships between nature, community, spirituality, youth, elders and ancestors, rather than only sustainable use of biodiversity.
- These interrelationships are often maintained through resource use by communities, and are mediated in many different ways, including by ILK, customary rules, customary governance systems and rituals.
- Customary sustainable use thus often has to integrate all the pillars of sustainable development and aspects of community life, including environment, economic, socio-cultural aspects.

2.2.2. Trends in sustainable use and their causes

In general, IPLC participants reported downward trends in sustainable use, while also highlighting some positive examples. The most important interrelated factors influencing trends in sustainable use include:

- Customary use and cultural change;

⁴ The text in section 2 represents an attempt to reflect solely the views and contributions of the participants in the dialogue. As such, it does not represent the views of IPBES or UNESCO or reflect upon their official positions.

- Declines in species or contamination of species and places;
- Government policies that discourage or prevent IPLCs from using resources, or from using them in sustainable ways.

In terms of the factors that influence trends in customary sustainable use, participants discussed various issues for attention by the assessment, including:

- ILK is key to sustainable use of wildlife by IPLCs, as it includes information on species numbers, distributions, health and also how to manage and respect animals and plants. ILK should be recognized as an important resource for conserving biodiversity, and decision-making on IPLC lands should engage with IPLCs rather than only relying on science.
- Indigenous languages should be recognized as key to ILK and sustainable use, as much knowledge is encoded in indigenous languages.
- Customary institutions and rules on wildlife, plants and fungi should also be recognized and supported, as these are key to regulating IPLC use of wild species.
- The assessment could highlight IPLC livelihoods and traditional occupations, and their contributions to sustainable use, food systems, good quality of life and human wellbeing. This includes especially IPLC activities that can be poorly recognized, negatively perceived or even criminalized, including hunting, gathering, pastoralism, rotational farming, or practicing traditional medicine. The aim could be to improve recognition and respect at all levels, including within communities and in national policy.
- The spiritual and cultural aspects of sustainable use need to be recognized, including the impacts on the culture and spirituality of IPLCs if a species can no longer be used.
- The role of women and women's knowledge in sustainable use of wild species could be highlighted, e.g., of seed conservation and species propagation, as well as nutritional requirements, and also particular threats to women from harassment related to resource use in protected areas.
- The roles and importance of children and youth need to be highlighted, especially considering their potential roles as future leaders and practitioners around sustainable use.
- Transmission of ILK should be safeguarded wherever possible. This may involve recognizing and supporting traditional education and ways of learning, both in community settings and within formal schooling and universities. Schools may also need to be adapted to suit IPLC needs, e.g., mobile schools for nomadism, or with lessons focused at certain times of the day or year to fit in with IPLC activities at seasonal or daily timescales.
- The role of formal education in changing peoples' knowledge, aspirations and relationship with the environment could be recognized and explored by the assessment.
- Formal religion can also play a large role in discouraging or changing IPLC beliefs and activities. This could be accounted for and addressed, where possible.
- Disconnection from nature could be recognized as a major threat for people and environment, both for IPLCs and for humanity in general.

- The assessment could do an analysis of the status of IPLCs in different countries, and also engage with questions of who owns the land on which IPLCs live, as these questions are key to sustainable use.

In terms of declines in and contamination of wild species, participants discussed issues for attention by the assessment, including the following:

- Declines in species, or contamination of species and places, leads to significant disruptions in sustainable use in much of the lands and waters inhabited by IPLCs. They are caused by many factors including habitat loss, industrial development, unsustainable exploitation, climate change, invasive alien species, and genetically modified organisms.
- Community-based management is very important for sustainability in wild species use and for halting species declines.
- Community-based monitoring may also be important for understanding and following trends in wild species and their use.
- Co-production of knowledge is an important area for work on sustainable use of wild species and biodiversity conservation. Good examples of this working in practice could be highlighted.
- The assessment could draw from work where ILK is recognized and applied as part of the official knowledge base, for example previous IPBES assessments.
- Community protected areas, including sacred sites, and indigenous and community conserved areas (ICCAs) can be important for biodiversity and should be recognized and supported in national policies.
- The current predisposition to favour industrial development in environmental decision-making needs to be countered with more attention to the environment and human wellbeing.

2.2.3. Policy, sustainable use and ILK

In terms of issues related to policy, participants highlighted the following issues for attention by the assessment:

- Human rights and people should be at the centre of all policy discussions relating to the environment and sustainable use. The recognition of indigenous rights under international law and policy agreements is an important contribution towards a more sustainable use of wild species.
- Land tenure and land rights will be a critical focus for policy discussions, as this impacts the ways that IPLCs can use their lands and make decisions.
- There has been good progress on a supporting policy environment at the international level. The assessment could scope and assess this international legal framework, including the CBD (Article 10 (c)); United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP); International Labor Organization (ILO) Convention 169; regional indigenous peoples rights declarations; Strategic Plan for Biodiversity 2011-2020, including Aichi Biodiversity Targets 18 and 14; global plan of action on customary sustainable use of biodiversity; Nagoya Protocol; etc.
- Despite good progress at the international level, often little or no progress has been made on indigenous peoples' rights and issues at the national level. This is a crucial gap that should be

addressed. Good practices and knowledge of IPLCs should not be ignored, disrespected or considered as backwards in policymaking at all levels.

- The assessment could scope the policies that are discouraging sustainable use practices. These policies could be mapped and recommendations / options could be suggested for change. The assessment could highlight examples where policies and laws prohibit (or promote) customary sustainable use by IPLCs. Concrete good practices that could become national or international policies could also be given. One focal question is whether current institutional arrangements are adequate to facilitate sustainable management of wildlife by and for IPLCs.
- Participants highlighted that human rights violations in the name of conservation (and also for industrial developments such as dams) need to be recognized and unequivocally condemned. This includes criminalization and deaths of environmental and human rights defenders and displacement of communities for conservation purposes.
- Synergies should be fostered between policies at all levels, including between international agreements on biodiversity, climate, agriculture, and water, etc.
- The neo-liberal model of economy often does not give outcomes in terms of well-being. The assessment could explore alternatives to growth economics that would combine social, environmental and economic sustainability.
- The concept of “transformative change” and its effects on IPLCs could be examined, including who is being advised to change their behavior, and whether this includes IPLCs. The concept requires a clear assessment of who currently makes positive and negative contributions to biodiversity.
- Participants highlighted that currently, lack of political will is one of the main drivers of unsustainable resource use, despite good decisions at the global level and progressive laws at the national level. Much-needed political and financial action should thus follow commitments made by states at the international level, such as the 2030 Agenda for Sustainable Development. Reaching global objectives can only be successful if action is taken at the local level.
- Sustainability may be achieved when taking a more holistic approach to resource use. Participants highlighted that divisions should not be made between water and land, land and climate, social and natural, etc. These aspects are all interconnected and this nexus needs to be better understood, including by actors at the international level.
- Co-management can be an important avenue for engaging IPLCs, ILK and customary institutions. However, in many cases co-management is not functioning well in reality, with IPLCs denied real decision-making power.
- Strengthening customary institutions could also be an important policy intervention that would enhance the sustainable use of wild species.

2.3. Challenges for the assessment around ILK

Participants discussed some of the main challenges around working with ILK and IPLC issues for the sustainable use assessment. Participants highlighted:

- There is a risk that ILK would be forced to conform to western standards during the process of producing the assessment.

- It will be challenging to properly document and access ILK, also with regard to sustainable use of wild species, mainly because it is largely held in oral traditions and the assessment mostly functions through literature reviews.
- The challenge of identifying overarching global themes from local practices, whilst avoiding decontextualizing ILK.
- Some indigenous peoples and marginalized groups are not formally recognized by their governments as indigenous, and so can be missed from analyses.
- Even among indigenous peoples, there are those who want to capitalize on natural resources, and they may criticize the assessment for not speaking of their perspective and context.
- Proper attention will need to be given to gender dynamics and the role of indigenous women in sustainable use.
- It will be very important to ensure that there is a true engagement with ILK and IPLCs during the assessment process, rather than this becoming a box-ticking process.

2.4. Process and methods for IPLC participation

Participants discussed the process going forward for the sustainable use assessment and avenues for participation by IPLCs, and made the following comments and recommendations:

- There is a lot of important documentation of sustainable use in languages other than English. The assessment team should be encouraged to think about how to work with languages other than English, and should make a list of priority languages and seek ways to access and use literature published in them (e.g., Russian, Sanskrit, Chinese, Japanese).
- Developed country IPLCs should be involved in the assessment – funding should be found to make this possible as IPBES does not currently provide funding for IPLCs from these countries.
- ILK dialogue workshops could be held in communities rather than big cities.
- The sustainable use assessment should be closely linked to the Global Assessment (and also the values assessment), and could build on, e.g., the indicators used in the Global Assessment.
- As much as possible, IPLCs should be invited to engage as contributing authors to the assessment. Contributing authors write portions of text for the assessment on specific topics.
- IPLCs should be involved as fully as possible in reviewing the document at the first and second order drafts phases, and also involved in developing the summary for policymakers. This could be done through dialogue workshops but also through online networks and conference tools such as skype.
- The timeframe of analysis for the assessment is important, as there is often material on sustainable use available from very early sources. For example, from the 1830s, people were already writing about sustainable practices in Hawai'i. Original Hawaiian newspapers could be cited in the assessment.
- It was noted that the deadline for including new material in the assessment is around the second order drafts (around the third quarter of 2021). After this point, unless there are major gaps, no new information can be included.

- Participants suggested that each chapter of the assessment could have boxes written by ILK holders, which would provide some autonomy from the scientific narrative.

2.5. How could the IPBES assessment be useful to IPLCs?

Participants noted that in order to justify their participation, the assessment should be useful to IPLCs, and discussed ways that IPLCs could potentially make use of the assessment. This will be important for the authors to keep in mind during the process of producing the assessment.

- The assessment may lead to reaffirmation and strengthening of customary sustainable use of natural resources, by examining and highlighting sustainable wildlife management by IPLCs. For example, the assessment could provide an evidence-base on the contributions of customary sustainable use (people's contributions to nature) to enhancing the functioning of ecosystems and biodiversity, e.g., through traditional occupations that enhance biodiversity.
- The assessment could be useful in terms of raising public awareness on existing policies that support and promote sustainable use in relation to IPLCs, and also on raising public awareness of sustainable use by IPLCs, and how this functions in reality. This could help to resolve some of the many misunderstandings by the public about IPLC practices, which often see indigenous management as bad practice or not aligned to conservation goals.
- The assessment could be a tool that IPLCs could use in discussions with local, regional and national authorities about ILK, rights of indigenous peoples, and indigenous participation in natural resource management.
- The assessment may be used by IPLCs for discussions in relation to other international processes, including the United Nations Framework Convention on Climate Change (UNFCCC), Convention on Biological Diversity (CBD), World Heritage Convention, Agenda 2030 and the Sustainable Development Goals (SDGs).
- The assessment could identify all international commitments related to traditional knowledge, management, and indigenous peoples' rights regarding the sustainable use of wildlife species, forming a base of information that could be used to support these management systems.
- The assessment could be used when developing tools and programs related to conservation, climate change and invasive alien species.
- The assessment might be used for capacity-building by IPLCs, to improve IPLC understanding of the issue of sustainable use, and the importance of customary sustainable use by IPLCs. When adjusted to fit the local context, it could enrich existing knowledge systems and influence current IPLC practices. The assessment could also be used to stimulate discussion between IPLC communities about sustainable use.
- The assessment could be a resource for educational materials to promote sustainable use.
- By highlighting cultural and spiritual aspects of the environment, the assessment may allow a fundamental reflection on how nature is impacted by human activity.

2.6. What kind of products and tools could be useful from the assessment?

Participants discussed the tools and products that could be derived from the finalized assessment, and made recommendations including:

- A “Summary for IPLCs” could be produced, highlighting the main findings of importance for IPLCs.
- Policy briefs containing recommendations/options relating to sustainable use and IPLCs for national governments and other decision-makers could be developed (noting that the assessment is not meant to be policy prescriptive, but can provide policy options).
- Tools for implementing sustainable use at the local, regional and national level could be created.
- Education tools and materials could be created, including videos, photos, fact sheets, pamphlets, posters (e.g., presenting data on IPLC traditional livelihoods).
- A repository of case studies from the assessment could be developed, which could be accessible online or in a publication.
- Website updates and newsletters could be important.
- Remembering that not everyone can read, comics, animation videos, posters and songs with simple clear messages can be good ways of communicating at local levels.
- The full report with citations could be shared with the wider public (including students, civil society and government authorities involved in environmental work and looking for success stories to replicate).
- All tools and products could use simple, clear English or if possible be translated into UN languages and local languages. Culturally appropriate language and concepts should also be a focus.

3. Chapter-Specific Recommendations from the Dialogue⁵

3.1. Introduction

Following brief presentations about the overall aims of each chapter, participants discussed general recommendations for the assessment and gave examples from their communities. These are given below for each chapter.

3.2. Chapter 2. Conceptualizing the sustainable use of wild species

3.2.1. Introduction

Presenter: Isabel Diaz-Reviriego

The main questions posed to the participants were as follows:

- What are wild species from the perspective of IPLCs?
- What is sustainable use from the perspective of IPLCs?
- Are international definitions of wild species and sustainable use different from IPLC conceptions?
- What are the appropriate methods and tools for assessing and managing sustainable use of wild species according to IPLCs?

3.2.2. Perceptions of wild species

Key points expressed by participants:

- IPLC perceptions of wild species should be considered carefully, as they may be different from those of mainstream science.

Example

- When indigenous groups in the Cordillera, Philippines list crops in rotational agricultural areas and in the irrigated paddy fields, they interchange the terms meaning “wild species” and “naturally occurring flora and fauna”. This is because in these cultivated areas, aside from what people plant or put (like fish fingerlings in the wet ricelands), there are a lot of species that can be collected that occur naturally. If one is not the cultivator, permission has to be sought to take cultivated crops from the farm, but naturally occurring flora and fauna like edible weeds, crabs and fishes can be harvested by anyone in the ricelands, as long as damage is not done to the crops or farm, even though these are in “privatized” farms.

3.2.3. Perceptions of sustainability and sustainable use

Key points expressed by participants:

⁵ The text in section 3 represents an attempt to reflect solely the views and contributions of the participants in the dialogue. As such, it does not represent the views of IPBES or UNESCO or reflect upon their official positions.

- The CBD definition of sustainable use, which reads as follows, was presented to the group:
"Sustainable use" means the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.
- Participants highlighted that the definition should also include the cultural and spiritual aspects of sustainable use. Participants noted that IPLC perceptions of sustainability may include maintaining continuity of culture, spiritual connection with nature, and transfer of traditional knowledge, rather than just maintaining biodiversity. Many IPLCs recognize the spiritual aspect of nature, e.g., by using it in most of their rituals. The relation between humans and animals should be based on a belief that the latter are gifts, to be shared with the community, not treated like resources or trophies.
- Participants also noted that the economic aspects could also be included (e.g., linked to marketing of honey).
- For many IPLCs, it is crucial to consider the well-being of future generations in their current activities. This is particularly emphasized by elders, who strive to safeguard the availability of resources and their sustainable use for both current and future generations. Participants emphasized that generational responsibility is key for preserving sustainability.
- Participants noted that some IPLCs may not be aware of the concept and definition of "sustainable use", but nonetheless they practice sustainable use in their everyday life. When discussing sustainable use of wild species, elders may convey their messages using various concepts rooted in tradition and spirituality, rather than in terms that might be easily recognized as "sustainable use".
- On the other hand, communities collaborating with NGOs and other external institutions gradually start to incorporate concepts such as "sustainable development" into their vocabulary and then their perceptions of the environment.
- Some participants stressed that they find the word "use" problematic. They would welcome replacing it with "relationship with nature" or "contributions of people to nature". Others explained that there is no "sustainable use", there is only "use", which is always sustainable by IPLCs. When learning about the concept of "conservation", many communities maintain they have always known about it and implemented it. Other participants noted that wild species really are being "used" by people, e.g., to tie their rice, to make baskets or to make houses. It is through this use that their relationship to nature becomes strong. If done respectfully and sustainably, the use of wild species is an important part of being human and maintaining a connection to nature, not just being merely consumers.
- The use of nature happens in cycles, and sustainable use is no exception. Examples include rotational (swidden) farming or the use of plants positively affecting vegetation restoration.
- The assessment should highlight that IPLC views of nature and natural resources are often holistic and that they see everything as interrelated. From many IPLC perspectives, humans are an inherent part of nature. According to participants, as long as there is harmony between nature

and people, there is sustainability. Misbalance between these two leads to disasters, which are an expression of nature being abused.

- There are also multiple customary rules that regulate use of nature, e.g., restrictions on when some forest plants can be used. According to participants, it is possible to increase the use of some species when harvesting or collecting them, but it should be done with respect to traditional knowledge.
- Participants acknowledged that not all IPLCs always follow the principles of a good relationship with nature. Sometimes people use and impact nature in a way that needs apologizing for, e.g., when economic incentives take over. One of the participants recalled an example of a local community that used to collect mushrooms without damaging mycorrhizae (the root system). With mushroom prices rising, people started ignoring the way in which they collected, prioritizing quick gains from mushroom harvests over sustainability.
- Participants highlighted that sometimes, there are disagreements between IPLCs and governments about what is considered sustainable and what is not.
- As a result of these discussions, participants noted that “sustainable use” should be well defined in the assessment. To this end, participants were invited to think about the definition of sustainable use and to share it with the Task Force/TSU for ILK.

Examples

- In the Russian far-east, the Yukaghir people’s traditional view on sustainable use implies that you take from nature only the exact amount that you need. They do not consider making reserves for future or for trade, as this would imply that they do not believe in the spirits and their ability to provide them with what they need in the future.
- In the Philippines, some communities make sure they protect areas for animal reproduction. Also, they never hunt for animals in spiritual places or harvest the last bamboo shoot standing, which for some people is meant to be saved for the spirits, while others say it will give the bamboo the chance to reproduce more shoots. All these practices are important in allowing the environment to regenerate after the hunt/harvest.
- The Selkup peoples of northern Siberia believe that for any interaction with nature, each person bears personal individual responsibility to the spirits of the forest and water, as well as receiving a reward from them. At the same time, all personal actions will have consequences for future generations of all nations, which is why it is always necessary to understand what you do and what the results of your actions will be.
- Harvest of insects was also highlighted as a subject to explore in the assessment, as this is important for many communities.
- Urban harvesting of food and urban areas in general could serve as a source of inspiration when looking for sustainable solutions in wild species use.
- Examples of disagreements between IPLCs and government about what is considered sustainable include communities in Africa, which consider the harvest of broom grass (*Aristida junciformis*) to be sustainable, while governments disagree.

3.3. Chapter 3. Status and trends in the use of wild species

3.3.1. Introduction

Presenter: Ram Prasad Chaudhary

The following questions were used to frame the discussions:

- What are the current and historical contributions of IPLCs and ILK to the status and trends of the use of wild species? How does this effect nature's contributions to people and quality of life?
- What are the status and trends in recognizing and honoring the rights of IPLC? What effect, if any, do these have on trends in sustainable use of wild species?

Along with discussing trends, many examples of drivers of trends were also highlighted during this discussion, and these are presented in Section 3.4 on drivers below.

3.3.2. Understanding and monitoring trends

Key points expressed by participants:

- Participants highlighted that it is important to consider which knowledge is being used to determine trends in use. Ideally, ILK and science should be working together to monitor trends and determine why trends are occurring, and also working together to make recommendations based on those trends. This could be encouraged through international agreements and processes. It is important for IPLCs that they are involved in the decision-making processes, not just monitoring.
- Monitoring of traditional use is needed, and can be done through looking at rates of traditional occupations. Traditional language use can also be an indicator.
- It was noted that monitoring of contaminants of wild resources is also important in some cases.

Example

- In Africa, community-based monitoring systems are commonly used. Combined with new technologies, such as GPS monitoring systems and 3D maps, they empower communities to better ensure sustainable use of wild species. They also made a community handbook with the information.

3.3.3. Declines in species numbers

Key points expressed by participants:

- Declines in numbers of species and numbers of animals within a species currently threaten IPLCs and their sustainable use. Causes of declines in species can include habitat loss due to agricultural expansion and deforestation, roads, dams and climate change mitigation schemes. Invasive alien species can also cause species to decline.
- Participants noted that extirpation/local extinction should be considered a serious issue. Often this may not be a priority issue for decision-makers looking at the national or regional level, but for local people the local extinction of a species can be highly significant.

3.3.4. Contamination

Key points expressed by participants:

- Contamination of animals and plants from industrial development can also greatly limit a community's ability to practice sustainable use of a species. Mercury and black carbon were highlighted as major issues for contamination of wild species; in some places communities can only eat small amounts of fish and other species due to heavy metal contamination.
- Plant species can be adulterated with other similar species (for example the supply of *Swertia chirayita*, a valuable species collected from the Himalayan region to China and India is adulterated with other species of *Swertia* degrading the quality of the medicinal properties).

3.3.5. Declines in access and use

Key points expressed by participants:

- In many countries the numbers of people engaging in traditional livelihood practices is decreasing. Significantly among many underlying causes, national government policies often make it difficult for people to engage in traditional practices, or prohibit them entirely.
- In many places indigenous peoples resist government policies and continue their practices.
- It can also be important to bring policymakers to the field and show them firsthand how local systems are working.
- Sometimes where indigenous peoples are legally allowed to practice sustainable use this can come under threat as the broader population see indigenous peoples harvesting resources and decide that they should be allowed to harvest too, leading to overexploitation. In these cases it can be difficult to know who is indigenous and who is not, and who is harvesting the resources.

3.4. Chapter 4. The drivers of the sustainable use of wild species

3.4.1. Introduction

Presenter: Uttam Babu Shrestha

The main questions posed to the participants were as follows:

- What are the main drivers that impact wild species uses and their outcomes?
- How does political commitment to Agenda 2030 and the SDGs contribute to sustainable use of wild species and human well-being?
- Which policies of which sectors have a major impact on the use of wild species and its sustainability?

3.4.2. Transmission of ILK and IPLC values

Key points expressed by participants:

- ILK is critical to the sustainable use of wild species, and should be recognized as a fundamental part of the knowledge-base that can be brought to bear on the understanding and monitoring sustainable use of wild species.
- Weakening of knowledge transmission and conflicting worldviews between generations represent a significant threat to sustainable use. It was emphasized that older generations often have a greater sense of responsibility for their land and wild species than younger generations.
- Young people are sometimes shamed for their traditions and culture, which often pushes them to reject their heritage or even to leave their community.
- However, while some young IPLCs reject tradition and prefer to assimilate into larger society, others seek continuity of traditional practices and ILK. They often add some innovation to their traditional lifestyles, e.g., through developing and promoting social enterprises or marketing local products.
- Intergenerational knowledge transfer should be better protected to prevent losing traditional skills and know-how.
- The assessment should look at what is taught at the local level, and how this is done, as community learning and teaching practices are the basis for sustainable use and sharing of responsibilities.
- Current school curricula often show IPLC livelihoods as something negative and ecologically destructive. Better understanding of the practices and actions undertaken locally in the field could improve the situation and change political perceptions. A positive representation of IPLC livelihoods in schools could do much for inter-cultural understanding and respect, and also for communities' pride and desire to continue with traditional practices.
- NGOs play a key role in giving voice to local people and ensuring the sustainable use of resources. Their work on the issues of biodiversity and local livelihoods should thus be promoted and better supported, including financially.

Examples

- There are some trees (*Ficus* species) in the Himalayas that cannot be cut down because of their sacred value. Traditional knowledge is crucial in natural resource management because some

populations may decrease if not harvested the right way, as was the case with wild garlic (*Allium oreoprasum*) in the Himalayas.

- For the Baniwa tribe in Brazil, people understand ecological processes taking place in nature, from which they are able to extract cosmological knowledge on climate, weather, and flowering season, etc. They are aware that the better their understanding of the environment, the better they can benefit from it.
- In Brazil, another major threat to traditional knowledge of the Baniwa is religion. Young generations in Rio Negro now have problems accessing traditional knowledge that was lost due to religion, but the community is trying hard to save it.
- In Rio Negro, culturally important plants were overexploited during colonial times, but when mining came to Brazil, the focus became mining, rather than plants, so plant species were able to recover. More recently, indigenous peoples were given rights to land, and now they are discussing how traditional harvesting of plants can be made more sustainable, using techniques from pre-colonial times. They are revitalising and preserving the knowledge of elders to aid them in this. Through interviews they are documenting knowledge of the elders, and they have produced a book that explains this. The communities now have more young people, and the youth are engaging with processes for culture and also economy, trying to do both sustainably.
- In the Pacific, elders wish to protect swamp taro (*Cyrtosperma merkusii*) from the impacts of climate change. While older community members prioritized its conservation and sustainable use, some younger community members assert that other species could be substituted if needed.
- It is becoming more and more challenging for the Yukaghir people to maintain a sustainable level of natural resource use, mainly due to influences from outside the community. The media has a big impact on people, constantly increasing their perception of their needs. Currently, community members do not only extract resources for food purposes, but also for commercial use. In the past, there was more respect towards nature, e.g., by offering gifts to animals. The participant recalled the words of his grandfather who says: “you must remember that the wolf is the master of this place. If you kill him, this place will be without its master”.
- IPLCs usually know best how to use their resources. Sometimes scientists come to IPLC areas (e.g., in the Amazon) and advise local people not to eat wild species (e.g., monkeys). However, often they do not possess in-depth knowledge of local biodiversity compared to IPLCs.
- In Tuvalu, climate change is being integrated into the school curriculum, reflecting that it has become an important issue for the government. It lays the basis for further integration of biodiversity and ecosystem services into the education system.

3.4.3. Maintaining and reviving customary governance

Key points expressed by participants:

- Maintaining or reviving customary governance and related practices by IPLCs is key for maintaining or increasing sustainable use.
- Current declines in customary governance are a significant threat to sustainable use of wild species.

- Sacred places are often protected by local people, and can therefore be important areas for biodiversity. Often however these sites are not completely “natural” – they have been managed and cared for and enriched by IPLCs for millennia.
- Indigenous peoples and their knowledge can be successful in managing changes and threats, but often they need the support of the government in order to make decisions about their lands. As people are often given no control over their resources, they stop caring for them in the same ways that they would normally.
- To maintain sustainable use of wild species, balance needs to be re-established in human-natural systems and IPLCs and their customary governance have a pivotal role to play in this regard.

Examples

- The Yukaghir people in Russia tend to have highly dispersed clans/families, so in order to maintain sustainable use, they have to put regulations in place. If a family is too big, it is allowed to expand its territory by adding more land, so that everyone can live within the ecological capacities of a particular area. It also ensures that enough food is available not only for the current generations, but also future generations.
- The Yukaghir try to preserve sustainable use in various ways, including through revitalizing their school curriculum, reestablishing traditions, and founding a council of elders. The latter is particularly important for IPLCs, as elders have the traditional knowledge and experience that can help influence the desires of the younger generation.
- The participant from the Philippines explained how customary laws help in resource conservation in her community. They have a common phrase that translates as “do no harm” that refers to the relationship to nature, people and others. Some of the main rules and principles governing the life of the community are shared responsibility, community solidarity and customary governance.
- Another participant explained how the loss of customary practices in some communities in India led to the spread of invasive alien species. Plants that used to be controlled by herders in the past suddenly started to flourish.
- In Tuvalu, different clans are in charge of management and use of different resources. Some clans are involved in managing land resources, while others in managing sea resources and so on. On the island of Nanumaga, there are five clans, each with their respective responsibilities. The first is a chiefly clan, the second is the protector of the island, the third is a new clan, the fourth is in charge of sea resources, and the fifth is in charge of land resources. If someone has any questions related to a specific resource, they need to approach the appropriate clan.
- In Mexico, each community that wants to harvest wild species needs to develop a plan and submit it to the community authorities for approval. The species population is then assessed on an annual basis. Such a permission-based approach towards natural resources significantly contributes to their sustainable use.
- In Thailand some communities have beliefs and rules that they do not hunt in certain seasons, and there are some animals that they are not allowed to kill e.g., hornbills and gibbons. They also classify different types of forest, with for example some areas where it is prohibited to hunt, and some areas where they can collect non-timber products. Strong customary laws also create regions of the forest, through replanting of trees. These kinds of customary laws allow people to

strengthen the use of wild species. They also work to increase the richness of the ecology, and collect tea trees and bamboo shoots. They also create firebreaks and control their burning.

- Traditionally in the trans-Himalaya of Nepal (in Manang), IPLCs manage the winter fodder requirements from private as well as common lands by harvesting only at specific times as the grasses are limited in the winter; and the harvesting time from common lands is kept open only for two days before the harvest of crops starts (see Chaudhary et al., 2007, for more information).
- Fire management systems in Australia have shown how IPLCs can positively contribute to ecosystem management through controlled burning, if supported by appropriate government policies.
- In Hawai'i, traditional fishing practices are very different from the approach of state regulation. Traditionally, the *kapu* (the Hawaiian code of conduct and regulation) guided the conduct of the people and maintained order and balance as they related to each other and the environment around them. When balance was upset and communities observed this, corrections were made. With regard to fishing, the conduct and gear types were different from those in use now. Traditionally, different timings for species and gear types favored desired outcomes which were monitored and adjusted for based on constant observation. When the Hawaiian Nation was overthrown, the *kapu* was set aside. For some generations, people remembered how to fish properly and they maintained the balance of the system. With the influx of people with no understanding of balanced and sustainable fishing, intensive and unsustainable fishing became the norm. Being content with two, three, or four fish was replaced with ambition for more fish. In response to this, one community, at Ka'ūpūlehu on Hawai'i Island, has now established a ten-year rest period on all species of fish, shellfish, and seaweeds. This is a nearshore area, an area where women were and are more active, and accordingly they were active in advocating for this rest period. While the traditional and customary practices of gathering and hunting are recognized in the Hawai'i State Constitution, the Hawai'i Revised Statutes, and in case law, the traditional and customary practices of taking care of and tending the resources that support native practices and subsistence livelihoods are not. After 18 years of effort, including skepticism and pushback from some natives, among other people, the ten-year rest period was approved by the State of Hawai'i. As a community-based-subsistence-fishery area, the community is partnering with the State of Hawai'i to manage their fishery from a condition of abundance rather than a condition of depletion. Three years into the ten-year rest period, the increase in fish is remarkable, including 60% in the case of one preferred food species. There is increasing support for the rest period, even among former skeptics. To be most effective, islands-wide, rotating closures of sufficient years are probably needed; rest periods of one or two years do not seem enough, five seems to be the minimum for successful comeback.
- In Tuvalu, communities have a vast knowledge of oceans, species, and times of breeding. Tuvalu also has local marine protected areas which are owned by communities, and no-take zones in some areas which open from time to time. When they know there are a lot of fish in this area, they let people harvest for a week or so and then close it again, then shift to another site. If someone is found in the zone in a no-take time there is a penalty, but it is the community who enforces it, for example someone could be forced to feed the whole community as punishment,

which is very difficult to do. This system of management has been practiced for a long time, and they do not see a need for new methods. As Tuvalu has little land, it focuses on its marine territory, so it relies heavily on its fish industry as one of its main sources of income. Sometimes however there is over harvesting, e.g., of certain seabirds for food consumption, and over the years there is a decline in these species.

- Moose hunting in Nova Scotia, Canada, is a positive example of sustainable use policies and activities. Indigenous peoples went to court and fought for their rights and developed moose guidelines. This management plan proved to be so successful that it became necessary to do some moose culls every few years as there were too many animals. These culls were distributed around the communities.
- In France some people are against the idea of sacred sites, as it is against public freedom to be banned from going to these places.

3.4.4. Business, industry and agriculture

Key points expressed by participants:

- Because of industry's efforts to commercialize local resources, it is important to consider the role of these private actors as a contributing driver.
- Agriculture, along with other sectors, makes significant demands on land and influences the way it is used. It poses a serious threat for the sustainable use of wild species when plantations and monocultures replace natural forests. In addition, the amount of chemicals used in modern agriculture impacts both human and animal health.
- Forestry may be among the industries most affecting sustainable use of wild species. Heavy use of timber drives biodiversity loss and ecosystem degradation. At the same time, it also triggers reforestation initiatives worldwide, which often are led by the international community and also can have negative results for IPLC uses of wild species.
- Infrastructure projects (e.g., establishing rail routes through tropical rainforests) often contribute to ecosystem fragmentation and displace people. Many IPLC territories are abundant in resources such as gold, diamonds and timber, and industry has been found to overpower human rights and environmental policy.
- The impact of the tourism industry may be both positive (ecotourism, agrotourism) and negative. Negative impacts include big infrastructure developments targeted at expanding ports, hotels and other tourist facilities, where forests are cleared and people displaced. Sadly, at present, for many IPLCs it is the negative impacts that are the most common from tourism.
- Other sectors identified as potentially harmful for sustainability were energy, water, mining, medical health care system and cosmetics.
- Today, it is fashionable to use products and practices that are considered "green" and sustainable, even though, paradoxically, the impacts of their extraction or production are often unsustainable in nature. However, increasing demand for products from sustainable origins also may be a positive driver in terms of sustainable use.

- Current economic models focus on single products and species, and this is a major challenge. It is also linked to the producers' and consumers' limited understanding of the impacts of natural resource extraction.
- Western views of property were highlighted as one of the main drivers of unsustainable use by participants. In these perceptions, nature is subordinate to humans and should thus be exploited. Both privatizing resources and placing them in the public domain were highlighted as contributing drivers.
- Some IPLCs join industry in their extractive activities, in the belief that "we cannot beat them so let's join them". It was therefore suggested the assessment consider many aspects of poverty, including poverty of spirit, as the concept is more complex than is commonly understood.

Examples

- In the Solomon Islands, many communities are concerned about increased logging. Various commercial developments are taking place, greatly transforming the local landscape. It is the local people who face the local consequences of ecosystem degradation, not investors or developers.
- In Siberia, Altai and the Far East of Russia, millions of hectares of untouched taiga of valuable tree species (cedar, larch, etc.) have been subjected to massive deforestation. This leads to degradation of soils and ecosystems, as wild animals and birds have nowhere to live. As a result of the forced migration of these wild species, there is pressure on other territories and species.
- In Thailand, agricultural systems and cash cropping are impacting forest areas, removing habitat.
- Changing societal preferences have contributed to growing demand for commodities such as avocado and quinoa, leading to massive forest clearing for the purpose of establishing plantations in Mexico and Bolivia.
- Policies aimed at increasing biofuel production from food crops, such as palm oil or rapeseed, can result in loss of land that has been a source of wild species for IPLCs.
- Russia is seeking to reach out to new markets outside of Europe to facilitate trade in oil and mineral resources. This may have a negative influence on indigenous lands and wildlife therein. Establishment of new military bases to assert control over places such as the Arctic also could hinder IPLC access to their traditional territories.
- In an example from Brazil, policy regarding timber extraction is very strict. To cut down one tree, there need to be roads built and heavy machines used, to ensure that laws are obeyed. However, paradoxically, these laws then have a significant negative impact on the environment as it makes industry more destructive.
- For the Baniwa of Brazil, the biggest issue is globalization, which for them means taking knowledge that is appropriate in one place and applying it in a place where it is not appropriate, e.g. agribusiness in a tropical forest.

3.4.5. Commercialization and over-exploitation

Key points expressed by participants:

- Customary sustainable use is often now disrupted by commercialization of resources that were formally used for subsistence. This either pushes IPLCs to overexploit the resource, or outsiders

begin to overexploit it, which then impacts IPLC access and use. This can negatively impact the resource itself, and in turn the local people who previously relied on it, as the resource may become scarcer or more expensive.

- Commercial collection of wild plants can be done in a sustainable manner, but when industry is interested in a particular species, it often exploits it to an extent that does not allow for proper regeneration of the wild population. It was emphasized that there are natural limits to the exploitation of wild species, which require people to adjust to their life cycles. This is not the case with cultivated species, where yield can usually be increased.
- Human population levels in an area are one of the drivers of (un)sustainable use of wild species. The global trend is that rural areas are currently depopulating because of younger people moving to the cities.
- Another crucial factor in changes in sustainable use is the ability of the state to provide basic socio-economic services to people, as this can determine if communities need to generate income to pay for basic services, which then impacts their use of resources.
- Sustainable use of wild species can also be maintained through more regular contact with nature. As pointed out by one of the participants, consuming local resources that are close to you allows you to see the direct impacts of your consumption. It takes time, strengthens your relationship with nature, and allows you to observe interactions in the natural system. If you consume something located further away, you lose sight of the environmental impact of your actions. This is common in big cities, where many people are disconnected from nature, often to an extent where they lose the sense of what is sustainable.
- Some commercialization of customary sustainable use can be positive, if it is controlled by communities and takes place within their values systems. Sometimes support from governments may be needed, e.g., in opening up new markets for local products.
- Promoting local handicrafts can also help to support local livelihoods and preserve the traditional skills and know-how that were used to produce them.

Examples

- In the 1980s, in a village in the Philippines, there was a rule on maintaining 85% of the forest intact. However, because there were few employment opportunities and they were seeking income to provide for basic needs and education for their children, people veered away from their traditional farming systems and exploited agricultural lands for commercial vegetable production. Forests, too, were converted to commercial vegetable farms and this resulted in devastating consequences for the local wild species. Many vanished, while others have dropped in numbers, including bees. In the past, there used to be more than seven species of bees and currently there are barely three. Honey collection is not possible anymore for the local people.
- One of the participants explained that most of the hunting done by his community is to gather furs to sell. Some thirty or forty years ago, fur enjoyed wide popularity worldwide and furbearing animals represented an important resource for indigenous livelihoods and income. However, with the current trends and movements in the fur market, including a strong anti-fur lobby, the livelihoods of many IPLCs are threatened.

- Commercial demand for wild garlic (*Allium ursinum*) has been high and led to harvest practices that are incompatible with the plant's regeneration needs in both France and Russia. In some of Russia's swamp areas, wild garlic is a year-round food. IPLCs possess the knowledge of when and how to pick it, how to preserve it (e.g., through fermentation, drying) and other activities related to the plant. People from abroad come to these territories to collect it in a manner that damages the wild population. They disrespect the regeneration time for this species, which is around ten years, and collect all of its parts, including the bulbs and roots.
- In Zimbabwe, the baobab has been impacted by the western desire for "super foods", greatly increasing the demand for this resource. Sustainable customary practices have been in place for many years, but are now under pressure and are being eroded. Other environmental factors like the rains failing can further add pressure to the system. The government tries to monitor the situation but they are far from the areas of impact, and often do not have the resources to monitor effectively.
- Quinoa (*Chenopodium quinoa*) was previously harvested by traditional women from the Andes. However now it has become commercialized as it is recognized for its health benefits. Other useful plant species in the surrounding habitat also often suffer in this way, for example the medicinal plant *Aloe vera*.
- For 100s of years Hutsuls communities of the Carpathian Mountains in Ukraine used *Arnica montana* (Asteraceae) for healing themselves. This is a rare species, and when industry discovered its medicinal properties they tried to buy it from local people. As a result it is now red listed, and very hard to find, and local people are finding that now they have none left to sell, or for their own personal use. This in turn impacts the indigenous knowledge of the uses of this plant.
- In Hawai'i, Maile (a wild, native, twining shrub - *Alyxia stellata*) is used traditionally for adornment, decoration and ceremonies. In the past its use was limited by geography (as people could not travel far), the ceremony involved, and family practices. In later years its use was influenced by occupations, such as ranching, as well. It has been made available for sale and has grown increasingly popular, even as its natural range has been diminished by habitat loss. It has even been imported for sale from the South Pacific archipelago of the Cook Islands. Increasingly, it is now grown locally, for sale as ready-made lei (a garland for adornment) and even as a garden plant.
- In Thailand, economic interests have promoted increased hunting of wild species, and also destruction of entire trees, where previously only parts of trees were harvested. These trends are increasing.
- In Canada, communities won fishing rights, but afterwards small-scale fishing quickly became obsolete, as fishing became highly professionalized and commercialized due to a push from the government to regulate the activity. Fishing became concentrated in a smaller and smaller number of companies, and bigger boats and more modern technology became the norm.
- Interest in Ayurveda (a system of medicine with historical roots in the Indian subcontinent) has recently been on the rise in certain Asian countries since it is considered an affordable and effective form of health care that can also be accessed in more remote areas. Nevertheless,

overexploitation of natural resources, often located in remote areas, has been a consequence of this rising trend.

- In Mexico, IPLCs are willing to provide deer meat to the market as a viable alternative to importing it from abroad.
- In Colombia, an association of women works in the forest on the issue of wild plant species, and enables local communities to make a living. It represents an alternative economic approach and could potentially be a good case study for the assessment.

3.4.6. Technology

Key points expressed by participants:

- New technologies have both advantages and disadvantages for sustainable wild species use. Disadvantages include IPLCs losing aspects of traditional knowledge and becoming increasingly dependent on technologies that are often environmentally unsustainable but preferred by younger generations of IPLCs.
- Technology facilitates hunting activities for many IPLCs, but at the same time, it makes hunters dependent on the technology. Perhaps most importantly, it gives people an advantage over the animals. In the past, the indigenous hunter-prey relation was equal as both used to be on the same level. Currently, technology provides the hunter with so much of an advantage that it overpowers the ecological sensibility and the connection to nature.

Examples

- In Yakutia, some elders would forbid the use of GPS navigation devices due to their negative impact on reindeer herders. In the tundra, where the landscape can be featureless, a high level of attention should be paid to details of the landscape. When distracted by their technological devices, reindeer herders face difficulties in identifying details necessary for recognizing their location and often get lost as a result.
- Migration routes of Yakutia's reindeer herder brigades are also subject to change due to technological innovations. Younger brigades prefer to make stops on hills, where the signal received by their mobile phones is stronger. This contradicts past practices, which prohibited visiting hills and mountains because they were regarded as sacred places as they don't catch water and floods, so this is where people were buried.

3.4.7. Climate change

Key points expressed by participants:

- Climate change challenges IPLC adaptation mechanisms and therefore sustainable use. Due to climate change, IPLCs need to adjust their methods of predicting weather, as these sometimes no longer work with changing weather patterns and seasons.
- Government policies can restrict or enhance the ability of communities to adapt to climate change.

Examples

- The experience of IPLCs from Yakutia in Russia shows that more frequent and rapid changes in weather pose a threat to the sustainable use of natural resources for reindeer herders. For them, selection of migratory routes is very weather-dependent. If winter is snowy, they choose the routes along rivers or mountains, but if it is not, they opt for valleys. Climate change and its weather-related impacts may have major consequences on these migration patterns. Furthermore, with climate change and melting permafrost, the corpses of people buried in the mountains are being revealed.
- Another example in Russia comes from impacts of climate change, and a reduction in the numbers of fish that were being caught. Scientists did not know why this was happening so the communities came together to discuss. It emerged that the fish had not disappeared but were moving to the deeper channels in the rivers where the water was cooler. As fishnets only go to depths of 1.5 to 3 metres they were no longer able to catch the fish. Normally the community would adapt to this, but net sizes and depths are regulated by the federal government and so permission is needed to make this change.
- Regarding climate change, one of the Yukaghir elders in Russia says: “nature doesn’t trust us anymore”. For them, climate change means unpredictability. It is a major challenge because their life depends heavily on making constant predictions, for example about animals and their behavior at certain times of year. The Yukaghir in Russia currently have more difficulties in predicting where animals are at certain times and where they are heading due to climate change. For example, on the rivers and marshes of central Siberia, in certain months of winter, the Elk migration season takes place along the Winter Trail. But due to climate change, if the swamp is not completely frozen, moose and other large animals change their route. This has a big impact on communities, their traditional food and nutrition. As a result, hunts are becoming less and less successful. This affects the behavior of hunters, who start to keep the whole animal for themselves after killing it, rather than sharing the meat with the community. They have greatly increased their hunt for other wild species. Due to the thin ice on the river, the fishermen in Russia also often cannot go ice fishing, as the number who fall through the ice increases. This can also raise pressure on other species.
- In Tuvalu, individuals have little influence on what adaptation measures should be taken to reduce the impact of climate change. That communities may have different views was understood by the government during one of the workshops when developing a project on coastal aquifers, where communities expressed that they would rather opt for other types of developments for climate change adaptation.
- One of the participants proposed that authors could look into a thesis of a student from the Solomon Islands who worked on co-producing scientific and traditional knowledge with regard to climate change. He focused on his community, where traditional methods of predicting weather were prevalent.

3.4.8. Negative impacts from policy

Key points expressed by participants:

- Government policies and regulations can be one of the most significant factors impacting sustainable use.

- Sustainable use can be impacted by government policies which limit access to resources, make people uncertain of their status when collecting wild resources, or which otherwise do not create an enabling environment which allows people to make decisions about how they will harvest wild resources. Sometimes traditional, sustainable use of natural resources is criminalized, and traditional harvesting or fishing can be considered illegal because they are conducted without proper permits. This is a highly problematic issue for IPLCs and requires that they fight for their lands and ultimately their survival. This disturbs the traditional way in which people have been managing their resources for hundreds of years.
- Lack of data about positive impacts on wild species from indigenous and local management allows for criminalization and negative visions of traditional management.
- From the sustainability perspective, some policies can be dangerous or harmful, in particular land use policies.
- On the other hand, insufficient policy regulations at the national and local level can also be an important negative driver. This can be the case when policies address cultivated plants, such as maize or potato, but not wild plant species.
- Projects and developments that aim to help communities are often steered by political objectives rather than local priorities. There is a need for increased political commitment to collaboration with citizens. Engaging IPLCs is critical for strengthening genuine local ownership and empowering people.
- Nature protection and sustainable use of wild species is hindered in countries where social institutions, including NGOs whose work is of relevance to IPLCs, are weakened. Also, governments often create new types of NGOs, trying to represent IPLCs at national and international levels. Co-management in such a socio-political situation often proves very difficult.
- Changes in governments affect, both positively and negatively, ongoing indigenous and local initiatives aimed at promoting sustainable use of wild species, as policies and approaches can change very quickly, making continuity and smooth progress difficult.
- Geopolitics can also have significant impact on the sustainable use of wild species.
- Protected areas can negatively impact sustainable use, reducing IPLCs' ability to practice traditional activities in known places that they have used for generations. This reduces their ILK about how to utilize species sustainably, as well as reducing or halting the transfer of knowledge to future generations.

Examples

- In Russia the state is the owner and regulator of all the land, including animals and fish. This is one of the main problems for all territories where indigenous peoples practice traditional lifestyles, including Yakutia Autonomous District. Yakutia is recognized as one of more progressive regions for indigenous peoples' rights and issues, as Yakutia has the status of a "Republic", and has its own legal system. When the federal government makes decisions mostly this is informed by scientific organizations, and often the scientists do not have enough information on local ecosystems and cultures. This is why indigenous peoples' groups are always requesting that scientists work with indigenous peoples when doing their research and making recommendations.

- In Russia community members need special permission or a permit for traditional activities, e.g., for fishing or hunting moose or reindeer. The cost of permits, and also the time involved in securing them, prevents some people from carrying out traditional activities. As permits also have to be bought for children, this also impacts the ability to pass on knowledge to younger generations.
- In Canada, national and provincial bureaucracy to access forest resources is so difficult that it creates an underground (illegal) market for products derived from wild species, which can lead to unsustainable exploitation.
- In Russia, federal guidelines are set for what people can eat, including potatoes and cabbage, which are not part of the indigenous diet. Too often, indigenous peoples and nature protection authorities are opponents. Often conservation measures are highly restrictive for indigenous peoples, which is difficult but can sometimes be understood as the goal is to protect wildlife. But then if industrial development becomes interested in an area there is little consideration for conservation.
- An example of a policy decision based on science that had unintended consequences at the local level is the introduction of salmon to some rivers in Russia. This was meant to make life better for indigenous peoples, but in practice salmon were too strong for the nets of the indigenous peoples, as previously they caught whitefish which would stop when they became entangled in the nets and therefore the nets did not need to be pegged. Another issue is that with whitefish, people were able to catch what they needed over several days and then move back to the main village and process the fish. Salmon however need to be processed more quickly, often within five hours, or they become bad. The indigenous peoples did not know this, and they became sick from eating bad salmon. People were very angry about the introduction of the salmon but luckily after twelve years the salmon disappeared. Now the indigenous peoples have asked that no more experiments of this kind are done.
- In France there is no specific status for plant gathering, and for a long time the government did not consider that the activity exists. Now however it is changing – there is an association of French Wild Plant Collectors (IFC) so they are now in contact with the Ministry of Environment to see how the activity could be regulated. Among plant collectors there is some conflict, as some think there should be some regulation and others are against it. No rules have been imposed for the activity as yet, but there is a list of protected species in both France and its territories, and there are also some spaces like regional or national parks where it is forbidden to collect plants. In other areas it is less clear. For plant collectors, if they do not own their own land they are in a vacuum and it is not clear what is allowed.
- For hunting in France, there are rules, permission is needed and hunting can only take place in some periods of the year. There are private lands where people will come to hunt prestigious animals, and will pay the owner to go hunting there. Otherwise anyone can buy a permit for hunting in public forest but the hunting season is limited to allow for reproduction by the animals. Some species that are supposed to be pests can be hunted with no quotas or restrictions (e.g. for a long time wolves were considered to be a pest) but for some species there is a quota.

- In Brazil, policies and processes were developed in the past to encourage sustainable management of wild species, where the Ministry of Environment often collaborated with IPLCs. With political changes in the government, some of the past projects and initiatives were suspended or aborted, partly through cuts in financial resources. In answer to this, IPLCs organized themselves in councils to defend their lands and their right to sustainably use wild species. External pressure from economic partners for sustainability standards and certification could be a potential solution, e.g., in the case of Arabic countries, which are the main importers of Brazilian meat.
- In Asia many progressive laws are slowly being diluted and are becoming more regressive, making activities such as harvesting honey illegal. This impacts indigenous knowledge transmission as youth cannot learn by experience. In some places this is causing migration away from traditional areas.
- In India (and also Canada and some other Asian countries), existing laws and regulations are quite strict, but the current government plans to loosen regulations, which potentially puts biodiversity and people at risk.
- In Zimbabwe, National Tree Planting Day (more here <http://www.forestry.co.zw/8044-2/>) is commemorated each year on the first Saturday of December, an initiative inspired by the World Bank. Despite good intentions and objectives of this campaign, it may lead to negative consequences on native vegetation. The communities are often encouraged to plant eucalyptus or other gum tree species, which are very water consuming and suppress other trees. Gum trees are preferred to indigenous tree species because they grow tall and quickly, but this happens at the expense of local ecosystems.

3.4.9. Co-production and co-management

Key points expressed by participants:

- Dialogue and increased collaboration within and between communities, and between communities, scientists and states, can be effective for promoting sustainable use.
- Participants highlighted that scientific studies about natural resources are also key, even for IPLCs, but they should be used in a respectful way that does not disempower IPLCs and ILK.
- Use of ILK in scientific work on environmental issues is crucial for ensuring sustainable use of wild species. In this regard, the IPBES Global Assessment has significantly advanced efforts to recognize the role of IPLCs in safeguarding wild species and biodiversity as a whole.
- The right governance mix is critical to ensure sustainable use of wild species. Local arrangements should be combined and well integrated with national arrangements. Moreover, differences between governments and local communities in defining sustainability indicators should be eliminated.
- There are positive examples of conservation aimed at enhancing sustainable use of wild species. At the same time, if IPLCs are excluded from resource management in a designated conservation area, sustainability can be negatively affected. Biodiversity cannot then be managed properly, creating a risk that it will begin to decline. IPLCs are directly impacted, losing access to their traditional land.

Examples

- Mushroom harvesting in many parts of the world was highlighted as important to explore, noting that mushrooms are important for food but also often medicines, spirituality and other cultural uses including rituals and festivals. In Mexico, mushroom collection is well regulated; communities that collect mushrooms develop management plans with harvest limits and are assigned codes which allows them to harvest and sell the mushrooms. There is a lot of information available about mushroom harvesting in Mexico.
- In Yakutia in Russia, IPLCs organize special public hearings to disseminate information on community-based projects. In addition, they focus on the local application of international work that recognizes traditional knowledge and expertise.
- In India, forest services used to consist only of degree holders with previous experience in the forest industry. However, the approach is now changing and the government hires more local and indigenous people, recognizing their extensive knowledge of the forest ecosystem and its resources, as well as biological processes taking place therein.
- Similarly, in Australia, Aboriginal people are now employed to control forest fires through their traditional management systems, thus protecting wild species.

3.5. Chapter 5. Future scenarios of the sustainable use of wild species

3.5.1. Introduction

Presenter: Denise Matias

The main questions posed to the participants were the following:

- Do you have a vision of future for your community and how you could get there (considering political, technological, social and environmental perspectives)?
- Given current conditions, what is the scenario that your community is heading towards?

3.5.2. Indigenous and local knowledge and traditional livelihoods

Key points expressed by participants:

- For many IPLCs, ILK and traditional livelihoods should serve as a foundation for their future management and relationships with nature, and governments should support this vision.
- IPLCs often assign sacred, aesthetic and other values to wild species, which can support their conservation. These should be carried into the future.
- Land-based learning, including ceremonies, is crucially important for the future of ILK.
- Challenges for the future of IPLCs, ILK and traditional livelihoods include changing needs and expectations of some IPLCs, diseases, use of medicines and poverty.
- Growing disconnection from nature is a growing issue for many IPLCs, exacerbated by the use of modern technologies. To face this challenge, striving to preserve traditional knowledge and maintaining spiritual relationship with nature is key.

Examples

- In Hawai'i, native people are working hard to restore order in the human-natural system, mainly through establishing community-based resource management areas. At Ka'ūpūlehu, it took 18 years of sharing people's stories with government agencies and the wider society to establish one such community-based area. There, the challenge was to protect their marine resources. The government agreed to a designated area for fish to rest and breed for 10 years, to be managed by the local people with the help of an NGO. Excellent outcomes of this decision were seen already within the first three years, when fish populations substantially increased. Now, the vision of the people is helping and advocating for other communities to replicate this success.
- Experiences in Tuvalu are similar to the ones in Hawai'i. In Tuvalu, they follow an approach that natural resources should be used without overexploitation. There is a lot of support for this view from the local people, who care for environment. Given the relatively small size of Tuvalu's land area, the approach is mainly implemented through a network of marine protected areas.
- In Argentina some IPLC communities have an important spiritual connection with vicuña (*Vicugna vicugna*), a species intensively hunted by outsiders (authorized by the government through licenses). IPLCs fear that vicuña will get extinct in the future, and the spiritual connection will be lost forever.

3.5.3. Livelihoods

Key points expressed by participants:

- Many IPLCs do want income for their communities, but in culturally appropriate ways. IPLCs are more inclined towards intensive exploitation of natural resources when they have difficulties sustaining their livelihoods and survival. However, there are risks to moving towards commercial exploitation of resources.
- Often, industry works against local markets, which impacts people and biodiversity, and this looks set to increase.

Examples

- Decrease in the global fur trade has a negative impact on Siberian indigenous hunting, which also leads to reduced meat for communities to sell. Many IPLCs rely on both sources of income.
- In the Baniwa community in Brazil, both men and women are handicraft workers, which helps to access markets, earn money and preserve their traditions, now and into the future.
- In Brazil, although the government sometimes appears to see indigenous peoples as barriers to development, communities often do want development whilst preserving human wellbeing, culture and the environment. Governments and business should work with indigenous peoples in this regard. For example, fishing tourism inside indigenous land is a potential economic activity. Tourism businesses can work with indigenous peoples to learn where to fish, where not to fish, and to build on existing indigenous peoples' infrastructure to make the enterprise more efficient and less destructive. Some communities have also had projects for commercializing arts and crafts, for example basketry, in ways that preserve ILK and culture but also provide income for indigenous communities. A priority for the Baniwa people is also to have better infrastructure that would connect the community with the main cities, because now they are very isolated.

- In some indigenous communities in Brazil, everyone in the community has their house and space for agriculture. However, today, people buy more and more from markets and farming is less and less common among IPLCs, mainly due to growing individualism and loss of culture. This is very visible in Mato Grosso (Southeast region of Brazil), where some indigenous peoples have become entrepreneurs, selling their territories.

3.5.4. Policy

Key points expressed by participants:

- Policies are one of the major factors influencing future scenarios.
- Within this context, recognition of the rights of indigenous peoples is crucial.
- Policies should also properly regulate the extraction of natural resources.
- Current policies and reality on the ground, which revolve around industrial or commercial use or conservation, often do not suggest positive future scenarios for sustainable use.
- Future scenarios should explore the issue of unequal partnerships between IPLCs and researchers, business and decision-makers.
- Carbon markets need to change as they do not coincide with local realities.

Examples

- Under current policies, which mainly prioritize conservation and not sustainable use, future scenarios may not be very positive in Kenya and Siberia. The current trajectory may lead to rapid species extinction with devastating impacts on people and nature. An alternative scenario would entail a change in governance and improved perceptions of traditional knowledge, conservation and restoration, and use of wild species. It also would be more inclusive of young people. It would support development of guidelines on sustainable use and increased commitment to community-based management.
- The current likely future scenario is very negative for IPLCs in Thailand, where policies discourage sustainable use by imposing strict rules and criminalizing people. The Karen people of northern Thailand want to continue managing their natural resources and passing knowledge to younger generations in their own way. Together with other IPLCs, the Karen want to actively participate in international fora such as IPCC, IPBES and CBD, and if possible in regional dialogues.
- In the Philippines, IPLC organisations follow the CBD guidelines, implementing an ecosystem-based approach. This is complemented by a strong spiritual component when implemented in indigenous territories. There are two areas that have been doing this successfully for around 18 years. However, Philippines also criminalizes environmental and human rights defenders, and a number of deaths have been recorded.
- In France, areas that provide access for use of wild species are not very numerous. The majority of land is occupied by agriculture and protected areas, where harvest of wild species is prohibited. Future scenarios of sustainable use depend on the areas where wild species are collected, especially for pharmaceutical and cosmetic purposes. Many species take a long time to grow and regenerate. Maintaining sustainable harvests is also difficult because there are no studies on how much can be collected to keep within sustainable limits (it may be around ten per cent of a plant

population). Also, manual harvest of wild species may be better than the use of mechanical tools. Hand picking helps to protect biodiversity and ensures a better connection with nature.

- In Canada, the federal government has a legal duty to consult indigenous peoples before any activity, including policy development. However, often this does not work in practice, as it is not promoted enough by the federal government. When it does happen, it is often very weak. To change this in the future, a bottom-up initiative is needed.

3.5.5. Environmental change

Key points expressed by participants:

- Climate change poses a major threat to IPLC livelihoods and knowledge in the future.
- Impacts of invasive alien species may have significant impacts on future scenarios of sustainable use. Communities need increased support at the local level with regard to the challenges posed by invasive alien species. In addition, more studies may be needed on the impacts of invasive alien species on people's health and traditional food systems.
- Some IPLCs are concerned about synthetic biology, as IPLCs are afraid of the impacts of genetic transformation due to its high unpredictability. Many IPLCs believe that results of such practices are very uncertain, and it is thus important to treat them with caution.
- Sustainability concerns should be taken into consideration by polluters, because they are the ones who affect the quality of resources.

Examples

- Deforestation in the tundra is also among future threats, resulting in increased frequency of flooding events, soil quality degradation, and loss of traditional knowledge.
- In France, pollinators are currently decreasing, and this is reflected in declining populations of wild plant species.
- In Tuvalu the brown alga *Sargassum polycystum* has a large impact on local people and species, for example fish being poisoned. One of the reasons for the increase of such species is ballast water discharges by ships.

3.5.6. Recommendations and actions for the chapter

- Participants noted that IPBES assessments usually consider only scientific scenarios, not those developed by ILK holders. To change this, it would be necessary to find a large amount of scenarios written down by IPLCs. Participants of this dialogue were thus encouraged to help identify grey literature on scenarios.
- It was recommended that the IPBES TSU for scenarios and models could discuss with IPLCs how to better include ILK in IPBES processes of scenario development.
- ILK indicators could also be developed, which could be very useful for IPBES assessments and other processes.
- Participants also highlighted the following ideas regarding the development of ILK holders scenarios:
 - The Karen of Thailand would be willing to contribute with knowledge and information, including that coming from the people on the ground;

- Some participants have already participated in studies on scenario creation, and are willing to share them with the assessment.

3.6. Chapter 6. Policy options and responses

Presenter: Shalini Dhyani

3.6.1. Introduction

The following questions were used to frame the discussions:

- Based on evidence presented in earlier chapters, what are the benefits of including ILK and IPLCs in approaches to governing sustainable use of wild species and assuring nature's contributions to wellbeing and good quality of life?
- What are some examples of approaches to governing sustainable use of wild species that integrate IPLCs?
- What are some examples in which ILK is incorporated into approaches for governing sustainable use of wild species?
- What tools are available to involve IPLCs in decision-making?

3.6.2. Overall

Participants highlighted the following overarching points:

- It is important to document best practices in terms of policy, but also to look at the ways examples are playing out in reality on the ground. Often implementation is weak or has unintended consequences on the ground.
- Overall, there is good progress at the international level, but the connection between policies and guidelines at the international level and the national level is often very weak.
- There are also many good examples of sustainable use institutions and decision-making at the local level, but often these are not recognized or are hindered by national policies.
- Policies, governance and good practices for transformative change could be an important focus.
- Sustainable use is an economic and social issue, not just an issue of wildlife management.
- The assessment will be a global-level report, and it may be hard to incorporate local level practices and management. One suggestion is to look at 50 case studies, to try to look at commonalities and differences, and to try to highlight the main themes.

3.6.3. International level

Key points expressed by participants:

- Overall, participants noted that often it is in international fora and international guidelines where the best policies, guidelines and tools can be found. Many indigenous peoples focused their work to make progress in international law as they could not do anything at the national level. As a consequence, over 20 years indigenous peoples issues have advanced at the international level, when often there was no possibility to work at local and national levels.

- However, participants also noted that, in spite of the often-impressive progress at the international level and an obligation for countries to implement international laws at the national level, implementation at the national level remains weak, and policies are often ignored, or become diluted or are interpreted in ways that do not benefit IPLCs. In general, often large-scale corporate rights take precedence over local economies.
- The sustainable use assessment could highlight good policies and guidelines at the international level, but it should also highlight the lack of political will to implement them, and the need for harmonization between national and international law.
- Participants stressed that sustainable use of natural resources is a fundamental human right, even though it usually loses to more powerful corporate rights. Mechanisms should be in place to monitor and evaluate adopted policies and conventions.
- Work at the international level could include a focus on encouraging national and regional policies that facilitate and protect indigenous management of wild species. This could be based on case studies that demonstrate the effectiveness of sustainable management of wildlife by IPLCs.
- There is also a need to look at how indigenous peoples would want to see that implementation happen. For example, protecting local food systems and livelihoods is crucial. There is also a need for co-production of knowledge and co-production of policies, which reemphasize ILK and land and food practices.
- It was noted that in some cases there are too many international agreements, and that some contradict local beliefs and cultures, and governments can be lost on how to implement them all. For example, attempts to address poverty can lead to policies that encourage IPLCs to degrade resources for economic gain.
- To an extent the international system also therefore needs a bottom-up approach, observing local realities.

Examples

- Examples of largely positive international policies and processes include:
 - United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP): recognizes rights of lands and resources, and free, prior and informed consent;
 - International Labor Organization Convention (ILO): ILO 169 on rights of Indigenous Peoples;
 - The Local Communities and Indigenous Peoples Platform (LCIPP) in the United Nations Framework Convention on Climate Change (UNFCCC): a first for indigenous peoples in terms of participation in governance and decision-making;
 - IPBES: There is also the possibility to include more indigenous peoples on the next task force on ILK for IPBES, and IPLC issues were well represented in the global assessment;
 - Convention on Biological Diversity (CBD): especially article 10c “Protect and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with conservation or sustainable use requirements.” The Conference of the Parties to the CBD has promoted a plan of action on customary sustainable use. Governments agreed that customary use will be respected and implemented. CBD guidelines on customary and sustainable use are a good tool at the international level;

- Food and Agriculture Organization (FAO): Small scale fishery guidelines (which mention UNDRIP) and guidelines on water, species, rights of indigenous peoples;
- Interamerican Declaration on Indigenous Peoples Rights;
- Some conservation organizations have adopted indigenous peoples policies to work with indigenous peoples on the ground. An example is the Durban Action Plan Objective 5 “*The Rights of Indigenous Peoples, Mobile Peoples and Local Communities Recognized and Guaranteed in Relation to Natural Resources and Biodiversity Conservation*”.
- Examples of issues with how international policies are implemented include:
 - The CBD has guidelines on wild species, but it may be unclear where they would fit within overlapping policies;
 - CBD customary use agreements are often not implemented at the national and local levels. Some indigenous peoples have been jailed because they used species that are protected nationally, or they used a national park. Often traditional lands of communities are now in private hands or are national parks. Indigenous peoples, particularly women, have knowledge of these areas and go there to gather resources, but they risk legal issues and sometimes their lives;
 - UNDRIP recognizes rights of lands and resources, and free prior and informed consent, but at the national level, governments own resources and communities often have no rights;
 - FAO guidelines are voluntary and governments often choose not to follow them;
 - In the Nagoya Protocol, the right to exchange genetic resources among communities is critical, but is not being implemented. There is a huge interest in genetic material of animals and plants, and if a community has no right to exchange these then the community will have no rights in relation to genetic resources;
 - Indigenous peoples were successful in being recognized within the small-scale fisheries guidelines, and the Global Environment Fund (GEF) and other big organizations were then involved, but it seemed that the goal was for small-scale fisheries to join the global economy, rather than to protect small-scale fisheries and indigenous peoples.
 - As shown by a recent report by the UN special rapporteur, on-the-ground implementation of conservation organizations’ policies for indigenous peoples is often very weak, and human rights violations continue to occur around protected areas.
 - An example of international policies failing to recognize local realities comes from Brazil, where some children are not allowed to go to the fields as this is considered “work” in international law, so there is no transmission of knowledge in this setting.

3.6.4. National level

Key points expressed by participants:

- Participants highlighted that participation for IPLCs is more difficult to achieve at the national level than at the international level. In general, at the national level indigenous peoples have to negotiate a lot to be recognized. The national level is the crucial break in the chain between many good practices taking place at the local level, and good and progressive agreements and norms at the international level.

- For various reasons, some countries do not recognize the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), which directly affects land tenure rights of IPLCs, and consequently, the sustainable use of wild species therein.
- Participants recommended that national laws should be reviewed to see if they facilitate or obstruct sustainable use.
- Participants noted that a lot depends on the context and political climate at the national level – a change in government can change the situation.
- Following human rights trends on the ground is very important, to track how and if national level policies are being implemented, and whether they are benefitting or harming IPLCs and sustainable use. Attention must be particularly paid to abuse and deaths of indigenous resource users and environmental defenders.

Examples of national policies that may be of benefit to IPLCs:

- In the Pacific, locally managed marine areas (LMMAs) are an effective mechanism for wild species management as it gives communities ownership. In Tuvalu, each island has an island council (*Kaupule*). If the government intends to extract resources or intervene in any way, it must go through the local government on the relevant island, which in turn will consult with *Kaupule*. The island council will then consult with island community members (*Falekaupule*). The decision is made by island communities and then channeled back to *Kaupule* which advises the government.
- In India, informed by India's biodiversity act, it is prohibited to harvest any medicinal plant in a protected area, unless you are a traditional healer or local community, in which case sustainable harvesting is allowed. This allows knowledge to be transferred to younger generations.
- In many Latin American countries indigenous rights are recognised in the constitution, although implementation may be weak.
- In some countries, e.g., Malaysia, there are indigenous peoples in ministry-level posts. This does not solve all issues, but representation still is important at the decision-making level. Some countries also have institutes of native affairs, which provide space for people to discuss IPLC issues.
- Kenya has a customary use law. This covers communities' tenure rights, which includes access and control.
- The Philippines have the Indigenous Peoples Rights Act, which recognizes rights to territories, but it still depends on the strength of a community to assert the law. On indigenous lands belonging to Igorots (an indigenous group), the Igorots are asserting their management system in terms of wild species. However, some indigenous peoples in small island groups do not manage to do this and their land is conceded to corporate farming. There is a growing issue with agriculture advancing into forestlands, destroying habitat for many species. For industrial development, consent or access and benefit agreements are not always obtained from indigenous peoples. Nevertheless, elders are still very strong in many areas of the Philippines. In some provinces people are trying to get customary forest laws to become legislation, but this has not been approved at the provincial level. There is some government regulation, e.g., wild forest products are being banned, and there is always conflict and opportunity for dialogue.

- Some education systems now have aspects of indigenous programming, for example in the Philippines, but often it is up to the communities themselves to try to make this meaningful. Universities, including the Intercultural University in Mexico, are also now trying to build in more indigenous knowledge as well as respect and information about indigenous cultures.
- Mexico has 16 ministries involved in implementing the 2030 Agenda, and they all have programs aimed at working together. In addition, following the recommendations of the CBD, the country intends to promote biodiversity mainstreaming across sectors such as forestry, mining, or fisheries. This kind of political commitment is a critically important factor enabling further development of adequate policies and programs, including ones for IPLCs to support sustainable management of natural resources in their territories.
- In Mexico, sustainable use is often well regulated. There is a national law framework, national wildlife law, forest law and rural development law. Community members can harvest for personal consumption and sell a small amount, but if they wish to sell more they need to have a management plan. There is also a national network of wildlife managers, which includes not just indigenous peoples, but also business and other actors working on wildlife management.
- It was noted that forest certification can be a good example of a policy tool that can be used to protect forests, as well as customary rights and use of wild species, for example mushrooms and berries. For example, forest certification was used as a tool to protect the customary rights of Komi people in the republic of Komi (Russian Federation). The conflict with the customary use of game resources and forestry companies was solved with the help of NGOs and forests certification schemes. However, it was also noted that in Latin America the cost of certification has been a problem, and often certification is only done for commercial species and not native species, which can stimulate the replacement of native vegetation with commercial forests. The parameters of certification often also do not allow for customary use and management systems, so it has not worked for many indigenous communities.

Examples of national policies where implementation may be weak or harmful:

- In some African countries, there are good policies for biodiversity, but they tend to be scattered across different spheres, including agriculture and wildlife, with little coordination between them. There also tends to be a lack of recognition of community activities and co-management, and often there is no access control or rights. Traditional activities such as hunting can also often be considered illegal.
- In Eastern Europe there are some good policies, but they are often segregated and do not work together, or are inconsistent between each other e.g., for forestry or fisheries.
- There are very progressive laws in some parts of Asia, but also there are attempts from policy makers to bring out laws that dilute some of the more progressive laws.
- There are good tools and documents around ethnoecological expertise, but they are not widely used and they only have voluntary status. They can however be important for IPLCs in trying to influence mining companies, for example.
- Laws created to protect people can lead to a loss of access to resources at the local level. In Oaxaca, Mexico, people from cities were being poisoned from eating wild mushrooms, so the

government prohibited mushroom collection. But many IPLCs knew which mushrooms were safe, and were safely harvesting them, but were also caught up in the ban on mushroom collection.

- National education and linguistic policies can also have a great impact on sustainable use of wild resources. In France the French language was imposed over local languages in 1914, and as a result knowledge of plants that was encoded in local languages was lost.
- The assessment should also keep in mind transboundary interactions between countries. For example, when some countries put a ban on logging e.g., China, Thailand, logging is often pushed to other countries like Nepal, Cambodia and Mongolia, which then supply wood to these countries.

3.6.5. Local level

Key points expressed by participants:

- To enhance sustainable use of wild species there is a need to look at good practices and lessons that can be learnt at the grassroots level. Many communities are doing good practices by themselves, and this may be supported or undermined by national-level policies.
- Communities often have good practices for sustainable use, and policymakers may acknowledge that the practices are good, but they are often not recognised within legal frameworks. The challenge is then to create new national laws that effectively support community practices.

Examples of local level practices that are supported by or are working with national policies:

- In Zimbabwe there are some good examples of resource management in forests where policies support joint sharing by local communities and where sustainable resource use is a result. There are a number of case studies. Also there is the Campfire Programme whereby communities who live near national parks or wildlife are incentivized to protect the animals, as they get a share of the profits, e.g. if a sports hunter kills a lion.
- The Tagal river management system in Borneo is a traditional management system whereby fishing is only allowed at specific times, and in specific areas. It is recognised as good practice and is recognised by law, and could be used as example of law recognised by government.
- In Hawai'i, at the island level the county controls public access to the shoreline, but they do not contribute to the management of the resources that then become popularly accessible. Native communities are working with them on a case-by-case basis, to caution them about unlimited public access to areas that were previously limited and only accessible to native peoples. Last year work was started on community-based subsistence forest areas, reclaiming pasturelands using native upperstory and understory trees, shrubs and vines, as well as fruit trees that are not invasive and are used in local diets. At the federal level the community at Ka'ūpūlehu has been successful in a legal intervention arguing that certain seaweed beds, fish grounds and shellfish nesting areas be analyzed using National Historic Preservation Act criteria, setting a national precedent. Communities are committed to enhancing cultural continuity through traditional and customary practices including ceremonies, handicrafts and arts, natural resource management and use. Communities are now working together, partly through organisations such as Kua'āina Ulu 'Auamo (KUA) to help one another to engage in civic affairs. For example, communities come

together to the state capital to support the recognition of community-based resource management areas.

- In Oaxaca, Mexico, research has shown the importance of fire management to pine forests, and this could be a good future area for policies relating to sustainable use. Also at the national level in Mexico IPLCs showed that they can manage sustainable use according to national laws and international standards, and in so-doing IPLCs obtained rights to maintain customary use. More research and evaluations could further provide evidence for IPLC sustainable use, leading to more rights.
- Some communities in Mexico may have a mix of traditional occupations and economic ventures, including forest certification, timber products, etc.
- In Indonesia, upon the review of the 1999 forestry law (Act No.41/1999), indigenous peoples argued for their rights over their customary forests. The legislation regulating the management of forests in the country was successfully changed, returning the rights to the people. This success story could encourage IPLCs to organize themselves, share experiences between regions and countries, and foster solidarity and support, including from NGOs and governments.

Examples of local level practices that are hindered or prevented by national policies:

- Some IPLCs do degrade the land, but often this is due to their options being limited by policies, land loss and other factors, or due to a loss of enabling factors.
- Traditional agricultural systems in Thailand were disrupted when the government decided that people were “poor” and needed to intensify their farming, by cutting down trees and using pesticides. Farmers fell into debt, and now cannot go back to the traditional systems that had previously been sustainable. A more effective strategy for improving community wellbeing would have been to support what was already in place in terms of traditional, sustainable systems. For example, in Thailand in the past if people planted trees on their own land, they could not legally harvest the trees, but now after some national debate they are allowed to plant and harvest trees on their own land. However, in the wider forest if a community member plants a tree it belongs to the state. Policy and laws need to be created to address this, and policymakers may need to visit the areas in question to see the practices on the ground.
- In France, some species of plants are considered endangered and it is forbidden to pick them, but they can still be picked on farmland. This is contradictory because they are also endangered on agricultural land. This situation is due to a very powerful agricultural lobby in France, and they are allowed to pick wild plants, but professional pickers are not allowed to pick them. These exceptions and contradictions should be redesigned to better protect plants. There are protected areas such as regional or national parks where plants are fully protected, but these are only a very small area.
- In the northern Himalayas, a sacred landscape called the “Kailash Sacred Landscape” is managed by three countries. Parts in Nepal are managed by local institutions, where leaders are chosen through elections. Pasturelands are divided into four categories along gradients: summer, rainy, autumn, winter. Certain areas are allocated for different months, so all animals have to spend time during the summer season in a specific pasture, and if they are using pastureland in the wrong season they get a big penalty. People take oaths in the local monastery that they will follow

rules, for example that they will not pick up any green twigs; bundles are checked to see if they contain dry twigs. This has been happening for many generations there. But this system has not been recognized by national institutions. (See the IPBES report on the Asia-Pacific regional ILK dialogue for more information.)

- In some cases, resources are over-harvested e.g. caterpillar fungus from different parts of the Himalayas, and work needs to be done to look at how to manage the resource sustainably. If local communities are allowed to manage, and can rotate harvests, there is potential, but often governments do not recognize indigenous management.
- Conflicts can occur at the community level where external actors try to take advantage of existing divisions within communities, for example by trying to offer compensation and payments to one section of a community.

3.6.6. Connecting local, national and international levels

Key points expressed by participants:

- Participants highlighted a need to find ways to make national and local governments respond to international agreements.
- There also need to be systems for communicating directly with local people on the ground so they know their rights and how to protect their own systems of wildlife management.

Example

- A example is the dialogue on the IPBES pollination assessment that was held by communities in Thailand with Swedbio and UNESCO in 2019. After the dialogue, government officials were invited to attend a policy day. In this way the government became more aware that international organizations and indigenous peoples are in agreement, and that there is recognition and respect for indigenous livelihoods and knowledge.

3.6.7. Protected areas

Key points expressed by participants:

- Protected areas and customary use could be a focus area for the assessment and chapter 6 in particular, looking at all forms of documentation.
- In negative examples, IPLCs are banned from accessing national parks or the resources within them. In extreme cases, park rangers may kill, wound or arrest IPLCs who are trying to carry out traditional activities. While some conservation organizations have adopted progressive policies on indigenous peoples, implementation on the ground often remains weak.
- Gender perspectives become increasingly important, as often it is women who go into protected areas to gather wild resources (e.g. 70% of wild-species based livelihood resources in Asia comes from women), and they are most at risk of abuse from park rangers.
- However, protected areas that allow IPLC access and use, or are created by IPLCs themselves, offer avenues for positive outcomes and increased protection for biodiversity and human wellbeing.

Examples

- In Brazil there are different types of protected areas which people are allowed to use to different degrees, for example some cultivation may be allowed. However, there is a general understanding in the government and society that protected areas should be untouched. However, studies have shown that protected areas with indigenous peoples are often healthier and more biodiverse than areas with no indigenous peoples. There is also sometimes a perception that there is a lot of land for a small number of indigenous peoples. However, this is not always the case, particularly in the south and east of Brazil.
- Australia's Indigenous Protected Areas are also an important case study, and reviews should be done of studies of their effectiveness.
- In the Philippines the system of protected areas, including marine protected areas, often does not work well as economic needs take precedence, causing the protected areas to be conceded to mining companies and other interests. The Indigenous and Community Controlled Areas (ICCAs) instrument proved useful, and many communities declared their lands as ICCAs and were able to establish concessions and no-go areas. There is hope that this will be drafted into national law, but even without being law the ICCA designation is already being respected. Among indigenous peoples there has been erosion of customary sustainable use, but now there is a growing consciousness about the need to strengthen, revitalize and assert customary use. This interest, confidence and pride is supported by a national organization for indigenous peoples, as well as recognition of customary use by indigenous peoples at the international level, e.g., by the CBD. Customary use is allowed in ICCAs, and ILK may be a main governance mechanism. Communities use the area, but often only for gathering plants and herbs, whereas in protected areas designated by the state often no use is allowed.
- Bikin National Park in Russia is a good example of forest management and protection. Indigenous peoples are involved in a full system of traditional management with food restoration, protection of rivers, and full territorial practices, including wild species. In addition, indigenous peoples engage in the development, adoption and implementation of decisions on the protection of nature, and coordinate programmes and projects in the national park whose implementation may have an impact on their traditional way of life. In the Russian arctic there are also very good examples of local management of tundra species, but these are not recognized by the government.
- In Uganda there were problems with IPLCs not being involved in the development of policies and national parks. The Batwa lived in the Bwindi Forest but they were removed. However the gorillas began to have trouble eating bamboo, as the community used to cut bamboo, which caused shoots to grow which the gorillas could eat. The Batwa now often work in tourism, where their tracking skills are very useful.
- A new type of World Heritage site could be proposed, "traditional sustainable land use sites", where symbiosis of people and nature is key. UNESCO Biosphere Reserves do already serve this role, looking at how people can live sustainably in some areas.

Annexes

Annex 1: Recommended resources

Sources of information

A number of sources of information were recommended by participants, including:

- Publications of Forest Peoples Programme:
 - Bangladesh: Resuscitating the Sundarbans: Customary use of biodiversity & traditional cultural practices in Bangladesh. ([here](#))
 - Thailand: Indigenous knowledge, customary use of natural resources and sustainable biodiversity management: Case study of Hmong and Karen Communities in Thailand. ([here](#))
 - Cameroon: Protecting and encouraging customary use of biological resources by the Baka in the west of the Dja Biosphere Reserve. ([here](#))
 - Guyana: Wa Wiizi - Wa Kaduzu. Our territory - Our Custom. Customary Use of Biological Resources and Related Traditional Practices within Wapichan Territory in Guyana: an indigenous case study. ([here](#))
 - Suriname: Marauny Na'na Emandobo / Lokono Shikwabana ("Marowijne – our territory"). ([here](#))
 - Venezuela: Protecting and encouraging customary use of biological resources: The Upper Caura, Venezuela. ([here](#))
 - Synthesis report: Customary sustainable use of biodiversity by indigenous peoples and local communities: Examples, challenges, community initiatives and recommendations relating to CBD Article 10(c). Working draft of a synthesis paper based on Case Studies from Bangladesh, Cameroon, Guyana, Suriname, Venezuela, Suriname and Thailand. ([here](#))
- Proceedings from the previous IPBES ILK regional and pollination dialogue workshops (available on the IPBES website: <https://www.ipbes.net/ilk-publication-resources>)
- Participants also shared reading materials about human rights violations related to protected areas, including cases of abuse in Nepal and India, which will be shared with author teams.

Organizations that could be engaged in the assessment

Participants suggested a number of organizations that could be involved in the assessment:

- Biowatch South Africa
- Ecology Action Centre (Sadie Beaton)
- Indigenous Women and Biodiversity Network (Lucy Mullenkei)
- KAIROS Canada (Rachel Warden)
- KAIROS Canada (Gabriela Jimenez)
- Kamehameha Schools (Jason Jeremiah)

- Kua'āina Ulu 'Auamo (KUA)
- La Organización Femenina Popular (OFP)
- La Fédération des Paysan-Herboristes (fpaysansherboristes@gmail.com)
- L'Association Française des professionnels de la Cueillette de plantes sauvages (AFC)
- Le Conservatoire botanique national des Pyrénées et de Midi-Pyrénées (CBNPMP)
- Le syndicat SIMPLES
- Tebtebba (Florence Daguitan)
- The Nature Conservancy of Hawai'i (Chad Wiggins)
- The Pacific Community (SPC)
- The Pacific Islands Forum
- The Secretariat of the Pacific Regional Environment Programme (SPREP)
- UNESCO's network of biosphere reserves
- United Organization for Batwa Development of Uganda (Peninah Zaninka)
- WWF
- Zimbabwe Environmental Law Association (ZELA)

Annex 2: Agenda

Monday 6 May	
8h30-09h00	Registration
9h00-9h30	Opening, introductions
9h30-10h30	Introduction to IPBES, including work on ILK (IPBES secretariat) (15 mins) Introduction to the sustainable use assessment: aims, methods, structure, timelines, final product, ILK in the assessment (co-chair) (30 mins) Discussion (15 mins)
<i>10h30-11h00</i>	<i>Refreshment break</i>
11h00-11h30	Aims, methods and agenda of the dialogue Brief presentation on agenda and discussion Discussion on Free Prior and Informed Consent
11h30-12h30	Discussion: IPLCs and the sustainable use assessment <ul style="list-style-type: none"> • Questions or comments from the presentations • What are the key issues that IPLCs would like to see reflected in the assessment? • Are there concerns or potential issues?
<i>12h30-14h00</i>	<i>Lunch</i>
14h00-15h00	World-café Round 1: Ch2: Conceptualizing the sustainable use of wild species Ch3: Status and trends in the use of wild species Ch4: Indirect drivers of the sustainable use of wild species
15h00-16h00	World-café Round 2: Ch2: Conceptualizing the sustainable use of wild species Ch3: Status and trends in the use of wild species Ch4: Indirect drivers of the sustainable use of wild species
<i>16h00-16h30</i>	<i>Refreshment break</i>
16h30-17h30	World-café Round 3: Ch2: Conceptualizing the sustainable use of wild species Ch3: Status and trends in the use of wild species Ch4: Indirect drivers of the sustainable use of wild species
17h30-18h00	Report backs from sessions / reflections on the day

Tuesday 7 May	
9h00-9h30	Introduction to day
9h30-10h30	World-café Round 1: Chapter 5: Future scenarios of the sustainable use of wild species Chapter 6: Policy options and responses
<i>10h30-11h00</i>	<i>Refreshment break</i>
11h00-12h00	World-café Round 2: Chapter 5: Future scenarios of the sustainable use of wild species Chapter 6: Policy options and responses
12h00-12h30	Report backs from sessions
<i>12h30-13h30</i>	<i>Lunch</i>
13h30-14h30	Time for IPLC caucus if needed
14h30-15h30	IPLCs and the final assessment How could the final assessment be utilized by IPLC? What could be done to make the assessment useful for IPLC? What are the key issues to keep in mind?
<i>15h30-16h00</i>	<i>Refreshment break</i>
16h00-17h00	Participation in the assessment: Timelines for collaboration, communication and dialogue throughout the assessment process, identifying key experts, resources, case studies, meetings and events
17h00-17h30	Next steps and closing

Annex 3: Participants list

Name	Country	Background
Indigenous Peoples and Experts on ILK		
Florence Daguitan	Philippines	Tebtebba Foundation
Franklin Paulo Eduardo da Silva	Brazil	University of Brasilia
Viviana Figueroa	Argentina	Indigenous Women Network on Biodiversity
Guadalupe Yesenia Hernández Márquez	Mexico	ILK focal point for IPBES in Mexico
Edna Kaptoyo	Kenya	Indigenous Information Network
Witness Kozanayi	Zimbabwe	University of Cape Town
Sherry Pictou	Canada	Mount Saint Vincent University
Vyacheslav Shadrin	Russia	Council of Yukaghir Elders
Lakpa Nuri Sherpa	Nepal	Asia Indigenous Peoples Pact
Polina Shulbaeva	Russia	Centre for Support of Indigenous Peoples of the North (CSIPN)
Hannah Kihalani Springer	USA (Hawai'i)	Kua'āina Ulu 'Auamo
Nataliya Stryamets	Ukraine	Ca' Foscari University of Venice
Tilia Tao Tima	Tuvalu	Ministry of Foreign Affairs, Trades, Tourism, Environment and Labour
Thierry Thevenin	France	Syndicat SIMPLES
Prasert Trakansuphakon	Thailand	Pgakenyaw Association for Sustainable Development
IPBES Sustainable Use Assessment		
Marla Emery	USA	Co-chair of the sustainable use assessment
Esther Katz	France	Co-chair of the sustainable use assessment
Isabel Díaz-Reviriego	Spain	Chapter 2 of the sustainable use assessment
Ram Prasad Chaudhary	Nepal	Chapter 3 of the sustainable use assessment
Uttam Babu Shrestha	Nepal	Chapter 4 of the sustainable use assessment
Denise Margaret Matias	Philippines	Chapter 5 of the sustainable use assessment
Shalini Dhyan	India	Chapter 6 of the sustainable use assessment
IPBES Secretariat / Task forces		
Zsolt Molnár	Hungary	IPBES Task Force on Indigenous and Local Knowledge
Daniel Kieling	Brazil	Technical Support Unit for the Sustainable Use Assessment
Tanara Renard Truong Van Nga	France	Technical Support Unit for the Invasive Alien Species Assessment
Nigel Crawhall	South Africa	Technical Support Unit for Indigenous and Local Knowledge
Peter Bates	UK	Technical Support Unit for Indigenous and Local Knowledge
Patrycja Breskvar	Poland	Technical Support Unit for Indigenous and Local Knowledge

