



# Developing and Implementing Community-Based Monitoring and Information Systems



## The Global Workshop and the Philippine Workshop Reports





**Developing and Implementing  
Community-Based Monitoring and  
Information Systems:  
The Global Workshop and the  
Philippine Workshop Reports**

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# Acronyms

|        |                                                                                                                                           |
|--------|-------------------------------------------------------------------------------------------------------------------------------------------|
| ABN    | African Biodiversity Network                                                                                                              |
| ADMP   | Ancestral Domain Management Plan                                                                                                          |
| ADSDPP | Ancestral Domain Sustainable Development and Protection Plan                                                                              |
| AMAN   | Aliansi Masyarakat Adat Nusantara – Indigenous Peoples’ Alliance of the Archipelago, Indonesia                                            |
| APA    | Amerindian Peoples’ Association, Guyana                                                                                                   |
| CADC   | Certificate of Ancestral Domain Claim                                                                                                     |
| CADPI  | Centro para la Autonomia y Desarrollo de los Pueblos Indigenas – Center for the Autonomy and Development of Indigenous Peoples, Nicaragua |
| CADT   | Certificate of Ancestral Domain Title                                                                                                     |
| CBD    | Convention on Biological Diversity                                                                                                        |
| CBMIS  | Community-based Monitoring and Information Systems                                                                                        |
| CERDA  | Center of Research and Development in Upland Areas, Vietnam                                                                               |
| CIR    | Conselho Indigena de Roraima – Indigenous Council of Roraima, Brazil                                                                      |
| DENR   | Department of Environment and Natural Resources, Philippines                                                                              |
| FCPF   | Forest Carbon Partnership Facility                                                                                                        |
| FPIC   | Free, Prior and Informed Consent                                                                                                          |
| FPP    | Forest Peoples’ Programme                                                                                                                 |
| GBO    | Global Biodiversity Outlook                                                                                                               |
| GIS    | Geographic Information System                                                                                                             |
| GPS    | Global Positioning System                                                                                                                 |
| HCVA   | High Conservation Value Assessment                                                                                                        |
| HDI    | Human Development Index                                                                                                                   |
| ICCA   | Indigenous and Community Conserved Areas                                                                                                  |
| ID     | Institut Dyakologi, Indonesia                                                                                                             |
| IIFB   | International Indigenous Forum on Biodiversity                                                                                            |

|           |                                                                                                   |
|-----------|---------------------------------------------------------------------------------------------------|
| IKAP      | Indigenous Knowledge and Peoples Network, Thailand                                                |
| IKSP      | Indigenous Knowledge Systems and Practices                                                        |
| ILO       | International Labor Organization                                                                  |
| IP        | Indigenous Peoples                                                                                |
| IPBES     | Intergovernmental Platform for Biodiversity and Ecosystems                                        |
| IPRA      | Indigenous Peoples Rights Act                                                                     |
| IPSSDD    | Indigenous Peoples' Sustainable, Self-Determined Development                                      |
| ISCO      | International Standard Classification of Occupations                                              |
| IWGIA     | International Work Group for Indigenous Affairs                                                   |
| LGU       | Local Government Unit                                                                             |
| MAO       | Maporac Ayta Organization, Philippines                                                            |
| MATRICOSO | Manobo Tribal Council of Sote, Philippines                                                        |
| MDGs      | Millennium Development Goals                                                                      |
| MPIDO     | Mainyoito Pastoralist Integrated Development Organization, Kenya                                  |
| NBSAP     | National Biodiversity Strategy and Action Plan                                                    |
| NCIP      | National Commission on Indigenous Peoples, Philippines                                            |
| NEFIN     | Nepal Federation of Indigenous Nationalities                                                      |
| NGO       | Non-Governmental Organization                                                                     |
| NGP       | National Greening Program, Philippines                                                            |
| NORAD     | Norwegian Agency for Development Cooperation                                                      |
| PAFID     | Philippine Association For Intercultural Development                                              |
| PDA       | Personal Digital Assistant                                                                        |
| PES       | Payment for Ecosystem Services                                                                    |
| RAAN      | Regional Autonomous Government of the North Atlantic, Nicaragua                                   |
| REDD      | Reducing Emissions from Deforestation and forest Degradation                                      |
| REDD+     | REDD with conservation, sustainable management of forests and enhancement of forest carbon stocks |
| SBSTA     | Subsidiary Body for Scientific and Technological Advice                                           |
| SILDAP    | Silingan Dapit sa Sidlakan Mindanao, Philippines                                                  |
| UN        | United Nations                                                                                    |
| UNDRIP    | United Nations Declaration on the Rights of Indigenous Peoples                                    |
| UNESCO    | United Nations Educational, Scientific and Cultural Organization                                  |
| UNFCCC    | United Nations Framework Convention on Climate Change                                             |
| UNPFII    | United Nations Permanent Forum on Indigenous Issues                                               |
| VITEK     | Vitality Index of Traditional Ecological Knowledge                                                |



# **PART 1**

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

**Bonn, Germany  
26-28 April 2013**

Photo credit: CADPI



# Executive Summary

In different global regions, indigenous peoples have developed their own ways of monitoring ecosystems and community health. These are based on traditional knowledge and a holistic view of people and their environment, but they also 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.

Meanwhile, governments and international bodies have begun to recognize the importance both of indigenous peoples' traditional knowledge and of the information generated through community-based monitoring. International agreements whose implementation could benefit from community monitoring include the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Convention on Biological Diversity (CBD) and the United Nations Framework Convention on Climate Change (UNFCCC).

The Global Expert Workshop on Community-Based Monitoring and Information Systems (CBMIS) brought together indigenous peoples, governments, academics, research institutes, intergovernmental organizations, and NGOs with an interest in using the information generated by community monitoring, whether at local, national or global level. The aim of the

workshop was to unite the diverse participants on the importance, substance and applications of CBMIS for traditional knowledge, biodiversity and climate change, and the rights and well-being of indigenous peoples.

## Overview of experiences and challenges

The opening session aimed to situate community-based monitoring and information systems in terms of the policies emerging from global agreements, the steps being taken to apply them, and how governments can work with communities.

Joji Cariño of the Forest Peoples' Programme traced the development of indicators relevant to indigenous peoples' rights and well-being, the CBD and the Millennium Development Goals. Community-based monitoring is a key source of data if these indicators are to be operationalized at national, regional and global levels.

Florence Daguitan of Tebtebba (Indigenous Peoples' International Centre for Policy Research and Education) 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 tenurial arrangements, customary law and sustainable use of resources; biodiversity of plants and animals; and productivity of major crops.

Victoria Tauli-Corpuz of Tebtebbba explained the safeguards agreed by the parties to the climate change convention for implementation of initiatives for reducing emissions from deforestation and forest degradation, with enhancement of forest carbon stocks, 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.

Eduardo Romero Olivero, 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.

The presentations indicated that community-based monitoring provides strong evidence and information to strengthen indigenous peoples' negotiating position with governments. If this can be systematized at global level, indigenous peoples will be in a stronger position to hold governments to account in global forums, for example, by challenging national reports to treaty bodies.

Community involvement and collective analysis is key to the success of CBMIS. There is a need to empower communities to act on the basis of the information they have gathered and analyzed.

## Traditional monitoring systems

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

Tui Shortland of Nga Tirairaka o Ngati Hine explained how the monitoring framework used by the Ngati Hine people of Aotearoa-New Zealand 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 coast.

Onel Masardule of the Foundation for the Preservation of Indigenous Knowledge described a monitoring program established by the General Assembly of the Guna and applied in all Guna communities in Panama. The program 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.

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

The presentations showed that traditional monitoring and information systems are dynamic: they are tested 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 preservation of traditional knowledge are a unique opportunity for indigenous peoples to influence state policy. But indigenous peoples cannot maintain indicators and traditional knowledge unless they can secure their territory. Pastoralism, for example, cannot be maintained without community land.

## **Monitoring changes in land use and tenure**

Status and trends in land use and tenure are key indicators for both traditional knowledge and indigenous peoples' rights.

Sharon Atkinson of the Amerindian Peoples' Association (APA) described a program 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 was land tenure and the level of recognition of land rights, but it also included land-related issues identified by each community.

Gathuru Mburu of the African Biodiversity Network showed how ecological maps and 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 ecological calendars to identify the spiritual as well as the economic benefits of their environment, and to identify problems in ecosystems such as signs of climate change.

The presentations showed how recognition of tenure and ecological status of their lands and territories is fundamental to indigenous peoples' 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 lands and territories at national level. Maps and other evidence of indigenous peoples' use of the land have been used to assert rights to territory.

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**

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

Eunice Nkopio of MPIDO described how Maasai elders in Kenya 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.

Prasert Trakansuphakon of the Indigenous Knowledge and Peoples Network (IKAP) de-

scribed 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 practiced. 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.

Krisussandi Gunui of the Institute Dayakologi (ID) 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.

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.

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 western-influenced officials and politicians often label as drivers of environmental degradation, are in fact sustainable systems that nurture natural resources as well as using them. In northern Thailand, community monitoring provided an evidence base to demonstrate customary sustainable use of natural resources and challenge myths and misunderstandings about rotational farming.

## Additional tools and technologies

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

Vu Thi Hien of the Center of Research and Development in Upland Areas (CERDA) described a pilot project that aimed to demonstrate how ethnic minority communities in Vietnam could participate in REDD+ programs. The project included community monitoring of forest carbon, use of forest land and water resources, and establishing 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 FPIC.

Pasang Dolma Sherpa 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.

Henky Satrio of the Indigenous Peoples' Alliance of the Archipelago (AMAN) described the organization's SMS-based information system. The system provides a two-way information flow linking AMAN members and structures throughout Indonesia 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.

Information systems are also communications systems. The nationwide alliances of indigenous peoples 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**

Working with governments and international processes poses both risks and opportunities for indigenous peoples. Safeguard systems can help mitigate some of the risks. In some cases indigenous communities have shifted from opposing national governments to cooperating with them for specific purposes.

Claudia Ituarte-Lima of the SwedBio at Stockholm Resilience Center proposed a set of guiding principles for safeguards applicable to biodiversity financing mechanisms. The purpose of safeguards is to avoid violations of indigenous peoples' rights arising from external initiatives intended to protect biodiversity or mitigate climate change.

Manggob Masinaring of the NGO Sildap showed how a Philippine government agency was able to achieve its environmental protection goals once officials recognized the value of indigenous peoples' 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.

Rose Cunningham Kain 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 program organized by

the Miskito women's organization in Nicaragua. The program aims to educate young people to care for the environment and to sustain their interest and participation in traditional knowledge and community affairs.

Joenia Wapichana 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.

Historically, indigenous peoples' experience of state activity has been linked to invasion and occupation of indigenous territories, undermining of livelihoods and destruction of culture. It is not surprising, then, that indigenous peoples opposed their governments. However, as some states and the international community as a whole began to recognize indigenous peoples' rights, relations between governments and indigenous peoples in some countries became less confrontational. This has made it possible for indigenous peoples to cooperate with governments on specific initiatives to protect the environment and promote indigenous peoples' well-being.

However, governments remain subject to competing pressures. The private sector, in particular, is often stronger than the state, so indigenous peoples still need to put pressure on governments. Moreover, in some countries governments have yet to recognize indigenous peoples' rights, and indigenous communities face severe threats. Support for recognition of indigenous peoples from the international community remains important.

## Opportunities and challenges

Workshop participants were asked to state 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' organizations, intergovernmental organizations, and NGOs.

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 thing for indigenous peoples to monitor is land use change, because that is where culture, knowledge and language are based;
- Respect that the richness of CBMIS is its diversity, but collaborate for particular purposes;
- Data collected by people 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.

The participants concluded that at local level, CBMIS brings the community together and provides a basis for 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 peoples and their issues more visible to policy makers. The same is true at global level. In the current economic climate UN agencies have insufficient funds to produce global statistics, but community-based moni-

toring can provide reliable snapshots of trends on the ground.

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

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.

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.

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.

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?

## Next steps for CBMIS

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

Participants identified key areas to monitor, with appropriate indicators, as shown in the table below.

### What to monitor? Domains and indicators

| Key Areas/Domain                    | Indicators/Components                                                                                                                                          |
|-------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Land, Territories and Resources  | External threats<br>Land rights<br>Status of land use change<br>Fate control<br>Violations of rights<br>How are rules/norms/policies observed in the community |
| B. Traditional Occupations          | Culture dimension, practice of rituals                                                                                                                         |
| C. Traditional Knowledge            | Social relationship/community interactions<br>Indigenous languages<br>Cultural integrity<br>Species/wildlife                                                   |
| D. Full and Effective Participation | Role of women, men, elders, youth<br>Effective participation depends on the format and methods<br>How decisions are made<br>FPIC                               |

## Scoping

- There is a need to identify resources, experiences, and groups who are currently doing community monitoring. This will show what skills, toolkits, training expertise are available, what lessons have been learned, and what areas communities are monitoring. SwedBio wants to support this kind of scoping on a regional basis, and is looking for a person or organization to do it.
- If the scoping exercise can find out what baseline information communi-

ties have, it may be possible to agree a common reference level.

- There is a need to identify a person or organization to compile information for structural and process indicators.

## 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 10c Network and the Indigenous Peoples' Partnership on Climate Change and Forests could coordinate in their own countries; 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 listserves 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.

## Institutions

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

## Processes and issues to address

- The preparatory meeting for the World Conference on Indigenous Peoples

(Alta, 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, FPP 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.

## 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.



# Introduction

Historically, indigenous communities have had customary institutions that monitor the state of the natural resources in their ancestral domains. In different global regions, indigenous peoples have developed their own ways of monitoring ecosystems and community health. These are based on traditional knowledge and a holistic view of people and their environment, but they also 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.

Meanwhile, governments and international bodies have begun to recognize the importance both of indigenous peoples' traditional knowledge and of the information generated through community-based monitoring.

The United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) obliges UN agencies to take into account the human rights of indigenous peoples. The Convention on Biological Diversity (CBD), in its Article 8j, explicitly recognized the contribution of traditional knowledge, innovations and practices of indigenous peoples and local communities to the maintenance of biological diversity. The United Nations Framework Convention on Climate Change (UNFCCC) aims, among other

things, to reduce CO<sub>2</sub> emissions arising from deforestation and forest degradation (REDD). Research has shown that the healthiest forests are those managed and monitored by indigenous peoples and local communities.

All of these global initiatives require national governments to provide information. Some of the information required is not available in national statistical and information systems, but is being collected by indigenous peoples at community level.

The process of identifying indicators relevant to indigenous peoples started in 2006, with a view to proposing indicators for adoption under the CBD and the Millennium Development Goals (MDGs). Tebtebba (Indigenous Peoples' International Centre for Policy Research and Education) and the International Indigenous Forum on Biodiversity (IIFB) guided this work and submitted its results to the Working Group on Article 8j and Related Provisions of the CBD, and to the United Nations Permanent Forum on Indigenous Issues (UNPFII). Tebtebba, together with partners in the Indigenous Peoples' Partnership on Climate Change and Forests, is working to strengthen community-based monitoring and information systems (CBMIS) in a project intended to ensure protection of rights, effective participation and fair benefits

for indigenous peoples in REDD+ policies and programs.

The global expert workshop on CBMIS brought together indigenous peoples, governments, academics, research institutes, inter-governmental organizations, and NGOs with an interest in using the information generated by community monitoring, whether at local, national or global level. (For a full list of participants, see Annex, p. 69.) They reviewed a variety of examples of community monitoring, and discussed the opportunities and challenges for using the information generated in national and global processes to address environmental, human rights and development issues.

## Objectives of the workshop

The overall aim of the workshop was to unite the diverse participants on the importance, substance and applications of CBMIS for traditional knowledge, biodiversity and climate change, and the rights and well-being of indigenous peoples.

More specifically, the workshop aimed to:

1. Update participants on local-to-global developments and challenges on the implementation of the UNDRIP, the Strategic Plan on Biodiversity and Aichi Biodiversity Targets,<sup>1</sup> the UNFCCC and sustainable development plans, and the role of CBMIS in reaching these goals and targets;
2. Report on existing work on CBMIS as a tool for strengthening indigenous peoples' self-determined development and other local, national and global plans;
3. Share experiences and deepen understanding about tools and methodolo-

gies for community-based monitoring and reporting, towards a user-friendly CBMIS toolkit for use in pilot countries and communities; and to identify next steps for the development of a more comprehensive CBMIS toolkit;

4. Agree a common general framework and plan of action for CBMIS for pilot countries and communities, and define the roles of indigenous organizations and institutions, NGOs, governments, academic institutions, and multilateral bodies and research institutions;
5. Establish mechanisms to provide support and guidance to pilot countries and communities, possibly including a Network and Technical Working Group.

### Organizers and sponsors of the workshop

#### Organizers

Tebtebba  
Forest Peoples Programme  
Indigenous Peoples' Partnership on  
Climate Change and Forests  
International Indigenous Forum on  
Biodiversity-Working Group on Indicators  
Customary Sustainable Use and Rights on  
Protected Areas (10c) Partners  
SwedBio at Stockholm Resilience Center  
Secretariat of the Convention on Biological  
Diversity

#### Sponsors

Norwegian Agency for Development  
Cooperation  
Climate Land Use Alliance  
Tamalpis Foundation  
Brot für die Welt-EED  
Rights and Resources Group

<sup>1</sup> Plan and targets for implementing the CBD.

# Overview of Experiences and Challenges

The opening session aimed to situate community-based monitoring and information systems in terms of the policies emerging from global agreements, the steps being taken to apply them, and how governments can work with communities.

Joji Cariño of the Forest Peoples' Programme traced the development of indicators relevant to indigenous peoples' rights and well-being, the Convention on Biological Diversity, the Millennium Development Goals, and REDD+ safeguards. Community-based monitoring is a key source of data if these indicators are to be operationalized at national, regional and global levels.

Florence Daguitan of Tebtebba 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 tenurial arrangements, customary law and sustainable use of resources; biodiversity of plants and animals; and productivity of major crops.

Victoria Tauli-Corpuz of Tebtebba discussed the safeguards for implementation of REDD+ agreed by the parties to the Climate Change Convention, and outlined the monitoring, reporting and verification requirements. 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.

Eduardo Romero Olivero, 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.

## Global updates: Monitoring and indicators relevant for indigenous peoples

Joji Cariño, Forest Peoples' Programme (FPP) and IIFB Working Group on Indicators

In 2002, when the UN Permanent Forum on Indigenous Issues first called for disaggregated data to be made available to show the situation of indigenous peoples, few national statistical bodies were collecting such data.



The UN Statistics Division noted that the issue of indigenous peoples and data collection was ground-breaking work. It also pointed out that the collection and disaggregation of data on indigenous peoples pose unique challenges, in terms both of developing data for global comparative purposes and of developing data useful to indigenous peoples in their own communities.

Since then, a number of UN initiatives have sought to fill the gap by identifying data and indicators. In 2004, in response to advocacy by indigenous peoples, the CBD recognized the need for indicators on the traditional knowledge, innovations and practices of indigenous peoples if it was to monitor progress towards its 2010 target. The IIFB set up a working group to help develop appropriate indicators. In 2006 the UNPFII sponsored a set of regional workshops seeking to develop indicators for indigenous peoples' well-being and sustainability (in relation to the MDGs). The IIFB Working Group also contributed to these.

The IIFB Working Group on Indicators is made up of indigenous peoples' organizations

#### **Global core themes for indigenous peoples' well-being**

1. Security of rights to territories, lands and natural resources
2. Integrity of indigenous cultural heritage
3. Gender dimensions—elders, youth, men, women
4. Respect for identity and non-discrimination
5. Fate control or self-determination
6. Culturally appropriate education
7. Health
8. Full, informed and effective participation (FPIC)
9. Access to infrastructure and basic services
10. Extent of external threats
11. Material well-being
12. Demographic patterns of indigenous peoples

collaborating to identify indicators on indigenous peoples' rights, knowledge and welfare. It is a loose network, which organizes activities for specific outputs. Its activities so far have included a series of regional and thematic workshops in 2006-07, with the results brought together in an international expert seminar; publication of a resource book on indicators relevant to indigenous peoples;<sup>2</sup> a series of technical workshops; and pilot testing of the traditional knowledge indicators in the Philippines in 2010.

The regional, thematic and global expert meetings in 2006-07 identified 12 core themes or domains as central to the well-being of indigenous peoples (see box above).

<sup>2</sup> *Indicators Relevant for Indigenous Peoples: A Resource Book*, Tebtebba, 2008.

## Human rights indicators

Monitoring on the human rights of indigenous peoples is based on the UNDRIP and Convention 169 of the International Labor Organization (ILO).

The common framework for human rights monitoring consists of structural, process and outcome indicators. Structural indicators address the legal and constitutional framework; process indicators measure activities intended to bring about change; and outcome indicators measure the effects on the ground. The UNPFII is developing a common framework for monitoring well-being of indigenous peoples and implementation of the Declaration for UN bodies.

The UN General Assembly will hold a high-level World Conference on Indigenous Peoples in 2014, to examine the application of UNDRIP and other globally agreed goals affecting indigenous peoples.

## The Human Development Index

Efforts have also been made to apply the Human Development Index (HDI)—a composite of life expectancy, education and income—to indigenous peoples. For example, indigenous peoples in Canada developed a Community Well-being Index. In India, the Institute for Human Development applied the HDI measures to data on scheduled tribes (in effect, indigenous peoples) available in the national census. The Arctic Social Indicators Project added three domains to the HDI to make it more directly relevant to the people of the region:

- Fate control (key indicator: control of land);
- Contact with nature (key indicator: consumption and harvest of country food);
- Cultural well-being (key indicator: cultural vitality index).

## The CBD and indicators on traditional knowledge

The CBD adopted the indicators on traditional knowledge proposed by indigenous peoples in 2007.

In 2010 the CBD adopted a new Strategic Plan on Biodiversity and the Aichi Biodiversity Targets and a monitoring framework of goals, targets and indicators was adopted in 2012. Aichi Biodiversity Targets 14 and 18 are particularly relevant to indigenous peoples (see box)

The CBD has adopted four indicators on traditional knowledge:

### Aichi Biodiversity targets

**Target 14:** By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.

**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.

- Status and trends in linguistic diversity: number of speakers of indigenous languages;
- Status and trends in traditional occupations;

- Status and trends in land use change;
- Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan.

Tebtebba organized a series of technical workshops to consider how to collect and present the information for these indicators, and also commissioned two research papers to better understand ways of including indigenous peoples in official statistics. One showed how the ILO's International Standard Classification of Occupations (ISCO), which is used in national labor statistics, can be used to collect data on traditional occupations.<sup>3</sup> The other provided basic information about the Philippine Statistical System and entry points for indigenous peoples.<sup>4</sup>

## Indicators on land use and traditional occupations

Indicators on changes in land use and traditional occupations have relevance beyond the CBD.

**Land use change** (including water as well as land) highlights the relationship between traditional knowledge and the security of indigenous peoples' rights to territory. Changes in land use that take land and natural resources out of indigenous peoples' control imply decreasing opportunity to practice traditional knowledge.

Mapping is the key tool for conveying information about this indicator. Many indigenous

peoples' organizations collect this information through community mapping—a sign that monitoring land use change meets needs at local level, in addition to meeting the global need for monitoring status and trends in traditional knowledge.

Trends in the practice of **traditional occupations** help demonstrate how far traditional knowledge is being used in everyday life, where it is often linked to customary sustainable use of natural resources. This indicator also addresses the rights to subsistence and non-discrimination, to identity and culture. Traditional occupations are also directly relevant to ILO Convention 111 on Discrimination (Employment and Occupation), which prohibits discrimination in employment and occupations. The ILO has a comprehensive reporting framework and a Committee of Experts, so it is crucial for indicators to be compatible with this supervisory mechanism.

## The REDD+ safeguards

In its initial approach to REDD, the focus of the UNFCCC was on carbon. But indigenous peoples insisted that the social and biodiversity co-benefits of forests must also be recognized, and REDD became REDD+: reduced emissions from deforestation and forest degradation, with social and biodiversity co-benefits. The monitoring, reporting and verification of REDD+ must include the social and biodiversity benefits of forests, and not only carbon capture. The REDD+ Safeguards Information Systems must monitor and report on compliance with the environmental and social safeguards agreed at the Cancun conference of the UNFCCC (see p. 19).

<sup>3</sup> *Guide to using ISCO-08 and its relevance for collecting data on traditional occupations*, ILO.

<sup>4</sup> "Overcoming the Statistical Divide: Indigenous Peoples and the Philippine Statistical System," by Benjie Navarro, 2010.

## Piloting indicators in the Philippines

Advocacy by indigenous peoples in the Philippines resulted in the inclusion of an indigenous identifier in the 2010 National Census, complemented by a question on language. This should make indigenous peoples more visible in the statistical system.

The Philippine Traditional Knowledge Network is testing the indicators on land use change and traditional occupations at community level. The methods used included 3D maps and community lists of traditional occupations, as well as monitoring the practice of traditional occupations and out-migration for jobs. Overall, this experience has shown that indigenous communities can generate data, but that better information management systems are needed to ensure the data is stored, retrieved and used. The traditional knowledge network is seeking collaborating researchers and institutions.

## Reflections emerging from discussion

Indigenous communities have their own concepts of well-being, which governments sometimes incorporate into national programs. How have these concepts been incorporated, and how have communities participated? Governments have used their own interpretations of well-being against indigenous peoples, so there are risks in mainstreaming.

Nevertheless, community-based monitoring provides strong evidence and information to strengthen indigenous peoples' negotiating position with governments. If this can be systematized at global level, indigenous peoples will be in a stronger position to hold governments to account in global forums, for example, by challenging national reports to treaty bodies.

## Community-based monitoring and information systems for restoring the balance: Revival of indigenous knowledge systems of the Kalanguyas in Tinoc, Ifugao, Philippines

Florence Daguitan, Tebtebba

The Philippines, with 7,000 islands and a population of 87 million, is one of the megadiverse countries of Southeast Asia. Colonized for more than 350 years, it retains colonial legacies in the form of state land laws and an export-oriented, import-dependent development paradigm.

Tinoc is in the Cordillera Administrative Region, the homeland of the Igorots—seven indigenous groups with a total population of 1.1 million.



## The CBMIS project

The CBMIS project was based on two non-negotiable principles:

- Participatory research, with the people as the main actors in an educational process;

- Respect and sensitivity for traditional knowledge and traditional knowledge holders.

The project used data from previous studies, and from surveys and censuses, as well as generating new data through workshops, focus groups and case studies. The aim was to pilot an ecosystems-based approach, so data was collected on land, water and resource management; biological diversity; people's well-being; and the roles of different institutions and stakeholders in sustainability and benefit sharing.

The community's land-use system is kept in balance by their spiritual belief system and customary law. Different areas of the territory are used in different ways: watershed preservation, ricefields, woodlot, home-lots, vegetable gardens, rotational farming land, and grassland. From these different uses emerge distinct sets of biodiversities and 26 traditional occupations, all but two of them land-based.

Traditional monitoring activities include checking water volume to manage irrigation systems and weather monitoring systems. Traditional management systems combine sustainable use of resources with conservation mechanisms. Economic activities are prohibited, or kept to a minimum, in areas such as sacred sites, natural springs and watersheds, water bodies and steep terrain. Other areas are subject to active protection efforts, such as erosion controls, fallow systems in rotational agriculture areas and regular collective maintenance of irrigation systems. Cutting of trees is selective and regulated. The agro-economic calendar ensures the regeneration of species in the different areas.

There are different resource-sharing mechanisms for the different types of land use. For example, water rights are based on natural flow of the water; naturally occurring organisms in

ricefields and rivers can be collected by any member of the community.

Analyzing these traditional management systems helped restore people's confidence in their traditional knowledge.

The project also mapped the effects of changes in land use, comparing areas where the community had kept its traditional land-use system with areas dominated by commercial vegetable farming using chemical inputs. In these cash-cropping areas there was less biological diversity (some plants and wild animals were no longer seen, and some had become very rare) and traditional occupations were being eroded.

## Using the information

The information, maps and stories gathered through the project were used to raise awareness in the community, with local government, and with national government agencies. This led to the adoption of a People's Covenant to arrest environmental degradation and promote people's well-being through the revival of the indigenous knowledge practices and systems of territory management.

The community used the information to draw up a land use plan with four goals:

- Enhanced ecosystems services and resilience;
- Increased food sovereignty;
- Developed or improved social services;
- Strengthened good governance promoting positive values, customary laws of sustainable and equitable resource use.

The Kalanguyas of Tinoc are now systematizing their monitoring and information system. Table 1 (next page) shows what is being monitored and how.

**Table 1. Community-based monitoring in Tinoc**

| Data category | Particular information                                                                            | How data is generated                                           | Indicator of positive change             |
|---------------|---------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|------------------------------------------|
| Land use      | Land areas according to land use                                                                  | Workshops                                                       | Increasing forest cover                  |
|               |                                                                                                   | Mapping                                                         | Increasing land area for commons         |
|               | Tenurial arrangement                                                                              | Secondary data (Assessor's Office files, municipal plans, etc.) | Implementation of customary laws on land |
|               | Commons                                                                                           |                                                                 | Customary laws adopted by state          |
|               | Commons and shared Clan                                                                           |                                                                 |                                          |
|               | Family                                                                                            |                                                                 |                                          |
|               | Custom laws on tenure                                                                             |                                                                 |                                          |
|               | Sustainable resource use                                                                          |                                                                 |                                          |
| Biodiversity  | Listing of flora and fauna, corresponding uses and status (abundant, scarce, threatened, extinct) | Workshops                                                       | Increasing biodiversity                  |
|               |                                                                                                   | Key informant interviews                                        | Retrieval of lost fauna                  |
|               |                                                                                                   | Mapping (only local names)                                      | Decreased habitat loss                   |
|               |                                                                                                   |                                                                 |                                          |
| Productivity  | Productivity/unit area of major crops                                                             | Secondary data                                                  | Increased yield per unit area            |
|               |                                                                                                   | Focus group                                                     | Increased diversity                      |
|               |                                                                                                   | Household survey                                                |                                          |

### Key lesson

The key lesson of the project is that it is important for the people to know why they are doing CBMIS. After collectively analyzing the status and trends in their territories, the people proceeded to formulate a comprehensive land-use plan. They also agreed on the indicators to use to gauge the success of their intervention and to identify any negative trends.

dation and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries”.

Appendix 1 of the Cancun Agreement specified guidance and safeguards for implementation of REDD+, including the following:



### UNFCCC Safeguards on REDD+

Victoria Tauli-Corpuz  
Tebtebba

In the Cancun Agreement of 2011 the parties to the UNFCCC defined REDD+ as “Reducing emissions from deforestation and forest degrada-

- a) That actions complement or are consistent with objectives of national forest programs and relevant international conventions and agreements;
- b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty;
- c) Respect for knowledge and rights of indigenous peoples and members of local communities, taking into account relevant international obligations, national circumstances and laws, noting UNDRIP;
- d) Full and effective participation;
- e) That actions are consistent with conservation of forests and biodiversity.

Developing countries were asked to create a national strategy or action plan and set a national forest emission level, forest reference level or subnational forest emission levels. They were also requested to establish robust and transparent national forest monitoring systems, as well as information systems to show how they were addressing the safeguards in their implementation of REDD+.

In their national strategies and action plans, developing countries were requested to address drivers of deforestation, land tenure and forest governance issues, gender considerations and safeguards. They were also expected to ensure “the full and effective participation of relevant stakeholders, including indigenous peoples and local communities.”

### Guidance on implementing the safeguards

The UNFCCC’s Subsidiary Body for Scientific and Technological Advice (SBSTA) has been asked to draw up methodological guidance on safeguards, on establishing reference levels for forest emissions, and on measuring, reporting

and verification of forest emissions. The parties to the Convention outlined the following principles for this guidance:

1. Implementation of safeguards and safeguards information systems should support national strategies and action plans and be included in implementation wherever relevant;
2. Information systems need to take into account national circumstances and capabilities, but also relevant international obligations and agreements, such as the UNDRIP.

The information systems should:

- (a) be consistent with the guidance identified in Appendix 1 of the Cancun Agreement,
  - (b) provide transparent and consistent information that is accessible by all relevant stakeholders and updated on a regular basis,
  - (c) be transparent and flexible to allow for improvements over time,
  - (d) provide information on how all of the safeguards are being addressed and respected,
  - (e) be country-driven and implemented at the national level,
  - (f) build upon existing systems, as appropriate;
3. Developing country Parties undertaking the REDD+ activities, should provide a summary of information on how all of the safeguards are being addressed and respected throughout the implementation of the activities;
  4. This summary should be provided periodically and be included in national communications and biennial reports;
  5. The Conference of Parties will decide

when and how often states should present this summary information, on the basis of a recommendation from SBSTA;

6. SBSTA is to consider the need for further guidance to ensure transparency, consistency, comprehensiveness and effectiveness of safeguards information and, any other appropriate guidance, and report to the Conference of Parties.

### Activities of Tebtebba and the Climate Change Partnership

In April 2011 Tebtebba organized a workshop of indigenous peoples and support NGOs on monitoring, reporting and verification connected to REDD+. It examined concepts, tools and instruments, and identified eight broad domains to be monitored (see box below).

#### Eight domains for monitoring REDD+

1. Land tenure
2. Traditional knowledge
3. Customary law, governance and institutions
4. FPIC
5. Traditional occupations/livelihoods
6. Benefit-sharing and management
7. Conflict management and resolution
8. Gender (cross-cutting issues)

In 2013, a planning workshop in Manila, Philippines (see p. 73) brought together members of the Indigenous Peoples' Partnership on Climate Change and Forests, 10c Network, the IIFB and indigenous peoples from five countries implementing pilot projects on REDD+ monitoring. This workshop developed criteria and indicators for the eight domains, as well as a set of principles for community-based monitoring.

#### Principles for community-based monitoring

1. Rights to lands, territories and resources are respected, protected and fulfilled
2. Free, prior and informed consent
3. Respect, preserve, maintain traditional knowledge, innovations and practices
4. Ensure security of traditional occupations and livelihoods
5. Customary governance
6. Benefit-sharing
7. Gender and inter-generational dimension: ensure full and effective participation of women, youth and elders in all phases

### A government perspective on community-based monitoring

Eduardo Romero Olivero, Vice-President, North Atlantic Autonomous Region (RAAN), Nicaragua

Law 28 of the Sandinista government has established a legal framework to support the evolution of indigenous peoples' rights in Nicaragua. Its implementation began in 1990, but slowed down in the years of neo-liberal governments. Since President Ortega returned to power, the process has been reinvigorated. The government has titled 22 indigenous territories, affecting more than 500 communities in 30,000 square kilometers—31 percent of Nicaragua's land area.

The autonomous region is developing a government where indigenous peoples participate in management and decision making, so



everything in the territory must be coordinated with communal governments and territorial authorities. Projects cannot be imposed unilaterally without the consent of indigenous peoples.

The legal framework includes the 1994 Language Law, which respects official languages, and a law on traditional medicine which recognizes the ancestral knowledge of indigenous peoples and local communities. An intercultural education system is in place. Law 45 defines territorial demarcation and in the autonomous

region 90 percent of the indigenous territories have been titled.

The regional autonomous government has its own climate change initiative. It has an environmental commission and natural resources secretariat that monitors natural resources. The regional council approves concessions for mining, forests and oil.

It will be important to conduct environmental and social monitoring in indigenous peoples' territories, and to involve communities in these programs through collaboration with the territorial and communal authorities. There is a need to strengthen monitoring to generate more resources and capacity and create a system for gathering data. A REDD+ pilot project would enable this to advance.

### Reflections emerging from discussion

Community involvement and collective analysis is key to the success of CBMIS. There is a need to empower communities to act on the basis of the information they have gathered and analyzed.



Empowering indigenous communities in RAAN, Nicaragua through participatory mapping organized by CADPI. Photo credit: CAPDI

# Traditional Monitoring Systems

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

Tui Shortland of Nga Tirairaka o Ngati Hine 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 coast.

Onel Masardule of the Foundation for the Preservation of Indigenous Knowledge described a monitoring program established by the General Assembly of the Guna and applied in all Guna communities in Panama. The program 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.

Joseph Ole Simel of the Mainyoto Pastoralists 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 behavior.

## The Ngati Hine spiritual framework for CBMIS

Tui Shortland, Nga Tirairaka o Ngati Hine,  
Aotearoa-New Zealand

The Ngati Hine tribe is descended from one woman, Hinea Malu, who settled on the land. The tribe is not legally recognized by the government, so it has set up an environmental organization—Nga Tirairaka o Ngati Hine—named after the fantail bird.

### Stories, principles and symbols

The Ngati Hine monitoring system is designed around the creation stories of Sky Father and Earth Mother, separated by their children. When one of their sons wanted a compan-



ion, he went to the sacred earth and made a woman, Hineahuone, the maiden of the sacred earth.

The spiritual framework is based on the ancient principles of *kaitiakitanga* and *whangaia te Mauri o te Taiao*. *Kaitiakitanga* embodies a circular relationship between the Ngati Hine and the environment. *Whangaia te Mauri o te Taiao* refers to nurturing the life force of the environment, which generates, regenerates and upholds creation. It is the bonding element that holds the fabric of the universe together.

The symbol of knowledge is the fish hook, *hei matau*. The grandmother of the demi-god Maui gave him her lower jawbone, which he used for many purposes, one of which was a fish hook. The upper jawbone symbolizes celestial knowledge, while knowledge of the land is symbolized by the lower jawbone.

The Ngati Hine territory is in the far north of North Island. Much of their territory was confiscated between 1860 and 1939, and the Ngati Hine gradually moved inland from the

coast. They have started legal action to regain the confiscated lands.

Current environmental problems affecting the territory include intensive farming with chemicals; deforestation; and change in land use from hunting and gardening, forest, swamp, rivers and coast, to agriculture and exotic forestry.

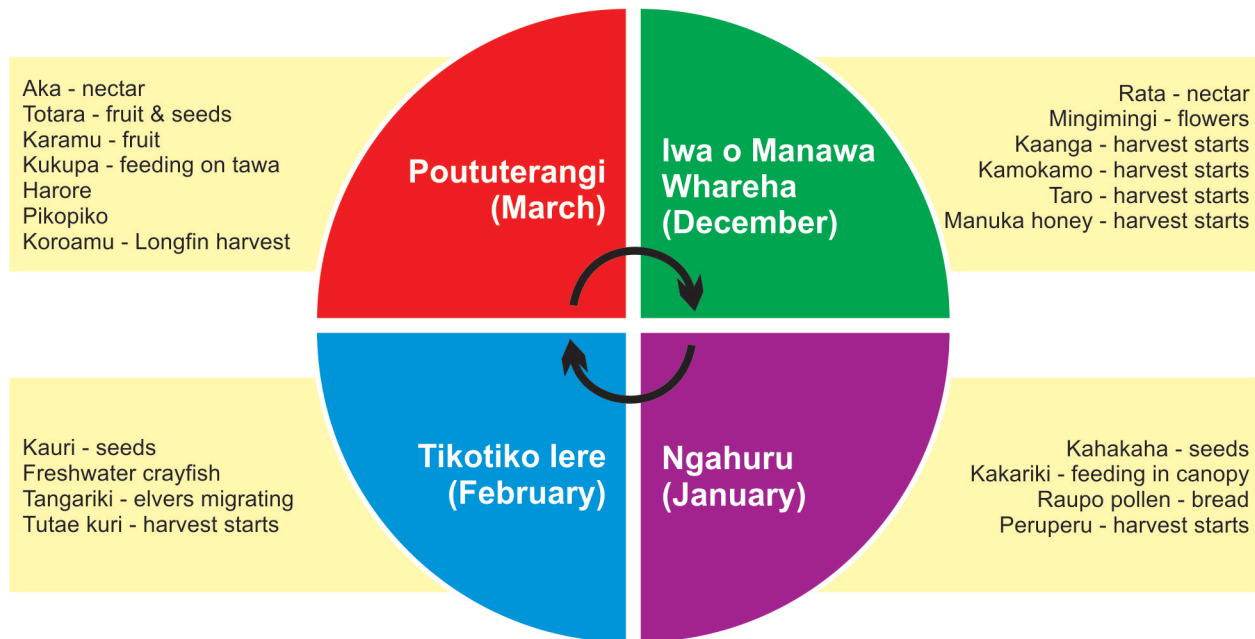
### The monitoring framework

The Ngati Hine monitoring framework is based not on ecosystems, but on the realms of gods and goddesses that relate to biodiversity:

- Rangi (sky father): tears for earth mother, water;
- Papa (earth mother): earth, soil, minerals;
- Rongo (god of peace): cultivated foods: sweet potato, taro;
- Tane Mahuta (god of the forest): forest trees, plants, birds;
- Tangaroa (god of the ocean): ocean water, marine fish;
- Tumatauenga (god of war): coastal tidal zone, shellfish;
- Haumietiketike (god of wild foods): berries, mushrooms, edible plants.

Traditional management techniques used to promote and maintain biodiversity include riparian planting, *Tapu* (rituals, prohibitions), *Rahui* (temporary prohibition), use of the *Mar-amataka* (the Ngati Hine moon calendar) and reseedling of forest, rivers and coast. Standards are assigned for outcomes. For example, the standards for water including *waiora* (healing waters), *waimaori* (natural waters), *waikino* (bad waters), and *waimate* (life-threatening waters).

### Maramataka: the Ngati Hine calendar



In the monitoring system, all species are regarded as equally important: one cannot thrive without the others. The *maramataka* (calendar) provides a timeframe for recording each realm (see diagram above).

Species-specific indicators are based on the relationship to language and culture, signals of change in the environment, the well-being and capacity of the species, lifecycle needs and *te whare tapawha*—body, mind, spirit, family health.

The Ngati Hine youth leadership strategy ensures that the knowledge underpinning the system is passed on. The elders of each *marae* (community meeting house) nominate young people who have demonstrated commitment and leadership qualities to participate in the youth leadership program. The young people go on weekend retreats, learn to hunt and

survive in the bush, and receive mentoring. The program is recognized in the education system as a course in outdoor education skills. The curriculum was developed around forest knowledge taught by elders.

### The monitoring and information system

Local guardians monitor their assigned areas at least once a month, testing the calendar and adding to it. They monitor and control invasive species and coordinate enhancement work. The guardians discuss their findings at monthly meetings, and the information they gather is uploaded to a traditional knowledge database and a GIS (Geographic Information System) database. The monitors make recommendations, and the meeting decides on further action. The outcomes are reported to the Ngati Hine via a weekly radio program, a website, YouTube and other social media.

Plans to continue and improve the monitoring system include:

- Assessing the work for social and economic outcomes;
- Contributing to CBMIS;
- Continuing to record, share and test by observation, and when required restore and adapt;
- Ensuring intergenerational transmission
- Developing graduate and postgraduate qualifications in outdoor education;
- Developing the sustainability of the monitoring and management program.

## Community monitoring and information systems of the Guna peoples

Onel Masardule, Foundation for the Preservation of Indigenous Knowledge, Panama

Panama has an area of 72,000 km<sup>2</sup> and a population of 3.5 million. Seven indigenous peoples live in Panama: Nagabe, Bugle, Guna, Embera, Waunan, Bribri, and Naso. Eighty percent of the Guna live in the Guna Yala Comarca, which has had political autonomy since 1925—a result of the Dule revolution.

The General Assembly of the Guna established a research program in each community, bringing young people and elders together to study traditional knowledge that was in danger of disappearing. The autonomous territory has its own budget and resources generated from tourism, so the program did not depend on government funds.

Table 2 (next page) shows the issues monitored, the type of monitoring activity, the indicators recorded and the methods used. In addition to traditional knowledge and sacred

sites, the program monitors intercultural education and tourism. The Guna are also mapping natural resources. Women play a big role in managing resources.

Three main indigenous languages are officially recognized, but the school curriculum does not reflect indigenous peoples' worldview and spiritual values, so the Guna have established bilingual and intercultural education in their territory.

Community tourism is a source of income for up to 40 percent of the Guna. It emphasizes Guna culture, not only sun and beaches. But the Guna are also concerned to preserve the coral reefs, so there is a need to control tourist numbers.

## Pastoralism and monitoring systems

Joseph Ole Simel, Mainyoito Pastoralist Integrated Development Organization (MPIDO), Kenya

Pastoralists in Africa have developed traditional knowledge that enables them to cope with a hostile environment. Livestock is not only their main source of food, but also at the center of spiritual, social and cultural practices. In East Africa pastoralists move between regions as dictated by nature, so they will occupy an area for a particular reason and at a particular season.

Monitoring is carried out to respond to these unique needs. The position of the moon and stars, cloud cover, plants and animal behavior can provide early warning of drought, outbreaks of disease, and other potential calamities.

**Table 2. Indicators and monitoring of the Guna peoples**

| Issue                 | Activities                                                                                                                                           | Indicators                                                                                                                                                       | Monitoring                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Traditional knowledge | <ul style="list-style-type: none"> <li>Research in all the communities of the Comarca</li> <li>Scholarships</li> </ul>                               | <ul style="list-style-type: none"> <li>Number of people who are traditional experts</li> <li>Number of scholarship recipients</li> </ul>                         | <ul style="list-style-type: none"> <li>Annual</li> <li>Semestral evaluation</li> </ul>                                                                                                    |
| Galus (sacred sites)  | <ul style="list-style-type: none"> <li>Participatory mapping to identify sacred sites</li> </ul>                                                     | <ul style="list-style-type: none"> <li>Sacred sites identified on maps</li> </ul>                                                                                | <ul style="list-style-type: none"> <li>Team visit to sites</li> </ul>                                                                                                                     |
| Language              | <ul style="list-style-type: none"> <li>Implementation of bilingual and intercultural education</li> </ul>                                            | <ul style="list-style-type: none"> <li>Curriculum</li> <li>Number of schools</li> <li>Number of educators/teachers trained in intercultural education</li> </ul> | <ul style="list-style-type: none"> <li>Visits to schools participating in the program or planning to do so</li> </ul>                                                                     |
| Community tourism     | <ul style="list-style-type: none"> <li>Inventory of traditional hostels</li> <li>Control of number of tourists and cars entering the area</li> </ul> | <ul style="list-style-type: none"> <li>Number of traditional hostels</li> <li>Number of tourists</li> <li>Entrance of cars</li> <li>Economic income</li> </ul>   | <ul style="list-style-type: none"> <li>Quarterly inspection of tourism areas</li> <li>Reports of visitors and their numbers</li> <li>Income for the Guna Yala General Congress</li> </ul> |

### Pastoralists and the state

Pastoralist communities are marginalized and neglected. Basic services are not available to them and the authorities ignore them.

In East Africa, British colonialism took the pastoralists' land and resources, crushing the pastoralist system. Post-independence governments followed the same policies and tried to make pastoralists settle in one place. The modern state has a problem with collective use of resources, but individual ownership and exploitation of resources have severe impacts on indigenous peoples.

However, things are beginning to change. In 2010, for example, the Kenyan Constitution acknowledged the marginalization of the pastoralists. The new Constitution and judicial system are capturing traditional ways of resolving conflicts, particularly over natural resources.



### Traditional knowledge

Knowledge of animal behavior, trees and plants is central to pastoralism, so it is important to pass traditional knowledge from the old to the young. Customary institutions are the holders of monitoring tools and traditional knowledge. There is also a division of labor between genders and generations.

Traditional monitoring methods have worked well for years, even centuries, but westernized education has ignored this. Much traditional knowledge is undocumented, and it is becoming harder to pass it on to the younger generation, so that knowledge is decreasing as elders pass away.

The new Kenyan constitution has important principles and values, recognizing in particular the need for communities to benefit from their natural resources. There is greater recognition and appreciation of traditional knowledge and indigenous peoples: we are being listened to now.

### ***Reflections emerging from discussion***

The presentations showed that traditional monitoring and information systems are dynamic: they are tested 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. Formal education has often had a negative impact, for example on the Maori language, and has discouraged and undervalued traditional knowledge. However, indigenous peoples are rising to the challenge. The Ngati Hine run their own schools and Maori universities have been established. The Guna operate a system of intercultural education, despite the withdrawal of state resources under the present government.

Indicators for preservation of traditional knowledge are a unique opportunity for indigenous peoples to influence state policy. The subject is being addressed at global level by international institutions, such as the CBD, the climate change convention (UNFCCC) and the MDGs, which provides an opportunity for addressing it at local level. But indigenous peoples cannot maintain indicators and traditional knowledge unless they can secure their territory. Pastoralism, for example, cannot be maintained without community land. How can indigenous peoples tap these opportunities?



# Monitoring Changes in Land Use and Tenure

Status and trends in land use and tenure are key indicators for both traditional knowledge and indigenous peoples' rights.

Sharon Atkinson of the Amerindian Peoples' Association (APA) described a program 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 was land tenure and the level of recognition of land rights, but it also included land-related issues identified by each community.

Gathuru Mburu of the African Biodiversity Network showed how ecological maps and 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 ecological calendars to identify the spiritual as well as the economic benefits of their environment, and to identify problems in ecosystems, such as signs of climate change. NGOs encourage schools to use the eco-calendar as a way of teaching traditional knowledge and making it part of the curriculum.

## Community-based tenure assessments and information monitoring systems: A case study from Guyana

Sharon Atkinson, Amerindian Peoples' Association (APA), Guyana

Community-based tenure assessments are a tool for communities to document the situation of their own lands, including the level of recognition of their land rights and the status of the land. Status can include any issues impor-



tant to the community: environmental health, for example.

These assessments are carried out by, for and with communities, rather than by external experts. They aim to generate robust and reliable information that the communities want to have documented, rather than reflecting the priorities of others. The information gathered is processed, stored and presented in ways useful to the communities, and can send a powerful message to governments and other target audiences.

Documenting the status of lands is vital if indigenous peoples are to press for policy reform and recognition of land rights in a context of global land-grabbing.

### **Indigenous peoples in Guyana**

Amerindian land rights remain largely unrecognized in Guyana, despite decades of Amerindian activism. The legislation does not recognize territories, but only small parcels of land; it does not recognize peoples without legal title; and it does not recognize subterranean rights. In dealing with international donors the government portrays the land situation as resolved, but it is not.

Given the country's weak legislation and the threat of land grabbing, there is an urgent need to analyze information about the status of indigenous lands. In 2011, therefore, the APA General Assembly prioritized a community-based land tenure assessment in order to document the status of Amerindian lands in Guyana and press for legal and policy reforms.

### **Preparation and design**

Sixteen delegates from five regions met for four days to design the project, with support

from experienced social researchers. They developed a survey questionnaire with more than 90 questions. They also received basic training in research methods (interview techniques, note taking, public presentations, storage of information, and use of equipment such as GPS and smart phones).

### **Methodology**

Logistical arrangements included prior coordination with villages. The methodology included public meetings and presentations to explain the assessment; mapping; semi-structured interviews with knowledgeable people; collection of oral and written testimonies; and field visits. The maps were discussed in public meetings with the communities. The survey forms were filled in by hand or on laptops.

Public meetings were held to validate the data, and the information was left behind with the communities so that they could use it in their own meetings with government.

The methodology was tested with a few communities, and then modified according to the experience. There was also a pilot test with nine communities in one region, and further slight modifications were made as a result.

### **Lessons learned**

The community-based land tenure assessment showed the importance of giving information back to the community, rather than simply extracting data. Public validation of the information gathered was much appreciated by the communities, increased their trust in the research team, and permitted important cross-checking of information.

The assessment also strengthened the APA by deepening links with communities, improving its knowledge of the situation on

the ground, and building the capacity of the research team.

Practical lessons learned were:

- Land issues can be complex: cross-checking is vital to ensure accurate data;
- Sufficient time in communities is essential, and good logistical planning and coordination is required;
- Storage and back-up are important.

### The power of information

The information generated was powerful. It highlighted systemic failings of the government land titling process, ranging from failure to incorporate traditional lands into legal titles, to omitting land physically occupied by farms and houses from land titles. These problems have been exacerbated by failings in demarcation processes, which have created disputes and conflicts within and between communities.

Through the process, APA was able to provide geo-referenced photos of illegal logging and environmental destruction caused by mining. The research results have not yet been published, but preliminary information was fed to policymakers and international donors to highlight the gaps in government discourse.

### Eco-cultural maps and calendars: Tools for strengthening and re- building community resilience

Gathuru Mburu, African Biodiversity Network (ABN)

The ABN works with indigenous peoples and local communities to pioneer culturally-centered approaches to social and economic problems. It focuses on biodiversity-related



rights, policy and legislation and its work is informed by local knowledge about ecosystems and community resilience, and local solutions. ABN currently works with 12 communities.

Local knowledge is being lost because of a failure to correct problems going back to colonial times. The source of the problem must be recognized in order to find the solutions. Table 3 compares eco-mapping with ecosystems assessment.

**Table 3. Community-led assessment vs Millennium ecosystems assessment**

| Eco-mapping        | Ecosystems assessment        |
|--------------------|------------------------------|
| Map of the past    | Historical change and impact |
| Map of the present | Conditions and trends        |
| Maps of the future | Scenarios                    |
| Initiating actions | Responses                    |

ABN believes the foundations for a successful community engagement process are:

- Long-term commitment;
- Respect for customary practices;
- Communicating on equal terms;
- Modesty in relation to one's own knowledge system;

- Ethical codes of conduct;
- Free, prior and informed consent;
- Inclusion of elders and youth of the community;
- Recognizing women's knowledge.

The spiritual belief systems of communities are intricately related to local ecosystems and define local understanding of the relationships between nature, humans and deities.

Eco-cultural maps and calendars are complementary tools. The map represents the community's understanding of their territory. The eco-cultural calendar shows cyclical time and its cultural-natural relationship with ancestral knowledge. The maps and calendars are created using participatory processes: both women and men take part, and elders, who are seen as the experts, take the lead

The eco-cultural map of the past shows the status of the territory before destruction set in. The map of the present shows the current situation; while the map of the future shows the desired state of the territory after restoration has taken place.



Eco-calendar developed by indigenous peoples of Roraima, Brazil. Photo credit: CIR

Action planning to restore the territory is based on the map of the future. It takes a holistic approach: it aims for natural regeneration of ecosystems, invoking natural laws and cleansing rituals such as no-go zones. Rituals are important for enforcing the norms and should not be confused with witchcraft. Putting the plan into practice includes petitioning the government as necessary, using the opportunities offered by national constitutions, and using international instruments.

The presentation ended with a warning that the expansion of mining is about to become a major problem, tantamount to a second scramble for Africa.

### *Reflections emerging from discussion*

The recognition of tenure and ecological status of their lands and territories is fundamental to indigenous peoples' 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 lands and territories at national level. Maps and other evidence of indigenous peoples' use of the land have been used to assert rights to territory.

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 Livelihood

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

Eunice Nkopio 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.

Prasert Trakansuphakon 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 practiced. 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.

Krisussandi Gunui 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.

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.

## Loita forest traditional management and monitoring systems

Eunice Nkopio, MPIDO, Kenya

The Maasai are nomadic pastoralists. Livestock, their only source of income, plays a key role for the Loita people. They use the milk, meat, blood, fat (for cooking), and skin (for mattresses). Livestock is sold for cash.

Climate change affects the Maasai through its effect on the cattle. In prolonged droughts, the cattle become thin and even the skin becomes unusable.

The Maasai indigenous peoples of Loita Naimina Enkiyio forest are located in the Rift



Valley province in Kenya. The Loita community has forest, which is protected through the traditional knowledge of elders and which sustains the community in times of drought. Then, the pastoralists' alternative livelihood is cultivating maize and vegetables, using water from the stream in the Loita forest.

The leader of the community, Oloiboni, regulates the use of pasture and water in the forest. The council of elders plays a key role in teaching the younger generation how to manage the forest.

## Rotational farming, biodiversity, food security and climate change in Northern Thailand

Prasert Trakansuphakon, IKAP, Thailand

Thailand has a land area of 51.3 million ha. The national forest policy sets a target for forest cover of 40 percent, or 20.5 million ha. The actual forested area is 17.2 million hectares, so 3.3 million hectares needs to be rehabilitated to meet the target. Logging was banned in

1989. The forests are the home of Thailand's indigenous peoples.

The presentation focused on community-based monitoring of biodiversity in three areas where rotational farming is practiced:

- Hmong and Karen villages in highland areas of Chomthing district, Chiang Mai province;
- Mae Lan Kham village, Sa Meong district, Chiang Mai province;
- Hin Lad Nai village, Wiang Pa Pao district, Chiang Rai province.

### Karen wisdom and the forest

***Live with the water, care for the river; live with the trees, care for the forest. Live with the fish, care for the spawning grounds; live with the frog, care for the cliff.***

**- Karen saying**

Rituals reinforce the Karen connection to the forest. For example, each child's umbilical cord is tied to a tree and thereafter the tree must not be cut.

Karen resource management practices include rotational farming, forest hunting and gathering, agroforestry, paddy rice farming, and animal husbandry.

Rotational farming is based on thorough knowledge and a diversity of crops. It is sustainable and culturally rich, but is often misunderstood and criminalized as a cause of deforestation, environmental degradation and climate change. Table 4 shows the Karen rotational farming cycle.

The seven-year cycle starts with a ritual at New Year to create power for the family. The field is cleared by slashing tree trunks, and a firebreak is carefully prepared before the field

**Table 4. Karen rotational farming cycle**

|            |                                 | Biodiversity                                                                                      |
|------------|---------------------------------|---------------------------------------------------------------------------------------------------|
| Year 0     | Current field (Qu)              |                                                                                                   |
| Year 1     | Last year's field (Hsgi au mei) | 16 kinds of food plants, 7 kinds of wildlife, 7 kinds of herbs                                    |
| Year 2     | White field (Hsgi wa)           |                                                                                                   |
| Year 3     | Infant fallow (Hsgi bau)        | 10 kinds of plants, 4 kinds of bamboo, 13 kinds of wildlife                                       |
| Year 4     | Young fallow (Doo lau htau)     |                                                                                                   |
| Year 5     | Adolescent fallow (Doo yau plo) | 75 kinds of plants for food, wood and herbal medicine, 12 kinds of wildlife, 30 kinds of wildfowl |
| Year 6     | Adult fallow (Doola)            |                                                                                                   |
| Years 7-10 | Adult fallow                    | 35 kinds of food plants, trees, 19 kinds of wildfowl                                              |

is burned. The cut trunks are left in the field, and new shoots grow from them within a week or two of the burning. Within two months, the field is green with diverse plants. Rituals are carried out before sowing, at mid-year and before threshing.

In the first two years, food crops are cultivated. Then the forest gradually regenerates until, in the seventh year, the adult fallow is ready to be farmed again. The productivity of rotational farming depends on the forest regenerating, so rotational farmers nurture the forests into their fallow period during the cultivation phase.

The system has been used for hundreds of years, and it enhances biodiversity. One study found 207 species in the fields used for rotational farming: a natural seedbank.

Rotational farming is an important source of food for the community: 54 percent of plant food in the community comes from rotational farming, compared with 33 percent from the paddy fields, seven percent from community forest and six percent from tea gardens.

Rotational farming is a dynamic management system, based on continuous adaptation. It is integrated with other systems such as paddy fields, kitchen gardens, animal raising,

hunting and gathering, and so on. It provides a connection between agricultural production and the ecosystem, maintaining the balance of land, water and forest. The regeneration cycle conserves animals and plants.

Rotational farming is a major component of the sustainable management of natural resources. It also helps to maintain the community's food security and control of its food supply, its sustainable use of local resources and local biodiversity.

### Community-based carbon monitoring

In the three Hinlad communities in Chiang Rai, community monitoring showed that rotational farming does not cause climate change: it stores more carbon than it emits. The net carbon storage from fallow fields, covering 236 ha, left to recover for up to 10 years, accounts for 17,348 tons C, while CO<sub>2</sub> emissions from the burning of fields amounts to only 480 tons C. Table 5 shows carbon sequestration and emissions on 192 ha of rotational farming area in Mae Lan Kham community.

**Table 5. Carbon sequestration and emissions in Mae Lan Kham rotational farming area (tons C)**

|                                     |                   |
|-------------------------------------|-------------------|
| Carbon sequestration years 1-9      | 3,407             |
| Carbon emissions in Year 10         | 614               |
| Net carbon sequestration Years 1-10 | 2,793             |
| Carbon increment                    | 2.79 per ton/year |

## Challenges and support

Rotational farming in Thailand faces many challenges, but there is also a degree of support for the practice in laws and policies.

The challenges include discrimination against rotational farmers because the practice is not recognized in national law. Pressures to stop or reduce the practice come from several sources, including government and company projects that force the community to change to permanent cultivation of cash crops. Recently, the forest ministry prohibited burning of forest in Northern Thailand for 100 days, from January to April. All this suggests a need for interdisciplinary research on rotational farming, with participation from multiple stakeholders.

Legal and policy support for rotational farming can be found in the 2007 Constitution, which supports the rights of communities to manage their own natural resources based on traditional practice. In August 2010, a Cabinet Resolution on “Recovering the Karen Livelihood in Thailand” recognized the natural resource management of the Karen people, including rotational farming. International agreements and declarations, such as UNDRIP, CBD Articles 8j and 10c, and ILO Convention 111 can also support rotational farmers.

Recommendations for addressing the challenges are:

- To have force, the law must emphasize the diversity and complexity of the context and conditions;
- Because rotational farming covers diverse practices, policy needs to be open and flexible;
- The number of years in rotation cycles should not be fixed in law or policy, to prevent adverse impacts on the life security of communities;
- The minimum length of the rotational cycle should be maintained: in mixed forest this is five years and in evergreen forest seven years;
- The arrest of rotational farmers should cease and indigenous communities’ use of traditional land should be protected, even if control of the land is in dispute;
- To manage disputes over use or control of indigenous lands, a committee or mechanism should be established to determine land for livelihoods, residence and continuation of communities’ way of life;
- The rotational farming system, which is a cultural activity of the indigenous peoples, aids the sustainable use of resources and self sufficient way of life. It should be promoted and recognized in national, regional and international levels.

## Conclusion

***The elders still order us,  
The elders still tell us,  
Order us to conserve the taro seeds,  
To save at least 30 kinds of seeds,  
Even in a famine we will not die.***

***- Karen saying***

The monitoring of status and trends in rotational farming could contribute to the CBD indicators and REDD+ safeguards. It would reveal trends in land tenure and land use change in indigenous territories, traditional occupations, indigenous languages, and customary law and governance systems.

### ***Dahas – Dayak Jalai natural resource and livelihoods management***

Krissusandi Gunui, Institut Dayakologi, West Kalimantan, Indonesia

Dahas is a traditional concept of integrated natural resource management among the Dayak Jalai people of Indonesia. It is based on the principles of togetherness and sustainability. Natural resource management is reflected in the traditional wisdom and local initiatives of the people. Dayak Jalai communities have been revitalizing the dahas system since 2010.

The concept of dahas reflects the rights of the Dayak Jalai people to manage their natural environment. It includes forest, hamlets (*du-*

*huk*) of five to seven households, natural rubber plantations, farmland, *lakai mudaq*, vegetables, medicinal plants, fruit trees, streams and water sources, and animals (pigs, chickens, duck and fish).

The process of dahas formation moves from farming, to a cabin, to a single house, to dahas building.

### **Managing the dahas**

The dahas group is based on inherited rights. Management is collective and sustainable, based on customary law, natural process and ritual. It is managed through gender balance and sharing of roles.

Threats to the sustainability of dahas include expansion of palm oil plantations, bauxite and iron mining, and industrial tree plantations.

### ***Reflections emerging in discussion***

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 western-influenced officials and politicians often label as drivers of environmental degradation, are in fact sustainable systems that nurture natural resources as well as using them. In northern Thailand, community monitoring provided an evidence base to demonstrate customary sustainable use of natural resources and challenge myths and misunderstandings about rotational farming.



## Additional Tools and Technologies

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

Vu Thi Hien of the Center of Research and Development in Upland Areas (CERDA) described a pilot project that aimed to demonstrate how ethnic minority communities in Vietnam could participate in REDD+ programs. The project included community monitoring of forest carbon, use of forest land and water resources, and establishing of a biodiversity inventory.

Pasang Dolma Sherpa 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.

Henky Satrio of the Indigenous Peoples' Alliance of the Archipelago (AMAN) described the organization's SMS-based information system. The system provides 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 advoca-

cy messages, helping communities to deal with imminent threats.

### **Community-based carbon measurement, biodiversity inventory and benefit distribution system in the REDD+ pilot project at grassroots level**

Vu Thi Hien, CERDA, Vietnam

The presentation focused on a REDD+ pilot project in Thai Nguyen, in northern Vietnam. The project aimed to build the capacity of an ethnic minority community to participate in REDD+ and was part of the global project of the Indigenous Peoples' Partnership on Climate Change and Forests.

The participating communities included ethnic minorities and local communities, a total of 1,568 households, organized in three new cooperatives. Local governments and government agencies concerned with forests or REDD+ were also involved.

The project aimed to show how REDD+ could work at ground level in Vietnam, and to show decision makers and donors that indige-

nous and local communities living in or around the forest can act as stakeholders in national REDD+ processes through collective action, institutional development, state law, and customary governance.

The project adopted a rights-based approach, based on full free, prior and informed consent (FPIC). It was based on collective decision making and action, included social and environmental safeguards, and sought to integrate economic social and environmental aspects into a holistic intervention. It promoted customary institutions and traditional knowledge.

Interventions before and in parallel with the pilot project included allocation of forest to the communities, and establishment of the cooperatives producing “organic-oriented commodities” for sale to companies.

### **Interventions of the pilot project**

The pilot project itself developed institutions and governance at community level, built capacity and assisted with technical aspects of REDD+. It also conducted advocacy at national and provincial level.

The cooperatives are composed of self-governing groups of households, which elect a steering committee and an independent community monitoring group. The steering committee operates a management board, responsible for planning, advice and consultation, and community-based monitoring. Sub-groups of the board are responsible for finance, information and REDD+ technical aspects.

The technical sub-groups and community monitoring groups received training in use of GPS and in measuring carbon. The project district staff turned the GPS data into maps. The carbon measurement is based on above-

ground biomass: the wood in sample plots is measured, the carbon is calculated, and these are plotted on a carbon map.

The participatory monitoring and information system is financed and maintained by the cooperatives.

The monitoring also included biodiversity inventory, based on traditional knowledge and science. Methodologies include mapping use of forest land, water resources and changes in biodiversity. Species are identified through survey and observation. Community mapping took in the past, present (changes in land use) and future (planning).

The project developed a methodology, tools, indicators, rules for using the information, and ways to update and maintain the information system.

### **Benefit-sharing**

The pilot project took a landscape approach. REDD+ interventions were considered as an emission reduction service, and all people living in the landscape who contributed to emission reductions were considered eligible to benefit from REDD+, whether or not they owned part of the forest. Members of the community cooperatives decided on the benefit distribution system, with full FPIC.

The cooperatives sell the carbon, and the CERDA project buys it. The income of each cooperative member depends on the forest area of each household or community, and the commitment to forest protection. Two systems were piloted, one based on households and the other on communities. Both systems had a complaints mechanism to resolve conflicts at group level, community level, and with the state system.

In the household management and cooperation system, 60 percent of benefits went to people who owned forest, and 40 percent to those who had made a commitment to protect the forest, although they did not own any of it. In the community management and cooperation system, the benefits were shared equally between all those who had committed to protect the community forest. (In both systems, the costs of implementing the REDD+ contract were deducted before the benefits were shared.)

### Next steps

Possible next steps for the pilot are:

- Analysis of the advantage of the REDD+ pilot with landscape approach under forest household and community management, for advocacy;
- Documentation of the carbon and biodiversity CBMIS;
- Pilot for a third structure of forest management, looking at co-management and co-benefits between state forest users and communities living in and around the forest;
- Working out how to integrate community-based monitoring of carbon and biodiversity with the national system.

## The role of community radio in CBMIS

Pasang Dolma Sherpa, Nepal Federation of Indigenous Nationalities (NEFIN)

NEFIN has been working on climate change and REDD since 2009, initiating community-based REDD+ processes with indigenous peoples at national and local levels.

For NEFIN, community radio is a platform for sharing and learning, easily accessible and affordable to all. It is the best means of disseminating information to build awareness and capacity, to pass on traditional knowledge to young people. Because it reaches local government and national government agencies, it is an effective advocacy and lobbying tool. It is also a means to document traditional knowledge and livelihood systems.

Community radio in Nepal is distinct from commercial radio. Community radio aims for the ownership, involvement and voice of the community, while commercial radio is profit-oriented.

### Using community radio

NEFIN initiatives include training community radio journalists, informing them about climate change and REDD+ in relation to indigenous peoples. Refresher training is provided after three to five months, with updates on global and national developments on climate change, as well as the issues and challenges facing local communities.

Once a week, NEFIN produces a 30-minute radio program, which is carried by 23 community radio stations across the country. The program consists of:

- news about climate change and REDD+ activities—international, national and local (3-7 minutes);
- reports on climate change and REDD+—international, national and local (5-7 minutes);
- interview (10-15 minutes);
- public service advertising (1-2 minutes).

Use of community radio has helped NEFIN to raise awareness among journalists and their listeners about climate change and REDD+ and



Photo credit: NEFIN

how these affect communities, so that women, youth and elders are willing to speak about the issues. It has also helped to make the government at both local and national level aware of indigenous peoples' issues.

Community radio has also informed communities about their rights, sometimes prompting them to action. For example, information broadcast on Marshyandi FM resulted in a community affected by the Upper Marshyandi hydropower project demanding an FPIC process.

Another community, informed by Dhankuta FM, demanded an FPIC process and dialogue over a mineral water project; the result was a three-point agreement: the affected area would be monitored, employment opportunities would be available to the community, and alternative water sources would be identified.

In Illam, a radio program on FPIC in REDD+ prompted the local community to demand an

FPIC process, and to raise the need for addressing traditional customary practices and alternative livelihoods.

### **Mobile phone communications and monitoring**

Henky Satrio, AMAN (Indigenous Peoples' Alliance of the Archipelago), Indonesia

AMAN has a membership of more than 2,240 communities across Indonesia, with 20 provincial boards and 85 district organizations. The organization's mission is to restore the sovereignty of the indigenous peoples of the archipelago, and defend economic, social, cultural and political rights.

Given its scope and mission, the organization needs an efficient and effective system for both internal and external communications.



AMAN has a print magazine, *Gaung Aman*, and a website. It also uses community radio, television and multimedia. But one of the most effective ways of reaching members at community level is by mobile phone.

External communication is a key activity for AMAN, because mainstream media are not sensitive to indigenous peoples. They tend to focus on urban issues, and to portray indigenous peoples as backward.

AMAN's communication system needs to link its boards at national, provincial and district level; to link members with each other at community level, as well as with the boards; and to enable a two-way flow of information between the various components of the organization and the government, NGOs and the public.

More than 70 percent of AMAN members have a mobile phone and the technology allows the organization to reach them immediately, and in a personal way. AMAN's mobile phone system relies mainly on SMS (text messages). All the organization's information, to and from board members, individual community mem-

bers, and from the website, can be accommodated in the SMS system.

Information reaching the AMAN office from a community is edited and then sent to 2,000 mobile phone numbers, reaching not only AMAN members but also advocacy targets such as government agencies and members of parliament. The system allows information from community monitoring to be converted swiftly into advocacy when necessary.

This system is used to spread information about the problems facing indigenous peoples, including land grabbing and conflicts with mining and palm oil plantation companies. For example, when the Dongi people in Kalimantan faced a threat from a company to drive them off their land, the community sent an SMS to AMAN, which spread the information to put pressure on the authorities. The result was negotiation between the community and the company, and the community kept its land.

The system contributes to monitoring because the feedback from communities helps to measure the impact of programs.

### ***Reflections emerging in discussion***

The community-based monitoring in Vietnam 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 FPIC.

Information systems are also communications systems. The nationwide alliances of indigenous peoples 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 Government

Working with governments and international processes poses both risks and opportunities for indigenous peoples. Safeguard systems can help mitigate some of the risks. In some cases indigenous communities have shifted from opposing national governments to cooperating with them for specific purposes.

Claudia Ituarte-Lima of SwedBio at Stockholm Resilience Center proposed a set of guiding principles for safeguards applicable to biodiversity financing mechanisms. The purpose of safeguards is to avoid violations of indigenous peoples' rights arising from external initiatives intended to protect biodiversity or mitigate climate change.

Manggob Masinaring of Sildap showed how a government agency was able to achieve its environmental protection goals once officials recognized the value of indigenous peoples' 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.

Rose Cunningham Kain of the Center for the Autonomy and Development of Indigenous Peoples (CADPI) described the participation of young people in community mapping and mon-

itoring, through a youth program organized by the Miskito women's organization. The program aims to educate young people to care for the environment and to sustain their interest and participation in traditional knowledge and community affairs.

Joenia Wapichana 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.

## Safeguards for supporting livelihoods and CBMIS: A legal landscape approach

Claudia Ituarte-Lima, SwedBio at Stockholm Resilience Center

This presentation is based on a discussion paper being prepared for the CBD Conference



of Parties, taking into account comments from parties and stakeholders: “Safeguards for scaling-up biodiversity financing and possible guiding principles,” by Claudia Ituarte-Lima, Maria Schultz, Thomas Hahn, and Saran Cornell.

The paper aims to assess which safeguards are applicable to biodiversity financing mechanisms, and to explore their relationships with CBMIS.

The notion of safeguards emerged among international financial institutions, when they recognized that certain projects had caused problems or harm to communities. They adopted safeguard policies to avoid causing this sort of harm. However, the concept of safeguards has since evolved into a more comprehensive one, linked with monitoring. For example, the UNFCCC has a safeguard monitoring system. For indigenous peoples, safeguards are linked with FPIC.

The discussion paper focuses on safeguards in biodiversity financing mechanisms such as

REDD+. Biodiversity financing mechanisms have market and non-market alternatives. Various values of biodiversity, such as resilience, justify its protection. There are new financing mechanisms, but there are also pre-existing laws and policies.

### Learning from existing laws and policies

Safeguards can be substantive—defining rights and duties—or procedural—mechanisms to make rights effective. They operate at multiple scales.

Community protocols, such as the biocultural community protocols recognized in the Nagoya Protocol of the CBD, set rules for engagement with external project proponents.

Social and environmental impact assessment identifies what needs safeguarding in a particular context.

A legal landscape approach to CBMIS would:

- Emphasize dynamic legal systems, including indigenous legal systems regulating the interaction between people and nature;
- Aim to reconcile trade-offs between improvement in livelihoods and conservation of biodiversity;
- Imply social learning for better governance;
- Address different scales, while being context-specific;
- Take into account the co-existence of various ecosystems.

### Guiding principles

The guiding principles in biodiversity financing mechanisms would therefore need to address biodiversity values for local livelihoods; people’s rights and access to resources and livelihoods; local country-driven or specific

processes linked to the international level; and governance, institutional frameworks and accountability. For example:

***Biodiversity values for local livelihoods:***

The design and implementation of biodiversity funding mechanisms should recognize that biodiversity and ecosystem processes underpin insurance value, resilience and local livelihoods. Proper institutional arrangements are needed to safeguard biodiversity and the associated ecosystem functions and services.

***People's rights and access to resources and livelihoods:*** Measures to allocate rights to benefit-sharing should be fair and equitable, with FPIC for the indigenous peoples and local communities directly affected.

***Local and country-driven or specific processes linked to the international level:*** Safeguards in biodiversity funding mechanisms need to be grounded in local realities and supported by country-driven and specific processes that use existing international legal and policy frameworks, where relevant.

***Governance, institutional frameworks and accountability:*** For safeguards to function properly, appropriate institutional frameworks and accountability mechanisms to support effective and equitable governance are a prereq-

uisite. They must address drivers of biodiversity loss and remove perverse incentives. Besides developing appropriate social and environmental laws and policies, states should have effective means to ensure accountability and compliance with safeguards.

Table 6 shows how the different principles are linked to different types of safeguards.

Different types of biodiversity financing mechanism require different types or combinations of safeguards.

***Payment for ecosystem services (PES)*** requires procedural safeguards (such as FPIC) and substantive safeguards (such as rights and duties associated with carbon, land and forest). The safeguards need to link tangible and intangible resources and benefits. ***Environmental fiscal reform*** requires safeguards to reduce perverse incentives such as the subsidizing of unsustainable practices. For ***biodiversity offsets***, given their uncertain implications, the precautionary principle should apply. Approval or rejection of projects should be based on participatory assessments of the potential environmental, social and cultural impacts. ***International development assistance***, although not an innovative financing mechanism, can provide seed money and lessons for various biodiversity financing mechanisms.

**Table 6. Guiding principles for safeguards in biodiversity financing mechanisms**

|                        | Guiding principles                        |                                                      |                                                                                |                                                         |
|------------------------|-------------------------------------------|------------------------------------------------------|--------------------------------------------------------------------------------|---------------------------------------------------------|
|                        | Biodiversity values for local livelihoods | People's rights, access to resources and livelihoods | Local and country-driven/ specific processes linked to the international level | Governance, institutional frameworks and accountability |
| Substantive safeguards | X                                         | X                                                    | X                                                                              |                                                         |
| Procedural safeguards  |                                           | X                                                    | X                                                                              | X                                                       |

## Conclusions

Safeguards need to respond to the specific risks and opportunities of each financing mechanism. In practice, however, the different mechanisms are linked, so there is a need to harmonize safeguards. In all biodiversity financing mechanisms, safeguards should be underpinned by a common set of guiding principles.

### Call for input to the discussion

The discussion paper can be downloaded from [www.cbd.int/doc/notifications/2013/ntf-2013-025-financial-en.pdf](http://www.cbd.int/doc/notifications/2013/ntf-2013-025-financial-en.pdf). The authors welcome any input and opinions.

## Working with government to establish a protected area

Manggob Masinaring  
Sildap, Philippines

The Philippine government's Department of Environment and Natural Resources (DENR) has difficulty in implementing its programs because its concept of environmental protection is to prohibit local people's activities. This always fails.

The DENR sought SILDAP's assistance to declare a protected area in the territory of the Mansaka indigenous peoples in the Compostela Valley in Mindanao, southern Philippines.

The process started with a workshop where the Mansaka explained their traditional zoning practices, the roles of the different zones, their customary beliefs, burial grounds, places where the spirits reside, and no-go zones. The discussion paved the way for the declaration of a protected area in Mount Canduyog, a Mansaka sacred site, reflecting the interface between the beliefs of the DENR and those of the people.

After the declaration, the people integrated their customary laws with local government ordinances at barangay level (the lowest level of local government).

The following are examples of these laws:

- Selling of land to outsiders is prohibited;
- Naturally growing trees may be cut only



From left, Manggob Masinaring of Sildap and Rose Cunningham of CADPI and Wangki Tangni.

for house construction, not for commercial use, and the tree must have a minimum diameter;

- When one tree is cut, five must be planted;
- Hunters must not pursue animals that enter the protected area.

## An indigenous youth network

Rose Cunningham Kain, Center for the Autonomy and Development of Indigenous Peoples (CADPI), Nicaragua

The Miskito women's organization works with leaders of the local community government and the territorial government, with women and men. It works for the individual and collective rights of women, and also runs programs for Miskito youth.

A network of 76 young people has been organized. It began investigating different types of biodiversity, and went on to examine issues such as indigenous peoples' rights. The young people learned about the last seven generations, and thought about what the next seven generations could look forward to. These activities conveyed the importance of caring for the territory.

These workshops encouraged the young people and their families to take more care of their environment and to adjust their behavior.

The young people and the elders worked together to map territories for demarcation, and this enabled intergenerational exchange. The young people used GPS to establish the coordinates, and compare the results with official maps. They also developed a map of potential problems, and exchanged these

among the communities. In the process, young people listened to the elders, and participated in dialogues to resolve disputes between communities.

The project monitored trees, animals and sacred sites. Not all the information is shared publicly: there are some things that communities want to keep to themselves.

The key thing is to work in a sustainable way, so that the community can stand on its own feet in terms of climate change mitigation.

## Monitoring indigenous territorial demarcation and management

Joenia Wapichana, Conselho Indigeno de Roraima (CIR), Brazil



Brazil has begun a process of recognizing indigenous traditional knowledge. Land claimed by indigenous leaders is being demarcated, paving the way for legal recognition of traditional territories.

Brazil has made significant progress in indigenous peoples' rights. The Constitution

recognizes inherent rights, and places a duty on the federal government to demarcate territory. Indigenous peoples have permanent tenure and exclusive enjoyment of their territory, including their natural resources. These rights are recognized as inalienable, permanent and indivisible.

In response to lobbying by indigenous peoples, the government established a working group of experts to identify territorial boundaries and demarcate land. Indigenous peoples had to become familiar with the process to influence it.

All demarcation claims are submitted to the Ministry of Justice, and then the President of the Republic ratifies the decision. It is a long process, and once the demarcation has been ratified, the process of titling and registration starts. Officially, land belongs to the federal government, but indigenous peoples use it. It is a different way of possessing the land.

### **The Roraima context**

Roraima is in the north of Brazil, bordering Venezuela and Guyana, and has a land area of 1 million km<sup>2</sup>. The last state in the country to be colonized, 47 percent of its land area is officially recognized as indigenous peoples' territory. Roraima has 10 different indigenous peoples in 300 communities.

With a variety of biomes—forests, savannah, mountains and rivers—Roraima is rich in natural resources and biodiversity.

### **Indigenous peoples in Brazil**

Indigenous peoples in Brazil number about 1 million individuals according to FUNAI, the state agency with responsibility for indigenous peoples, although the last census put their number at about 800,000. There are 235 indigenous peoples with distinct cultures, speaking 180 languages.

There are 674 indigenous territories covering 13 percent of the country.

Indigenous peoples' organizations promote demarcation as a way to protect their territory.

### **A history of conflict**

In the 1970s, miners invaded the indigenous territories in Roraima, bringing violence, slavery and abuse. Mining degraded the environment through contamination of rivers, deforestation and mercury pollution.

In the 1980s, indigenous lands were invaded and occupied by cattle ranchers. This was followed in the 1990s by urbanization, and from 1997 by the spread of rice plantations. Since 2000 there have been legal conflicts, bombings and continued destruction.

Indigenous peoples have used a wide range of strategies to address threats to their land, including legal action, advocacy and lobbying, campaigning, education and raising the awareness of third parties. They have worked with a range of sectors and organizations, building alliances with NGOs, working with the federal police to stop illegal mining, and forming partnerships with universities and researchers. They also used international instruments to defend their rights.

Indigenous leaders monitored the demarcation process in the 1990s, supported by public demonstrations highlighting the importance of demarcation and rights to natural resources. Once the land was demarcated, they worked with the people conducting the demarcation to protect their territories

## Monitoring

Monitoring helped to provide information for legal processes and to strengthen indigenous peoples' organization. It was important to provide information to the indigenous communities when mapping the lands. The process included creating protocols for the use of sacred sites and natural resources, and it emphasized capacity building, so that indigenous environmental agents could protect the territory.

CIR is carrying out studies on land use and alternative economies, to feed into discussions on how to manage the environment and territory. On 19 April 2013 a commission was established to implement a new presidential decree on management of indigenous land. CIR is part of the commission and will receive public funds for implementation.

Before, the indigenous peoples opposed the government. Now they are working with it. But the communities have not forgotten the past:

***Our experience is that for many years we suffered human rights violations, they burned our houses, they killed our brothers but they could not destroy our dreams because our land is our mother.***

***As long as there is one single indigenous person alive, our fight will continue.***

***- Statements from people in indigenous communities in Roraima***

## Reflections emerging in discussion

Historically, indigenous peoples' experience of state activity has been linked to invasion and occupation of indigenous territories, undermining of livelihoods and destruction of culture. It is not surprising, then, that indigenous peoples opposed their governments. However, as some states and the international community as a whole began to recognize indigenous peoples' rights, relations between governments and indigenous peoples in some countries became less confrontational. This has made it possible for indigenous peoples to cooperate with governments on specific initiatives to protect the environment and promote indigenous peoples' well-being.

However, governments remain subject to competing pressures and the private sector, in particular, is often stronger than the state, so indigenous peoples still need to put pressure on governments. Moreover, in some countries governments have yet to recognize indigenous peoples' rights and indigenous communities face severe threats. Support for recognition of indigenous peoples from the international community remains important.



# Expectations, Contributions, Opportunities and Challenges: World Café

Workshop participants were asked to state 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' organizations, intergovernmental organizations and NGOs. A number of proposals and recommendations emerged from this session.

## Why is CBMIS important?

The workshop presentations gave many examples of indigenous peoples' work to develop and use CBMIS. Many more communities generate data through community mapping, monitor biodiversity and the effects of climate change, or collect data on language. This work is important to the communities—otherwise they would not do it. But it is also important to governments, international organizations, NGOs, and academics.

- The knowledge generated helps the community to make better decisions and to develop appropriate action plans to restore languages, knowledge, land and waters.
- CBMIS is a way for communities to find out what is happening in their areas.
- CBMIS can create empowerment and ownership. It enables people to understand the value of their natural resources.
- CBMIS helps keep decision making at community level: if it is introduced into programs such as REDD+, communities can become a central part of managing the program.
- For NGOs working on forests, preserving community rights is important because forests that are in the hands of communities, especially indigenous peoples, are in better condition than any other forests, including those in protected areas.

### Local: plans, decisions, effective conservation

- It helps the community identify positive and negative impacts on their lives, culture and knowledge.
- It helps to channel their knowledge.

### Local to national: rights, visibility, survival

- "It is a right and a responsibility to use CBMIS for the survival of our people."
- Generating data for national information systems can make indigenous



Marcus Colchester of FPP moderates the World Café.

peoples and their issues visible to policy makers, making it more likely that they will be taken into account in public policy and distribution of resources.

- Even where the state does not recognize indigenous peoples' land rights, CBMIS provides a way to demonstrate attachment to and knowledge of the territory.
- Monitoring the status of traditional occupations can help demonstrate the value of traditional knowledge and defend livelihoods.
- CBMIS provides an opportunity for indigenous peoples to engage with government.
- CBMIS can help to influence national policies on REDD+ so that they take the rights of indigenous peoples into account, so that indigenous peoples

derive real benefits.

- When governments are open to using information generated by communities, it helps them to make better decisions.

#### **Local to global: diversity, access to justice, ground truth**

- Those who know the local reality best are the people who live in it. They know the data, so they should define the problem.
- People who want to be visible in global decision making must be involved in global data processing.
- Those who provide the data will have better control over the result.
- CBMIS offers a way for communities to participate in national and global initiatives: if they are not included in the

process, they will be victims and not beneficiaries.

- CBMIS can insert diversity into global processes.
- Access to justice: CBMIS is essential for providing evidence to treaty monitoring bodies.
- The UN will not do the monitoring for UNDRIP.
- In the current economic climate, UN agencies lack funds for global statistics, but community-based monitoring of biodiversity, for example, can provide reliable snapshots at community level.
- Progress towards the Aichi Targets of the CBD can be monitored by aggregating positive data from local level.
- CBMIS is important for monitoring REDD+ safeguards, including full and effective participation of indigenous peoples and respect for their traditional knowledge, as well as biodiversity and conservation of forests.
- For conservation NGOs, community monitoring can provide evidence about the progress and impact of conservation action on the ground.
- CBMIS can help to update information about deforestation, and communicate the change quickly. Tracking illegal deforestation in remote regions is best done through community-based monitoring.
- For NGOs mobilizing consumers to address companies that operate unsustainably, CBMIS can provide information from the source of the supply chain.

### **Engaging with others: sharing knowledge and perspectives**

- Participating in data generation helps indigenous peoples develop a relation-

ship with researchers, so that other sectors learn about the knowledge indigenous peoples inherited, the knowledge that was lost, and the knowledge that is changing.

- CBMIS provides an opportunity to adapt new technologies to support traditional knowledge.
- Good science needs to be challenged constantly: “We need different ways of thinking science and thinking knowledge.”
- Academics have much to learn from indigenous communities, both in terms of practical knowledge of biodiversity and in terms of approaches and worldviews. (For example, Andean indigenous peoples do not talk about “management” and “development,” but of nurturing life and reciprocity between living beings).
- Combining indigenous knowledge with a scientific approach give a clearer and richer picture of reality (a multiple evidence base).
- Scientists should not just search for universals that divert them from local knowledge and perspectives.
- For many research institutions, CBMIS is important because it is their mandate: they have to take into account all citizens and sectors.

## **Contributing to CBMIS**

### **International organizations**

- Under the CBD, it is a legal obligation for governments to produce a national report with effective participation of indigenous peoples and local communities. These reports should have input from community monitoring.

- The UN should set up a monitoring framework for UNDRIP that community monitoring can feed into.
- The ILO's International Standard Classification of Occupations provides a uniform framework for gathering statistics. It has detailed categories, including subsistence pastoralists, farmers and fishers, and governments should be encouraged to use it.

## Government

The RAAN in Nicaragua engages with communities and other relevant actors, and aims to build an alliance between the government and indigenous peoples' organizations to protect the environment.

## Academia

- Scientists, academics and researchers can:
  - » share methods and perspectives;
  - » help standardize CBMIS tools and methodologies;
  - » act as a facilitator or hinge, supporting community-based consultation on food security, biodiversity conservation and ecosystem management;
  - » provide resources to strengthen connections between communities.
- Richard Doral is preparing a CBMIS manual, for use in ancestral domain development planning.
- The Intergovernmental Platform for Biodiversity and Ecosystems (IPBES) can help with methodologies.

## NGOs

Make information available to people who need it.

## Opportunities

- UNDRIP provides a common framework relevant to indigenous communities on the ground. If the monitoring can be made relevant to the declaration, it will be relevant to the treaty bodies.
- The information generated can be used to highlight discrimination. For example, a community could bring a complaint under ILO Convention 111, which prohibits discrimination on the grounds of occupation.
- CBMIS can be used for conflict resolution: for example, community maps can help to address conflicts over land use.
- Pilot CBMIS projects, working jointly with governments, can provide proof that UNFCCC safeguards, biodiversity and forest conservation can be monitored without incurring huge costs.
- Governments can invite communities to contribute to national reports.
- The opportunity in Nicaragua is the willingness of the government to establish a real monitoring system and invest in local capacities.
- The traditional occupations indicator can be a proxy for traditional knowledge, an indicator of biodiversity and an indicator of rights to land, territory and resources.
- The International Land Coalition, which monitors commercial pressures on land, commons, pastoralism, etc., has decided to work on indigenous peoples' issues. If the ILC could tag its information with an identifier for indigenous peoples, it could help to monitor land use change.
- Data already collected (e.g., by the Economic Commission for Latin America and the Caribbean) can be identified and used.



World cafe participants, from left, Adrien Sinafasi of Dignité Pygmée, Birgitte Feiring of the International Land Coalition, Louis Biswane of KLIM/VIDS, and Pernilla Malmer of SwedBio at Stockholm Resilience Center.

## Challenges

### Generating information

- How to reconcile scientific knowledge with traditional knowledge?
- How to standardize so that data is comparable across times and places, while still reflecting the diversity of communities? (Broader coverage will lead to stronger policy impact.) CBMIS does not have to be standardized across communities, but a single community needs to standardize its data and methods if it is going to use the results for planning.
- How to generate information that serves local needs but that can also be used at national and global levels?
- Scoping: identify who is who, who is doing what, what are the results.

### Recognition

- How to achieve recognition and acceptance of the validity of information generated by communities?
- How to communicate the relevance of CBMIS to governments and UN agencies?

### Using information for advocacy

- How can CBMIS help communities threatened by land grabbing and state delinquency?
- How can CBMIS contribute to fair sharing of benefits, respect for sacred sites and cultural rights?
- Is there space for community-based monitoring systems to feed into the national information systems, and then into global reporting?

- How to ensure community information reaches international organizations (governments are unlikely to include negative information in the reports they submit to treaty bodies)?

### **Sustainability**

- How to ensure sustainability of CBMIS in a time of limited financial resources?
- How much support is needed to maintain local monitoring for national purposes? To maintain traditional knowledge?
- What are the incentives for monitoring if there is no obvious benefit to the community (e.g., carbon monitoring)?
- How to adapt methodology for use by local communities with limited technical skills?

## **Suggestions and recommendations**

### **Community needs**

- Monitoring will fail unless it is valuable for the people who do the monitoring, so it must address the local level.
- The community has to decide on what data to gather and how, before dealing with any interlocutor.
- It is important to provide information to communities: indigenous peoples need access to information. It is particularly important to provide information to communities on the progress of projects that are likely to affect them negatively and irreversibly.

### **What to monitor?**

- The key questions are: What do indigenous peoples want to learn from each other? What do they want to share with others about their own community?
- The key thing for indigenous peoples to monitor is land use change, because that is where culture, knowledge and language are based.
- Propose the same three indicators for the post-2015 Sustainable Development Goals as for the CBD.

### **Diversity and standardization**

- Respect that the richness of CBMIS is its diversity, but collaborate for particular purposes. Avoid international frameworks: they fail to maintain diversity.
- Data collected by people using different methodologies can be aggregated, as long as the methods used over time in each place are consistent.

### **Ways and means**

- Keep it simple: big global data sets cannot cope with complexity.
- CBMIS needs a mix of old and new technologies: new technology is important for indigenous knowledge.
- Mainstream the idea that local monitoring is important to monitor biodiversity, so as to increase support and money for such initiatives.

# Next Steps for CBMIS

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

## Summary of experiences

Joji Cariño suggested some next steps for feeding information generated by indigenous communities into national and global processes such as the CBD, the MDGs, and the UN-FCCC. She also outlined some of the learnings and issues that emerged in the first two days of this workshop and proposed issues for further discussion.

Some possible next steps would be:

- Strengthen indigenous peoples' monitoring work by establishing community-based monitoring and information systems;
- Conduct workshops to consider availability of data, methodologies and coordinating organizations, and to further refine the proposed indicators and tools;
- Identify communities for pilot testing of indicators;

- Obtain institutional support and resources to develop and operate monitoring and information systems.

Learnings and issues that emerged during the discussions include:

- Connecting indigenous monitoring frameworks (worldviews, methods) with national and global monitoring needs;
- Inter-generational learning and transmission of knowledge;
- Gender dimensions;
- Establishing information systems to record, process and use data collected:
  - » Using technology: assessment of available tools and software,
  - » The power of community mapping and eco-calendars,
  - » Tracking illegal logging and human rights violations,
  - » Two-way information flow through community radio,
  - » Mobile phone communications and monitoring,
  - » Methods of forest biodiversity assessment, including measurement of carbon;
- Access to justice: CBMIS for legal recourse and litigation using national,

- regional and international bodies;
- Monitoring changes in land use and tenure;
- Negotiations with national park authorities;
- Community-based monitoring and information systems have multiple uses:
  - » Community self-determined development and management of land and resources,
  - » Making indigenous peoples visible in national and global monitoring and assessments,
  - » Advocacy,
  - » Campaigns to stop human rights violations and land or forest incursions.

### **Issues for further discussion**

- Maintaining diversity of approaches and also agreeing some common indicators.
- Maintaining consistency in monitoring and possible standardization of information systems.
- Developing guides and toolkits for CBMIS.

## **Reflections and discussion**

### **Strengthening CBMIS**

The current monitoring work of communities is integral to self-determined development. It may need seed funds but to be sustainable, it should be embedded in the community's long-term activities. Community mapping and eco-calendars are particularly useful tools,

because they create the cohesion needed to sustain monitoring work.

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 aim is to 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.

### **The additional uses of monitoring**

International standards and national constitutions offer openings to embed community-based monitoring in national information systems. States are obliged to submit national reports to the CBD, the UNFCCC, and human rights mechanisms. The national level is a key arena: indigenous peoples need to translate their gains in international processes and their experience in communities into policy and practice at national level.

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.

The most immediate need is for input to the World Conference on Indigenous Peoples in September 2014, which aims to make implementation of the UNDRIP more effective.

Further thought is needed on such issues as non-carbon benefits, food security and food sovereignty, and ecosystems services.

## Connecting individual efforts

There is a need for scoping to gain a better understanding of the institutions, organizations, initiatives and resources that could be linked to this work. A CBMIS network could provide mutual support and a way of contributing to the various international initiatives and processes.

These efforts need institutional anchoring: visible and recognizable sources of the information generated by the network, accepted as credible sources of information.

## Information already available

There is a need to process and analyse the information already available: for example, a simple survey of information submitted by states to international organizations could provide considerable information on structural indicators.

## Information systems are also communications systems

A three-way flow is needed, not only between indigenous peoples and governments, but also among indigenous peoples.

## Dealing with the private sector

The private sector is often stronger than the state. Few companies are inclined to address indigenous peoples' rights, although some say they wish to do so. One tool for dealing with the private sector is the high conservation value assessment (HCVA). It aims to assess which aspects of land use are of greatest importance to conserving the ecosystem, the basic needs of communities, cultural identity and so on. Consultants and companies have started using HCVA toolkits in communities. The Forest Peoples' Programme is attempting to make this

tool more responsive to community needs.

There are both opportunities and risks in this. Indigenous peoples need to consider using information generated at community level to influence or counter the private sector. However, if the HCVA process is controlled by large companies, it is a potential challenge to the community-based approach. There is a need to interrogate tools that companies use, the structures of engagement and the ultimate interests.

## Common themes in community-based monitoring

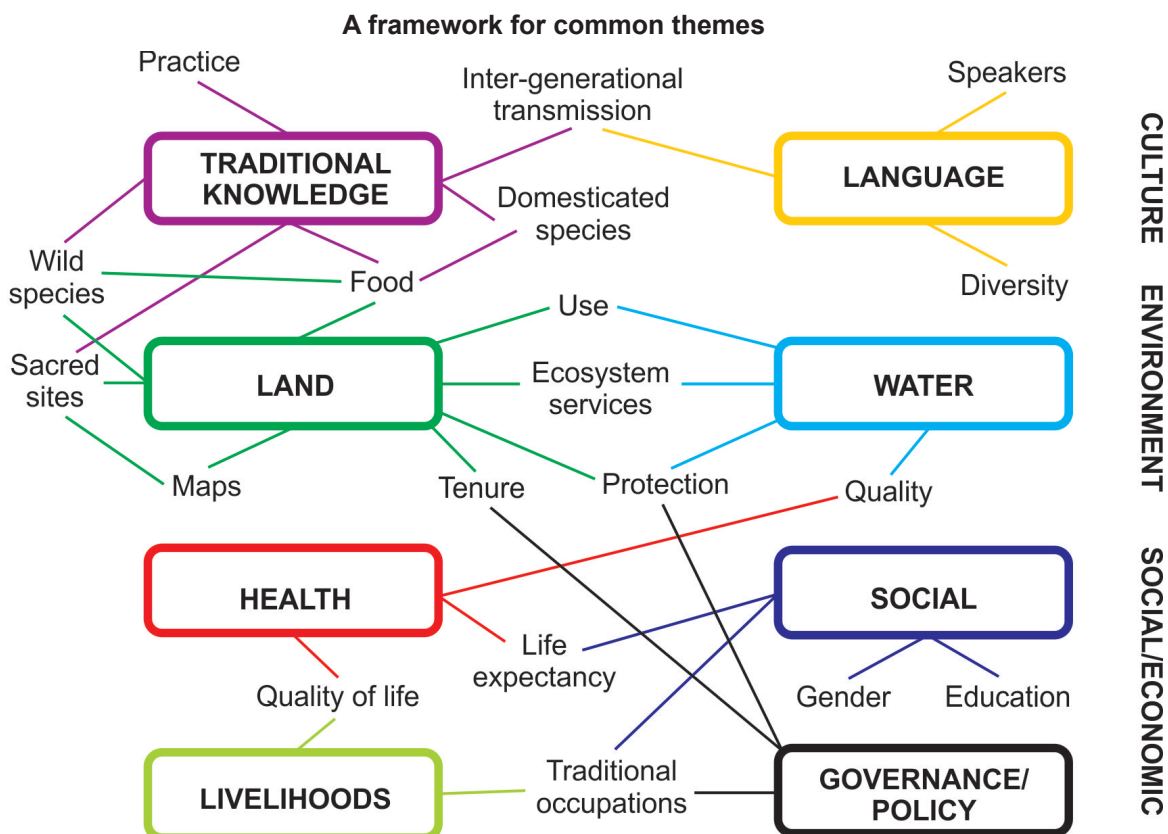
Jonathan Loh presented a framework of common themes arising in CBMIS (next page) to help bring together the data generated.

Richard Doral proposed an alternative framework for the relationship between indicators, based on landscape:

- The lived landscape: the people;
- The natural landscape: form, structure, topography;
- The sacred landscape: cosmology (the relationship between people and deity);
- Fate control: linking people, the physical landscape and the sacred;
- The human landscape: the built environment – buildings, roads, etc.

## Workshop groups

The participants divided into two workshop groups, one to discuss how to strengthen CBMIS, and the other to discuss how to deploy the information generated by CBMIS in international processes. Their recommendations were presented and discussed in the final session of the workshop.



## Strengthening CBMIS

The workshop group focused on ways to strengthen community tools, methodologies and technology. It looked at the issues to monitor, the tools, methodologies and processes to use, and potential partners and collaborators.

### What to monitor

The areas to monitor, with appropriate indicators, are shown in Table 7, next page.

### How to monitor

The participants proposed the following processes or general actions:

- Capacity building;
- Training of trainers;

- Advocacy work:
  - » engagement with other stakeholders,
  - » involve support organizations so they can see what is happening on the ground;
- Scoping and compilation of what has been done by different communities;
- Documentation and community research;
- Information-sharing.

The participants proposed the following methodologies and tools:

- Community mapping;
- Eco-calendar;
- Community radio and use of technologies (smart phones);
- Community-based biodiversity registry

**Table 7. Key domains and indicators for community monitoring**

| Key Areas/Domain                    | Indicators/Components                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A. Land, Territories and Resources  | <ul style="list-style-type: none"> <li>• External threats</li> <li>• Land rights</li> <li>• Status of land use change</li> <li>• Fate control</li> <li>• Violations of rights</li> <li>• How are rules/norms/policies observed in the community</li> </ul> |
| B. Traditional Occupations          | <ul style="list-style-type: none"> <li>• Culture dimension, practice of rituals</li> </ul>                                                                                                                                                                 |
| C. Traditional Knowledge            | <ul style="list-style-type: none"> <li>• Social relationship/community interactions</li> <li>• Indigenous languages</li> <li>• Cultural integrity</li> <li>• Species/wildlife</li> </ul>                                                                   |
| D. Full and Effective Participation | <ul style="list-style-type: none"> <li>• Role of women, men, elders, youth</li> <li>• Effective participation depends on the format and methods</li> <li>• How decisions are made</li> <li>• FPIC</li> </ul>                                               |

and other biodiversity areas;

- Trend analysis;
- Use of images or participatory video;
- A toolkit;
- Oral tradition (dialogue);
- Booklets (could be electronic also) and educational materials (easy guide);
- Use of matrix;
- Use of template (e.g., Andean world-view).

Some challenges and issues in this area are:

- How to standardize and aggregate data?
- How to ensure community ownership of data (data generated through CBMIS are protected and given back to the community)?
- How to translate the information for use by schools or other institutions?

### Who to work with?

- Governments (more strategies to work with them, communication strategy to influence them, terms of reference).
- Multilateral bodies (e.g., Forest Carbon Partnership Facility (FCPF) for REDD + implementation, terms of reference).
- PRATEC and similar organizations.
- Traditional institutions (e.g., community organizations).
- Indigenous media/supportive media.
- Build alliances supportive of indigenous peoples.
- International bodies (with careful judgement).
- Academe/scholars.
- NGOs.

## Deploying the information in national and international processes

This workshop group made a set of recommendations for using information generated through CBMIS beyond the community:

- Convene national forums to decide how to use the CBMIS process and information to create or access apertures (existing and new) at national and regional levels;
- For the 2014 World Conference on Indigenous Peoples, prepare a publication on the State of the World's Indigenous Peoples (with chapters including for example women's issues);
- Advance the indicators work within the CBD by using the IIFB (including the 10c Network) and the 8j Working Group meeting (October 2013) to review the available data. The data can then be submitted for use in the fourth edition of the CBD report (*Global Biodiversity Outlook-4 – GBO-4*) and national reports;
- Explore mechanisms or intermediate bodies at national, regional and global levels that could help participants to come together to strengthen the CBMIS work by:
  - » collecting the data,
  - » processing the data into indicators and usable information,
  - » reporting,(These functions are compatible with IPBES.);
- Ensure strategic collaboration to influence the Post-2015 development agenda (that is, to include the land use change and traditional knowledge indicators);
- Submit reports or complaints to the

ILO supervisory bodies under Convention 111;

- Identify possible collaborators (e.g., International Land Coalition, IWGIA).

## Final session: Recommendations

### General points

Sensitive data does not have to be shared with third parties: it can be included for the purposes of calculating global indicators without the details being explicit.

It is important to share the information from this workshop at grassroots level, so that people understand the importance of monitoring.

### Strengthening the network

The participants in this workshop can build the basis of the network by starting to implement some of these recommendations.

### Scoping

- There is a need to identify resources, experiences, and groups who are currently doing community monitoring. This will show what skills, toolkits, training expertise are available, what lessons have been learned, and what areas communities are monitoring. SwedBio wants to support this kind of scoping on a regional basis, and is looking for a person or organization to do it.
- 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 identify a person or organization to compile information for structural and process indicators.

### ***Coordination and communication***

- Regional coordination makes for more effective communication, because of language differences. Perhaps regional hubs or teams could address specific regions.
- There is scope for building the network at national level. For example, members of the IIFB, the 10c 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 listserves 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.

### ***Institutions***

- It should be an ambition to set up a registry or center of reference, to add credibility, as no one is collecting data on traditional knowledge and indigenous peoples.

### ***Processes and issues to address***

- The preparatory meeting for the World Conference on Indigenous Peoples (Alta, 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, FPP will prepare a short briefing paper on the limitations, risks and opportunities posed by HCVAs.
- An opportunity to discuss monitoring of gender dimensions is the Global Conference of Indigenous Women, to be held in Lima in October 2013. The conference will consider issues to take forward for the 20<sup>th</sup> anniversary of the Fourth World Conference on Women (Beijing +20) and the 2014 review of the Program of Action of the International Conference on Population and Development (Cairo+20).

### ***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 (for example, from community mapping). Perhaps training on this can be part of the agenda at the community mapping workshop to be held in Indonesia in August 2013.
- An opportunity for further discussion and reflection on indigenous-friendly research methods, theoretical frameworks of indigenous thinkers, etc. is the Global Conference on Indigenous Studies and Research, June 26-28, 2013, in Manila, Philippines.



Victoria Tauli-Corpuz of Tebtebba and Joji Cariño of FPP lead discussions on next steps.

# Annex: Program

## GLOBAL EXPERT WORKSHOP ON COMMUNITY-BASED MONITORING & INFORMATION SYSTEMS (CBMIS)

26-28 April 2013, Bonn, Germany

### ORGANIZERS:

Tebtebba, Forest Peoples Programme (FPP), Indigenous Peoples' Partnership on Climate Change and Forests, International Indigenous Forum on Biodiversity (IIFB)-Working Group on Indicators, Customary Sustainable Use and Rights on Protected Areas (10c) Partners, SwedBio at Stockholm Resilience Center, Secretariat of the Convention on Biological Diversity (SCBD)

### SPONSORS:

Norwegian Agency for Development Cooperation (Norad), Climate Land Use Alliance (CLUA), Tamalpais Foundation, Brot für die Welt-EED, Rights and Resources Group (RRG)

### OBJECTIVES:

To unite on the importance, substance and applications of community-based monitoring and information systems on traditional knowledge, biodiversity and climate change, rights and well-being of indigenous peoples.

1. To be updated on local to global developments and challenges on the implementation of the UNDRIP, the Strategic Plan on Biodiversity and Aichi Biodiversity Targets, UNFCCC, and sustainable development plans and the role of community-based monitoring and information systems in reaching these goals and targets.
2. To report on existing work on community-based monitoring and information systems as a tool for strengthening indigenous peoples' self-determined development and other local, national and global plans.

3. To share experiences and deepen understanding about tools and methodologies in carrying out community-based monitoring and reporting towards a user-friendly CBMIS tool kit for use in pilot countries and communities and identify next steps.
4. To agree on a common general framework and plan of action on CBMIS for pilot countries and communities and to define the roles of indigenous organizations and institutions, NGOs, governments, academic institutions, and multilateral bodies and research institutions.
5. To establish mechanisms, which will provide support and guidance to pilot countries and communities including a possible Network and Technical Working Group.

#### PROPOSED PROGRAM:

| Date/Time                                 | Activities                                                                                                                                                                                                                                                                                                                                                                    | Person/s-in-charge                                                                                                            |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>Day 1: 26 April 2013</b>               |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                               |
| <b>AM Facilitator: Vicky Tauli-Corpuz</b> |                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                               |
| 8:30-9:00                                 | Registration                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                               |
| 9:00-9:30                                 | Preliminaries: Welcome, Introduction, Objectives Expectations, and Program                                                                                                                                                                                                                                                                                                    | • Vicky Tauli-Corpuz                                                                                                          |
| 9:30-10:45                                | Opening Session<br>1.1 Keynote address: (Overview and Context of CBMIS) (30 mins)<br>1.2 CBD Experience<br><br>1.3 Climate Change/REDD+ Experience<br><br>1.4 Government's Experience (15 min. presentation for each speaker)                                                                                                                                                 | • Joji Cariño, FPP<br><br>• Florence Daguitan, Tebtebba<br>• Vicky Tauli-Corpuz, Tebtebba<br>• Eduardo Romero, RAAN-Nicaragua |
| 10:45-11:00                               | Coffee Break                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                               |
| 11:00-12:30                               | Session 2: Traditional Monitoring Systems<br>2.1 Maori Spirituality: Aoteroa<br>2.2 Guna Yala Congress: Self-Directed Development and Monitoring<br>2.3 Pastoralism and Monitoring Systems (15 min for each speaker and 45 min. Q/A)                                                                                                                                          | • Tui Shortland<br>• Onel Masardule, FPCI<br><br>• Joseph Ole Simel, MPIDO                                                    |
| 12:30-2:00                                | Lunch Break                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                               |
| 2:00-3:30                                 | <b>PM Facilitator: Maurizio Ferrarri</b><br>Session 3: Land Use and Tenure Changes<br>3.1 Guyana – Using digital tools for monitoring land use and tenure tenure<br>3.2 Eco-mapping and ecolendars as tools for indigenous communities resilience building<br>3.3 Cameroon Forest Peoples: Film and Maps on Tracking Illegal Logging (15 min for each speaker and 45 min Q/A) | • Sharon Atkinson, Amerindian Peoples Association<br>• Gathuru Mburu African Biodiversity Network<br>• Caroline de Jong, FPP  |

|                                                                                      |                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3:30-4:00                                                                            | <i>Coffee Break</i>                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                  |
| 4:00-5:45                                                                            | <p>Session 4: Traditional Occupations and Local Livelihoods</p> <p>4.1 Loita Forest Traditional Management and Monitoring Systems</p> <p>4.2 Rotational Farming</p> <p>4.3 Dahas/Dayak Jalai Natural Resource and Livelihoods management (15 min for each speaker and 45 min Q/A)</p> | <ul style="list-style-type: none"> <li>• Eunice Nkpio, MPIDO</li> <li>• Prasert Trakansuphakon</li> <li>• Krissusandi, AMA-JK/Institut Dayakology</li> </ul>                                                                                     |
| 5:45-6:30                                                                            | Plenary for Day 1 Assessment                                                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                  |
| 6:30 up                                                                              | <i>Dinner</i>                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                  |
| <b>Day 2: 27 April 2013</b><br><b>Facilitators/Anchor Persons: Marcus Colchester</b> |                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                                                                                  |
| 9:00-11:15                                                                           | <p>Session 5: World Cafe: Why is CBMIS Important? How will you contribute to support CBMIS implementation?</p> <p>Panel 5.1: Governments, UN Bodies, Academe and Research Bodies, Indigenous peoples, and NGOs</p>                                                                    | (Note: Listed below are possible panelists to be confirmed who will be distributed for the two panels: with 1-2 representative/s per grouping with 3-5 min response for each speaker and 15 min Q/A after each panel.)                           |
|                                                                                      | Governments:                                                                                                                                                                                                                                                                          | Representative from Nicaragua                                                                                                                                                                                                                    |
|                                                                                      | UN Bodies                                                                                                                                                                                                                                                                             | SCBD on TK Indicators                                                                                                                                                                                                                            |
|                                                                                      | Academe and Research Bodies                                                                                                                                                                                                                                                           | <ul style="list-style-type: none"> <li>• Pernilla Malmer, Swedbio at Stockholm Resilience Center (SRC)</li> <li>• Tirso Gonzales (University of British Columbia Okanagan)</li> <li>• Brigitte Baptiste, Colombia Humboldt Institute.</li> </ul> |
|                                                                                      | Indigenous Peoples:                                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Ibrahim Njobdi, Lelewal</li> <li>• Adolphine Byawuwa/Adrien Sinafasi, DRC</li> <li>• Rita Castro/Tarcila Rivera Zea, Chirapaq</li> </ul>                                                                |
|                                                                                      | Non-Government Organizations (NGOs)                                                                                                                                                                                                                                                   | <ul style="list-style-type: none"> <li>• Jonathan Loh, Terra Lingua/ Zoological Society of London</li> <li>• Richard Dorall</li> </ul>                                                                                                           |

|                              |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11:15-12:30                  | Con't: World Cafe: What are the opportunities and challenges on CBMIS? How will you address the challenges in CBMIS implementation?<br>Panel 5.2: Governments, UN bodies, Academe, Indigenous Peoples, and NGOs                                                                                                   | (Note: Same list as above with 1-2 representative/s per group with 3-5 min response per speaker and 30 min Q/A)                                                                                                                |
| 12:30-2:00                   | <i>LUNCH BREAK</i>                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                                                                |
| 2:00-3:30                    | <b>Facilitator: Stanley Kimaren Ole Riamit</b><br>Session 6: Additional Tools and Technologies<br>6.1 (Vietnam) - Carbon Measurement, Biodiversity Inventory and BDS<br>6.2 (Nepal) - Community Radio<br><br>6.3 (Indonesia) Mobile Phone Communications and Monitoring (15 min each presentation and 15 min Q/A) | <ul style="list-style-type: none"> <li>• Vu Thi Hien, CERDA</li> <li>• Pasang Dolma Sherpa, NEFIN</li> <li>• Henky Satrio, AMAN</li> </ul>                                                                                     |
| 3:30-4:00                    | <i>Coffee Break</i>                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                |
| 4:00-5:45                    | Session 7: Interphase/Working with Government<br>7.1 Biodiversity/REDD+ Safeguards Monitoring and Information Systems<br>7.2 Nicaragua: CADPI-RAAN<br><br>7.3 Philippines: SILDAP<br><br>7.4 Brazil: CIR on Monitoring Indigenous Territorial Demarcation/Management (15 min for each speaker and 45 min Q/A)     | <ul style="list-style-type: none"> <li>• Claudia Iduarte Lima, SwedBio-SRC</li> <li>• Dennis Mairena and Eduard Romero, RAAN Regional Council</li> <li>• Manggob Masinaring, SILDAP</li> <li>• Joenia Carvalho, CIR</li> </ul> |
| 5:45-6:30                    | Plenary for Day 2 Assessment                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                                                                |
| 6:30 up                      | <i>DINNER</i>                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                |
| <b>DAY 3: April 28, 2013</b> |                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                |
| 9:00-10:00                   | <b>Facilitator: Joji Cariño</b><br>Session 8: Presentation on Summary of Experiences on the use of Tools, Methodologies and Technologies in relation to the Domains/Themes/Indicators relevant to Indigenous Peoples: Reflections by Participants                                                                 |                                                                                                                                                                                                                                |
| 10:00-10:30                  | Coffee Break and Presentation of Workshop Guide and Work Groups                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                |

|             |                                                                                                                                                                                                                                                                                                                                                                                                                                   |                    |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|
| 10:30-12:30 | Workshop for 2 working groups:<br>WG1: What are the priority domains/areas for CB-MIS? What are the appropriate tools/methodologies/technologies in CBMIS that will be needed to generate comparable information? What are the other needs for capacity building in CBMIS?<br>WG2: What are the national/global processes where we need to interface/link local reports in relation to Monitoring and Indicators relevant to IPs? |                    |
| 12:30-2:00  | <i>LUNCH BREAK</i>                                                                                                                                                                                                                                                                                                                                                                                                                |                    |
| 2:00-3:30   | Plenary Session: Report Back from Work Groups and Discussions                                                                                                                                                                                                                                                                                                                                                                     |                    |
| 3:30-4:00   | <i>Coffee Break</i>                                                                                                                                                                                                                                                                                                                                                                                                               |                    |
| 4:00-5:30   | Plenary Session on Next Steps and Mechanisms, (including the need for a Network, Technical Working Group, etc.)                                                                                                                                                                                                                                                                                                                   |                    |
| 5:30-6:00   | Closing Plenary Session                                                                                                                                                                                                                                                                                                                                                                                                           | Vicky Tauli-Corpuz |
| 6:30 up     | <i>DINNER</i>                                                                                                                                                                                                                                                                                                                                                                                                                     |                    |

# Annex: Participants List

## Global Expert Workshop on Community-Based Monitoring and Information Systems

April 26-28, 2013, Bonn, Germany

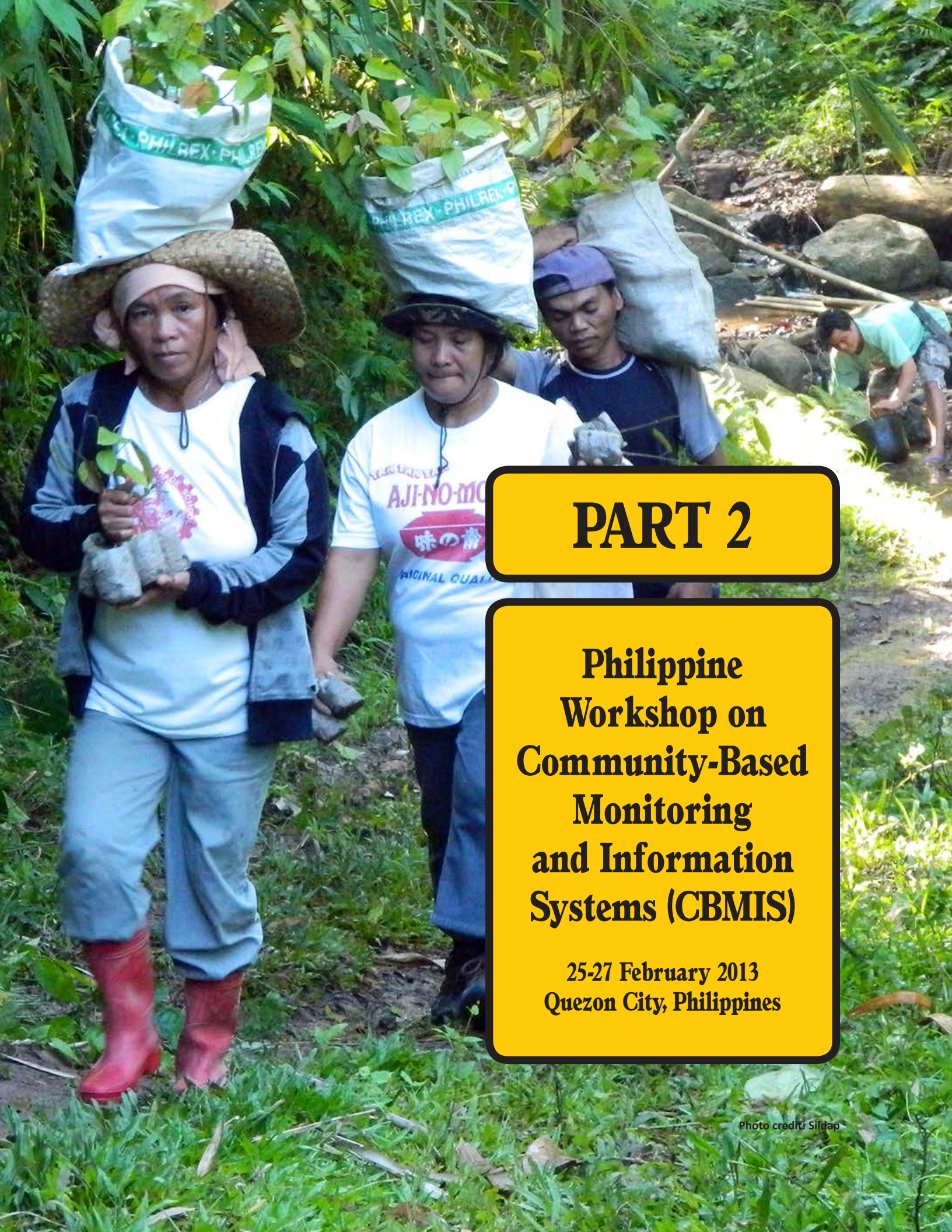
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|                        |         |                                                                        |                                                   |
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|                            |                         |                                                                        |                                               |
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| Grace Balawag              | Philippines             | Tebtebba                                                               | grace@tebtebba.org                            |
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|                          |             |                     |                                                                         |
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## **PART 2**

### **Philippine Workshop on Community-Based Monitoring and Information Systems (CBMIS)**

**25-27 February 2013  
Quezon City, Philippines**



# Executive Summary

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 peoples and local communities as tools for their management and documentation of their resources. Some CBMIS tools have been continuously used and developed as part of indigenous governance and management systems over long time, whereas others have been included in response to emerging needs in recent times.

The framework used for CBMIS is the holistic approach to indigenous peoples' sustainable, self-determined development (IPSD). It integrates the ecosystem-, cultural- and human rights- and sustainability-based approaches to indigenous peoples' economic development and well-being.

Historically, indigenous communities have customary and socio-political institutions that monitor the state of the natural resources within their ancestral domains. In the Philippines, some examples include the *lapat* system of forest management among the Tinggian and Kalinga people, the *lampisa* water management practice among the Igorots of Mountain Province, and the practice of seed dispersal in

the forest among the Ayta of Bataan, and *uma* rotational agriculture practices among many indigenous peoples of the Philippines.

This workshop aimed to consolidate existing work on CBMIS as a tool for strengthening indigenous peoples' self-determined development, in the context of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) and Indigenous Peoples Rights Act (IPRA), the Strategic Plan for Biodiversity and Aichi Biodiversity Targets, as well as UN Framework Convention on Climate Change (UNFCCC) and other global and national commitments. The Philippines has been leading in this initiatives 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.

It was also an opportunity for indigenous participants to reflect on and deepen 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) printers, and the conservation management system (CMS) were also presented and discussed.

The participants agreed to form themselves as a CBMIS network in order to strengthen the work on CBMIS, together with supportive NGOs. A meeting among local participants would be held to support capacity building on tools and methodologies for CBMIS; to talk

about how to report on monitoring targets identified under the CBD and UNFCCC; and to support further discussions on sustaining the work on CBMIS. The workshop identified areas of work that needed to be undertaken and continued in order to establish CBMIS.



# Introduction

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 peoples and local communities as tools for their management and documentation of their resources. Some CBMIS tools have been continuously used and developed as part of indigenous governance and management systems over long time, whereas others have been included in response to emerging needs in recent times.

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forest among the Ayta of Bataan, and uma rotational agriculture practices among many indigenous peoples of the Philippines.

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## Objectives

Specifically the workshop has the following objectives:

- 1) To unite on the importance and substance of community-based monitoring and information systems on traditional knowledge, biodiversity and climate

change, rights and well-being of indigenous peoples;

- 2) To share community experiences and the status of work on generating baseline information and monitoring changes over time;
- 3) To deepen our understanding about common tools and methodologies to carry out this work;
- 4) To identify the next steps and mechanisms in strengthening community-based monitoring and information systems in pilot communities

## Welcome

Vicky Tauli-Corpuz, Executive Director of Tebtebba, welcomed the participants and thanked them for coming.

## Opening prayer

Mr. Salvador (Ka Badong) Dimain opened the meeting with a prayer in the language of the Ayta people. This was delivered standing in the center of the circle of participants, who stood in order to join the prayer.

## Welcome address

Vicky Tauli-Corpuz highlighted the importance of monitoring to ensure the implementation of national policies and international agreements in relation to indigenous peoples' rights. In the Philippines, the 1997 Indigenous Peoples Rights Act (IPRA) is a key piece of legislation that requires monitoring to assess if it is being correctly implemented. Globally the

adoption of United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) in 2007 was a significant moment, creating expectations of positive changes for indigenous peoples. Community-based monitoring is required to show if UNDRIP is in fact being respected, and to fully utilize this instrument as way of holding governments accountable with respect to their international commitments on indigenous peoples' rights. Indigenous peoples' advocacy in global policy processes has resulted in UNDRIP being recognized as providing a framework to be considered when implementing actions in relation to both the Convention on Biological Diversity (CBD) and the UN Framework Convention on Climate Change (UNFCCC). Monitoring is necessary in connecting scales from the global to the national and local, and it is necessary to see if officials of local government units (LGUs) understand, and correctly implement these commitments.

It is also important for indigenous peoples to be able to understand changes taking place in order to take action, as well as being able to share what is being done at the local community level. Indigenous peoples need to define their duties in relation to protecting their territories, responding to climate change, and protecting biological diversity. A key objective of this workshop is to unite on the essence of community monitoring, and how to set up community monitoring and information systems that can include monitoring of traditional knowledge, biological diversity, climate change, and respect of indigenous peoples' rights. Governments have a responsibility to produce reports under the CBD and UNFCCC, and indigenous peoples should also produce their own reports and ensure that these reports are made available and accurately reflect what is happening at the local community level.

Conducting community-based monitoring will allow indigenous peoples to define their own methodologies, and monitor what their communities define as priorities. A number of governments have stated that they do not have the necessary resources to produce comprehensive reports. This provides an opportunity for indigenous peoples to produce their own reports in order to demonstrate that it is possible, and to ensure that what is happening at a local community level is accurately reflected in global processes.

## Introduction of participants

Proceeding around the room in a circle, each participant had the opportunity to introduce themselves by stating their names as well as the community they had come from, or their organization. This can be found in the full list of participants (see Annex, p. 119). Some participants also stated their expectations of the workshop, and some expressed thanks to the other participants and the workshop organizers.



Ka Badong opens the workshop with a prayer.

# The Importance of Community-Based Monitoring and Information Systems and the Objectives of the Workshop

## Overview on the role and importance of CBMIS within the context of indigenous peoples' self-determined development

Joji Cariño, Tebtebba

Joji Cariño presented an update on the global status of monitoring and indicators work relevant to indigenous peoples, outlining the background and wider context that led to this meeting. A number of workshops have already been held to identify what data collection is relevant to indigenous peoples and how this might be done. These previous workshops have been organized by both the UN Permanent Forum on Indigenous Issues (UNPFII) and the International Indigenous Forum on Biodiversity (IIFB) Working Group on Indicators. The concept of an indicator was explained, emphasizing why it is necessary to develop indicators relevant to indigenous peoples.

Indicators are needed in order to present information to decision makers in a manageable

and understandable form. It was highlighted that there were different kinds of indicators, including structural indicators, process indicators, and outcome indicators. This monitoring work is important to getting a better picture of how international agreements, such as UNDRIP, ILO 169, CBD, and UNFCCC are being implemented on the ground, and if action is producing the desired results.

Monitoring is also necessary in order to inform future decision making processes, as CBMIS will improve the quality of information available for policy making processes, and this is essential in ensuring good governance. These indicators must also be useful to the communities for their own decision making and planning processes. The successful implementation of international agreements relies on the action taken at local levels, and will require bottom up community-led approaches that support the self-determination of indigenous peoples.

CBMIS is important for ensuring that good information is available to decision makers at all levels from the local to the global.

The following core domains (the numbers does not indicate general priorities) have been identified as being of key relevance for the well-being of indigenous peoples:

1. Security of rights to territories, lands and natural resources;
2. Integrity of indigenous cultural heritage;
3. Gender dimensions - elders, youth, men, women;
4. Respect for identity and non-discrimination;
5. Fate Control or Self-Determination;
6. Culturally-appropriate education;
7. Health;
8. Full, informed and effective participation (FPIC);
9. Access to infrastructure and basic services;
10. Extent of external threats;
11. Material well-being;
12. Demographic patterns of indigenous peoples.

Communities should consider these core domains, determine the priority areas for their community, and define possible indicators for how these might be monitored. The Arctic Social Indicators Project was offered as an example of how indigenous peoples have defined what the key aspects to be considered are in relation to determining well-being within their communities, and how these might be monitored.

Examples of the indicators identified by Arctic Social Indicators Project fall within six domains: (1) Fate control and or the ability to guide one's own destiny; (2) Cultural integrity or belonging to a viable local culture; (3) Contact with nature or interacting closely with the natural world; (4) Material well-being; (5) Education; and (6) Health/demography.

In 2010 the CBD adopted three traditional knowledge indicators, which were proposed by the IIFB Working Group on Indicators, and key agencies were identified with having the responsibility for undertaking this monitoring work. These were: Status and trends of linguistic diversity and numbers of speakers of indigenous languages—UNESCO; Status and trends in the practice of traditional occupations—ILO and IIFB Working Group on Indicators; Status and trends in land use change and land tenure in the traditional territories of indigenous and local communities—FAO with further development by IIFB Working Group on Indicators.

As well as these, the Ad-Hoc Technical Expert Group on Indicators under the CBD identified the following indicators for Target 18 of the Aichi Biodiversity Target under the Strategic Plan for Biodiversity: Trends in which traditional knowledge and practices are respected through their full integration, safeguards and the full and effective participation of indigenous and local communities in the national implementation of the Strategic Plan. In light of the 2010 national census, the IIFB Working Group on Indicators also highlighted changes in demographic trends with respect to indigenous peoples. Accurate information about land use change and land tenure can be gained through community-based mapping, and much of this has already been undertaken. Also it is possible to undertake monitoring in such a way that generates data that is useful for a range of different processes and applications.

The Vitality Index of Traditional Ecological Knowledge (VITEK) methodology developed by Dr. Stanford Zent was explained. This is a means of measuring the retention of traditional ecological knowledge over a period of time, and acts as an indicator of how effectively knowledge is being transmitted from one generation to the next. This is done by compiling a list of

100 things defined as being of key cultural importance, e.g., plants, animals, soils, etc. Then checking how many of these are known by a random cross-generational sample of the community over a period of time.

## Update on community-based monitoring and the UN Convention on Biological Diversity (UN CBD)

Vivianna Figueroa, Secretariat of the CBD

Viviana Figueroa, from the Secretariat of the CBD, emphasized that CBMIS is of great importance to the work of the CBD. The CBD was opened for signatures in 1992 and has been signed on to by 193 parties, and these parties are responsible for ensuring its full implementation. This therefore provides opportunities for indigenous peoples to influence governments. Indigenous traditional knowledge has been recognized as being key to the protection and sustainable use of biological diversity, and successful implementation of the convention will be supported by the traditional knowledge



of indigenous peoples. There are two key articles that relate to indigenous peoples: Article 8j and Article 10c. Between 2000 and 2010, the existing evidence suggests a decline in the number of speakers of indigenous languages. The strategic plan for 2011-2020 has already been agreed, and the Aichi Targets provide an overarching framework, not just for biodiversity-related conventions but the whole UN system. Parties have agreed to develop national biodiversity strategies by the end of 2013. Targets 14 and 18 are of particular importance to indigenous peoples.

**Target 14:** By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and the vulnerable.

**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.

The latest decisions relating to traditional knowledge indicators for the CBD were also explained, and this included a request for technical support and financial resources to support this work, including the need for a technical workshop.

## Group discussions

The participants were then asked to form into groups determined by geographical regions. These groups were Northern Luzon, Island groups, Mindanao, and global participants. The groups were asked to discuss the 12 key domains, and ways these applied to their own communities, as well as determining priority areas for monitoring, and possible indicators appropriate for demonstrating changes.

## Group feedback

### **Northern Luzon Group: Tinoc, Ifugao and Tubo, Abra**

Domain 1 relating to the security of rights was identified as being a key priority, and personal security and the right to life, was added to security of rights to land, territory and natural resources. The interconnection and inseparability of life and land were emphasized, as the ancestral domain is needed for life, and without the land we die. Respect for and strong implementation of customary land laws was identified as a possible indicator, along with the presence of abundant natural resources, practice of traditional knowledge systems and practices, and the absence of destructive, and extractive industries. The presence of extractive industries was also identified as an indicator of the extent of external threats, together with the presence of militarization. Free, prior and informed consent (FPIC) was another domain that was seen to be of priority importance and the indicator identified was if there was 99-100 percent consent or consensus agreement among members of the community. Simply gaining agreement from the local government unit (LGU) was not seen as sufficient.

### **Mindanao Group: Mt. Kalatungan, Bukidnon; Burboanan, Surigao del Sur; and Manipongol, Maco, Compostela Valley Province**

Security of rights to land territory and resources was identified, and occurrences of lack of respect of these rights are an indicator of these rights being recognized. There is strong protection of Tinuy-an Falls, but there is a need for benefit-sharing of tourist income. Respect for cultural identity, and access to culturally appropriate education were considered to be important domains, and this includes education about customary laws, as well as laws about indigenous peoples. The people in the LGUs are not aware of the laws about indigenous peoples. For example, there is a law that requires representation of indigenous peoples in local government units, but this is not known or accepted by the local government unit. Health was also identified as an important area, but traditional healing is no longer being widely practiced. Finally, material well-being was believed to be of great importance, but this is an area where there has been no progress. Eighty percent of indigenous peoples are poor even though they have natural resources, there is little to no income from this. There is a lack of infrastructure. Rattan furniture is made, but getting this to the market is a problem. The women are attempting to maintain and develop other craft practices, but this is an area that requires more attention.

### **Islands Group: Sibuyan, Romblon; Coron, Palawan; and Maporac, Cabangan, Zambales**

Security of rights to land territories and resources was seen as a priority and the protection of biological diversity was proposed as an indicator of control and access to natural resources. Animals must be protected, so they are still available to hunt. Integrity of indige-

nous cultural heritage was also seen as being a priority, and the use of indigenous languages, and the performance of rituals were proposed as possible indicators. It is necessary that the cultural traditions are used and maintained. Culturally appropriate education was also identified as being of key importance, and access to education in indigenous languages was suggested as an indicator. For the Sibunyan communities, five percent of education is in their language, but in Coron, Palawan there is 100 percent access to education using the mother tongue.

**Global Group: Nepal, Vietnam, Thailand, New Zealand, Nicaragua, Panama, Kenya and others**

Changes in demographic trends were discussed, and the importance of self-ascription together with being recognized by the community as the means by which to determine membership as indigenous peoples. Language

was discussed, and the ways in which language change is being influenced through both in and out migration. Migration was also identified as a possible threat to the security of lands, territories and resources. An example from Nepal was given, of ways in which community radio have been used to help develop information systems, both as a means of collecting and disseminating information.

The importance of this work to a number of global processes was discussed, and it was agreed that there was need to connect community monitoring efforts in order that data could be provided for all of these processes. The importance of ensuring that there are structural, process and outcome indicators was reiterated. A structural indicator might be a policy, a process indicator might be the way in which it is implemented, and an outcome indicator would be the effect.



# Experiences on CBMIS Focusing on Generating Baseline Information and Monitoring Changes Over Time

**Bonifacio Dumanop**  
**Wangwang Farmers Association**  
**Tinoc, Ifugao**

The study was conducted in Kalanguya territory in Tinoc, Ifugao. The Kalanguya people make up 12 percent of the population of Ifugao province, and also live in Benguet and in Nueva Vizcaya. The other peoples of Ifugao are the Ayangan (51%) and the Tuwali (37%). Tinoc is composed of 12 barangays/villages and this pilot study was conducted in five areas (barangays): Ahin, Wangwang, Tulludan, Tukucan, Binablayan. Traditional monitoring systems exist for monitoring irrigation systems (*giti*), and changes in seasons and weather. For example, the *pullet* (plant) and *kiling* (bird) act as indicators that the storms have passed, signalling that it is time to start planting rice. However, these traditional indicators are no longer as accurate due to the effects of climate change.

Mapping was used to determine past and present land use. This showed that some primary forest has been converted into vegetable gardens while some areas of mossy forest had become pine forest, and there had been a decrease in communally managed land towards privatization. A land summit was held and this united the communities to prevent any



further environmental damage and develop community land use plans that will increase local well-being and livelihoods. Inventories of biodiversity were conducted; and policies were developed to protect watershed areas and river systems and move towards implementing the community land use plan, including monitoring of crop yields. Also through the process it was identified that although people spoke the Kalinguya language in family conversations, terms relating to customary laws were not widely known.

### **Maramie Diego, Mangyan Tagabukid Organization of Sibuyan Island, Romblon**

The Mangyan Tagabukid people live in seven communities located across Sibuyan Island. 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 Develop-

ment 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 village areas falling within the protected area, resulting 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 that quality of the water. This is done through observing the size and number of shrimp. It is important that customary laws are respected, and this should be done by community-led education projects based on sharing experiences between communities. The local governments should also have a responsibility in ensuring that the environmental care plan is respected, based on information produced by the community.

### **Open Forum**

*How do you measure the health of the forest? What are the methodologies to say that the forest is healthy?*

The health of the forest is measured through customary laws and practices, where traditional sustainable practices are followed and rituals are performed there is healthy forests. These forests, and sustainable practices are inherited from our ancestors.

*How was mapping used by communities to help gain government recognition of their land, and what challenges still remain?*



In Sibuyan, maps were made indicating the ancestral domain determined by self-delineation in accordance with IPRA. Next, an ADSDPP was prepared and presented to the National Commission on Indigenous Peoples (NCIP), and finally, the Certificate of Ancestral Domain Title (CADT) was granted. The remaining challenge is the overlap of the ancestral domain and the protected area. In Tinoc, they have a CADT, but still the ancestral domain is not protected. There are plans for a hydro project and a geothermal energy project.

*Who keeps the data after it has been gathered?*

In Tinoc, the barangay and municipal officials store the data, although this data is not yet complete as there is the problem of the possible entry of hydro company and we are facing this first.

**Comment:** Due to climate change there is a need for a shift from fossil oil to renewable energy. The Philippine government passed a Renewable Energy Act giving opportunity to businesses to set up renewable energy sources. The problem is that indigenous peoples are not being included in the planning and implementation of these projects. It is important that indigenous peoples understand this Act. Projects must gain FPIC from communities before going ahead, and benefit-sharing agreements must be included in this, including payments for ecosystems services, and sharing of other benefits.

**Comment:** In Sibuyan, the community protect the environment through showing respect to our ancestors and deities. This means that the watersheds that provide water for a hydroelectric dam on the Cantingas River are protected. The energy company does not give royalties to the communities.

The representatives of NCIP and Department of Environment and Natural Resources

(DENR) say ancestral domain is public land, and NCIP is not taking any action.

*What should be done in order to be able to collect royalties from the energy company?*

The negotiations with the Department of Energy are currently taking place, and if these negotiations are unsuccessful this will be grounds to ask the company to leave.

### **Datu Johnny Guina, Council of Elders, Mt. Kalatungan**



The Mt. Kalatungan Council of Elders was formed in 2010 from 14 identified peoples organizations, and aims to unite indigenous communities by strengthening indigenous peoples' values through the protection of indigenous knowledge systems and practices (IKSP), and biodiversity in the context of climate change. There are four peoples in the area: the Talaandig, Manobo/Menuvu, Higaonon, and Bukidnon. A unified CADT application has been submitted that involved producing a perimeter survey.

A unified or one CADT (Certificate of Ancestral Domain Title) is the combined territory of the four indigenous peoples living in and around Mt. Kalatungan who consider the mountain as sacred and valuable to their survival as a people, instead of separate CADTs for the four groups. There has also been support for environmental activities being undertaken by civil society organizations, the national greening program, and the upland development project.

Through a process of community meetings, focus group discussions and interviews with key informants, a general management plan was produced for an indigenous community conservation area. Traditionally, monitoring is conducted as part of daily routines and livelihood activities. There are also a range of traditional indicators for determining if the environment is healthy. Forests, should be mossy and blue in color, rivers should be clear and full of fish, and the vigorous blooming of the tree species Kalamagan and Maluymoy indicate the availability of honey.

The quality of soil can also be determined by how it compresses in the hand. The presence of moss in river beds is a sign of the sunny season, and the presence of many tadpoles is the sign for the rainy season.

Traditional environmental protection is maintained through performing rituals, traditional hunting methods, and respect for sanctuary periods and areas. Modern education and non-indigenous religions were seen as being the most significant threats to maintaining traditional knowledge systems and practices. There is a need to establish a school for living traditions, and also for each community to document their traditional knowledge systems and practices.

## **Elizabeth Dagsangan Manipongol, Maco, Compostela Valley, Davao, Mindanao**

Manipongol used to be part of Davao del Norte but gained separate status in 1998. The barangay/village is the home of the Mansaka people, and the population is 482 people according to a count conducted in 2012. The Mansaka people hold a CADT for a total land area of 141,773 hectares. The full 2,315 ha area of Barangay Manipongol is included in this ancestral domain. Some of the land area of the barangay has also been designated as the Mt. Kanduyog Protected Area. Typhoon Pablo damaged much of the forest, and this has impacted the community's livelihoods.

Research was conducted in order to monitor traditional knowledge, flora and fauna, traditional practices and climate change, and document the forest management practices of the indigenous peoples. The methods used were interviewing key informants, group discussions, and community meetings.



An inventory of biological diversity identified 34 types of hardwood and softwood trees, 60 animals and birds, 12 flowers, 31 grasses, 50 plants with traditional medicinal uses, 22 edible plants, 7 types of mushroom, and 5 bamboos. Traditional products include fibers, baskets and furniture that can be crafted from plants obtained in forest. Women are the knowledge holders of traditional knowledge relating to medicinal plants and seed saving. Land ownership is communal and based on mutual respect; however, perspectives on land ownership are changing somewhat, and there is a need to protect communal lands.

The LGU has introduced laws and policies relating to the Mt. Kanduyog Protected Area, protection of rivers, trees, and making water-sealed toilets. It is also important that customary laws are recognized and implemented. It was also recommended that further research on traditional knowledge and the development of CBMIS be done.

## Open Forum

*For Mt. Kalatungan representatives: Did the National Greening Program (NGP) have FPIC?*

The indigenous peoples are the ones implementing the project so the community is already informed about this. In essence, FPIC has been conducted.

NGP is also in Romblon, there is no consultation for FPIC. This goes against IPRA, which states that even government projects require FPIC from the community. Increases in population may cause encroachment into the forest due to additional need for land.

If tree planting projects take place on your land, then you own these forests including

the carbon benefits which you can sell under REDD+.

If there are projects, we insist they respect our policies and processes.

The NGP is a national program, and it seems it is being implemented differently in different places. In Hungduan, according to the Municipal Planning and Development Officer, they planted indigenous trees but DENR insist they should follow the procedure step by step and plant non-indigenous species provided under the program. How can threats, like modern education and religion, be addressed if these contradict traditional beliefs and practices?

In Kalatungan, the tree planting area for NGP was identified as a denuded area for reforestation in the ADS DPP. In order to address the threats posed by modern education and religion, we must transfer IKSP to the young generation as part of everyday life.

A school of living tradition should also be established, as this would help address these threats.

In order to address the threat posed by modern education, it is necessary to make sure that education is available in indigenous languages. We approached the teachers, and recommended the addition of indigenous education to the local curriculum.

Education should not be seen as a threat, as education is needed. Religion is additional knowledge. These are not threats but we should remember cultural redemption. We can selectively accept new ideas in addition to traditional knowledge. NGP is a good project but we must understand it first. We need to carefully consider the species that should be planted. As the owners of the land, we should decide what is to be planted.

## Jesse Mayonado Calamian Tagbanwa of Coron Island, Palawan

At the time the community was applying for Certificate of Ancestral Domain Claim (CADC), there had not previously been any recognition of ancestral domain rights over marine territories. The belief of the Calamian Tagbanwa people is that the mountains, lands and seas are all interconnected. This led them to push for recognition of their ancestral waters, which are also recognized in their CADT. The ancestral lands have an area of 7,160 ha, and the ancestral waters have an area of 15,124 ha.

The livelihoods of the community are fishing, farming, and collecting valuable birds nests found in caves in their territory. Only traditional fishing methods using hooks and bows are allowed; nets are banned. Also the amount of area that can be cleared for use in rotational agriculture is limited. The Panyaan reef is the home of giant octopus and is a sacred no-fishing area.

There are 13 sacred lakes in the mountains of Coron islands, and two sacred lakes have been opened for tourism, which generates income for the community. Elders gave their blessing to open these lakes, and rituals were performed. Also visitors must behave respectfully. These lakes are the cleanest in the Philippines. Specific areas are designated as communal forests, sacred forests and forest reserves. Hunting and cutting trees is illegal in the sacred forest. Information was collected through 3D community mapping, group workshops and interviews with key informants. Transects were used to generate a resource inventory of species. There is a need to link these activities with government programs, and the community

recommends that they be deputized as wardens of their ancestral waters, with required legal training.

### Open Forum

*What is the difference of sea delineation and land delineation in claiming ancestral domains?*

Marine territories are the places that our ancestors would often go to by boat and depended upon for their livelihoods.

*What came first? the application for CADT or making a plan as a community?*

The council of elders agreed upon plans before applying for the title. Plans were agreed before any action was implemented.

*What is the role of the government in implementing management in the island, and is there any regulation imposed by the government?*

The government wanted to implement their own management plans, but the people refused, as there is already an Ancestral Domain Management Plan (ADMP). If the government propose a plan that the community agree to, then this can be implemented, but the community has the right to decide what will happen in our territories.

## Domingo Lawagan, Tubo, Abra

The ancestral domain of the Maeng people straddles the boundary of the provinces of Abra and Kalinga in the Cordillera Region of Northern Luzon. The majority of the territory is located in the Municipality of Tubo in the Province of Abra. The *dap-ay* requested that research be undertaken to support formation



of an ADSDPP, and inform decision making relating to the management of resources. The dap-ay is the traditional system of governance, and is made up of respected community elders. There is an overlap between the dap-ay and members of the LGU, so there is still strong respect for customary laws. In the past, women were not allowed to enter the dap-ay, but this has been changed. Now there is a woman mayor, and women participated fully in undertaking the research, which was conducted by the local peoples' organization TIPON with support from the UNDP-Small Grants Program, the Foundation for the Philippine Environment, the local government of Tubo, Abra, and the Philippine Association For Intercultural Development (PAFID). The research methods used were 3D community mapping, community meetings, and transect lines used to determine sample plots for the purpose of undertaking resource inventories.

The extents of the various land uses were measured and the actual area and percentage of each land use was determined for each village within the domain. Local and traditional indicator and keystone species were identified

for *lapat* areas, and then resource inventories were used to show which species were actually present. *Lapat* is the traditional system of forest management, and is an integrated part of Maeng Tinggian culture.

The research showed that 31 percent of the ancestral domain was still covered by primary forests, which act as watersheds. Most of these areas are covered by *lapat*. Twenty four percent of the territory is covered by secondary forest, and these areas have to be restored and properly managed. The bio-mass of the forest in selected *lapat* areas was also calculated. The research showed that traditional indicator and keystone species were still present, however, the quantity of these species was in decline so the decision was taken to enlarge the protection zones. Lowland and mid-elevation dipterocarp species were slowly encroaching into the higher elevation areas and displacing the pine forests. This change might be attributable to climate change.

The research showed that the *lapat* system of governance is an effective conservation approach as it has allowed the regeneration of the secondary forests and sustained the old growth forests. The community affirmed that the *lapat* system should remain as the system conserving and managing their natural resources. All extractive industries have also been banned by the dap-ay.

### Salvador Dimain Maporac Ayta Organization Cabangan, Zambales

The Ayta Abellen community of Sitio Maporac, New San Juan, Cabangan, Zambales is composed of 186 families, and was the recipient of



the first CADC in the Philippines. Maporac is located 20 km west of Mt. Pinatubo, and the eruption in 1991 destroyed the *kabagbagan* (forest), impoverished the people, and resulted in the Ayta people being displaced to several areas in Cabangan. This situation persists until now where the Ayta are primarily concentrated in Maporac. Reforestation efforts are underway to restore the forest damaged by the eruption.

Although a CADC has been issued, this still remains to be converted into a CADT. The ancestral domain is 5,439 ha, 60 percent (3,259 hectares) of which is managed as an Indigenous Community Conserved Area (ICCA). 3D community mapping was conducted to identify different land uses. A resource inventory using transects was carried out revealing the presence of 182 species, some of which are considered critically endangered like Yakal, Bolong-eta and Pahutan. The participation of women was ensured in data gathering and at community meetings.

Traditional indicators exist for determining the health of the forest. These include the presence of water bearing vines and bamboo species, the abundance of biodiversity needed

for traditional livelihoods, and the presence of crickets (*duwi-duwi*). The availability of water is also monitored, as is the availability of shrimp, eels, fish, crab, and edible frogs. Traditional occupations are still practiced, including organic agriculture and mixed agro-forestry. There are limitations on when animals can be hunted, and also on the methods used for hunting. Destructive fishing practices using electricity and poison are also banned. There is a continued practice of rituals, use of language, and practice of traditional dances. Some support has been received from the provincial and local government, but this has been unstable.

The next steps identified as priorities are generating a resource inventory using the transect method, and ensuring that the youth are educated about traditional knowledge and the importance of protecting mother earth.

### Open forum

*What is the role of the government in mapping, and what land tenure instrument do you have?*

In Tubo, we do not have a CADT yet because there are still some boundary disputes. The domain was self-delineated by our ancestors using natural boundaries. The delineated area will be adopted by the LGU. In Coron, we have CADT and ICCA.

*How often do you do the transect lines and resource inventories? On traditional indicators, why were these selected?*

In Coron, we conducted a resource inventory of plants five times, animals once, and an inventory of water resources remains to be carried out. These were selected to see if there were improvements in biological diversity.

*What measures were used in Coron to manage coastal areas to prevent impacts from big waves that can cause erosion?*

The waves are not that large in our territory, but we prevent degradation of the coral reefs, and maintain well-managed forests to offer protections from waves and storms.

*How are the key species identified?*

In Tubo, we regard all species as important; there are no key species.

*What kind of mountains serves as the barriers from waves?*

Rocky limestone mountains surround the island of Coron, and the good health of the coral also provides protection.

*What are the agricultural practices on the land?*

In Tubo, agroforestry and sloping agricultural land technology are replacing rotational agriculture, as these allow continuous yields, while still preventing erosion to support a growing population.

*The bodong peace pact system has been used to unite communities together. Is the bodong peace pact used to negotiate the boundary of your territories? When the territories were determined, was there a negotiation between the communities around Tubo? Or did you determine the territory by yourself?*

There was a good relationship between the communities, and the boundary was agreed; but DENR conducted a survey that led to a boundary conflict.

*How do you deal with people coming from outside of the communities? How do you manage and get information from these people? In Nicaragua, people of different tribes and origins came together and created a community.*

Anyone is welcome in the community as long as they respect and follow the traditional laws. Information will come as the settlers stay in the community.

## **Alfredo Domogoy (Datu Tinoy-an), Sitio Sote, Burboanan, Surigao del Sur**

Sitio Sote, Burboanan, Bislig City, Surigao del Sur, Mindanao is the home of the Manobo people. These ancestral lands are home to the Philippine Eagle. Recently one baby eagle was caught and taken away for the purpose of research and conservation by the Philippine Eagle Foundation. The traditional occupations are farming, fishing, hunting, and producing textiles from plant fibers. The Tinuy-an waterfalls are located within the territory and attract many tourists to the area. The methods used in undertaking the research were 3D community mapping, sketch mapping, community meetings, and interviews with key informants. The 3D mapping involved making past land use and present land use maps, and delineating the changes in different land uses.

A resource inventory was conducted using transects, and the following biodiversity was found in the area: 84 ants, 16 snakes, 8 frogs, 16 forest animals, 12 freshwater animals, 45 insects, 101 trees, 15 vines, 11 grasses, 14 ferns, 4 bamboos, 20 herbal plants, 45 edible wild plants, and 13 orchids. Also members of



the community used cell phones to take photographs of different species to get a better picture of the biodiversity in the area. There have been problems communicating with the local government due to a language barrier. The community act as forest guards (*bagani*) and protect it from illegal loggers.

## Open Forum

*What is the status of Zambales following the eruption of Mt. Pinatubo, and is there a danger that there might be another eruption?*

The land is slowly recovering, through a process of community-assisted rehabilitation, particularly of the water systems. The mountain is not yet dormant but the community now lives further from the mountain itself.

*In what way has the water been affected?*

The water system is now fine, and it is safe to drink the water.

*How are benefits shared from the tourism resulting from the waterfalls?*

There was an agreement that shares from tourism revenue generated by the Tinuy-an falls would go to the community, but this never actually happened and the community has not received anything.

*Was the eagle returned to its natural habitat?*

The Philippine Eagle Foundation says that if the eagle is returned there is a danger that the mother will kill the youngster. They also sent a group to try to catch a male and a female, but the datu (community leaders) would not allow it. The eagle should be returned as it is part of the forest and the community cares for the bird.

The community does the management of all tourism in our ancestral domain, and there

is no government share in the tourism of Coron Island. Activities are made known to the LGU.

**Comment:** Lessons can be learnt about eco- tourism management from Guna Yala in Panama.

*How was recognition of ancestral domain gained by the community?*

Initially, three communities were going to make a joint application, but exact agreement could not be reached, so these communities each delineated their own boundaries. This resulted in a portion of the Maporac domain being shared with San Felipe.

*It seems that there are differing experiences of interacting with LGUs. Identifying commonalities might help to ensure that self-determined development is respected, and there is clarity surrounding how projects should be managed within indigenous territories. What laws are being implemented in indigenous territories?*

Customary laws should be applied. Customary laws must be respected, and these must also apply to non-indigenous people within the territory; for example, restrictions on hunting must be respected by all.

Indigenous peoples ask for a share of the benefits gained from using water coming from their domain. This process should start from the barangay/village, and move up to the municipal government.

*How do you persuade other people from your community to join your activities?*

This work is inherited from our ancestors and passed down from generation to generation. Help will come if the objective is good and people can see that things that we do are good for the community.

Holding community meetings can be used as a strategy to generate involvement.

# Tools and Methodologies to Strengthen CBMIS

The participants were asked to undertake a discussion among the representatives present from their community in order to identify what needs to be done to strengthen community monitoring and information systems. This included identifying any support that they would require in achieving these goals. The communities then presented what had been discussed to the whole group. The communities identified the following actions, needs and challenges:

## Sote

- Coordination is required between the LGU and NGOs.
- NGOs should strengthen their ties with the community to help develop community monitoring and information systems.
- Financial support is required for 50-60 bagani (ancestral guards) to prevent people from illegally entering the land.

## Tubo

- Expansion of lapat.
- Networking with other indigenous peoples (IPs).
- Technical training on resource inventory, follow up training to build capacity.
- Provision of communication and monitoring devices such as GPS and radio communication.
- Continuous interfacing with LGU.

## Kalatungan

- Monitoring should be integrated in daily routines and traditional occupations.
- Tourism activities need to be regulated.
- Strengthening customary governance:
  - » barangay level,
  - » municipality level.
- Strengthen the *latanduga* system of tradition of sharing.
- Improve local to global linkages.
- Conduct a resource inventory.
- Conduct 3D mapping.

- Formation of ADS DPP.
- Gaining recognition of CADT.
- Financial and technical support.
- Networking of indigenous peoples.

### **Coron**

- Continue regular community meetings.
- Continue with the council of elders.
- Continue with the board of trustees, this makes the laws for approval by the council of elders.
- Local government should recognize customary law.
- Strict implementation of rules determined by leadership for the community and non-indigenous people.
- Strengthen support through local, national and global networking.
- Continue linking with government agencies to attempt to gain support from the LGU.
- Reporting to the community in an understandable and engaging way.

### **Maporac**

- Set up a group that will oversee this work so that each community will be aware of the necessary tasks.
- Ensure good dissemination of information materials.
- Ensure regular communication about information gathered in the community.
- Cell phones will allow good communications.

### **Manipongol**

- Mapping training.
- Make 3D map to identify land uses.
- Training on resource inventory.

- Hold a summer workshop on traditional knowledge to strengthen the knowledge amongst the youth.
- Local to global networking.
- Financial support for livelihoods is required due to devastation caused by Typhoon Pablo.

### **Sibuyan**

- Continue gathering knowledge from elders among each people.
- Teach the youth, about traditional knowledge.
- Develop culturally appropriate education in high school.
- People should have documentation of their culture and traditions, in order to transmit it to the next generation.
- Support traditional livelihoods within the ancestral domain.
- Identify our sacred sites, rituals. This will also help:
  - » analyze health, and identify traditional medicines,
  - » protect sanctuary forests.
- Build networks with other indigenous peoples.
- Implement customary laws.
- Continue community meetings to build unity.

### **Tinoc**

- Continue mapping and inventory of biodiversity.
- Complete 3D maps.
- Formulate indicators of positive and negative changes
- Strengthen peoples' organizations to manage and control the information systems.
- Use maps to assert ownership.

There is an urgent issue relating to a proposed mini-hydro project. There have been problems with the FPIC process, and no environmental impact assessment has been carried out. Agreement was given in 2008 but since then the proposed plans have changed from six megawatts then to eight megawatts, now to 11 megawatts. No new consultation has been carried out. There are different opinions within the community but any help anyone could offer on this would be appreciated.

### Global Group

The global group tried to address the same questions, but drew on experiences at home, the lessons learnt from listening to the presentations, and an understanding of the global context.

- Hold more workshops to share experiences.
- Lobby for enabling laws and policies, so these can have positive impacts.
- Use monitoring to diagnose problems then find solutions to act on.
- Develop information systems to allow for long term monitoring in order to show trends.
- Consider the methods that will best deliver the outcomes that the community want.
- Recognize the difference between information gathered and information shared, and ensure there is clarity about the intended purpose of the information. Aggregate information, in order to have local, regional and global impacts.
- Continue network building.
- Ensure strong leadership structures are in place.
- Monitor how the community takes action.

Victoria Tauli-Corpuz highlighted the fact that in order to make sure that governments are implementing national policies and international agreements, the information collected will need to be submitted to the governments, and to international processes overseeing these agreements. It is important that there is coordination to ensure that the relevant information being collected in each community is provided to these processes.



### Tools and methodologies for CBMIS presentation Prof. (Ret.) Richard F. Dorall

The presentation introduced a range of mapping techniques and highlighted ways in which communities could use maps. Maps are useful tools to aid in administration management and decision making. A number of low cost mapping technologies were described and explained, including sketching, satellite images available free online, cheap GPS units, and compass and chain surveys. Digital maps have become widely available. The most important thing is the willingness of the community to self-organize to develop solutions, rather than the technology used. Four key stages were identified. First, the community must identify



what they wish to gain from mapping, understand what data they will collect, and how it will be used. It is important that this process is participatory and engages the community. The second step is data collection. Different tools can be selected according to the needs of the community to aid in data collection. Here there are some more advanced technologies that might be helpful: personal digital assistant (PDA) tablets can be used for field mapping, and relatively low cost unmanned aerial vehicles can be used to take high-resolution aerial photographs. Data then needs to be processed to become information: data on its own is not that useful, it needs to be presented in a useable form.

The third stage is decision making, and the data has to be organized into an information system that will support decision making. Maps are useful as they visualize data in an easily understandable and usable form. Contour lines display 3D maps in two dimensional (2D); analytical hill shading can also be used to show changes in elevation. Maps can be used to visualize a large range of data. Scale is important, and the bigger the map the better, and large printed maps are useful decision support systems.

There are also ways of organizing data systematically through the use of software, for example, this could be done by using CMS (conservation management system), a piece of software developed in the UK that allows data to be systematically analyzed to support decision making. Licences for this software are fairly expensive, but an open source version could possibly be developed, specifically designed for the needs of indigenous peoples. This software would allow each domain to be made an objective that could be recorded, tracked and searched for. The key to CMS is linking a map to the database, which allows the map to be continually updated, and allows feedback.

The weakness of CMS software is that it is not community focused, but this could be re-focused, particularly if you were to develop this within open source software. Also there might be psychological benefits to community producing physical 3D maps, due to the participatory nature of the process. A 3D printer could also be used to produce physical 3D maps. Software is freely available to convert topographic maps into 3D prints.

## Open Forum

*Dave de Vera of PAFID was asked to provide information on what is the current status of the mapping work that had been carried out in the Philippines.*

PAFID has helped to produce 137 3D models to date; however, there has not been any aggregation of this data. These maps exist as both physical models and in a digitized form. These were all done at different timeframes, so some of this data is out of date due to the high speed of development. If the data was aggregated it might be possible to use the information to present a unified statement. All of these maps are at a scale of either 1:5,000

or 1:50,000. Most of these have information related to the impacts of mining. If we are to standardize this information to convince governments that indigenous peoples are the best at protecting nature, it would need to be updated. Most of these 3D models have a past, present, and future map. There are some gaps, but we have a tremendous starting point.

The case of the Philippines is perhaps unique globally once these are digitized and collated. The past land use maps are based on mental maps which are not widely accepted as being of great accuracy. How is the past present and future displayed on a single map?

Using chalk we draw on the past land use according to the memory of the elders. Then community discussions formulate the future land use plan.

*How often are the maps used?*

The communities use these models in their planning.

*How often are paper maps used?*

I value getting the process of getting the community to build the map, the interaction that you get by building it by hand becomes the main activity of the community.

**Comment:** I acknowledge the value of the psychological effect of building the maps. Other places use 2D maps. The main weakness is the need to make the information more systematic, in order to support community decision making, although only the community can decide this.

**Comment:** I was thinking of collating this information over a region, and consolidating it in order to be able to make assertions not just as individual communities.

*This is the purpose of the discussion about next steps. From the community presentations we know how we can support the work hap-*

*pening at the community level, but we also need to discuss how to influence the national government, and the global level. How can we support the needs of this core work being done by the communities? Hopefully the outcome of our meeting will prepare us to take the next steps in developing community-based monitoring and related actions.*

You could easily put all of these places together, but what you will see is 137 separate places, and this could be a strength or a weakness. Maybe we should consider a regional approach. It is important to consider how much information you want to share with governments. There are ways that you can manage a map, so that outsiders cannot make the information public

**Comment:** Tui Shortland shared her experience of developing research methods sensitive to protecting traditional knowledge. The elders wanted to educate the next generation, but it was important that the knowledge remained protected, so they classified different kinds of knowledge to three levels: knowledge that it was okay to make public information, which anyone could know; knowledge that the whole tribe would know, but would not be shared with those outside the tribe; and finally, very sacred things at the family level, which only they would know and would share only with the people coordinating the project in order that it could be made available to their future generations.

**Comment:** There had already been a consultation on sacred sites, but some peoples will not mark their sacred sites on the maps, as they need to protect the location of these sites, so will not mark them on maps.

**Comment:** It must be emphasized the importance of never giving access to digital data to governments, as it is incredibly valuable.

# Next Steps and Mechanisms in Strengthening CBMIS in Pilot Communities

Jo Ann Guillao of Tebtebba summarized the actions, areas of concern, and support needs identified by the communities in workshop Session 2 (see p. 85).

Viviana Figueroa of the SCBD reminded the participants of Target 18<sup>1</sup> of the Strategic Plan for Biodiversity, and traditional knowledge indicators will show if parties are implementing the Convention on Biological Diversity.

Joji Cariño of Tebtebba praised the quality of the reports produced by the communities and highlighted the importance to ensure that these are documented. Strategic actions such as that proposed by Ms. Figueroa are needed, because communities are doing this monitoring and agreements will help in coordinating this work to ensure that the most useful data is being collected.

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<sup>1</sup> 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.

Also, consideration needs to be given to what will be presented to the Philippine government agencies in the dialogue.

Alfred Domogoy of MATRICOSO (Manobo Tribal Council of Sote) asserted that the discussions that had taken place during the workshop should be presented to the government agencies. These discussions demonstrate that indigenous peoples understand the biodiversity of their territories, and are the people most able to manage projects within their territories. Indigenous peoples are successfully managing their own projects with the support of NGOs, as they have not received much support from the government.

Proceso Diego of Sibuyan Island stated the desire of the community to be deputized as the forest guards, as the indigenous peoples are protecting the forest, day and night. The government should recognize this and support the community in protecting and conserving the forest.

The National Irrigation Administration makes use of the water from the ancestral

domain, and there is a need to establish a benefit-sharing arrangement with the indigenous peoples.

Oscar Sarahan of Sildap highlighted the need to consider how customary law and government legislation can be made to support each other. DENR has a responsibility to protect the environment, but as indigenous peoples have their own laws, sometimes conflicts occur between these two legal frameworks.

Florence Daguitan of Tebtebba asserted that indigenous peoples should be responsible for conducting environmental impact assess-

ments within their territories, and should be trained to monitor projects within their territories.

Elizabeth Dagsangan of Manipongol in Compostela Valley reiterated the need for support for rehabilitation following Typhoon Pablo, and emphasized the importance of directing resources directly to the community rather than channelling it through the LGU.

Ms. Figueroa noted that indigenous peoples should be able to access government databases, and it should be found out how this could be facilitated.



Photo credit: Montañosa Research and Development Center (MRDC)

# Indigenous Peoples' Dialogue with Government Agencies

The consultation with government agencies was attended by Theresa Mundita Lim, Director of the Protected Areas and Wildlife Bureau (PAWB), who is the National Focal Point on the CBD, and Ms. Flordame Eleazar also of PAWB; and Mr. Alexis Lapis, the Focal Point on REDD+ monitoring within the Climate Change Commission.

Joji Cariño reiterated the background to the meeting, explaining that the workshop aimed to strengthen community-based monitoring. The participants of the workshop were then introduced, explaining that the communities have been engaged in community mapping, producing land use plans, and resource inventories. The global participants were also introduced, and the importance of network building was highlighted. This monitoring work was contextualized in relation to strengthening reporting to global processes, such as the CBD, as well as the environmental and social safeguards to be put up under REDD+. Indigenous peoples have held a number of meetings in 2006 and 2007, particularly through the IIFB WG on Indicators, and identified 12 core domains that were the key priorities for ensuring indigenous well-being. There are efforts within a range of UN processes to include indicators appropriate to these key domains. Governments must use

these when developing national action plans. This meeting aimed to strengthen the Philippine network of community monitoring. A global workshop will be held in Bonn, Germany between April 26-28, bringing together indigenous peoples and local communities, governments and research institutes.

Director Mundita Lim thanked the participants, recognizing the importance of this meeting, and the contributions of indigenous peoples to protecting biological diversity. At the last CBD meeting in India, the Philippine government made a joint presentation together with indigenous peoples. This presentation was the result of decades of coming to understand the governance systems of indigenous peoples. Particularly through the program of work on Aichi Biodiversity Target 11<sup>2</sup> on protected areas and wildlife, the very important contribution of indigenous peoples to governing their own protected areas, as indigenous community conserved areas (ICCAs), has been acknowledged.

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<sup>2</sup> Target 11: By 2020, at least 17 percent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.



Dialogue with representatives of government agencies.

Not all biodiversity is within government managed protected areas, but also within ancestral domains of indigenous peoples. It is very important that the cultural practices are documented, and are given an important impetus as far as biological diversity is concerned. Under Target 17,<sup>3</sup> the agency is engaging indigenous communities in the National Biodiversity Strategy and Action Plan (NBSAP) and this would feed into producing the national development plan. This is why this consultation enriches the planning process for NBSAP in order to achieve the Aichi Targets.

Alexis Lapis said that the Climate Change Commission is the lead agency in establishing the National Multi-Stakeholder REDD+ Council. The NCIP (National Commission on Indigenous Peoples) was invited to this and the aim is to include the seven NCIP regions in this council.

<sup>3</sup> Target 17: By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.

This will provide direction and oversight for REDD+. A workshop was conducted in Zamboanga last year. The result of this, and other workshops, will be consolidated in a report released on March 4. This council will set the tone of the governance of REDD+ here in the Philippines. President Aquino highlighted REDD+ as one of the key processes in the environmental protection program. There are also a range of REDD+ demonstrations occurring in a number of regions. These initiatives are being shared at the international level.

Vicky Tauli-Corpuz of Tebtebba responded to Mr. Lapis by highlighting the importance of REDD+ not only being discussed in terms of carbon benefits. There is a need to develop indicators that recognize non-carbon benefits, as part of a wider consideration of how to achieve Sustainable Development Goals. The importance of forests to indigenous peoples must be recognized as most forests are in indigenous territories. The fact that the NCIP was

being asked to provide representatives to the National Multi-Stakeholder REDD+ Council is problematic, as tensions exist between indigenous peoples and NCIP. Indigenous peoples should be able to determine their representatives themselves, and NCIP might not suggest appropriate people to participate in this process. How would this issue be addressed?

She asked Dir. Mundita Lim about the reporting process with regards to the CBD: “How do you report on this workshop, and the other achievements of indigenous peoples?”

Dir. Mundita Lim explained that the CBD 5th National Report needs to be submitted by March 2014 in order to be included in the Fourth Global Biodiversity Outlook. It would be helpful to have regional or island group consultations to include everyone, including indigenous peoples. A clearing house mechanism also exists, that includes information from a biological diversity network. It is particularly important that the contributions of indigenous peoples are included in developing this report.

Mr. Lapis responded by saying that the REDD+ multi-stakeholder council will be made up of representatives of academia, indigenous peoples, civil society, and the private sector. Of course, indigenous peoples must be recognized in the process, which is why the invitation was formulated to include representatives from seven ethnographic regions. NCIP is included as a government agency. It is possible for participants at this meeting to make recommendations of who should be included in this multi-stakeholder council. As a government entity, NCIP was considered to be the appropriate agency to provide recommendations as to those groups who will be part of the council.

Proceso Diego of Sibuyan Island highlighted the fact that there was an overlap of ancestral domain with the protected area of Mt.

Guiting-Guiting Natural Park, so DENR should provide help to the community in protecting the forest. The community has been doing the work to protect the forests as that is where they live, but they had not been deputized as forest guards, or received any resources to support this.

Dir. Mundita Lim replied by suggesting that the area of overlap could be managed as an ICCA; however, the ICCA concept is a new one, and needs to be explained to other government departments, as well as local government units. Official papers recognizing the community as deputies are not required in order for the community to manage the forest; however, as the community regard this as important, a commitment was made to follow this matter up with the regional office, as they are responsible for deputizing people.

Ka Badong of Maporac Ayta Organization (MAO) stated that the community have been deputized as forest guards according to an ICCA, but the LGU does not recognize their authority, so they require a CADT in order to be able to more strongly assert their claim to the LGU.

Dir. Mundita Lim responded that only the NCIP is able to grant this title, but the ICCA should still be respected. It was reiterated that ICCA is a new concept, and work remains to be done to ensure that all areas of government are aware of what an ICCA is, and how they should operate. Areas of best practice need to be identified to demonstrate to local government how an ICCA can be effectively implemented.

Alfredo Domogoy of MATRICOSO described the ancestral domain, and sustainable management practices of the Manobo people of Surigao del Sur. The ancestral domain is 13,000 ha, and consists of 6,000 ha of protected area, 2,000 ha of agricultural land, and 6,000 ha of primary forest. There are regulations on hunt-

ing and gathering, and there are natural signs that are used to correctly protect biological diversity. The government should give projects directly to indigenous peoples to manage, so that the results of implementation between government managed projects and indigenous managed projects can be compared. The DENR operate a tree planting program, but this results in wide areas being cleared, and only small areas being planted.

Dir. Mundita Lim stated that when there are projects that do not support the community, they should be looked into and should be followed up with the relevant office. The process of raising complaints is aided by documentation. Under ICCA, help can be given to indigenous peoples to submit their own project proposals, and small grants can be made available.

Datu Johnny Guina of Bukidnon emphasized the importance of rituals to protecting the forest. These rituals need to be performed annually, and it would help the community if a budget was available to support these rituals. Through protecting the forest, the community ensures that ecosystem functions and services such as water are maintained, and increases the ability of the forest to respond to climate change. Those who benefit from the water should contribute towards the protection of the forest; however, it is difficult to go to companies and ask for money for rituals. The LGU does not recognize or respect these customary laws, or the IPRA. He requested that the national agencies educate the local government, because they will respect the authority of the national government.

Dir. Mundita Lim acknowledged the importance of upland services, and the need to fully calculate the value of protecting upland forest ecosystems. All benefits should be considered,

including cultural values. The DENR is looking into the possibility of developing a mechanism whereby people downstream contribute to the upland areas. Awareness raising and education are important to ensuring this recognition. Mount Kalatungan is a protected area, so there is a possibility of payments being made to fund protection mechanisms. Now that there is an ICCA, dialogue with other agencies, such as water and irrigation, can be done.

Joji Cariño of Tebtebba asked if these forests can be assisted for protection under REDD+.

Mr. Lapis responded that the Philippines is still currently at the readiness stage. This involves capacity building, setting up working groups and establishing monitoring, verification and reporting. Once the implementation phase begins, some benefits will become available.

Maramie Diego of Sibuyan Island requested the DENR to conduct another survey, as DENR conducted one before the CADT was granted, and an integrated social forestry program was established that involved a corporation in managing the forest. Ancestral title has now been granted, but DENR said that this is still owned by the government. People have lost their livelihoods as a result of this reforestation program.

Dir. Mundita Lim said that this needs to be validated on the ground, because they have this marked as a protected area, so there will be stakes placed around it. It is a possibility that this area could be established as an ICCA. There is a need for legal clarity about the classification of this land, and whether it is public or private.

Rodino Domogoy of MATRICOSO said that farmer cannot be successful unless he/she has access to land, capital, technology and is industrious. On top of land and being industrious, indigenous peoples have traditional knowledge.

Domingo Lawagan of Abra said that they brought a conflict with a neighboring municipality to the attention of the representative from DENR. The conflict had arisen as a result of a survey approved by DENR. The ancestors of each community had delineated boundaries of ancestral domain long ago. However, the modern survey indicated a different boundary, and was conducted without the knowledge of any representative from Tubo. Therefore a request was made that DENR cancel this survey, and also support mediation between the communities.

Dir. Mundita Lim stated that her office does not deal directly with land issues, but would inquire to see if it reached the proper office. It might also be a possibility that the area could be made a co-managed ICCA.

Stanley Kimaren of Kenya asked, “What do government agencies do to provide space for the full and effective participation of indigenous peoples?”

Dir. Mundita Lim said that there is legislation to ensure the full and effective participation of indigenous peoples. Also the NCIP is a government body aimed at ensuring indigenous participation, although the NCIP only has a certain capacity. Indigenous peoples are responsible for formulating policies for their ICCAs, and these need to be collated for the ICCA policy.

Mr. Lapis said that the national council for REDD+ seeks the participation of indigenous peoples.



# Experiences on Monitoring, Reporting and Verification (MRV) and CBMIS from Indigenous Peoples from Different Countries

## Pasang Dolma Sherpa, Nepal

Nepal is home to 59 indigenous peoples, and has a rich range of linguistic, cultural and ecological diversity. The Nepal Federation of Indigenous Nationalities (NEFIN), in partnership with Tebbteba, is piloting monitoring and information systems for REDD+. The demonstration area is made up of 1-6 wards in Bhajhakhet. A ward is an area resided over by the smallest unit of local government. The study area contains a mix of landscapes, of mountains, hills and plains.

Activities are taking place at both the local and national level to lobby government to develop policies to ensure the rights of indigenous peoples are respected. Community radio provides a very important tool, both as a means of collecting, and disseminating information. The community radios have also built the confidence of community members to be able to articulate and advocate their rights. A newsletter is produced to collect articles and stories, and disseminate information. Research publi-



cations are also produced on policy analysis on forests and indigenous peoples' rights.

The monitoring tools need to be able to demonstrate if the principles set out in the REDD+ social and environmental safeguards are being upheld. Educating communities about FPIC is important, and this has been supported by holding national workshops, developing implementation guidelines, publishing a manual, and building alliances at the local level. Tradi-

tional knowledge is being documented through research publications, and also textbooks have been produced in indigenous languages to educate the youth about traditional knowledge. At the local level there is an equal gender balance, or perhaps slightly more women in the hilly and mountainous areas, but the involvement of women is less good in the plains.

At the national level ensuring gender balance has been a challenge, and trainings have to be separated among indigenous women's groups. Apart from this challenge, there is also a need for continuous efforts to educate the government in order to change their perception about indigenous peoples. Information dissemination is also a great problem as there is a gap on the information being transmitted to the people. Hence, work on advocacy with the use of research, media, government platforms, and the schools/learning institutions are necessary to affect an appropriate and balanced information that will reach the people on the ground.

The seven principles that should guide implementation of any REDD+ project are:

1) Lands, Territories and Resources - Rights to lands, territories and resources are respected, recognized and fulfilled;

2) FPIC - free, prior and informed consent is implemented from the policy phase to benefit-sharing process;

3) Traditional Knowledge - Respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities;

4) Traditional Occupation/Livelihoods - Ensuring security of livelihoods among indigenous peoples;

5) Customary governance - All rights holders and stakeholders have timely access to appropriate and accurate information to enable informed decision making and good governance of any program/project;

6) Benefit-sharing - The benefits of any project/ program are shared equitably among all rights holders and stakeholders;

7) Gender and Inter-generational dimension - Ensuring the full and effective participation of women, youth and elders in all phases of program/project implementation.

## Vu Thi Hien, Vietnam

The CERDA (Centre for Research and Development in Upland Areas) project in Vietnam is part of a global project partnership of 15 indigenous peoples' organizations in 12 countries, funded by Norad (Norwegian Agency for Development Cooperation), and coordinated by Tebtebba. The project is intended to demonstrate to decision makers the ability of indigenous peoples to act as independent actors in the national REDD+ process. The project area in Thai Nguyen province in northern Vietnam is made up of 25 villages in two demonstration communes, two districts. A total forest area of 758 ha is due to be piloted, using both



household-based, and community-based forest management systems. The project utilizes an ecosystems- and rights-based approach focused on supporting the self-determined development of indigenous peoples by utilizing indigenous customary institutions and traditional knowledge. The project aims to uphold and monitor the principles identified under the REDD+ Social and Environmental Safeguards. Full FPIC is gained from the community, and the project is designed to make an integrated and holistic intervention. Benefits gained through the REDD+ program will be shared equally among all members of the community.

Mapping has already been done to demarcate the area, define the land uses, and develop a protection plan using customary and state laws. Technical training has been provided to key community members on GPS mapping, carbon measure, classifying biodiversity of native tree species, and computer skills.

A community cooperative was established to operate the project and ensure transparency and accountability. The government issued their REDD+ action plan and this officially recognized the importance of traditional knowledge to forest protection. Further workshops are required, and advocacy work is needed to ensure that community-based monitoring is connected to the national REDD+ information monitoring system.

## **Dennis Mairena, Nicaragua**

In Nicaragua, there are two indigenous autonomous regions, which together represent 49 percent of the land area of the country. There are 17 indigenous territories with their own institutions for governance and self-deter-

mination. Each community has autonomy, and decisions are also made at the level of the territory, the municipality, the autonomous region, and the national government.

Monitoring in the context of climate change is important, as it will allow indigenous peoples to track adaptation measures, respect of their rights, and traditional knowledge. Monitoring also allows the possibility of adaptive management. The government conducts monitoring of the following indicators: endangered species, presence of indicator species, introduction of alien species, and the area covered by each type of ecosystem. There is also monitoring of indicators that measure the amount and type of forest cover and declared protected area.

All of these indicators are environmental, and it is important to develop cultural indicators to be included in community-based monitoring. Monitoring of the social and environmental safeguards under REDD+ would make information available that is useful to indigenous peoples. Tourism is also being monitored, and this used as a points system based on infrastructural improvement, and if well-being is actually improved.



**Nadia Padilla, Serena  
Representative, Autonomous  
Region of the North Atlantic  
Coast of Nicaragua**

The government is conducting monitoring of mining, timber, fishing, forest management, renewable energy projects, and oil. Proposals for new projects can be made by the community, or by the private sector. Community consultations are carried out, and if agreement is given then an environmental impact assessment is conducted. Then the proposals are sent to the regional government for approval or rejection. In the case of oil projects, approval must be granted by the national government. The surveys conducted as part of this process are made publicly available. There is no general database in which all of the information is collected.



**Open Forum**

*What information storage systems do you use and where are these located? Are community-based systems being integrated into government national systems? Will the*

*communities continue monitoring, without the ongoing support from the indigenous peoples' organizations that are helping to coordinate this work?*

Vietnam has a law that supports the formation of community cooperatives, and community cooperatives have been set up to administer the pilot project. CERDA's only role is to provide trainings; and once these trainings have been completed, the cooperative are able to manage the monitoring themselves. The data is stored on CDs, and as hard copies that are kept by the cooperative.

In Nicaragua, data is stored in a database managed by the autonomous regional government, but this has not been maximized. Communities also have traditional monitoring systems, and have been collecting information for a long time. There was recently a hurricane that killed several people. The elders were unable to read the signs because they were not the same as they used to be. Traditional knowledge of how to read weather patterns are no longer as effective due to climate change, but these changes are being monitored.

In Nepal, each region has a focal person who works with the office of NEFIN, and all of the data is documented and stored in a database to gain a fuller picture. Documentation of this information is being produced in Nepalese. Community radio program helps disseminate focus on local issues, but also have some national and global news. The ongoing sustainability of the monitoring work will depend on the local groups undertaking the work. In the pilot area there are mothers' groups, fathers' groups, and progressive women's groups. The women are responsible for monitoring herbal medicines. Indigenous peoples have been able to access 15 percent of the national development project funds.

## Stanley Kimaren, Kenya



Community-based monitoring is important in order to ensure the full and effective participation of indigenous peoples in the design and implementation of projects such as REDD+. Equitable sharing of any benefits gained through REDD+ activities need to be established. Setting up community-based monitoring systems pre-empts the possibility that poorly implemented climate change response measures might result in negative impacts for indigenous peoples. Monitoring is often presented as a technical activity, reserved for technocrats. This rhetoric needs to be challenged, and the capacity of indigenous peoples to undertake this work needs to be demonstrated. Indigenous knowledge systems and practices of traditional occupations, and customary governance are a rich source of monitoring data and it is necessary that this knowledge is documented and included in national systems.

The inclusion of indigenous peoples in monitoring activities is necessary for the long-term success of such projects. These monitoring ac-

tivities also provide useful information for the decision making of indigenous peoples. Tracking changes in land use and biological diversity can help strengthen customary governance and promote respect for indigenous traditional institutions. The process should be, collective, open, inclusive and transparent. There are a range of knowledge holders, and rights holders who's rights need to be respected: spiritual leaders, warrior's encampments, women, herbalists, livestock herders, ceremonial leaders, and youth. The traditional system of daily briefs (*ilomo*) is used to monitor the social and environment status of the ecosystem, and often triggers immediate action.

As well as monitoring the impact of intervention measures such as REDD+, the community has also chosen to monitor changes in traditional occupation, land use dynamics, and social-cultural changes related to ecosystem changes such as indigenous medicine and rites of passage. Integrating the community-based monitoring into the national monitoring activities remains a challenge.

## Prasert Trakansuphakon Thailand

Prasert Trakansuphakon presented an overview and explanation of the rotational agriculture system of the Karen people of northern Thailand. This presentation draws on research conducted in the highland areas of Chomthong District in Chiang Mai Province.

Rotational agriculture is key element of the integrated resource management system of the Karen people. Rice paddies, agro-forestry and hunting are also practiced. Rotational agriculture is based on clearing areas of forest for

agricultural planting, followed by a long fallow period, before returning the area to cultivation. The term rotational agriculture, is used in preference to the term shifting cultivation, which has negative connotations and has been used to demonize indigenous peoples as responsible for causing deforestation, thus criminalizing the practice of this traditional occupation.

In fact rotational agriculture is sustainable and culturally embedded within the Karen worldview. When a child is born a ritual is performed where their umbilical cord is tied to a tree. The fallow cycle is also understood through the life cycle of a person, moving from an infant field to an adult field, that is ready to be married, which is when that forest can once more be cleared for cultivation.

Fallow periods are exactly set, but 5-7 years are the minimum required fallow period. When clearing an area for cultivation the trees are cut, but not killed, and will quickly regenerate. The beginning of the rotational agriculture year is marked with a ceremony where string is tied around the wrist of each family member, and this symbolizes the importance of collective effort of the community for swidden farming. Other rituals are also performed as part of the cultivation of the swidden area. The young people are responsible for performing the mother

rice ritual, which insures that important knowledge is transmitted to the youth. Products are available from the fallow forest through out the entire cycle. The levels of carbon dioxide stored by the forest have been measured, together with the amount released through burning, and this shows that rotational agriculture has a net effect of reducing levels of atmospheric carbon dioxide. There are inconsistencies within national law, as the criminalization of rotational agriculture continues, despite national laws and international commitments recognizing the rights of indigenous peoples.

### Open Forum

*Was the tree in the umbilical cord ritual prohibited from being cut in rotational farming? Is chemicals used as part of the system? What is the position of the Thai government in relation to rotational agriculture?*

The umbilical cord tree is prohibited from being cut, and no chemicals are used in rotational farming. Different government departments have different ideas, and the government attitude is changing over time because of the advocacy of indigenous peoples and local communities.



**Onel Masardule**  
**Guna Yala, Panama**

The Guna people are one of seven indigenous peoples living in Panama, together with the Ngäbe, Emberá, Wounaan, Buglé, Naso Tjerdi, and Bri Bri peoples. The territory of Guna Yala has political autonomy, and the traditional indigenous governance system is respected. Each community has the power to make decisions, and decisions are also made at the level



of Comarca (territory), and by the Guna General Congress for all of the Guna territories.

A number of areas have been identified for monitoring and indicators have been developed. Traditional knowledge is monitored by counting how many traditional experts there are within each community, and this is done annually. Scholarships are made available to support people to learn the traditional knowledge of the Guna people, and evaluations are conducted each semester, and the number of scholarships awarded is an indicator of traditional knowledge.

Participatory mapping was conducted to identify sacred sites, and these are now marked on a map and visits are conducted to monitor if they are being respected. Bilingual education and education about Guna culture is being introduced in schools, and this is monitored through visits to the schools; and the number of schools and teachers engaged in bilingual education is used as a language indicator.

Tourism is controlled and monitored within Guna Yala. The number of hostels is controlled as is the entrance of cars to the territories, and these areas are used to monitor tourism. Inspections are carried out four times a year

on the number of tourists and the amount of income generated, which goes to the Guna General Congress.

## Tui Shortland Aotearoa, New Zealand

The territory of the Ngati Hine people is located in Te Tai Tokerau, the northern region of the north island. The government does not recognize the ancestral domain of the people and the amount of land controlled by the community has been steadily shrinking. In setting up the community-based monitoring system, indicators were determined based on the indigenous traditional knowledge and spiritual beliefs.

The realms of the gods and goddesses relating to biodiversity were defined. Rangi (sky father) cry tears for the earth mother, water; Papa (earth mother) earth, soil, minerals; Rongo (god of peace): cultivated foods, sweet potato, taro; Tane Mahuta (god of the forest): forest trees, plants, birds; Tangaroa (god of the ocean): ocean water, fish; Tumatauenga (god of war): coastal tidal zone, shellfish; Haumietike-



tike (god of wild foods): berries, mushrooms, edible plants.

There are male and female deities for each domain. The indicators were chosen that were important for Maori well-being, which is composed of the physical, spiritual, mental, and family. Monitoring of eels were identified as an area of key importance, as the eel is of great importance to the livelihoods of the Ngati Hine people. The life cycle of the eel was studied, according to the traditional calendar, as were the eels needs in terms of food and water quality. The migration of eels was monitored, and efforts were taken to reduce the obstacles to migration.

The health of the forest was also monitored. Ngahere, the Maori word for forest, means the binding together of all things, each being as important as another. The monitoring lead to the creation of a policy document and the enforcement of restrictions on certain practices within the territory.

### Open Forum

*It is very clear that elders are taking actions to protect traditional knowledge, will these be linked up with government monitoring? Are guns used for hunting? Are there restrictions on where in the forest it was possible to hunt?*

It is necessary that community and government monitoring is complementary.

The community work with other tribal managers are recognized by the government. Guns are not used in hunting. The pigs are caught and then killed with knives. We control who enters our territory, and hunting is controlled at the level of the family.

## Continuation of Next Steps

A plenary discussion was called in order to consolidate recommendations across communities and draw out other next steps that were not captured in the group workshop session. The session aimed to reach a group agreement in order to be able to take the required action to implement decisions.

The participants of this workshop on CBMIS agreed to form as a CBMIS network, in order to strengthen the work on CBMIS together with supportive NGOs.

Tebtebba will complete the report on the Philippine Workshop on CBMIS and this will be given back to the participants for feedback and validation. The participants have agreed that this report can be submitted to the CBD and the names of all the participants will be included in the report.

It was agreed that:

- A technical workshop among local participants would be held within the next 3 months, to support capacity building on tools and methodologies for CBMIS;
- Another meeting will be set towards the end of the year to talk about how to report on monitoring targets identified under the CBD and UNFCCC, and to support further discussions on sustaining the work on CBMIS;
- Summing up of experiences and monitoring results should be produced in time to be inputted into the Philippine national report for the CBD, and this will also allow this information to be reflected in the Global Biodiversity Outlook. It was noted that this must not only focus on Target 11 (Protected

Areas, including ICCAs) but must also look into how to monitor and report on Target 18 and Target 14, which are also of great relevance to indigenous peoples. It was recommended that advocacy work is required to ensure that there is a strong chapter on Targets 18 and 14 in the national report.

The workshop identified areas of work that needed to be undertaken and continued in order to establish CBMIS. For example, some communities still need to undertake or complete mapping activities, and others have not yet completed resource inventories. This meeting has allowed these areas to be identified, and these activities should now be completed. It is necessary that the participation of indigenous peoples in relevant meetings is ensured, and follow up is required in relation to the

selection of indigenous peoples to be part of National Multi-Stakeholder REDD+ Council.

The communities attending this workshop are now at the stage of being able to set up and implement CBMIS within their communities, but as these are being developed, the following concerns must be addressed:

- How to share information with the CBMIS network;
- Technical aspects such as identifying appropriate technologies;
- Identifying common tools and methodologies to be used and shared;
- How information will be centralized;
- How information will be validated and managed;
- How to go about validation of information across knowledge systems.



# Annex: Program

## PHILIPPINE WORKSHOP ON COMMUNITY-BASED MONITORING AND INFORMATION SYSTEMS (CBMIS) 25-27 February 2013, University Hotel, UP Diliman, Quezon City, Philippines

### OBJECTIVES:

To consolidate existing work on community-based monitoring and information systems as a tool for strengthening indigenous peoples' self-determined development, in the context of UNDRIP/IPRA, the Strategic Plan on Biodiversity and Aichi Biodiversity Targets, UNFCCC and other global and national commitments.

- 1) To unite on the importance and substance of community-based monitoring and information systems on traditional knowledge, biodiversity and climate change, rights and well-being of indigenous peoples.
- 2) To share community experiences and the status of work on generating baseline information and monitoring changes over time.
- 3) To deepen our understanding about common tools and methodologies to carry out this work.
- 4) To identify the next steps and mechanisms in strengthening community-based monitoring and information systems in pilot communities.

| Date/time                                  | Activities     | Person-in-charge    |
|--------------------------------------------|----------------|---------------------|
| <b>DAY 1, February 25, 2013</b>            |                |                     |
| <b>AM SESSION: Preliminaries</b>           |                |                     |
| <b>Facilitator: Ms. Vicky Tauli-Corpuz</b> |                |                     |
| 8:30-9:00                                  | Registration   | Tebtebba staff      |
| 9:00-9:15                                  | Opening Prayer | Mr. Salvador Dimain |

|                                                                                                     |                                                                                                                                                                                       |                        |
|-----------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| 9:15-9:30                                                                                           | Welcome Address and Introduction of participants                                                                                                                                      | Ms. Vicky Tauli-Corpuz |
| 9:30-10:30                                                                                          | Context Setting: Overview on the role and importance of community-based monitoring and information systems within the context of IPSDD                                                | Ms. Joji Carino        |
|                                                                                                     | Update on community-based monitoring and information systems and the Convention on Biodiversity                                                                                       | Viviana Figueroa       |
| 10:30-10:45                                                                                         | <i>Break</i>                                                                                                                                                                          |                        |
| 10:45-11:15 (30mins)                                                                                | Workshop on the Objectives and Output of the Activity<br>1) What are the domains that re important to be monitored?<br>2) What are the indicators to measure trends in these domains? |                        |
| 11:15- 11:30                                                                                        | Report Back in Plenary                                                                                                                                                                |                        |
| 11:30-12:30                                                                                         | Synthesis on the Objectives and Output for the 2-day Workshop                                                                                                                         | Ms. Florence Daguitan  |
| 12:30-1:30                                                                                          | <i>Lunch break</i>                                                                                                                                                                    |                        |
| <b>PM SESSION: Sharing of Community Experiences</b><br><b>Facilitator: Ms. Maria Elena Regpala</b>  |                                                                                                                                                                                       |                        |
| 1:30-2:00                                                                                           | OPEN FORUM                                                                                                                                                                            |                        |
| 2:00-2:30                                                                                           | Tinoc experience                                                                                                                                                                      | Mr. Bonifacio Dumanop  |
| 2:30-3:00                                                                                           | Sibuyan experience                                                                                                                                                                    | Mr. Maramie Diego      |
| 3:00-3:30                                                                                           | <i>Break</i>                                                                                                                                                                          |                        |
| 3:30-4:00                                                                                           | OPEN FORUM                                                                                                                                                                            |                        |
| 4:00-4:30                                                                                           | Mt. Kalatungan experience                                                                                                                                                             | Datu Johnny Guina      |
| 4:30-5:00                                                                                           | Manipongol experience                                                                                                                                                                 | Elizabeth Dagsangan    |
| 5:00-5:30                                                                                           | OPEN FORUM                                                                                                                                                                            |                        |
| 7:00-9:00                                                                                           | <i>Dinner and Solidarity Night</i>                                                                                                                                                    | Christine Joy Agudo    |
| <b>DAY 2, February 26, 2013</b>                                                                     |                                                                                                                                                                                       |                        |
| <b>Continuation of Community Sharing on their experiences</b><br><b>Facilitator: Giovanni Reyes</b> |                                                                                                                                                                                       |                        |
| 9:00-9:15                                                                                           | RECAP                                                                                                                                                                                 | Host team 1            |
| 9:15-9:45                                                                                           | Coron experience                                                                                                                                                                      | Mr. Jesse Mayonado     |
| 9:45-10:15                                                                                          | Tubo experience                                                                                                                                                                       | Mr. Domingo Lawagan    |
| 10:15-10:30                                                                                         | <i>Break</i>                                                                                                                                                                          |                        |
| 10:30-11:00                                                                                         | OPEN FORUM                                                                                                                                                                            |                        |
| 11:00-11:30                                                                                         | Maporac, Cabangan experience                                                                                                                                                          | Mr. Salvador Dimain    |

|                                                                                                          |                                                                                                                                          |                                                                        |
|----------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 11:30-12:00                                                                                              | Sote, Burboanan experience                                                                                                               | Datu Alfredo Domogoy                                                   |
| 12:00-12:30                                                                                              | OPEN FORUM                                                                                                                               |                                                                        |
| 12:30-1:30                                                                                               | <i>Lunch break</i>                                                                                                                       |                                                                        |
| <b>PM SESSION: WORKSHOP</b>                                                                              |                                                                                                                                          |                                                                        |
| <b>Facilitator: Ms. Grace Balawag</b>                                                                    |                                                                                                                                          |                                                                        |
| 1:30-2:30                                                                                                | Workshop 2: What are the needs to be able to strengthen community monitoring and information systems                                     | Participants grouped according to their communities                    |
| 2:30-3:10                                                                                                | Report back to the Plenary                                                                                                               |                                                                        |
| 3:10-3:30                                                                                                | <i>Break</i>                                                                                                                             |                                                                        |
| 3:30-4:30                                                                                                | Tools and Methodologies for Community Monitoring and Information Systems                                                                 | Prof. (retired) Richard Dorall                                         |
| 4:30-6:00                                                                                                | Plenary Discussion on Next steps and mechanisms in strengthening community-based monitoring and information systems in pilot communities |                                                                        |
|                                                                                                          |                                                                                                                                          |                                                                        |
| <b>Day 3, February 27, 2013</b>                                                                          |                                                                                                                                          |                                                                        |
| <b>Facilitator: Ms. Joji Cariño</b>                                                                      |                                                                                                                                          |                                                                        |
| 9:00-9:15                                                                                                | RECAP                                                                                                                                    | Host team 2                                                            |
| 9:15-10:15                                                                                               | Dialogue with the Government/Response from Protected Areas and Wildlife Bureau (PAWB-DENR)<br>Climate Change Commission (CCC)            | Dir. Theresa Mundita Lim &<br>Ms. Flordame Eleazar<br>Mr. Alexis Lapis |
| 10:15-10:30                                                                                              | <i>Break</i>                                                                                                                             |                                                                        |
| 10:30-12:00                                                                                              | Continuation of the dialogue                                                                                                             |                                                                        |
| 12:00-3:30 pm                                                                                            | Lunch break and field trip to Fort Santiago, Manila                                                                                      |                                                                        |
| <b>3:30 pm - Panel presentation on Community-based Monitoring and Information Systems implementation</b> |                                                                                                                                          |                                                                        |
| <b>Facilitator: Ms. Ellen Dictaan-Bang-oa</b>                                                            |                                                                                                                                          |                                                                        |
| 3:30-3:45                                                                                                | Nepal                                                                                                                                    | Ms. Pasang Sherpa                                                      |
| 3:45-4:00                                                                                                | Vietnam                                                                                                                                  | Ms. Vu Thi Hien                                                        |
| 4:00-4:15                                                                                                | Nicaragua                                                                                                                                | Mr. Dennis Mairana                                                     |
| 4:15-4:30                                                                                                | Open Forum                                                                                                                               |                                                                        |
| 4:30-4:45                                                                                                | Kenya                                                                                                                                    | Mr. Stanley Kimaren                                                    |
| 4:45-5:00                                                                                                | Thailand                                                                                                                                 | Mr. Prasert Trakansuphakon                                             |
| 5:00-5:15                                                                                                | Panama                                                                                                                                   | Mr. Onel Masardule                                                     |
| 6:15-7:30                                                                                                | New Zealand                                                                                                                              | Ms. Tui Shortland                                                      |
| 7:30-8:45                                                                                                | Open Forum                                                                                                                               |                                                                        |
| 8:45-9:30                                                                                                | Closing Remarks and Evaluation                                                                                                           | Ms. Victoria Tauli-Corpuz                                              |

## Annex: Participants List

| Name                  | IP Group          | Organization                                            | E-mail             |
|-----------------------|-------------------|---------------------------------------------------------|--------------------|
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| Leticia Badar         | Ayta              | MAO                                                     |                    |
| Reynord Barrientos    | Ayta              | MAO                                                     |                    |
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| Victor Basaca        | Manobo     | MATRICOSO (Manobo Tribal Council of Sote)             |                                |
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| Alfredo Domogoy      | Manobo     | MATRICOSO                                             |                                |
| Jimmy Domogoy        | Manobo     | MATRICOSO                                             |                                |
| Oscar Sarahan        | Mansaka    | Sildap (Silingang Dapit sa Sidlakang Mindanao)        |                                |
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|                            |                 |                                                              |                              |
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| Holly Shrum            |            | Natural Justice, Sabah                                                 |                                            |



*Live with the water,  
care for the river;  
Live with the trees,  
care for the forest.  
Live with the fish,  
care for the spawning  
grounds;  
Live with the frog,  
care for the cliff.*

*- Karen saying*

