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Item 3 of the provisional agenda*

INDICATORS RELEVANT FOR TRADITIONAL KNOWLEDGE AND CUSTOMARY SUSTAINABLE USE

Note by the Executive Secretary

INTRODUCTION

1. In accordance with decision XI/14 A, on progress in the implementation of Article 8(j) and related provisions, and decision XI/3 B, on indicators relevant to traditional knowledge and customary sustainable use, the Executive Secretary has prepared this document to report on progress made on adopted indicators for traditional knowledge and customary sustainable use. The document provides an overview of progress made on adopted indicators for traditional knowledge and customary sustainable use (section I); a summary of recent developments on indicators including initiatives of Governments and indigenous and local communities (section II); conclusions (section III), and suggested recommendations for the consideration of the Working Group (section IV).

I. PROGRESS ON ADOPTED INDICATORS FOR TRADITIONAL KNOWLEDGE AND CUSTOMARY SUSTAINABLE USE

2. In recommendation XV/1, the Subsidiary Body on Scientific, Technical and Technological Advice took note of an indicative list of indicators identified by the Ad Hoc Technical Expert Group (AHTEG) on Indicators for the Strategic Plan for Biodiversity 2011-2020. The indicators were then reviewed during the eleventh meeting of the Conference of the Parties, which adopted an indicator framework for the Strategic Plan for Biodiversity 2011–2020 and the Aichi Biodiversity Targets with the indicative list of indicators in its annex (decision XI/3 A). Those related to traditional knowledge and customary use are indicated below:

* UNEP/CBD/WG8J/8/1.

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Target 18. By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.	
Headline indicator(s)	Operational indicator(s)
Trends in integration of biodiversity into planning, policy formulation and implementation	Trends in land-use change and land tenure in the traditional territories of indigenous and local communities (decision X/43)
Trends in integration of biodiversity into planning, policy formulation and implementation	Trends in the practice of traditional occupations (decision X/43)
Trends in accessibility of scientific/technical/traditional knowledge and its application	Trends in degree to which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation in the national implementation of the Strategic Plan
Trends in accessibility of scientific/technical/traditional knowledge and its application	Trends of linguistic diversity and numbers of speakers of indigenous languages (decision VII/30 and VIII/15)

(Adapted from decision XI/3 A, annex, Indicative List of Indicators for the Strategic Plan for Biodiversity 2011-2020.)

3. In its decision XI/3 B, on development of indicators relevant to traditional knowledge and customary sustainable use, the Conference of the Parties requested the Working Group on Article 8(j) and Related Provisions, in collaboration with the Subsidiary Body on Scientific, Technical and Technological Advice, the Working Group on Indicators of the International Indigenous Forum on Biodiversity and interested parties, including the Biodiversity Indicators Partnership, to pursue the ongoing refinement and use of the three adopted indicators for traditional knowledge and customary sustainable use of biodiversity with full and effective participation of indigenous and local communities, also bearing in mind the implementation of Article 10(c) of the Convention and the Strategic Plan for Biodiversity 2011-2020, including through further technical workshops subject to the availability of funding, and to report thereon to the Conference of the Parties at its twelfth meeting. The following update has been prepared in response to this request.

Status and trends of linguistic diversity and numbers of speakers of indigenous languages and UNESCO

4. There is a fundamental linkage between language and traditional knowledge (TK) related to biodiversity. Indigenous and local communities have elaborated complex classification systems for the natural world, reflecting a profound understanding of their local environment. This environmental knowledge is embedded in indigenous names, oral traditions and taxonomies, and can be lost when a community shifts to another language.[1] The Conference of the Parties adopted trends of linguistic diversity and numbers of speakers of indigenous languages as a proxy indicator for status and trends in traditional knowledge in decision VII/30.

5. In paragraph 3 of decision XI/3 B, the Conference of the Parties invited the United Nations Educational, Scientific and Cultural Organization (UNESCO) to further the compilation and analysis of data on linguistic diversity and the status and trends of speakers of indigenous languages and to provide information on this indicator for consideration by the Working Group on Article 8(j) and Related Provisions.

[1] See http://www.unesco.org/new/en/culture/themes/endangered-languages/biodiversity-and-linguistic-diversity/.

6. UNESCO, through its *Interactive Atlas of the World's Languages in Danger*,[2] offers information on the listed endangered languages, including indigenous languages. Furthermore, the Secretariat of the Convention has engaged UNESCO, as a possible focal point for the collection of data for the language indicator, in developing a framework to operationalize this indicator, based on reliable, comparable statistics from national censuses, over time, as well as other comparable data. UNESCO has advanced a conceptual framework to collect information; however, to date neither the Secretariat nor UNESCO has secured additional funds to operationalize this work.

7. The Biodiversity Indicators Partnership[3] has also pursued the operationalization of indicators, including the indicator on status and trends in linguistic diversity, in discussions with UNESCO and other relevant organizations, including Terra Lingua,[4] noting there are different methodologies being pursued by different organizations. Some positive outcomes have been reported by Terra Lingua in their approach, which focuses on the development of an Index on Linguistic Diversity,[5] which in part is based on extensive data from Ethnologue,[6] which has collected information on indigenous languages since 1951.

8. At this time, UNESCO and Terra Lingua continue their work on the language indicator, separately, using different methodologies. For the purposes of the Convention and the Biodiversity Indicators Partnership, this may indicate a need for allowing some diversity in the approaches taken for the language indicator, including exploring further how this might be done at national level, which is very amenable to UNESCO methodology, and also on how indigenous and local communities might effectively participate in the collection of data, including community-based monitoring, and how data on languages can be aggregated.

Status and trends in land-use change and land tenure in the traditional territories of indigenous and local communities

9. The indicator on land-use and tenure captures the relationship between traditional knowledge, customary sustainable use and land-use change and land tenure. For example changes in land use from indigenous forests to agriculture imply decreasing opportunity to practice traditional knowledge and customary sustainable use, including traditional occupations. The land indicator is related to areas traditionally owned, used or occupied by indigenous and local communities.

10. In paragraph 5 of decision XI/3 B, the Conference of the Parties further invited relevant agencies, including the Food and Agriculture Organization of the United Nations and its Globally Important Agricultural Heritage Systems (GIAHS), the International Fund for Agricultural Development and the International Land Coalition, in association with indigenous and local communities and relevant organizations, to develop regionally balanced pilot projects to collect information relevant to the operationalization of the indicator on status and trends in land-use change and land tenure in the traditional territories of indigenous and local communities for consideration by the Working Group on Article 8(j) and Related Provisions at its eighth meeting.

11. The Food and Agriculture Organization of the United Nations (FAO) works on land cover and land use in its Global Land Cover Network (GLCN)[7] initiative, with the objective of improving the availability of global information on land cover and its dynamics and harmonizing land cover mapping

[2] See http://www.unesco.org/culture/languages-atlas/en/atlasmap.html.

[3] http://www.bipindicators.net/.

[4] http://www.terralingua.org/ (non-governmental organization).

[5] http://www.terralingua.org/linguisticdiversity/.

[6] http://www.ethnologue.com/.

[7] See http://www.glcn.org/index_en.jsp.

and monitoring at national, regional and global levels.[8] The GLCN initiative only collects public information and has acknowledged a lack of data on land cover and land tenure relevant to indigenous and local communities.

12. Discussions with these organizations and indigenous and local communities have revealed that the detail of information required to operationalize this indicator is either beyond the mandate of the relevant organizations or the level of detail required to assess this indicator is filtered out before it reaches global levels. Agencies approached are also without additional funds for this proposed work. Based on the responses from the relevant organizations, it has not been possible to identify a focal point agency to assist the Convention with the adopted indicator on status and trends in land-use change and land tenure in the traditional territories of indigenous and local communities. However in recent workshops, facilitated by the International Indigenous Forum on Biodiversity's working group on indicators, funded by the Norwegian Agency for Development Cooperation, and supported by the Government of Sweden, indigenous and local communities propose to take this matter forward, through community-based monitoring and information systems, as well as through the Multiple Evidence Base approach.[9] This is taken up in detail later in this document under section II (recent developments).

Status and trends in the practice of traditional occupations

13. Practice of traditional occupations can serve as a proxy indicator for the preservation of traditional knowledge. Some indigenous and local communities are pastoralists, hunter-gatherers, forest dwellers, or shifting cultivators. Furthermore, many traditional occupations are closely linked to customary sustainable use of biodiversity.

14. The Conference of the Parties, through paragraph 4 of its decision XI/3 B, invited the International Labour Organization to develop, in association with indigenous and local communities and relevant organizations, pilot projects on, and to monitor data concerning, the practice of traditional occupations, and to provide information on this indicator for consideration by the Working Group on Article 8(j) and Related Provisions.

15. The International Labour Organization (ILO) works on International Standard Classification of Occupations (ISCO)[10] which includes traditional occupations. ISCO is a tool for organizing jobs into a clearly defined set of skills according to the tasks and duties undertaken in the job. ISCO main aims are to provide: (a) a basis for the international reporting, comparison and exchange of statistical and administrative data about occupations; (b) a model for the development of national and regional classifications of occupations; and (c) a system that be used directly in countries that have not developed their own national classifications. Furthermore, the ILO through its Convention 111, concerning Discrimination in Respect of Employment and Occupation,[11] has a mandate to collect information on all occupations, including traditional occupations, as well as to hear complaints.

16. Discussions with the ILO, as well as the United Nations Inter-Agency Support Group on Indigenous Peoples' Issues (IASG) and indigenous and local communities, have revealed that the detail of information required to operationalize this indicator is either not being systematically collected or is filtered out before it reaches global levels. The ILO is also without additional funds for this proposed work and has not been able to commit to assisting the Convention with its requests relating to the indicator on traditional occupations. However, as previously mentioned, indigenous and local community

[8] See http://www.glcn.org/prj_0_en.jsp.

[9] See http://www.stockholmresilience.org/21/research/research-news/6-14-2013-can-a-multiple-evidence-base-connect-different-knowledge-systems.html.

[10] See http://www.ilo.org/public/english/bureau/stat/isco/index.htm.

[11] Entry into force: 15 June 1960.

organizations, through the International Indigenous Forum on Biodiversity's working group on indicators is proposing to take this matter forward, through community-based monitoring and information systems, as well as the Multiple Evidence Base approach, which is taken up in detail under section II (recent developments).

Workshops on indicators

17. In paragraph 6 of decision XI/3 B the Conference of the Parties recommended that the Executive Secretary, subject to the availability of resources, organize and facilitate a technical workshop on the further development and refinement of the indicator on status and trends of land-use change and land tenure in the traditional territories of indigenous and local communities, and report to the next meeting of the Working Group on Article 8(j) and Related Provisions.Thanks to the support from the Government of Sweden[12] and the Norwegian Agency for Development Cooperation, the International Indigenous Forum on Biodiversity's working group on indicators, assisted by Tebtebba Foundation and the Forest Peoples Programme, have been able to facilitate workshops in which the Secretariat participated and which included this issue. The workshops form part of a larger project on "community-based monitoring and information systems", which uses a holistic bottom-up approach that integrates ecosystems, culture and sustainability, among other elements, and could be considered a Multiple Evidence Base approach to collection of information relevant for the adopted indicators.

18. Community-based monitoring and information systems (CBMIS) refers to the bundle of monitoring approaches related to biodiversity, ecosystems, land and waters, and other resources, as well as human well-being, used by indigenous and local communities as tools for their management and documentation of their resources.

19. Community-based monitoring and information systems use an innovative methodology based on both traditional knowledge and new tools such as digital mapping using the latest technology, three-dimensional (3D) maps and printers and the countryside management software (CMS). The methodology is based on traditional knowledge and is particular for each indigenous or local community. This is exemplified very well though projects in the Philippines that includes the *lapat* system of forest management among the Tinggian and Kalinga people,[13] the *lampisa* water management practice among the Igorots of Mountain Province[14] and the practice of seed dispersal in the forest among the Ayta of Bataan,[15] and *uma*[16] rotational agriculture practice shared among many indigenous communities. These communities use their traditional knowledge and new technologies for gathering information about status and trends of traditional knowledge and customary sustainable use of biodiversity based on the three adopted indicators. Participating communities analyse information gathered, which is used for monitoring and for policymaking and planning processes. Such work is reminiscent of the dialogue between traditional knowledge and scientific knowledge and is aimed at creating opportunities for learning on both sides.

20. Under this initiative also there are efforts to test the realization in practice of the Multiple Evidence Base (MEB) approach, which is under development by the Stockholm Resilience Centre together with partners from indigenous peoples and local communities. The Multiple Evidence Base approach takes into account different criteria of validation that should be applied to data and information originating from different knowledge systems (traditional and scientific knowledge) to create a more

[12] Through the Stockholm Resilience Centre, http://www.stockholmresilience.org/.

[13] Refer to http://www.ifad.org/newsletter/pi/18.htm#2.

[14] Refer to http://www.ipmpcc.org/2012/01/28/securing-food-through-the-lampisa-indigenous-practice-of-resource-management-of-the-pidlisan-tribe-in-the-cordillera-philippines/.

[15] Refer to http://pehfphilippines.com/projects_research.html.

[16] Indigenous terms for rotational or shifting agriculture.

comprehensive and complementary view of status and trends. This approach also is complementary to and supportive of community-based monitoring and information systems, which in essence also use the Multiple Evidence Base approach to information collection and analysis albeit at the community level.

II. RECENT DEVELOPMENTS

Global Expert Workshop on Community-Based Monitoring and Information Systems (CBMIS)

21. The Global Expert Workshop on Community-based Monitoring and Information Systems was organized by Tebtebba, the Forest Peoples Programme, the Indigenous Peoples' Partnership on Climate Change and Forests, the International Indigenous Forum on Biodiversity's Working Group on Indicators, the Article 10(c) customary sustainable use network, SwedBio at Stockholm Resilience Centre and the Secretariat of the Convention on Biological Diversity, and was sponsored by the Norwegian Agency for Development Cooperation, the Climate and Land Use Alliance, the Tamalpis Foundation, Brot für die Welt-EED and the Rights and Resources Group. The workshop was held in Bonn, Germany, from 26 to 28 April 2013. The full report is available as UNEP/CBD/WG8J/8/INF/11.

22. In different global regions, indigenous and local communities have developed their own ways of monitoring ecosystems and community health and well-being. These are based on traditional knowledge and a holistic view of people and environment, but use and adapt new technologies. Today, communities use the knowledge generated by their monitoring to document external threats, to assert claims to territory, and to plan for the future.

23. Governments and international bodies have begun to recognize the importance and value both of indigenous and local community traditional knowledge and the information generated through community-based monitoring. Some international agreements and processes whose implementation could benefit from community-based monitoring include the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Convention on Biological Diversity and the United Nations Framework Convention on Climate Change (UNFCCC), amongst others.

24. The global expert workshop on CBMIS brought together indigenous and local community representatives, Governments, academics, research institutes, intergovernmental organizations and non-governmental organizations (NGOs) with an interest in using the information generated by community monitoring, whether at local, national or global levels. The aim of the workshop was to bring together the diverse participants to explore the importance, substance and applications of community-based monitoring and information systems (CBMIS) for traditional knowledge, biodiversity and climate change, and the rights and well-being of indigenous and local communities.

Overview of experiences and challenges

25. The opening session explored opportunities for community-based monitoring and information systems (CBMIS) in terms of global agreements and their implementation, including opportunities for governments to work with communities.

26. The Director of the Forest Peoples Programme provided an overview of the developments concerning indicators relevant to indigenous peoples' rights and well-being, the Convention on Biological Diversity and the Millennium Development Goals. Community-based monitoring is a key source of data if these agreements are to be operationalized at national, regional and global levels.

27. The representative of Tebtebba Foundation described a project in the Philippines that used the community's traditional knowledge as the basis for establishing a monitoring and information system. The purpose of the monitoring was to develop a land-use plan and then to assess the effects of its

implementation. The data gathered included changes in land use, biodiversity and traditional occupations. The community aims to continue monitoring land use, including tenure arrangements, customary law and sustainable use of resources; biodiversity of plants and animals; and productivity of major crops.

28. The President of Tebtebba Foundation explained the safeguards agreed by the Parties to the United Nations Framework Convention on Climate Change for implementation of initiatives for reduction of emissions from deforestation and forest degradation, with conservation and sustainable management (REDD+). She then presented the domains and principles for community-based monitoring of REDD+ safeguards proposed by the Indigenous Peoples' Partnership on Climate Change and Forests.

29. The Vice-President of the North Atlantic Autonomous Region (RAAN) of Nicaragua described the legal framework supporting indigenous peoples' rights in Nicaragua, and the need for environmental and social monitoring.

30. The presentations indicated that community-based monitoring provides strong evidence and information to strengthen indigenous and local communities' negotiating position/s and can aid governments in developing an on-the-ground perspective of environmental changes through agreed-to indicators on traditional knowledge. If this can be systematized at global level, indigenous and local communities will be able to better contribute to and effectively participate in national reporting and Convention processes. Community involvement and collective analysis are key elements for the success of CBMIS.

Traditional monitoring systems

31. This session demonstrated how indigenous peoples apply their traditional knowledge in community-based monitoring systems, sometimes integrating new technologies into traditional frameworks.

32. The representative of Nga Tirairaka o Ngati Hine, New Zealand, explained how the monitoring framework used by the Ngati Hine people is based on Maori spirituality, which relates directly to biodiversity. Their monitoring provides a basis for action to restore and protect their environment, to communicate the status of their territories to all members of the tribe, and to maintain their traditional knowledge by applying it in practice and passing it on to the youth. Local guardians monitor biodiversity and the quality of waters, soil, forests and coastal areas.

33. The Executive Director of the Foundation for the Promotion of Indigenous Knowledge described a monitoring program established by the General Assembly of the Guna which is applied in all Guna communities in Panama. The programme aims to preserve traditional knowledge. It monitors the existence of traditional knowledge holders and the conduct of intercultural education, identifies sacred sites, and records the scale and impact of tourism in Guna territories.

34. The representative of the Mainyoito Pastoralist Integrated Development Organization (MPIDO) described the traditional monitoring systems of African pastoralists. A key purpose of these monitoring systems is to provide early warning of disasters such as droughts and outbreaks of disease among people and livestock. The phenomena monitored include plants, weather and animal behaviour.

35. The presentations showed that traditional monitoring and information systems are dynamic; they are tested and validated and adapted over time, so that they continue to respond directly to community needs. Traditional monitoring systems are based on traditional knowledge and all the presentations stressed the importance of passing this knowledge on to the next generation. Indicators for traditional knowledge represent a unique opportunity for indigenous and local communities to influence state policy. But indigenous and local communities cannot maintain indicators and traditional knowledge unless they have secure territories. Pastoralism, for example, cannot be maintained without a community land-base.

Monitoring changes in land use and tenure

36. Status and trends in land use and tenure are key indicators for both traditional knowledge and indigenous and local community rights.

37. A representative of the Amerindian Peoples Association (APA) described a programme of community-based research into indigenous peoples' land tenure in Guyana. The purpose of the research was to document the status of Amerindian lands so as to provide an evidence base to lobby for legal and policy reform, and in particular for recognition of land rights. The main focus of the research is land tenure and the level of recognition of land rights, but it also includes land-related issues as identified by each community.

38. A representative of the African Biodiversity Network showed how ecological maps and traditional calendars can capture and communicate local knowledge, and how the process of creating them strengthens community cohesion and helps build local solutions to social and environmental problems. Communities can use traditional ecological calendars to identify the spiritual as well as the economic benefits of their environment, and to identify problems in ecosystems, including signs of climate change.

39. The presentations showed how recognition of tenure and ecological status of their lands and territories is fundamental to indigenous and local community rights, local livelihoods and the vitality of traditional knowledge. Thus the monitoring of land tenure and land use change provides an important evidence base, both for local development planning and for asserting rights to territories and biological resources at national level. Maps and other evidence of indigenous and local community use of the land have been used to assist communities in national land claim processes.

40. Community maps and eco-calendars capture and present information about land in ways that are compatible with traditional knowledge. But whatever the tools used, it is crucial for information to remain with the community.

Traditional occupations and local livelihoods

41. Traditional occupations are fundamental to the livelihoods and culture of many indigenous and local communities. The practice of traditional occupations is a proxy indicator for traditional knowledge.

42. The representative of MPIDO described how Maasai Elders regulate the practice of traditional occupations so as to preserve the forest. She also showed the participants a short film featuring a Maasai Elder explaining spirituality and traditional knowledge.

43. The representative of the Indigenous Knowledge and Peoples network (IKAP) described the traditional rotational farming practices of the Hmong and Karen peoples, and presented the results of community monitoring of biodiversity and carbon storage in three areas in northern Thailand, where rotational farming is practised. The purpose of the monitoring was to assess the effects of rotational farming on environment and climate. Although this traditional occupation is often misunderstood and even criminalized as a driver of deforestation and climate change, rotational farming is sustainable and supports biodiversity. The data generated through community monitoring showed that rotational farming stores more carbon than it emits and can therefore help mitigate climate change.

44. The representative of the Institut Dayakologi described the *dahas* system of natural resource management and the efforts of the Dayak Jalai people of Kalimantan to revitalize it as a source of livelihood.

45. In addition to presentations, this session included the screening of a short film showing how the Baka people in Cameroon used specially adapted GPS technology to monitor logging in their forest.

46. All three presentations demonstrated the interdependence of traditional occupations and traditional knowledge. They also showed that traditional livelihood systems such as pastoralism and rotational farming, which some officials and politicians often label as drivers of environmental degradation, are sustainable systems that nurture natural resources as well as use them. In northern Thailand, community monitoring has provided an evidence base to demonstrate customary sustainable use of natural resources and challenges myths and misunderstandings about rotational farming.

Additional tools and technologies

47. Community-based monitoring systems are dynamic and flexible, and can integrate new tools and technologies.

48. The representative of the Centre of Research and Development in Upland Areas (CERDA) described a pilot project that aimed to demonstrate how ethnic minority communities in Viet Nam could participate in REDD+ programmes. The project included community monitoring of forest carbon, use of forest land and water resources, and establishment of a biodiversity inventory. In this instance the community-based monitoring was set up in response to a global initiative: REDD+. However, it offers clear benefits to the community in the form of payments for forest carbon. The project and the benefit-sharing system are subject to free, prior and informed consent.

49. The representative of the Nepal Federation of Indigenous Nationalities (NEFIN) explained how community radio can be an effective tool for building the awareness and capacity of communities, communicating the information generated by communities, and passing on traditional knowledge.

50. The representative of the Indigenous Peoples' Alliance of the Archipelago (AMAN) of Indonesia described the organization's SMS-based information system. The system provides for a two-way information flow linking AMAN members and structures with government officials, NGOs and the wider public. This enables AMAN to disseminate information about problems facing indigenous peoples, and to take information from community monitoring and swiftly turn it into advocacy messages, helping communities to deal with imminent threats.

51. Information systems are also communications systems. The nationwide alliances of indigenous communities in Nepal and Indonesia have established information systems that enable a two-way flow of information to and from communities, helping communities to defend their rights. Both systems use technologies that are accessible and affordable to many people at community level.

Working with global processes and national governments

52. Working with governments and international processes poses both risks and opportunities for indigenous and local communities. Safeguard systems can help mitigate some of the risks. In many cases, community-based monitoring and information systems have allowed indigenous and local communities to shift from opposing national governments to cooperating with them for common goals, such as conservation and sustainable use of biological diversity.

53. The representative of the Stockholm Resilience Centre proposed a set of guiding principles for safeguards applicable to biodiversity financing mechanisms. The purpose of safeguards is to avoid violations of indigenous and local community rights arising from external initiatives intended to protect biodiversity or mitigate climate change.

54. The presentation by the representative of SILDAP in Mindanao, Philippines, demonstrated how a government agency was able to achieve its environmental protection goals once officials recognized the value of indigenous and local community traditional knowledge and management systems. The Department of Environment and Natural Resources (DENR) worked in cooperation with an indigenous community to establish a protected area without undermining local livelihoods and cultural activities.

55. The representative of the Center for the Autonomy and Development of Indigenous Peoples (CADPI) described the participation of young people in community mapping and monitoring, through a youth programme organized by the Miskito women's organization. The programme aims to educate young people to care for the environment and to sustain their interest and participation in traditional knowledge and community affairs.

56. The representative of the Indigenous Council of Roraima (CIR) traced the experiences of indigenous peoples in the state of Roraima, Brazil, in working with government to achieve legal recognition of their territories. Indigenous peoples' organizations and leaders monitored the process of demarcation, and their community mapping provided information for the legal processes. CIR is now conducting studies on land use in order to improve indigenous peoples' livelihoods and their management of territory and natural resources.

Opportunities and challenges

57. Workshop participants were asked to summarize their views on the importance of CBMIS, the opportunities and challenges it poses, and how they planned to contribute to it. The responses came from representatives of governments, academia, indigenous peoples and local community organizations, intergovernmental organizations and NGOs. A summary of views follows.

58. At local level, CBMIS brings the community together and provides a basis for local self-determined development planning and decision-making. It can also contribute to better decision-making by government. At national level, the contributions of CBMIS to national information systems can make indigenous and local communities and their issues more visible to policymakers. The same is true at global level. In the current economic climate, United Nations agencies have insufficient resources to produce global statistics, but community-based monitoring can provide reliable snapshots of trends on the ground.

59. Participating in national and local data generation encourages communication between indigenous and local communities and researchers, creating opportunities for learning on both sides.

60. Opportunities for using data generated by CBMIS include conflict resolution and access to justice, whether in national courts or at international bodies. But there are also opportunities to supplement community data by using data already collected by international organizations, for example on national legal frameworks.

61. Community-based monitoring has many uses, at community level and beyond. The challenge is to develop simple frameworks and toolkits that serve the community's information needs but can also feed into national and global processes. The frameworks must address the needs, not only of strong communities but also those of communities under threat: those suffering human rights violations, in remote areas, with fewer links to sources of support.

62. In using CBMIS beyond the community, the challenge is to consolidate information generated at community level through common indicators, aggregate it, and present it to international bodies in a way that can influence their plans and decisions.

63. The challenges for CBMIS include comparability, recognition and sustainability. What type and degree of standardization will enable the use of community-generated information at national and global level? How to achieve recognition and acceptance of the validity of information generated by communities? How much support is needed to maintain local monitoring for national purposes and to maintain traditional knowledge?

64. A number of proposals and recommendations emerged from this session, including the following principles:

- Monitoring must be based on the needs of the community;
- Communities need access to information about initiatives that affect them;
- The key issue for indigenous and local communities is to monitor land use change, because that is where culture, knowledge and language are based;
- Respect the richness of CBMIS in its diversity, but collaborate for particular purposes;
- Data collected by communities using different methodologies can be aggregated, as long as the methods used over time in each place are consistent;
- Keep it simple;
- Use a mix of old and new technologies.

65. The participants concluded that at local level, CBMIS brings the community together and provides a basis for planning and decision-making; they also identified key areas to monitor, with appropriate indicators, as in the table below.

Key Areas/Domain	**Indicators/Components**
A. Land, territories and resources	• External threats • Land rights • Status of land-use change • Fate control • Violations of rights • How are rules/norms/policies observed in the community
B. Traditional occupations	• Culture dimension, practice of rituals
C. Traditional knowledge	• Social relationship/community interactions • Indigenous languages • Cultural integrity • species/wildlife
D. Full and effective participation	• Role of women, men, elders, youth • Effective participation depends on the format and methods • How decisions are made • Free, prior and informed consent (FPIC)

Next steps for CBMIS

66. On the final day of the meeting, the participants discussed ways to strengthen CBMIS and to use the information generated in global processes. They also outlined some next steps for building a CBMIS network:

(i) Scoping

- There is a need to identify resources, experiences, and groups that are currently doing community monitoring. This will show what skills, toolkits and training expertise are available, what lessons have been learned, and what areas communities are monitoring;
- SwedBio at the Stockholm Resilience Centre is supporting this kind of scoping on a regional basis, through a project with Tebtebba Foundation on linking traditional knowledge and diverse knowledge systems which will commission researchers (individuals or organizations) to carry out this scoping work;
- If the scoping exercise can find out what baseline information communities have, it may be possible to agree a common reference level;
- There is a need to compile information on structural and process and outcome indicators in relation to implementation of the United Nations Declaration on the Rights of Indigenous Peoples and other international commitments;

(ii) Coordination and communication

- Regional coordination makes for more effective communication, because of language differences;
- There is scope for building the network at national level. For example, members of the International Indigenous Forum on Biodiversity, the 10(c) network and the Indigenous Peoples Partnership on Climate Change and Forests could coordinate in their own countries; and others, for example the Andean network, may also be interested. Cooperation with universities at national level could also strengthen the network;
- The key units in this network are communities and their authorities. They will decide how much information is shared;
- There may be a need to augment existing structures to strengthen information flows if existing list-serves are inadequate;
- A small technical working group could be set up to create a CBMIS toolkit;
- It is a responsibility of participants to raise the profile of CBMIS and link it to the post-2015 process and others;

(iii) Institutions

- It should be an ambition to set up a registry or centre of reference, to add credibility, because no-one is collecting data on traditional knowledge and indigenous and local communities;

(iv) Processes and other issues to address

- The preparatory meeting for the World Conference on Indigenous Peoples (Alta, Norway, June 2013), which will discuss implementation of the UNDRIP, will need input on monitoring;
- More reflection is needed on engaging with the private sector. To start this, the Forest Peoples Programme will prepare a short briefing paper on the limitations, risks and opportunities posed by High Conservation Value Assessments;
- An opportunity to discuss monitoring of gender dimensions is the Global Conference of Indigenous Women, to be held in Lima in October 2013;

(v) Starting data collection

- Data collection must start now if the information is to be used in 2014;
- It would be useful to hold a technical workshop to start aggregating the CBMIS data already available.

Philippine Workshop on Community-Based Monitoring and Information Systems

67. The "Philippine Workshop on Community-Based Monitoring and Information Systems" was organized by Tebtebba, KASAPI, and PAFID, with support from the Norwegian Agency for Development Cooperation, Brot für die Welt and SwedBio. It was held from 25 to 27 February 2013, at University Hotel, UP Diliman, Quezon City, Philippines.

68. This workshop aimed to consolidate existing work on CBMIS as a tool for strengthening indigenous peoples' self-determined development, in the context of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and the Indigenous Peoples Rights Act (IPRA), the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets, as well as the United Nations Framework Convention on Climate Change (UNFCCC) and other global and national commitments. The Philippines has been leading in this work and the workshop gathered case experiences of 22 communities from various parts of the country, together with invited global experts from seven indigenous communities from seven countries, NGOs, international organizations and research institutions.

69. It was also an opportunity for indigenous participants to reflect on and deepen their understanding about common tools and methodologies that were used in carrying out this work. New tools such as digital mapping using the latest technology, three-dimensional (3D) maps and the countryside management software (CMS) were also presented and discussed.

70. The workshop had the following objectives: (a) to unite on the importance and substance of community-based monitoring and information systems on traditional knowledge, biodiversity and climate change, and rights and well-being of indigenous peoples; (b) to share community experiences and the status of work on generating baseline information and monitoring changes over time; (c) to deepen understanding about common tools and methodologies to carry out this work; and (d) to identify the next steps and mechanisms in strengthening community-based monitoring and information systems in pilot communities.

71. The participants exchanged their experiences in monitoring status and trends of biodiversity related traditional knowledge and use of new tools. For example, the Mangyan Tagabukid people live in seven communities located across Sibuyan Island, and each community has its own leadership, and is also part of an indigenous federation for the whole island. Three-dimensional (3D) mapping was carried out identifying all of the different types of land use, including sacred places, sanctuary forest, production forest, and communal areas. This information was used to formulate the Ancestral Domain Sustainable Development and Protection Plan (ADSDPP). It was found that sacred places have the highest levels of biodiversity, and these sanctuary forests are untouched. Areas of Mt. Guiting-guiting Natural Park overlap with the ancestral domain, which has resulted in some barrio sites falling within the protected area, and this has resulted in some traditional livelihood practices being deemed to be illegal. Traditional monitoring systems already exist for monitoring the amount of animals available to be hunted, the volume of water, the availability of plants for food and other uses, and the availability of honey. There are also traditional indicators for showing the health of the environment, for example the presence of thick virgin forest. There is also a type of fresh water shrimp (uyang) that indicates quality of the water; this is done through observing the size and number of shrimp (from the report).

72. To date, eight indigenous communities in the Philippines are developing community-based monitoring systems, including piloting the use of indicators on traditional knowledge and customary sustainable use. The full report is available as UNEP/CBD/WG8J/8/INF/11/Add.1.

III. CONCLUSIONS

73. Initially, the Working Group considered that it may be possible to invite the relevant United Nations agencies, according to their respective mandates, to assist the Convention in these tasks.[17] UNESCO has responded favourably and has progressed on a methodology and framework for the language indicator but, at this time, the Secretariat and UNESCO have been unable to secure funds to operationalize this framework and take it forward.

74. Discussions with the ILO have indicated that the information required is not available at a global level but may be collected by some at the national level. Discussions with FAO, IFAD and the International Land Coalition have also indicated that the information required on land change and security of land and waters traditionally occupied or used by indigenous and local communities is not available at a global level but may be available from some countries at the national level.

75. In general, operationalizing the three adopted indicators for traditional knowledge has proved quite challenging, yet recent advances have been made by indigenous and local communities, supported by Sweden, on community-based monitoring and information systems (CBMIS). In conclusion, according to experiences expressed above at local level, CBMIS could provide tools from traditional knowledge and new technology to the communities for their assessment and it is a base for developing planning and decision-making. CBMIS could also contribute at national, regional and global levels through improved local, national and regional information systems. Further to this, the Swedish Resilience Centre is promoting a methodology using a Multiple Evidence Base approach which is compatible with CBMIS and which may also be very useful in arriving at a picture of status and tends in the indicators adopted for traditional knowledge. CBMIS and a Multiple Evidence Base approach may assist Parties in drafting of national reports, noting the guidelines for the fifth national reports[18] call for indigenous and local community participation.

IV. RECOMMENDATIONS FOR THE CONSIDERATION OF THE WORKING GROUP

76. The draft recommendations below build on decisions made by the tenth and eleventh meetings of the Conference of the Parties.[19] Taking this into account, the Working Group may wish to recommend that the Conference of the Parties at its twelfth meeting adopt a decision along the following lines:

The Conference of the Parties,

1. *Welcomes* the work carried out under the Working Group on Indicators of the International Indigenous Forum on Biodiversity and other international organizations, and particularly the "community-based monitoring and information system" approach, to operationalize the indicators on the status of traditional knowledge, innovations and practices and customary sustainable use, to assess

[17] UNESCO - trends of linguistic diversity and numbers of speakers of indigenous languages; ILOs – trends in the practice of traditional occupations; and FAO, IFAD and/or the International Land Coalition - trends in land-use change and land tenure in the traditional territories of indigenous and local communities.

[18] Refer to decision X/10, paragraph 11.

[19] A full copy of Article 8(j)-related decisions on indicators from COP 10 (decision X/43) and COP 11 (decision XI/3) are available at: http://www.cbd.int/decisions/.

progress towards achieving the Strategic Plan for Biodiversity 2011-2020 and the Aichi Biodiversity Targets,

2. *Requests* the Executive Secretary, in collaboration with Parties, Governments, international agencies, the Working Group on Indicators of the International Indigenous Forum on Biodiversity and relevant organizations, including the Biodiversity Indicators Partnership, and subject to the availability of resources, to continue to organize and facilitate international technical workshops and regional workshops on indicators on the status of traditional knowledge, innovations and practices and customary sustainable use and to further explore the added value of community-based monitoring and information systems and the Multiple Evidence Base approach to indicators on the status of traditional knowledge, innovations and practices and customary sustainable use, in order to assess progress towards achieving the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Target, and to inform Parties, organizations and stakeholders of progress through the Traditional Knowledge Information Portal.

3. *Encourages* Parties and indigenous and local communities to consider how indigenous and local communities might effectively participate in the collection of data, including community-based monitoring, and further explore how community-based monitoring and information systems and Multiple Evidence Base approaches might contribute to the fifth national reports and the mid-term review of the Strategic Plan for Biodiversity 2011-2020 and its Aichi Biodiversity Targets and in particular target 18.
