



*International exchange meeting
for mobilisation of indigenous and
local knowledge for community
and ecosystem wellbeing*

Hin Lad Nai, Chiang Rai province, Thailand
13 – 15 February 2016

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Cover image: Walking to the paddy fields of Hin Lad Nai. Photo: Pernilla Malmer

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Preface

This report is a summary of the walking workshop “International exchange meeting for mobilisation of indigenous and local knowledge for community and ecosystem wellbeing”, held in Hin Lad Nai, Chiang Rai, Thailand, February 13–15, 2016. The workshop was kindly hosted by PASD and the Hin Lad Nai community, and arranged together with IMPECT and SwedBio. The report summarises the presentations and the discussions during the workshop. The workshop was held as part of an on-going dialogue process, started in Guna Yala in 2012¹, regarding ways of bridging across knowledge systems based on equity and reciprocity, and the usefulness for all involved.

The workshop used an interactive “walking workshop” method, facilitating participants to interact with the rotational farming landscape of Hin Lad Nai and articulate experiences from their own landscapes in discussions with community representatives.

¹ See: <http://swed.bio/multiactor-dialogues/guna-yala-dialogue/>

Acknowledgements:

We wish to thank the Hin Lad Nai elders and leaders who generously shared their wisdom about their landscape with the visiting communities and representatives for organisations. We also want to thank the whole Hin Lad Nai community for their hospitality to let us stay with them and all their openness and support. We also wish to thank the elders from other visiting indigenous communities in Thailand as well as visiting communities from partner organisations in Philippines, Kenya, Ethiopia and Panama.

The walking workshop in Hin Lad Nai was implemented with financial support from Swedish International Development Cooperation Agency (Sida) through SwedBio at SRC.

Executive Summary

Despite the recognition of indigenous and local knowledge (ILK) in science-policy fora, connecting indigenous knowledge systems and the diverse experiences from their practices, across scales and epistemologies, in ways that are equal, transparent and legitimate, and thus applicable and useful for all actors, science and indigenous communities alike, remains a challenge.

This is a report from a walking workshop that contributes to address this challenge, held in the community of Hin Lad Nai, Chiang Rai, Thailand, 13–15 February 2016. The contribution stem from the sharing of experience and best practices among indigenous communities engaged in mobilising and sharing their own knowledge, and through continuing an open cross-cultural dialogue around collaborations across knowledge systems, with a focus on bottom-up, community-driven initiatives.

The workshop brought together the partners behind a project to pilot a Multiple Evidence Base (MEB) approach in partnership with local communities. The partners were SwedBio at Stockholm Resilience Centre, Sweden; Tebtebba Foundation, Philippines; Pgakenyaw Association for Sustainable Development (PASD), Thailand; African Biodiversity Network with Institute for Cultural Ecology (ICE), Kenya and MELCA, Ethiopia; and Forest Peoples Programme (FPP) with Fundación para la Promoción de Conocimiento Indígena (FPCI), Panama. All the partners have been engaged since 2012 in a dialogue process around collaborations between science and ILK in local to global levels. One outcome of the process is the MEB approach, which sees indigenous, local and scientific knowledge systems as different manifestations of valid and useful knowledge systems that generate complementary evidence for sustainable use and management of biodiversity.

Based on the experiences from the partners of piloting a MEB approach in five communities in Thailand (Hin Lad Nai), the Phillipines (Tinoc), Kenya (Tharaka and Kivaa), Ethiopia (Gindeberet), and Panama (Usdub), the objective of the workshop was to create mutual learning about co-generation of knowledge across diverse knowledge systems. This learning can fulfill multiple needs within governance and policy making at local, regional and global level.

To facilitate the joint learning and reflections as embedded in the knowledge and practices of the local community, a walking workshop approach was used in which participants, local and visiting, shared knowledge and insights while walking through the rotational farming landscape of the Hin Lad Nai. The representatives from each community² held a

presentation of their MEB piloting – the knowledge system, the approach and methods used in their research, and the findings. Furthermore, specific discussion sessions were held on what are ways to validate knowledge in indigenous and local knowledge systems, and how community based research can be useful to influence decision making processes at local, national, and international level.

The rich discussions on validation revealed many general similarities with specific manifestations in the different communities and the experience of the participants. For example, there were many examples of custodians of knowledge systems, such as elders or other specific roles, that are key for accumulation and transmission of knowledge and continuous evaluations in particular cases. It was also clear how validation happens through interactions with the landscape, through activities of planting, harvesting, and hunting, based on e.g. indicators in nature. Cultural calendars, rituals and ceremonies are also critical in the knowledge systems, to guide activities, experimentations, and innovations. Several illustrations of this were found during the landscape walks, such as the innovation of the paddy fields some 50 years ago, and the experimentation needed to make it work locally.

The sharing around applications of communities’ research served as an important sharing of experiences on how mobilising knowledge can be empowering and lead to change, such as the recognition of rotational farming as cultural heritage in Hin Lad Nai, and the protections of sacred sites by National Museums of Kenya. There is a wealth of ways in which indigenous and community research can contribute to the revival and mobilisation of ILK, to supporting livelihoods and self-determined development. Through sharing and networking among communities across the world, such as with Community Based Monitoring and Information Systems (CBMIS), is important for learning as well as impact, even at the international level such as within CBD and IPBES. It was found that the walking workshop approach did indeed facilitate in-depth discussions about the local biocultural system, as well as stimulated questions and comparisons about similarities with other systems. It was also found that it was very useful to base the discussions about indigenous and local knowledge systems on the rich shared understanding that emerged from the walking discussions.

The dialogue on how to connect across knowledge systems based on equity and reciprocity will continue, with the objective of ensuring space for better policy decisions related to biodiversity and ecosystem governance, which includes the expertise of the holders of knowledge that are continuously observing and managing biodiversity on the ground.

² See Annex 3 and Annex 4, and the description of the communities in respective chapter

List of acronyms

ABN	African Biodiversity Network
CBD	Convention on Biological Diversity
COP	Conference of the Parties
CBMIS	Community Based Monitoring and Information Systems
FPCI	Fundación para la Promoción del Conocimiento Indígena
FPIC	Free Prior and Informed Consent
FPP	Forest Peoples Programme
IIFB	International Indigenous Forum on Biodiversity
IIFBES	International Indigenous Forum on Biodiversity and Ecosystem Services
ILK	Indigenous and local knowledge
ILKP	Indigenous and local knowledge and practices
IMPECT	Inter Mountain Peoples Education and Culture in Thailand Association
ILKS	Indigenous and local knowledge systems
IPBES	Intergovernmental Science Policy Platform on Biodiversity and Ecosystem Services
PASD	Pgakenyaw Association for Sustainable Development
SRC	Stockholm Resilience Centre
TK	Traditional Knowledge
UN	United Nations

Introduction:

The Knowledge Dialogue Project and piloting a Multiple Evidence Base approach.



Welcome to Hin Lad Nai. Photo: Pernilla Malmer.

Bringing together insights from a diversity of knowledge systems often contributes new evidence, insights and innovative responses, such as new crops and cultivation methods. For example, collaborations between local communities and climate researchers led to the acknowledgement and use of traditional fire management for carbon sequestration. This is well-recognised in global science-policy fora such as the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES) and the Convention on Biological Diversity (CBD), including the crucial importance and contributions from indigenous and local knowledge systems (ILKS).

Despite the recognition of indigenous and local knowledge (ILK) in science-policy fora, connecting indigenous knowledge systems and the diverse experiences from their practices, across scales and epistemologies, in ways that are equal, transparent and legitimate, and thus applicable and useful for all actors, science and indigenous communities alike, remains a challenge.

The walking workshop in the Karen community of Hin Lad Nai is part of a dialogue across knowledge systems that aims at addressing this challenge. The knowledge dialogue emerged from collaborations between SwedBio and partners among indigenous peoples and local community organisa-

tions and networks of experts from different knowledge systems – all of whom are committed to the value of diversity and sustainable biodiversity management and its links to policy processes from local to global, such as the CBD or the IPBES.³ One of the outcomes of the dialogue is the envisioning of “the Multiple Evidence Base (MEB) approach” that sees indigenous, local and scientific knowledge systems as different manifestations of valid and useful knowledge systems that generate complementary evidence for sustainable use and management of biodiversity (see Box 1).

In order to contribute to further development and illustrations of what a Multiple Evidence Base approach could mean as applied in practice, some partners of the dialogue process volunteered to

initiate community research projects to pilot the MEB approach, as applied to their own recognised needs. This was carried out as a collaborative partnership for co-generation of knowledge and methods for mutual learning between SwedBio at Stockholm Resilience Centre, Sweden; Tebtebba Foundation, Philippines; Pgakenyaw Association for Sustainable Development (PASD), Thailand; African Biodiversity Network with Institute for Cultural Ecology (ICE), Kenya and MELCA, Ethiopia; and Forest Peoples Programme (FPP) with Fundación para la Promoción de Conocimiento Indígena (FPCI), Panama.

The joint objectives of the community piloting of the Multiple Evidence Base approach are the following:

1. To emerge from and contribute to local needs for mobilising existing and new knowledge, creating synergies for solutions that contribute to the wellbeing of the community.
2. Create change in the view of governments of indigenous governance and management systems, towards respect and benefit for indigenous peoples and local communities
3. Create change within communities to strengthen liveli-

³ See for example the Guna Yala Dialogue from 2012 at www.dialogueseminars.net/Panama.

hoods and well-being based on indigenous governance systems, and promoting intergenerational learning.

4. To develop methods, procedures and good examples for how evidence can be mobilised for needs, from local to global, and across knowledge systems, such as local and national policymaking, and for processes such as in the CBD and the IPBES assessments, and other fora for working with knowledge synergies.

5. To create mutual learning about co-generation of knowledge across diverse knowledge systems. This learning can fulfill multiple needs within governance and policy making.

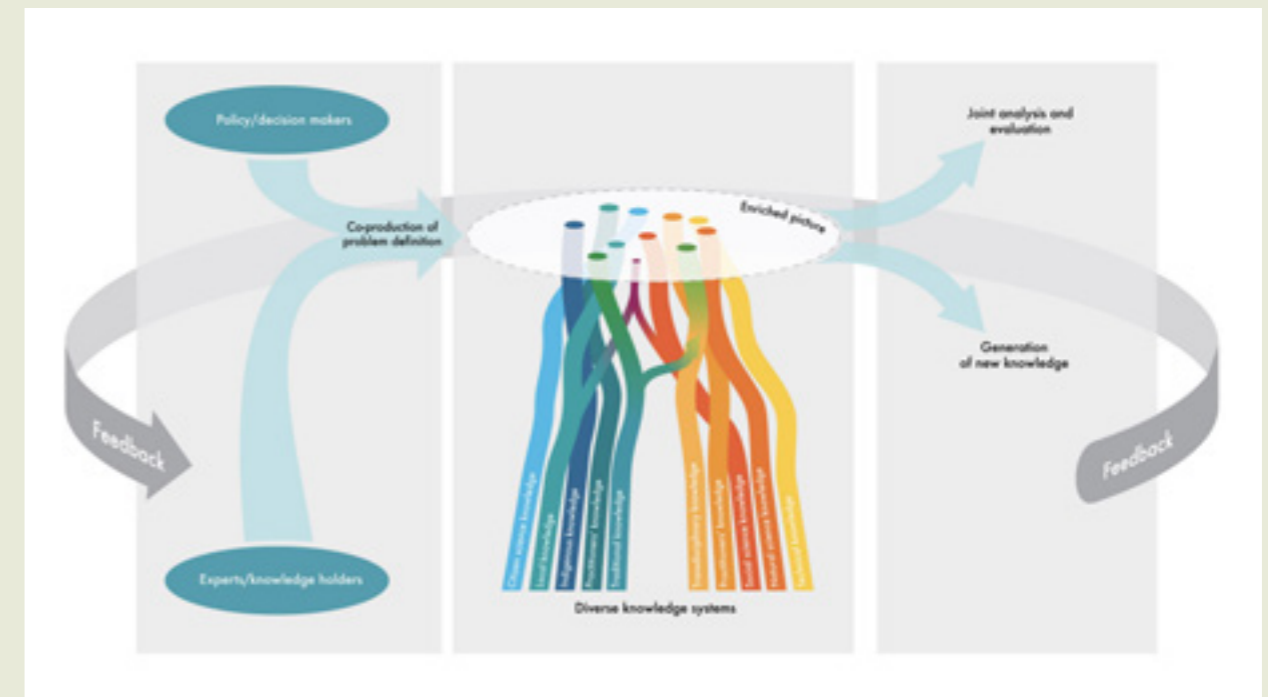
One of the community partners was Hin Lad Nai, who was hosting the workshop. The role of the Hin Lad Nai walking workshop was to share experience from the five communities and generate new insights from joint learning, and thus in particular contribute to objective 3 above.

Box 1. A Multiple Evidence Base (MEB) approach for equity across knowledge systems

Coming out of the Guna Yala-dialogue, MEB emphasises trust, respect, reciprocity, equity, and transparency as key for successful exchange between knowledge systems. The MEB approach views indigenous, local and scientific knowledge systems as generating different manifestations of knowledge. When combined, these can generate new insights and innovations for sustainable governance of biodiversity and ecosystem services. The MEB approach emphasises complementarity and equitable and transparent processes. If applied in ecosystem assessments, for example, evaluation of knowledge would occur within rather than across the contributing knowledge systems. A MEB approach on a particular issue creates an enriched picture of understanding as a base for policy decisions or as a starting point for joint problem formulation and further knowledge generation. In an inclusive and iterative process, a MEB approach can enhance the legitimacy and relevance of the assessment outcomes for a wide range of actors.

The MEB approach has been taken up within the CBD, as part of the effort to encourage the contribution of indigenous

peoples and local communities’ own Community Based Monitoring and Information Systems (CBMIS) to the monitoring of Aichi Target indicators. The decision XII/12, that deals with full and effective participation of indigenous peoples and local communities in the work of the Convention, from the 12th Conference of the Parties, mentions in particular the contribution of a MEB approach to methods development for validation of data generated from diverse knowledge systems on equal terms. In the IPBES, a MEB approach has been promoted in its conceptual framework, and more recently, in the guidance for how to include Indigenous and Local Knowledge and Practices (ILKP) in the Global Assessment. In the Scenarios and models assessment report the MEB approach has inspired models for how ILK can be included in all phases of policy and decision-making on biodiversity and ecosystem services, in order to improve decisions in these areas across scales. Also, the global research programme Future Earth has encouraged the further exploration of a MEB approach, as a useful tool for co-production of knowledge in trans-disciplinary research and assessments.



The figure outlines the three phases of a Multiple Evidence Base approach: joint problem definition, generating an enriched picture with contributions from multiple sources of evidence, and joint analysis and evaluation of knowledge.

Meeting culture, design and aim of the workshop

The workshop design was inspired by the methodology SwedBio have developed for multi-actor dialogues, which aims at enhanced dialogue and exchange of experiences and worldviews between diverse actors and knowledge systems.⁴ Such objectives require an atmosphere of trust and confidence, and an environment that reflects the issues at hand, such as in this case, biodiversity, food and culture, where people feel comfortable to speak on equal terms as an important precondition.

The workshop used an interactive “walking workshop” approach, in which participants, local and visiting, shared knowledge and insights while walking through the rotational farming landscape of the Hin Lad Nai. The discussions were situated in and around cultivated fields, fallows, sacred sites, and water sources that constitute the landscape. Unlike more formal workshop settings, being outside, visiting fields and other sites enables the participants to see experiences and innovations at first hand and exchange practical knowledge, as well as articulate and respond to ideas. The host community decides where to walk – in order to explore problems, reflect and bring up different experiences and perspectives, seeking explanations, answers and possible solutions together in the landscape, from their perspective. The approach used in Hin Lad Nai, was inspired from the exchange meetings of the International Network of Mountain Indigenous Communities,⁵ where the Hin Lad Nai community is a member. The opportunity to connect across knowledge systems starting from practice, stimulates innovation and experimentation based on experiences. The ‘walking workshop’ is an indigenous methodology, but also used in other contexts – even by the Greek philosophers.

The participants at the meeting agreed to apply The Chatham House Rule, where participants are free to use the information received, but neither the identity nor the affiliation of the speaker(s), nor that of any other participant, is revealed. However, in this report, the names of the persons presenting from their respective MEB pilots, and their contributions, will be referred to. This material is also presented in separate reports.⁶ It was further agreed during the meeting that all knowledge shared and generated during the workshop had to be based on Free, Prior and Informed Consent (FPIC). Consent forms were signed by representatives of all partner organisations, as ‘guardians’ of how the process and outcomes of the dialogue workshop may be used and shared further. It was also important to discuss where and how the learning and information would travel. No information from the meeting should be used or interpreted in a way that was

different from what it was aimed at. In particular, as researchers and others engaged in processes beyond the community were part of the sharing, control of the information emerging from the meeting, and how it is used was important. This is also part of FPIC.

The organisers stressed that information about how knowledge is mobilised and the further process of creating impacts on decision-making locally and beyond – i.e. the interpretation of knowledge as a process – was an important outcome of the meeting, in addition to sharing knowledge about management of landscapes and biodiversity. Insights from the knowledge processes are of particular interest for methods development for applying a Multiple Evidence Base approach.

Translation was organised between Thai and English, and Karen (the local language in Hin Lad Nai) and English, to ensure good interactions between the hosts and the visiting communities. Visiting community participants who were not fluent in English were supported by their accompanying organisations for translation to their local languages.

The particular objectives for the Hin Lad Nai walking workshop, as agreed among the partners, were the following:

- Exchange experiences between community projects piloting the implementation of a MEB approach. Exchange on certain areas of experiences; rotational farming, marketing, revitalisation of seed systems, eco-cultural calendars, etc.
- Sharing methods and practice for mobilising knowledge, and how to generate and validate new knowledge and innovations.
- Contributing to how processes of Community Based Monitoring and Information Systems (CBMIS)⁷ and other monitoring tools used by Indigenous peoples and local communities (IPLC) are being developed and used.
- How to best use the outcomes of the research, and share the progress made with others. For example, by contributing to local processes and decision making, to national processes of monitoring of biodiversity such as for the CBD Aichi Biodiversity Targets⁸, to international processes and to better laws and better conservation and protection of territories.

The meeting lasted three days (see agenda in Appendix 1). Each day included a walk to one component of the Hin Lad Nai rotational farming system: the catchment forest, the rotational fields and fallows, and the paddy rice fields on the valley floors. During the workshop, each of the five communities presented experience and insights from the MEB piloting. The report summarises the outcomes of field discussions, presentations, and discussion sessions linked to the workshop objectives.

4 <http://swed.bio/focal-areas/approaches/dialogues-learning/multiactor-dialogues/>

5 <http://swed.bio/news/peak-changes-and-adaptation-for-indigenous-communities/>

6 <http://swed.bio/stories/mobilisation-and-revival-of-indigenous-and-local-knowledge-for-enhanced-ecosystem-governance/>

7 <http://swed.bio/focal-areas/themes/biocultural-diversity/cbmis/>

8 The goals of the CBD Strategic Plan for 2020, are monitored through the Aichi Targets. See: <https://www.cbd.int/sp/targets/>

Day 1:

Introductions, visiting the catchment forests, and community presentations.



Forest gardens with a diversity of wild, semi-domesticated and planted crops thriving together. Photo: Pernilla Malmer.

During the first day, an opening session was held where the participants were welcomed to Hin Lad Nai by community leaders and introduced to the community. The idea of the walking workshop and the background to the community piloting of a MEB approach was presented. This was followed by a walking workshop session through the forests and gardens in the watershed of Hin Lad Nai, exchanging experiences and observations on the way. In the evening, the piloting experiences from Tinoc, Philippines, and Guna Yala, Panama were presented and discussed.

Opening session

The participants were welcomed by Mr. Chaiprasert Phokha, the village leader, who encouraged exchange of experience among the diverse members of the group. The shaman and traditional village leader Mr. Poo Noo Papa held a prayer as part of the inaugural ceremony. The District governor, Mr. Prasert Jitphlicheep, addressed the group and welcomed everyone with particular greetings to the Hin Lad Nai team and the international visitors. He presented the village leader with an award in recognition of their work to protect the

forest and said that Hin Lai Nai made him proud because people here looked after their resources and served as a model for other villages. He also mentioned the UN award as forest heroes that was given to the village.

All participants introduced themselves and their expectations for the workshop, including representatives from organisations and communities piloting the MEB approach in other parts of the world (see Annex 3 for a full list of participants). Most participants carried expectations for sharing experiences and learning from each other. The village leader, Mr Phokha, introduced the team that has been involved in the MEB piloting research, and the community of Hin Lad Nai. Box 2 gives a background to the community and its biocultural system. Together with Prasert Trakansuphakon, president of PASD, Mr Phokha also shared the story of the extensive logging by a company with a government logging concession that destroyed the forest in and around Hin Lad Nai in the 1980's. No consent was sought or given from the villagers, let alone any economic or other compensation. Despite their huge loss, the community decided to work collectively to restore their forest and the rotational farming system, rather

than accepting the situation and abandoning their rotational farming and forest management practices, as happened in most of the affected neighbouring villages. Mr. Chaiprasert Phokha said that the village was lucky to have elders who could share their knowledge from the ancestors to be carried forward to the young. Today, the village practises their traditional rotational farming for village needs based on a diversity of wild, semi-domesticated and cultivated crops. They grow tea and coffee, harvest bamboo shoots, and forest honey as sources of income, and a share of all that is sold goes to a community fund (see Box 2).

In response to questions from the participants, it was further explained how the logging ended due to national and regional protests against the logging concessions, which arose in particular as extensive flooding caused massive damage here and in other villages in the logged areas. Thus, in 1989, the government decided to close the logging concessions in the whole of Thailand. From then on, the destructive impact of the logging concession in Hin Lad Nai

finally ended. The most effective means for restoring the forest was to construct firebreaks around the village, and organise a schedule of round-the-clock guards to ensure the natural regrowth. Hin Lad Nai still needs to protect the forest from fires in surrounding areas by maintaining the firebreaks. Today, an important reason for the community to engage in research to document the biodiversity in the rotational farming system is that the government wants to create a natural reserve in their restored forest. If that happens, the community will no longer be allowed to carry out rotational farming. The community wants to demonstrate that rotational farming indeed contributes to biodiversity, and to the conservation of wildlife in the forest, and does not destroy it. This is also very important for the general recognition of rotational farming in Thailand, as it is considered illegal by law. A victory in recent years has been that Hin Lad Nai and a few other villages have been declared as a “Cultural Heritage” from the Ministry of Culture.



Gathered under one of the remaining old trees during the walk to the watershed. Photo: Maurizio Farhan Ferrari.

Box 2. Introduction to Hin Lad Nai community

The Hin Lad Nai community is situated in Northern Thailand, Wieng Pa Po district, Chiang Rai Province. It is located between the National Forest Reservation Area and the Khun Jae National Park, about 130 km from the city of Chiang Rai. The community land is a hilly forest area throughout which more than 14 small streams flow. Community forest covers 3110 ha, while agricultural land is approximately 570 ha. The community is comprised of four settlements: Hin Lad Nai, Pha Yuang, Hin Lad Nok and Huey Sai Khao. The total population of the 4 hamlets is about 350 people. In Hin Lad Nai, there are 20 households with a total population of 105

They are Karen people, or Pgakenyaw in their own language. It is one of the ethnic tribes of Thailand. Their ancestors came into the area from Mae Chaem, a district of Chiang Mai province and settled down more than 100 years ago. Up until 125 years ago, the community moved between about 11 different settlements, following the rotational farming system. The place of the permanent village was agreed upon based on having the best possible access to the most important rotational systems. The villagers of Hin Lad Nai believe in both animism and Buddhism.

The rotational farming system practised in Hin Lad Nai is the backbone of the natural resources management system developed by the Karen people. It contains the full range of Karen knowledge and wisdom, including cosmology, spirituality, technical knowledge of conservation practice, as well as value and cultural elements that are needed for any type of biocultural diversity management.

The rotational farming is underpinned by spirituality and decisions about where and when different events during the year will take place are planned according to the calendar cycle. All rituals align with the rotational farming systems. It provides the Karen people with stories and tales for their culture, and metaphors for their language; it is part of their

identity. It is crucial for the protection and transmission of the local spiritual and cultural patrimony. The plain and sticky rice is grown in the rotational farming system, and the rotational farming provides the broad diversity of food crops. No less than 207 species and varieties are found in the rotational system, providing the base for a rich, healthy and tasty diet. Moreover, the rotational farming system is the home of a rich biological diversity of plants, domesticated as well as wild species, and it creates shelter and habitat for a wide range of animals, birds and insects during the different stages of rotation.

In addition to the rotational farming, the community also has terraced paddy fields that were constructed starting 60 years ago, based on knowledge and observations gathered by travelling through the lowlands. The terraced paddy fields provide the community with additional sources of rice, but still the rotational farming area is the one maintaining all the cultural elements that are driving the calendar organising culture and food production over the year.

The main crop cultivated in Hin Lad Nai is rice. The community also grows fruits and other crops, and collects forest products such as tea, bamboo shoots, and honey. These are the main sources of income for the community. In particular, the rotational farming systems contain an exceptionally rich biodiversity of edible cultivars and semi domesticated crops, which together with the produce in the paddy fields, provide the community with its food security. The community breeds pigs, hens and buffaloes.

Cash incomes are provided from the diverse kinds of forest products. Tea grows wild but is managed and pruned to get the best leaves (knowledge contribution from Chinese middlemen), bamboo shoots, and honey, collected in the forest from carefully placed bee-boxes that facilitate collection and enhance harvest.

Introduction of the workshop and the Multiple Evidence Base piloting project

Pernilla Malmer and Maria Tengö

Pernilla Malmer and Maria Tengö outlined the history of the collaboration between the participating organisations and the MEB piloting project. Pernilla started by introducing the Stockholm Resilience Centre (SRC), which is a centre for research in Sustainability Science for Biosphere Stewardship, and SwedBio which is a programme on resilience and development, and acts as a knowledge interface between policy, practice and science within the SRC. When applying a MEB approach, the integrity of each knowledge system and its ways to assess validity and usefulness of knowledge needs to be respected (see more details in Box 1). Pernilla talked about participatory plant breeding and a project that assessed the relationship between reindeer herding and biodiversity in Sweden. She used these as examples of how diverse knowledge systems contribute complementary evidence that needs to be assessed jointly across knowledge systems to generate knowledge that is valid and legitimate for all actors involved.

Preliminary outcomes of the communities’ MEB pilots so far, as distilled and discussed among the partners, are that communities’ mobilisation of their knowledge strengthens self-confidence, contributes to securing territory and rights, and the authority to manage and govern their systems. In all the piloting projects there is strong emphasis on the local relevance and needs, and focus on mobilising knowledge and endogenous development, as a way to balance power relations with, for example, regional and national authorities. The ways in which knowledge was mobilised was an important part of building confidence for interactions with other knowledge systems, including authorities at different levels.

This highlighted the importance and value of engaging well in mobilising knowledge before engaging with other knowledge systems. The piloting projects bring forward appropriate methods for encouraging mobilisation of knowledge, such as eco-cultural mapping and calendars, participatory and inclusive research, and walking workshops. Interactions with science and policy on issues of community concern and interest that are brought up through the mobilisation of knowledge, can support attention to their concerns and needs, and improve governance and decision-making in the local community and beyond. The outcomes of knowledge mobilisation in the communities have generally been well received by local and regional authorities and collaboration has improved, as is also shown in the following presentations.

Maria Tengö presented a research project at SRC, starting from 2016, that she is coordinating; “Connecting diverse knowledge systems at multiple scales for enhanced ecosystem governance – developing the Multiple Evidence Base approach”. The project builds on the ideas and experiences that have been evolving through the dialogue across knowledge systems, on how valuable knowledge can be shared based on equity across knowledge systems, for better policies and decisions regarding biodiversity and ecosystem governance. The project aims to enable further collaboration between researchers and holders of knowledge from diverse knowledge systems interested in a MEB-approach, and further cross-cultural discussions about key issues such as validation of knowledge in diverse knowledge systems. The project also set out to monitor and analyse knowledge and practices for engaging with TK and ILK in CBD and IPBES, to further contribute to methods that are more equal, transparent and legitimate for everyone involved in knowledge generating processes across scales, from local to global.

Questions and reflections:

It was reflected among the participants that traditional knowledge has great value but that it is a challenge to get recognition at the same level in academia and by government. Maria Tengö responded that the MEB approach sets out to address this challenge and hopefully some progress can be made. Scientists are trained within specific disciplines and topics and have limited understanding of other ways of knowing, but there is some change underway in the scientific community, of increasing interest for working across disciplines and also with other actors in society. Karen representatives reflected that the UN recognition of Hin Lad Nai as forest heroes has generated changes for them here, but it is a long and slow process. The power relations between knowledge systems and ways of knowing were further discussed. It cannot only be about sharing knowledge, it has to be about sharing power. The question is how that can be changed, and how the strength and value of indigenous and local knowledge can be further recognised and respected. For example, it was noted that there may be more power in the poems and stories that carry the Karen knowledge, than they themselves realise. Mobilisation is about making this knowledge visible and articulating it, and the participants saw a need to discuss how to use it. When the knowledge is articulated and made visible, and thereby can be understood and recognised by other knowledge systems, this might contribute to respect and a more equal balance in power relations between knowledge systems.

Walking session 1: The Hin Lad Nai watershed

The participants were divided in three groups and each was led by community members from Hin lad Nai; Mr. Chaiprasert Phokha and Ms. Nauj Iv Pgaiz Naiv Hpo, Mr. Sharman Poo No o and Mr. Prasit and Mr. Chalermopol and Ms. Phong Phan.

There were exchanges of experiences among participants along the walk to the watershed area where the few older trees of the community are found. These are the only remaining trees from the original forest, before it was destroyed by the logging concession 1987. All forest in the community, beside these trees, is recovered by decisive collective action from the Hin Lad Nai community.

During the walk to the watershed, the community described that what they see now is a beautiful landscape – biodiversity, a rich agroforestry system, with tea-trees, bamboo, coffee, fruit and vegetable gardens. “A few big trees were replaced by many small ones”. It was here that the company with the logging concession brought down all their trees. The logging track went right by the school, and one of the elders said he was trying to convince the logging company to at least support the school where they were passing with all their logs from the communities’ forest. But they contributed nothing. They just took the forest and left the community.

The concept behind the Hin Lad Nai community governance system stems from the traditional philosophy of the

grandfather of Chaiprasert, the present official leader: “Land and forest never ends if we know how to take care of it and use it”, the grandfather said. This means that it is not enough to preserve and protect your forest, but you also need to know how to use and how to manage it; e.g. how to become food secure and earn income from its use, while conserving it and managing it collectively, to the benefit of all the community. That’s the philosophy behind the Hin Lad Nai villagers’ successful recovery of their forest.

There are plenty of plants and crops nurtured in the forest, for food and for income that our local hosts tell us about. The tea bushes grow wild in the forest. The community collects the tea leaves as a semi-domesticated product from the area around the rotational farming system. They collect the soft leaves and drink the tea in huge quantities. “It’s so great when one is thirsty!” In the 1950s, some labourers from China arrived in Northern Thailand and the Chiang Rai province. Based on their experiences from China, they advised the local people to dry the tea leaves and sell the product as tea, instead of fermenting it as wet tea leaves, “Miang”, that is locally used for chewing.

Another Chinese group arrived a few years ago. They came as visitors and were specialists in herbal medicine. They arrived on an excursion trip led by Mae Pha Luang University in Chiang Rai City. They got very excited when they found Assam tea growing in Chiang Rai, which is the same as they grow in China. After discussing with the villagers, it was concluded that the Assam tea came to them a long time ago, and spread along northern Thailand. The same happened in China – Assam tea spread naturally in many provinces. When the visitors from China learned about this story, they got really interested in the tea production of Hin Lad Nai, as it is naturally produced without chemicals, and such tea is almost impossible to find in China. After that, some Chinese businessmen came to Hin Lad Nai and made commitments to the villagers to export some of their production to China. They paid very well for the leaves, and also provided advice to the community on how to better prune the wild trees, how to get the best leaves and a good harvest. That way, a new product for cash income was born, and a new sustainable part of the production system was created and further refined, based on Hin Lad Nai knowledge of their forest and its customary sustainable use. The tea trees are collectively owned, but zones were created in the forest and they agree who takes care of each zone.

The participants also passed bamboo groves, and the community hosts explained that bamboo does not grow naturally in this area; the community brought bamboo from other places and propagated them in their area around the year 2000. Now Hin Lad Nai has its own bamboo forest that includes ten different varieties. The bamboo is used for different purposes e.g. for construction and fences. Bamboo shoots have become the main source of income in the last ten years. There is a factory nearby, thus it is easy to sell the bamboo at a good price. The community explain that they



A few huge, old trees remain as a memory of the forest that was logged in the logging concession in the eighties. Photo: Pernilla Malmer.

are careful when harvesting the bamboo so that it keeps growing abundantly. The harvesting of bamboo shoots is between July and August, but after that the bamboo forest is closed. Each bamboo plant produces three stems each year. The first harvest comes from the bamboo shoot from the shallow part of the bamboo. The second harvest comes from the middle pair that is next to the one that was first harvested. The last one is saved. It grows during August and will become the new tree for another year. The community has developed this practice over more than ten years, and the bamboo is still increasing in harvest capacity, and now forms a large bamboo forest in the watershed.

The community representatives pointed out beehives and received many questions from the visitors. Honey has always been collected from the forest, but innovations have also been introduced in beekeeping. In 2001, a Japanese NGO from a project between the Japanese and Thai Royal families arrived and showed the community how it could support the bees by providing bee boxes in the forest. The boxes not only facilitated the harvest of honey, they also increased the number

of bees. The community has investigated placing boxes in different places, and different ways of collecting honey that also make the harvest better. There are now almost 1000 boxes placed in the forest. The honey is branded under the name “Host BeeHive”, established by the marketing support of Mr. Nutdanai Trakansuphakon from PASD. The honey is mainly sold in Thailand, but part of it is also exported for a good price as the Japanese also offered a market for the honey. 30 % of the income from sales goes to the co-operative fund of Hin Lad Nai.

The groups also passed by open spaces where vegetables and herbs are grown, and some coffee plants are combined with fruit trees. All this contributes to a rich diet and continued food production for the community. In one group, the shaman shared his rich knowledge about different non-cultivated plants used as spices or medicines.

Finally, the groups came to the top of the watershed, where a few big trees remain as the memory of how their forest once looked. It took at least six to form a circle around one of the trees.



Cross-cultural dialogue in the field. Photo: Maurizio Farhan Ferrari.

Presentation of MEB pilot projects: Tebtebba, Philippines and FPCI, Panama
Multiple Evidence Base Approach pilot testing in Binablayan Tinoc, Ifugao, Philippines.
 Presented by June Batang-ay, Tebtebba,⁹

June Batang-ay presented the ongoing work in Binablayan Tinoc, Ifugao, Philippines, where the MEB piloting was carried out during 2015 through the implementation of CBMIS. The aim has been to systematise the information and deepen understanding of the indigenous knowledge systems and practices in *payew* (irrigated rice fields) and *inum-an* (rotational farming system) management. Additionally, a key aim is to support communities in experimenting, and validating a set of innovations based on their own knowledge and experience in relation to ecosystem governance, (agro-biodiversity, food and culture) as a response to new trends in agriculture and changing realities for their traditional livelihoods and culture. The background to the research that was done in 2015, which implemented a MEB approach together with farmer collaborators, dates back to 2008. That year, 4 of the 12 barangays¹⁰ of Tinoc decided to join in a process based on the ecosystem approach, in order to find solutions towards a more sustainable governance and management of their biodiversity and other natural resources. In 2010, the project attained a municipal scope with the First Tinoc Land Summit,

⁹ <http://swed.bio/stories/mobilisation-and-revival-of-indigenous-and-local-knowledge-for-enhanced-ecosystem-governance/>

¹⁰ A barangay is the basic unit of local government in the Philippines, followed by municipality, province, region and whole country. Binablayan is one of the 12 barangays of the municipality of Tinoc.

up to the formulation of the Comprehensive Land Use Plan (CLUP). Without the unification process to build a shared understanding and consensus around the problems and plans to go forward, and in particular, to mobilise and revitalise the self-confidence of the Kalanguyas' own knowledge system, the testing of the innovations would hardly have taken place. The long term unification process in Tinoc involved: building capacities among communities to systematise their information; formulate indicators of success in their intervention for increased food security and improved governance; support activities to generate hard data [quantitative and qualitative] on effects of people's innovation on biodiversity and ecosystems services, specifically in the forest and in the farmlands. Further, it involved promoting TK innovations and increasing the number of people engaged in knowledge and technology upgrades. It played a key part in demonstrating to the international community how TK promotion and innovations are cross-cutting to the attainment of the Aichi Targets of the CBD and for climate change mitigation and adaptation.

An important part is the documentation of the Kalanguya indigenous knowledge systems and practices (IKSP) on resource management, including the cultural calendar that is guiding rice production, rotational farming, customary laws, rituals and practices, and the land use system. Specifically, the MEB

pilot in Tinoc focused on revival of the rotational agricultural system to promote diversity in the food system of the *inum-an*, and on generating experiences about testing of innovations in the *payew* to increase rice production in a sustainable way.

In the *payew*, the new research set out to compare the practices in conventional paddy cultivation and System of Rice Intensification (SRI) farming conducted by farmers in Binablayan. SRI is a technique that was first tried out in Madagascar and has been successful in many places of the world. It was first introduced in small scale in Tinoc in 2012, to improve the rice production system. The age of palay seedlings, planting distance, application of inputs (such as Indigenous microorganisms or vermiculture) alternate wetting and drying, and the use of a mechanical weeder were also part of the innovations.

June also presented the extensive research on soil sampling and analysis and insect inventories as part of the study of the impact from the innovations to improve agricultural practices and the methodologies applied. She described how the study of the impacts of innovations has brought forth a methodology that integrates unique and complementary key elements of indigenous knowledge with the scientific knowledge system. The two knowledge systems have their differences but can be put together to benefit the farmers, in terms of providing them information on sustainable management of their resources. Farmers in Binablayan, through their experiences, have developed indigenous and local knowledge and they have also gained skills to monitor environmental conditions concerning their agricultural systems that are complementary

with western knowledge. The study has advanced to the extent that the traditional indigenous farming practices in the *payew* and *inum-an* were able to support the needs of the population for many generations in a sustainable way. Some of the indigenous practices done by farmers may not have scientific explanations yet, but were proven to be effective in farming, based on experiences and observations about production, such as the indigenous methods for fertilizing the soil, and the use of indigenous microorganisms from the forest. The innovations that were tested, revealed great potential to contribute to the enhancement of the rice production, based on the Kalanguyas' traditional knowledge complemented with new insights.

Based on the experiences, they recommend expanding the project to a wider range of ecological and cultural conditions, mobilisation of extension personnel to disseminate agricultural innovations such as the ones studied in the project, enhancement of the use of organic inputs to enhance soil fertility, and strengthening of collaboration among institutions and organisations that are involved in and have impacted land use management and planning the Tinoc municipality and its barangays.¹¹

¹¹ For further details, see: Mobilising indigenous knowledge, innovations and practices of the Kalanguyas farming systems in Tinoc, Ifugao, the Philippines. A contribution to the Piloting of the Multiple Evidence Base Approach. <http://swed.bio/reports/report/mobilizing-indigenous-knowledge-innovations-and-practices-of-the-kalanguyas-farming-systems-in-tinoc-ifugao-the-philippines/>



Photo: Maurizio Farhan Ferrari.

Brief update on MEB pilot in Guna Yala, Panama
 Onel Masardule, Maurizio Ferrari
Revitalisation and strengthening of traditional knowledge of the Guna people
 Presented by Maurizio Ferrari
 The world's first autonomous indigenous territory in Panama, and the different interlinked components of the landscape, including forest, forest gardens, mangroves and coral reefs. The community have identified a series of threats to their biocultural system, including loss of indigenous knowledge especially among youth, strong external market forces, decreasing marine biodiversity, threats to sacred sites, invasive alien species, climate change and rising sea levels. In particular, Ferrari illustrated how rising sea levels are threatening Guna settlement on coral islands, and how the poisonous lion fish, an invasive species that has been rapidly spreading over the last 10 years is causing imbalance in the local marine ecosystem.

Indigenous spirituality and traditional management systems have guided sustainable use, conservation and economic development in Guna Yala over time. However, indigenous knowledge has been in decline because of western education and loss of Guna language, emigration to cities, and interventions to improve natural resource management based on external concepts that focus on alternative livelihoods that are disconnected from indigenous knowledge and customary sustainable use.

One of the key challenges in the community of Usdub, where the Guna Yala MEB piloting is implemented, is that there is a continuous loss of indigenous knowledge, in particular among the youth, despite the fact that the Guna have control over their land. The community researchers came to the conclusion that the main driver was the strong external market forces at play during the past century, including the pressure to open up their land and resources to

markets and for economic investment. The group developed the illustration in Figure 1 to illustrate the current situation, where external ideas of development drive interventions that are disruptive for nature and society, while traditional knowledge and customary use of resources are marginalised (figure 1a). As an alternative vision, they propose figure 1b, where interventions should be developed based on their own spirituality and ways of life, Guna cosmovision, participatory governance, and management of the 'territory' as a fundamental whole unit for the wellbeing of the community's present and future generations. Indigenous traditional management systems would be the basis for action, and traditions would be used to filter what comes from the outside world and guide future directions in the community. Engaging with education is an important part of reaching this development. This should be supported by tools that have already been used and can be further explored by Guna indigenous researchers, such as community mapping, participatory videos and engaging in transdisciplinary research. There is a promising scope for the MEB approach, as it stresses elements of equity and reciprocity between diverse knowledge systems, which are strongly called for in processes related to sustainable development, conservation and climate change processes.

Fig. 1 a)

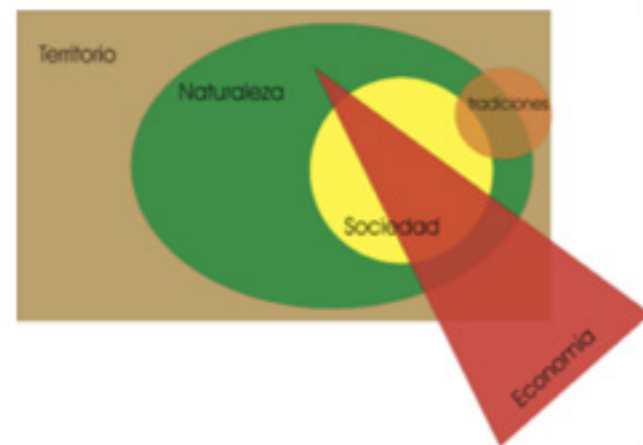


Fig. 1 b)



Figure 1. The first image, a) is outlining the current systematic problem in Guna Yala, and b) is a model for sustainable management of natural resources in Guna Yala as developed by the pilot team. It emphasises how traditions should function to filter and mediate external interventions and economic drivers in a way that protect society and nature, and promotes wellbeing. By Onel Masardule (2016)



Photo: Pernilla Malmer.

Summary of questions and discussions

The participants reflected that they see in both presentations that the communities are sharing similar situations as their own. The processes as reflected in the stories from Tinoc and Guna Yala went through similar stages that was needed to fully identify and address challenges and find solutions. First, to take action to identify challenges, and then to mobilise their knowledge and self-confidence. From there, it is possible to develop ways forward, based on their own knowledge and identity, and when needed bring in new or diverse knowledge that is useful. These steps are needed for it to be feasible to implement solutions that will truly strengthen and enrich their indigenous cultures and provide avenues for self-determined sustainable development.

Evening discussion of cases

The group reflected on their experiences of knowledge that reach the communities from outside sources. There are a lot of examples in both cases on how new knowledge has been successfully tested, and spread, to the benefit of the community and integrated as a new component in its customary sustainable use. For example, the bee hives and the tea gardens that were seen during the afternoon walk. But there is also a

challenge when things that work well in the community are not seen and recognised by outsiders interacting with them. As an example, the watershed is protected in Hin Lad Nai and that is an example of good management of forest. But although rotational farming and forest protection is working very well in Hin Lad Nai, it is not recognised outside of the community. Forest officers come and tell people they do not have knowledge about how to manage their forest and think they should educate the community, and demand of them to change their traditional management, that has actually not only protected, but also reforested the whole area.

The group reflected that similar behaviour from governments regrettably happens in many places. How could this attitude that is so common from many government officers be changed? Local people have the deepest knowledge of all; but this perception of outsiders is not very easy to change, it is a matter of uniting forces, to make it happen. The group concluded that they hope to be able to contribute to change that attitude by insisting on showcasing good cases that have been documented.

The fact that Hin Lad Nai is getting recognition, and at least in some villages here and there, their practice is supported and accepted by government officers shows that change is

happening. There are sayings from the Karen people that reflect this: *Many trees together become a very strong forest. With many children from our mother, we will have the power.*

A participant from Ethiopia reflected that listening to the Guna Yala story, reminded them of something similar happening in their communities. Education is one of the forces that distance the youth from their traditional knowledge. When children go to school, parents are separated from their children and the kids start to look down at their parents. Their elders think that the children are better than them. Some religions are also becoming radicalised and do not accept spirituality – it is demonised, and they try to destroy and substitute it. Sometimes, when investors come to the community, they initially give away things to people, such as seeds or small things for practical use. People are thankful, as they think these modern things must be much better, however, before they know it, they have lost their own resources (e.g. a traditional seed variety may not be possible to retrieve). The military threatens anyone who does not cooperate. It is the same story everywhere. “What I like is that we can do some activities at the local level and bring them together – connect the dots. To have an effect, our work has to be reflected in policies, and governments have to take the responsibility and lead. Otherwise it will not be successful.”

Also from the Philippines there was a similar experience. When children are sent to school, they appreciate less their

indigenous knowledge system. It was suggested that we should start from our communities and emphasise the importance of ILK systems and practices. Our children have to be taught traditional knowledge in school. In their experiences, governments have already recognised indigenous peoples education. Elders need to initiate teaching the youth, and promote indigenous peoples education. It was concluded that these are important links that have been observed and raised at the local level in many places, but seldom get attention and acceptance at the national level. There are thus strong needs to get some recognition. There is already strong support for recognition of ILK in global decisions in CBD and IPBES, but the problem is the national level, about implementation and to get support in national policy. Few people in government and society know about the progress being made at global and local levels. There is a bottleneck at the national level. How can we change institutions such as the forest departments? How can we show that we are able to implement the global decisions at the local and national level? This is the key challenge: to replicate and expand good examples at the local level, and from these build stronger networks at national level; and create pressure for better policies, referring to the good global decisions government has already agreed to implement.



The rotational farming cropping cycle is accompanied by ceremonies and rituals. Photo: Maurizio Farhan Ferrari.

Day 2:

Visiting the fallow system, additional community presentations and discussions on validation



The first years' fallow is mainly covered by grass; a lot of edible plants and crops that are left from the earlier years' sowing are also growing there. Anyone from the village can come and harvest. Photo: Pernilla Malmer.

Day 2 started with a walk to visit the rotational farming system, with fields and fallows in different stages. The Hin Lad Nai community presented their community research about the biodiversity of the rotational farming systems, and presentations were also made by representatives from Ethiopia and Kenya, with a particular focus on the methods for eco-cultural mapping and calendars. In the afternoon, there was an initial session on how knowledge is validated within the knowledge systems represented in the pilots. The day was concluded with a rich cultural evening, with contributions of song, dance and poetry from the visiting participants from different parts of the world and other communities from Thailand, as well as the hosting community.

Walking session 2: Rotational farming fields and fallows

The walk went through the different stages of the rotational farming system, guided by the research team. The community representatives explained how a field is cultivated one year and then left fallow for seven years. The participants could see the different stages of the fallows, and it was explained how they generate different resources and are home to different kinds of biodiversity (explained further below). For example, in the first year fallow, crops such as eggplant and other

vegetables still remain but there are also other resources. In the fourth year fallow, many non-timber forest products can be harvested, such as wild chestnut and stems for tools. In the field, the village leaders explained particular practices, for example, how trees are cut to protect the capacity of the trees to develop new stems – for each stem that is cut, three new ones will emerge. Furthermore, it was explained how ceremonies guide the use of the different stages of the fallow systems. There is a ritual for every step in the rotational cycle. For example, after an area has been burned to allow for cultivation, there is a cleaning ceremony, where you ask to be forgiven for those who have died. Another important time for rituals is before the harvest, to protect the crops and remove bad things. When a field is left, it does not belong to a person any more, but to the spirits.

When a family wants to open a field for cultivation, the man looks for a good place, looking at plants and soil qualities to decide. Then they need to ask the spirit for permission – you may get the message that you should not farm there. The women are responsible for the seeds and the sowing, they are the real owners of the harvest, while the men assist.

In the cultivation part of the rotation system, the farmers need to find a balance between how much grass there is, and how many trees. It is difficult to cultivate when there is too

much grass, but the grass is good for fodder and for wild animals to hide in. That is why the fallow system is good for biodiversity, as the different stages respond to different needs, for wilderness as well as humans. The trees are the last stage, after which it is easier to cultivate after burning because the grasses have gone. In the first year fallow there are mostly grasses. The second year more grasses along with palm trees start growing. They provide fodder and protection for wild animals.

The participants asked a lot of questions about fallows and field management and use during the walk. For example, the length of the fallow – it may range between 5 and 10 years, depending on the status of the field, but 7 is the most common. Many were amazed that cultivation is only for one year, and wondered why the land was not used for additional years of sowing and cultivation, since so much work was put in the burning and clearing the first year. It was explained that the method of one year cultivation followed by a long fallow, is in fact a good way of taking advantage of the life force of the burnt trees, that will not die but shoot again in

the same year, reducing the amount of weeding, planting etc, compared to if you keep sowing several years. If you sow several years, the stump and root of the tree will die, and the recovery of the fallow area will take much longer. The second and third years of fallow are still a good source of food, without being planted, and these are then communal areas, where everyone can come to harvest. This contrasts with the first year's harvest that belongs to the family that burned and sowed the field. Another question was how common the practices in Hin Lad Nai are elsewhere. Hin Lad Nai is similar to other Karen communities practising rotational farming in Northern Thailand, but there are also practices of longer cultivation, and shorter fallow periods. There is a lively debate between these practices, about advantages and weaknesses of the different systems of rotational farming. Hin Lad Nai has served as a good example for other communities. It was clear in the discussion that the visitors from the Philippines saw many similarities (but also differences), while the visitors from drier systems in East Africa had many novel experiences.



A few huge trees in the catchment area are memories of the time before the logging concession destroyed the old forest. Photo: Nutdanai Trakansuphakon.

Presentation of MEB pilot projects: PASD: Hin Lad Nai, MELCA and ICE/ABN: Tharaka and Kivaa

The study of Fallow Land in Rotational Farming, 2015–2016, Hin Lad Nai¹²

Presented by Prasert Trakansuphakon and research team in Hin Lad Nai

Prasert Trakansuphakon presented the research team that has carried out the community research and the results from mapping of biodiversity in the rotational farming system, and studying the use of the P'dav tree (*Macaranga denticulata*) as an innovation to restore the fallow. The participatory methodology applied by the group combined questionnaires, group interview, and in-depth interview with key persons with observation of everyday life in traditional livelihoods including farm activities and hunting, gathering and trapping. A part of the methodology included a number of plots established in the fallows, each plot representing a specific year of the fallow. The plots were studied over the season, and the plants, trees and animals and birds were carefully noted by the research team. The rotational farming in Hin Lad Nai is based on short cultivation and long fallow and an important part of the work was to document the rituals and practices that maintain the rotational cycle. To study biodiversity of plants (grass, bushes and trees) and animals (domestic, wild life animals, and fowl) in the fallow system, they grouped the seven years of the fallow into four periods.

The first period is dominated by grass and small trees. In the 1st fallow year many varieties of crops remain, allowing for continuous harvest. The next year, new plants and mushrooms appear, and most of the species of mammals and birds are small (such as bamboo rats). In the second period, from the 3rd year, higher trees cover and shade the grass, which slowly declines. Vine species increase and expand around the higher trees, bamboo and rattan form big clumps and increase the number of shoots. Most species of animals and birds are medium-sized, such as the partridges. Larger mammals are boars and barking deer. Poultry is present in the fourth year of the fallow because of the now dense tree cover that helps them to hide from hunters and also because of the bushes blossom and bear fruit, providing sources of food and spaces for roosting and reproduction. In the third period, from the 5th year, grass species continue to decline, fields are dominated by bamboo and P'dav and tree species are used for fuel and construction. Larger fowl are increasingly present. The fourth period is the 7th year of fallow and beyond. Trees in this period generate a lot of shade; monkeys and macaque appear while wild boars and barking deer disappear, turning to younger fallows where there are soft, young grasses. There are a lot of vines that provide food for a variety of animals

¹² <http://swed.bio/stories/mobilisation-and-revival-of-indigenous-and-local-knowledge-for-enhanced-ecosystem-governance/>



Studying each stage of the fallows. Photo: Nutdanai Trakansuphakon.

and can be used for many purposes e.g. herbal medicine. Last year in November, a Bengal tiger visited Hin Lad Nai and the survey sites and killed one bull, two wild boars and one barking deer. Many people were scared and went less to the forest, but the event was also seen as a warning and a sign to take care of the forest. Prasert also shared a poem reflecting on “the need to have fruits for birds to survive on fallow land and the human need for the delicious rice which come from their rotational farming field”.

The community research team also studied the practice of sowing P'dav seeds in fallow as an innovation to restore fertility developed by a member of the community through implementation of knowledge from his forefathers. When comparing a normal fallow with fallows where P'dav was sown, it was found that less weeding was required after planting and that higher rice yields were reached from the same amount of seeds. It was also found that P'dav fields have less to no damaged plants, i.e. fewer pests than normal fields, and plants have good health. Furthermore, P'dav trees normally bear large quantities of fruit, which attracts many species of bees and animals such as e.g. birds, rats and squirrels. In this way, P'dav areas become hunting and trapping grounds. People also use P'dav trunks for firewood, as they are easy to dry, get soft and good for making fires.

The group discussed these findings. It was thought that the shadow created by the large P'dav leaves helps to control most of the grasses which make the soil poor for crop cultivation. After 2–3 years, the leaves of P'dav that fall to the ground keep the soil surface cool and hold rainwater. Planting P'dav as a fast growing tree in areas with bad soil,



Presenting the eco-cultural calendar of Kivaa, Kenya. Photo: Maurizio Farhan Ferrari.

that were previously intensively cultivated with cash crops, could be a way of restoring fertility and soil qualities. At the same time, P'dav presents important resources to the community and decreasing workload as there is less grass. However, there was also concern that P'dav may decrease biodiversity and there were disagreements around whether the practice does indeed decrease workload or not.

In conclusion, the group found that fallow land plays a very important role for biodiversity, particularly during the first and second period (1–4th fallow years), and especially for ground dwelling mammals and birds, as it provides shelter and place for housing and breeding. While fallow becomes home to bigger trees in the third period (5th to 6th year and up), animals return to 3rd and 4th year fallow areas to hide, find food and breeding. The management of the rotational farming cycle follows the sustainable cycle of plant and animal species, in line with natural ecological processes. It is critical that the community are given the rights to manage their livelihoods and the natural resources e.g. such as varieties of plants and animals, in ways where they can complement and control each other in a sustainable process in the ecosystem. The knowledge and practices that form the basis of the community's management have been developed and collected for years in the everyday life of elders and villagers, these collections are expressed from memories and summarised into poetry and songs called "hta". This is a collective knowledge system of songs, poetry and storytelling based on everyday life experiences.

The role of Sacred Natural Sites for Socio-ecological resilience. MEB study in the Dinsho Wereda, Oromia Regional state, Bale Zone, Ethiopia¹³

Presented by Tesfaye Tolla Doyo

Tesfaye Tolla Doyo presented an approach for mapping sacred sites in Dinsho Wereda, Oromia Regional state, Bale Zone, Ethiopia, and talked about the role of sacred sites for building resilience. Mapping of sacred sites can be a useful tool in mobilising knowledge in a MEB process. Using blank maps with only elements such as roads and rivers marked up, is useful for mobilising and articulating the knowledge in the communities for further interactions with scientific knowledge systems, including representatives from regional and national authorities.

The local definition of a sacred natural site included descriptions such as a home for wildlife, a source of water, as well as a place for love, prayer and worship, tolerance, and democracy, and a place where conflicts between neighbours or religions can be resolved. The methodology applied to understand the role of sacred natural sites for resilience in the community combined participatory sketch mapping of the past and present, mapping of sites using transects walks and GPS devices, and focus group discussions with

¹³ <http://swed.bio/reports/report/participatory-mapping-as-a-tool-for-mobilisation-of-indigenous-and-local-knowledge-and-enhanced-ecosystem-governance-in-ginderberet-orama-region-ethiopia/>

community members. They found that sketch maps showed good alignment with the maps generated using GPS data and together they identified 72 sacred natural sites. Most of them had rich indigenous trees and natural forests in the past and were sources of streams and wetlands. Today, more than 75% are destroyed. A number of internal and external reasons behind the loss of sacred natural sites were identified. Internal reasons included a general failure in large part of society and communities today to understand the meaning and importance of sacred natural sites, marginalisation of custodians and use of the sites for harvesting of fuel and construction, for agriculture and planting of exotic trees. External drivers included modernisation, undermining traditional knowledge and customary laws, and insecure tenure. Tolla Doyo finally presented recommendations for reverting this trend, for example, by creating a network between custodians of sites, working for the revival and implementation of customary laws, norms and ethics, strengthening the advocacy work toward sacred natural sites to target laws and policies at national level, and enforcement of existing laws and policies.

Highlights of the MEB process in Kenya¹⁴

Gathuru Mburu, Sabela Kaguna, Judith Wavinya Joel

Gathuru Mburu presented the point of departure for the eco-cultural mapping and eco-calendar processes with the Tharaka and Kivaa communities in Kenya. Eco-cultural calendars are a strong community research tool that can support a process to revive a whole social-ecological system, as they embrace the whole "universe", he explained. They are also essentially a community planning tool, which can be used to develop community ecological governance plans. Eco-cultural maps manifest the knowledge and understanding of territory, and are also an effective tool for community-based ecosystems assessments. In addition, they assist in articulating a set of rights and responsibilities for communities that are reflected in their actions, he said.

Tharaka and Kivaa community processes were the first time a Multiple Evidence Base was applied to an eco-cultural mapping process. The philosophy that underpins MEB puts

¹⁴ For detailed information of the MEB piloting in Kenya, see the report: <http://swed.bio/stories/mobilisation-and-revival-of-indigenous-and-local-knowledge-for-enhanced-ecosystem-governance/>



Inter-cultural dialogue and sharing in the community meeting hall after walk. Photo: Maurizio Farhan Ferrari.

respect and the value of reciprocity in exchanges across knowledge systems at its core. These principles are well rooted in the processes involved in eco-cultural mapping. However, the framework of the MEB made very clear the importance of the mobilisation of indigenous knowledge within the unique knowledge system before exchanging with others. This is to ensure integrity and equity as basic conditions for mutual respect and reciprocity in the exchange. This is something that became apparent in both Tharaka and Kivaa, where one of the key outcomes of the mapping exercise has been the positive collaboration with the governments and their representatives. Without mobilising indigenous knowledge at the very start of the process, such an outcome would not have been possible, reflected Gathuru.

He further explained that Kivaa, where Judith belongs, and Tharaka, where Sabela belongs, are two different communities. The two processes have been motivated by specific objectives for each community, though they have in common that the revival of local and indigenous knowledge has been at the heart of creating possible solutions and ways forward for the communities. In Tharaka, the communities along the Kathita river have unified to protect and revive their river and its ecosystem, in particular, the fourteen sacred sites. Their process has been part of the MEB piloting, to test if the idea of different streams of knowledge to create an enriched picture of evidence may work. In Kivaa, the process has been about revitalisation of sacred sites and the rituals to uphold them, as a means of recovering and protecting their important ecosystems.

In this effort, they needed the traditional seeds for the rituals, so they realised they cannot revitalise the sacred sites without also revitalising their seed system, which is also a very important part of their entire biocultural system, and food sovereignty. It was explained that the preparatory stage of the eco-cultural mapping and the process of joint planning for the mapping is a critical component, where much time and energy are spent. It's a powerful internal process. Once the community starts to discuss with others, they see the need to have confidence in

themselves, perceiving their own knowledge systems as equally valid, and able to exchange perspectives and knowledge on equal terms. The processes of eco-cultural mapping are happening in the communities at all stages, and the communities are validating the data and knowledge they are mobilising with their own institutions, processes and actors. Tharaka and Kivaa invited a few selected key persons from other knowledge systems to take part, from local and national governments. The Natural Museums of Kenya have also been visiting them for the gazettement of the sacred sites as protected in their system of protection.

Gathuru stressed the importance of cross-generational participation in eco-cultural mapping and calendars. The processes are at the same time used for educating the youth.

Sabela Kaguna, a farmer leader in Tharaka, started her presentation with the map of the past from their eco-cultural mapping. Once Tharaka was a very beautiful community. When she looks at this map, it illustrates how people used to look at the community, and the beliefs that prevented people from cutting down trees. They lived together with animals and nature. She then presented the map of the present, which was a reflection of the current status – very much in harsh contrast to the map of the past – with degraded and lifeless sections of the riparian reserve, diminishing river water volumes and disregard of traditional ecological law. Finally, she presented the map of the future that represented the common vision embraced by the different knowledge systems and their institutions present in the mapping. The map of the

future showed a restored river, bubbling with life and promise again. In one earlier eco-cultural mapping process, they did a mapping of the bigger area, beyond Kathita river, but from that mapping they understand that the Kathita river is at the heart of their survival. So, that is why the recent mapping in August 2014 was zooming in on Kathita river.

There are still traditional institutions in the community, although many have been lost, explained Sabela. There are also rules for what animals you are allowed to kill, etc. Through drawing these maps together, the community regained a lot of skills, and youth and elders, as well as women and men took part; the knowledge was shared and revitalised. For every drawing, a song was created, and a beautiful dance to accompany it.

After the drawings, the community, representing upstream as well as downstream settlements, analysed the possible causes of the situations presented in the three maps, she continued. They were quite shocked by the contrast between the maps and calendars of the past and those of the present. The map of the present presented the stark reality of destruction that has happened over time, and all participants agreed that the Kathita river was facing the serious threat of disappearing. Using the map of the future, they envisioned a future in which the river would undergo recovery. However, the group also recognised the possible tensions, especially with land-owners who may view the restorative activities as trespasses on their farms. They also identified the possibility of resistance by farmers who are flouting existing abstraction guidelines, as well as those who have installed illegal abstraction points. All these are challenges that the communities along Kathita river have to face and search for solutions together.

Judith Wavinya Joel, from Kivaa, then presented the eco-cultural calendar from Kivaa. It has four seasons (not 12 months) and connects to what signs and stars appear in the sky, over different seasons. With strong winds you can see what can happen. In the calendar, different seasons and different crop varieties are noted. There are several circles illustrating ceremonies, what happens in the daily lives of people, etc. The calendar is good because it helps to get people to understand what they have to do at certain times. It is confusing having ceremonies when it is not time to have ceremonies, and sometimes people are planting the wrong varieties of crops in the wrong seasons. Judith emphasised that they continuously go through many aspects of the calendars, including connecting with the stars and the astrology. The calendar is not seen as ready yet; it is continuously being developed; it is a living process. For drawing the map of the past, or the calendar of the past, you must have the knowledge of the past through the elders. Sacred sites are very central in both calendars and maps, and the community also needs to understand their seeds; they recover them based on their spiritual values.

Summary of questions and discussion:

The presenters explained that eco-cultural mapping is going on in different parts of Africa, and what has been witnessed is that eco-cultural mapping is a process where a community can regain their identity and memory. They do so through recovering knowledge about e.g. land, seeds and culture, and like in the Kathita case, their river. They are bringing back their memory and taking what is good with them, for the future, they explained.

The participants also commented that processes of revival of seed systems are reminders about the reality that connects local seeds with the global political context. Governments from Africa that are members of ARIPO¹⁵ have through the “*Arusha Protocol, for the Protection of New Varieties of Plants*” that was adopted in 2015, pushed smallholder farmers’ seed systems in Africa into a new wave of pressure on adopting Plant Variety Protection models for industrialised countries and the traditional seeds and practices do not fit there, it was stressed. A specific concern is that the Arusha Protocol provides very strong intellectual property rights to breeders of uniform varieties, at the expense of farmers’ rights to freely use, save, exchange and sell seeds/propagating material of protected varieties. Concerns were raised that African countries are now forced to register under UPOV 91, despite being part of the Least Developed Countries, and thus having exemptions for this rule under WTO TRIPS¹⁶. As an alternative, they could create their own sui generis systems, and secure conditions that maintain food and seed security and sovereignty. A weak community can lose its seeds easily but a strong community cannot, one participant reflected. This is critical, and illustrates the importance of establishing policies that suit local conditions as they are intimately linked to national and global level, it was said.

The Karen representatives commented that for them, some laws have also been obstacles in their customary sustainable governance – in their case, for indigenous peoples practicing their traditional rotational farming. In particular, forestry laws were creating problems. With the kinds of maps coming out from eco-cultural mapping, and with integrated calendars, they might get a tool to make their traditional ways of life documented and understood, they said. The calendar is a universal model, and the Karen said their calendars follow the cycle of the rotational farming. They define the names of the components and when to prepare for the various tasks in the rotational farming over the year. It also links to rituals during the year that interact with the ecosystems. Hin Lad Nai has quite a lot of sacred sites, but they have not yet done a map for documenting them. There was an important link between mapping and calendars observed by participants, which could help to make visible how the sacred sites are contributing to the whole system.



Participants from Tharaka and Kivaa in Kenya present their community research built on eco-cultural mapping and eco-cultural calendars. Photo: Maurizio Farhan Ferrari.

¹⁵ African Regional Intellectual Property Office

¹⁶ See further: <http://www.apbrebes.org/news/open-letter-afsa-upov-members-concerning-african-regional-intellectual-property-organization>

And it could also help in transfer of knowledge to younger generations, they commented.

Participants from African Biodiversity Network responded by confirming that they are also working in schools, and engaging them in eco-cultural mapping processes. There is always a mixture of people, young people together with old, with the young people making the drawings. The old can many times not write or draw, but they have learnt to communicate through symbols like animals. We make sure we mix the groups, and the youth will be engaged, they said.

It was reflected that seasons and cosmologies in the communities represented here are different from the western ones. Thus, some are also documenting customary laws, as these can complement and facilitate the governance systems, and are compatible and recognised in Kenyan law.

The presenters summarised that an eco-cultural map is a spatial map that shows how the area looks at a specific time, and looking at the three different maps, captures how the land changes over a long time. The map of the present is a picture of how it looks today. The process of describing the map of the past, present and future has similarities with the process of an ecosystem assessment, in the scientific knowledge system. The eco-calendar is a temporal map. When you prepare the calendar, during one season, you capture the name of the season and how the environment is in that season. This captures how the land changes over the year.

Conclusion of African session.

Maria summarised that the session had described in various ways how different knowledge systems can add to the understanding of an issue. All traditional knowledge systems have legitimate ways of validating their knowledge, as exemplified by the different stories from the MEB piloting in the participating communities, she said. Eco-cultural mapping is an example of doing validation in a way that creates complementary understanding to, for example, scientific studies in the same area.



Eco-cultural map of Kathita river from MEB piloting in Tharaka, Kenya. Photo: Maurizio Farhan Ferrari.

The next session about validation in different knowledge systems, would take advantage of the shared reflection in this discussion, and from the walks and related discussions through the Hin Lad Nai biocultural system. Drawing from this, the participants were asked about how to explain and think about validation from their own experiences, in the realities of the knowledge system and practices they come from.

Examples of validation that have been visualised through sharing in the various sessions during the workshop so far were:

1. Collective community procedures for validating and exemplifying the knowledge, such as when Hin Lad Nai decided on methods to regenerate their forest after being destroyed by the logging concession, or about the various indicators that show when a fallow is ready for sowing again.
2. Experimenting. Learning by doing, and evaluating what is useful. Like with the P'Daw tree among the farmers in Hin Lad Nai.
3. Experts within the ILKS. They have to spend all their life being experts of their own knowledge systems, such as the elders accompanying us in our walks, and explaining the values of the different plants and herbs.
4. Intergenerational transmission, useful across generations. As in Hin Lad Nai, when the young farmers in the research team are discussing the outcome of their piloting research with their elders.
5. Another point that came out already from the dialogue in Guna Yala is about the cultural and spiritual validation. It is coming about as dreams or visions. There were many examples put forward in today's walking workshop, e.g. how to take decision about sowing.

Group discussion on mobilisation and validation of knowledge

Introduction: Methods for validation and mobilisation of knowledge within our knowledge systems

Presented by Maria Tengö

Maria Tengö presented insights from the discussion in Guna Yala dialogue 2012, where the MEB was brought up as a possible approach to ensure knowledge from different knowledge systems would be equally valid in ecosystem assessments and similar processes.¹⁷ This discussion has since then been brought forward in the network and learning platform continued from Guna Yala, during different events and exchanges. She reflected on how the quality and usefulness of knowledge are assessed differently in different knowledge systems. In Guna Yala, it was discussed that in knowledge-holders' interactions with science and scientists, science often sets out to validate indigenous and local knowledge through scientific tools and approaches. It was concluded that "translating all knowledge into one knowledge system – like science – is problematic and often not desired". However, if carried out in respectful ways, using scientific methods to show the value and sustainability of indigenous practices, were also found valuable by many. It was nevertheless also clear that *indigenous and local knowledge systems have their own ways of securing empirical and social legitimacy of knowledge and hence its validation.*

¹⁷ www.dialogueseminars.net/Panama

The MEB approach emphasises that indigenous, local and scientific knowledge systems generate different manifestations of valid and useful knowledge, presenting complementary evidence for sustainable use of biodiversity. It further emphasise the value of letting each knowledge system speak for itself, within its own context, and that validation of knowledge should occur within, rather than across, knowledge systems. For example, natural scientists may argue that for knowledge to be valid it needs to be tested through experiments, and approved by other researchers with relevant competence. In many indigenous and local knowledge systems, knowledge may be tested and evaluated through everyday practice, or approved by an elder or other experts, such as a shaman. To realise the potential of a MEB approach in an equal, legitimate, and constructive way, there is a need to better articulate and communicate validation of knowledge within ILKS.

Based on insights from the Guna Yala dialogue, and conversations during the on-going workshop, Maria gave some examples of how validation is practiced in indigenous and local knowledge systems. One way is through collective procedures for evaluating and cross-examining knowledge, such as the eco-cultural maps and calendars, as presented by several of the pilots during the workshop. Another way is through trial and error and experimentation in relation to, for example, cultivation and hunting. Many indigenous societies also have trained experts that are knowledge carriers and also review and assess new knowledge, such as elders or shamans. An additional aspect comes from cultural validation, where knowledge is validated in relation to tradition, or



Group discussion among the Thai participants. Photo: Pernilla Malmer.



Regenerated forest in Hin Lad Nai community. Photo: Nutdanai Trakansuphakon.

through communication with ancestors or spirits, for example through dreams or visions.

Lastly, Maria presented one way of thinking about what a knowledge system is. It can be described in terms of who are the actors (key persons and key roles, who engages in knowledge generation and learning), which are the practices (what kind of activities are carried out), and institutions (which structures that guide how knowledge is generated, which norms and rules are applied).

Outcomes of group discussions and joint discussion in plenary

Based on Maria's presentation, the participants were grouped into an African, Thai, and Philippine group to reflect upon ways to evaluate knowledge in the various knowledge systems they represented, in relation to their governance and management of biodiversity. For example, their rotational farming, rice cultivation, river management, seed management or other relevant examples. Each group discussed thoroughly and then shared their insights to the wider group. During the group presentations, a first attempt was also made to structure the different insights as validation mechanisms, or as descriptions of different aspects of knowledge systems; for example, descriptions of either actors, practices, or institutions that generate and assess knowledge.

The combined Africa group presented some categories for thinking about validation and knowledge systems, including custodians of knowledge, diviners, and institutions for cultural governance. The groups shared how in the traditional

indigenous context, dialogue is very important to keep clarifying issues and processes, a ritual for example, and to keep correcting it and making sure it is done right. References in such processes are people who are respected based on their expertise. They are custodians of knowledge within this community. There are also ancestral consultations, when we are talking with the spiritual leaders. There are those people who have the capacity to dream and receive knowledge from the spiritual rivers, or worlds. They clarify information about processes that are going wrong, and provide guidance to the community. As shared from one community, there is also specific thematic knowledge, for example held by farmers who are also pastoralists, where there is certain knowledge used as reference points. Validation also takes place continuously through people visiting one another and getting advice. The group also identified other references, such as stories, songs, and dreams. They are not static but renewed all the time as part of an on-going validation processes. Along with this are other forms of knowledge acquisition.

A question about institutions for cultural governance was asked, and the groups described that in each and every community there are such institutions, e.g. the *Njuri ncheke* or *Kiama Kia Ma* in Kenya. There are also women's organisations such as *Kiburu*, that are responsible for knowledge and practices for protection of sacred sites, and governance of seeds, which includes seeds as a food source as well as seeds for planting (as a genetic resource). Concerning sacred sites, this group is the one who has to act when they are damaged. Women in *Kiburu* ensure that the sacred site is brought back to the desired state and they do the rituals that

are needed to achieve that. They are custodians of that knowledge and practice, and ensure that the community system is working and connected to the sacred sites. This institution is key for validation of knowledge around sacred sites and seeds, in particular, in the example from the Kenyan community of Tharaka.

The Philippine group started with stating that indigenous validation exists and that science-based explanations do not work for traditional knowledge. In validation of traditional knowledge, it is necessary to consult ancestors, and elders, of whom there are very few today. The elders look for indicators in the environment, such as a star formation appearing, and then perform rituals. The messages of good or bad luck that are conveyed through the rituals can only be read and interpreted by the community leaders who carry out the rituals. It was also identified that learning by doing and teaching by showing is very important. Elders should engage the youth to participate in their activities.

In the communities, there are efforts within the indigenous political structures to document, validate and reinforce the indigenous knowledge that is slowly being degraded or lost. It is the role of the elders to check what is correct and that everything has been correctly captured in the process of documenting knowledge. This knowledge should be part of the school curriculum, for children to learn as they grow up. Documented knowledge can also be used to influence the national government. The Philippines has good laws, but they are not always implemented. One member of the group also shared how he wanted to thank the elders in Hin Lad Nai, that they had inspired him, the way they are custodians of indigenous knowledge and practices that is being handed over to the younger generation. This is very important. One example is in the practices: the elders are experts on hunting and fishing, the youth adapt and follow everything the parents do in the community. Through that process, the young are slowly learning the importance of what the parents do. Another example is the traditional way of resolving conflicts, and engaging the youth in such processes.

The big group from Thailand described how collected observations provide evidence for the outcome of different practices. As presented in their MEB piloting, the research group in Hin Lad Nai has recorded evidence such as foot prints and other signs of animals. Also, the people carrying out the rotational farming are continuously monitoring and observing. For example, how some trees produce many stems when one stem is cut. The groups also talked about the spiritual aspects of rotational farming. For major ceremonies it is believed that without this kind of ritual, the rice cannot be taken for household consumption. One of the rituals is performed, in order to predict the future. It was also discussed how knowledge is carried forward in proverbs. Our elderly people produced so many proverbs. When the proverbs are said by elderly people, it is powerful.

Part of the spirituality is the relationships, not only with nature, but also with the stars. The stars are used as

indicators, for example, when the seven sister stars (De muj in Karen) are above your head, it is time for sowing. This process expresses the validation in the rotational farming system. The rotational cycle with a short cultivation period carried out in Hin Lad Nai has proved by practice and spirituality that it is still valid; it is a complete, productive process. To keep this going, is not just to continue the agriculture in technical terms, rituals have to be performed that call in the spirits. These are legends in the present time. There is a need to follow this process in practice. Our elders say that we don't just create this system and put it in practice, but that step by step, we are connected with ancestors and the future. Everything is tied together, and it is accompanied in our songs, the ties are in the songs, and also connected in the songs of the birds. People follow the process and see that it is the time for cutting and opening a field, time for burning, time for planting. Other indicators are the sounds of the birds. This kind of information is embedded in the cosmology and also validated through rituals and signs in ritual processes. Farmers have to wait for three rains, before planting. They plan not only for humans, but for animals as well.

It was also discussed that the return of the forest in Hin Lad Nai after the logging in the 90's is evidence of the sustainability of the practices of the rotational farming. Where they still practise rotational farming, the forest is very good. This has also been validated by external people, accepted by the government, which for example led to the awards given to the community for their good practices in protecting their forest. Furthermore, the rotational farming system is now registered as an intangible cultural heritage.



Root crops harvested from the rotational farming area are carefully stored. Photo: Maurizio Farhan Ferrari.

Discussion of joint findings across groups

In addition to the group presentations, the discussion was inspired by the joint community walks and experiences of the rotational farming system in Hin Lad Nai that provided a shared platform for talking about validation. It was clear that there were many similarities and parallels between the groups, and that the groups had new reflections on their own systems. During the discussion, the participants' comments were clustered on a piece of paper stuck to the wall and revealed a number of examples of validation mechanisms that are summarised in Table 1 with some examples. One joint insight was that new knowledge or practices are validated through “filtering” through previous knowledge and experiences, as held by elders or other knowledge holders, as well as in rituals and practices.

The discussion had also given rich examples of actors, practices, and institutions that are part of building indigenous knowledge systems. Table 1 shows how elders, diviners,

shamans, but also everyday practitioners are key actors in the knowledge system.

Something that came out of all presentations was the need to use knowledge and evidence from indigenous practises to influence decision-making locally, as well as at regional and national levels.

Cultural evening

The whole community of Hin Lad Nai was invited to this cultural event. It took place beside the school of the community. All the visitors, as well as the community, contributed songs and dances from their countries and communities respectively, and some had even brought their traditional food and arts, and shared with all. Hin Lad Nai showed a film they had made about their community, the intergenerational learning practices and the research they had done in the MEB piloting.



Community members introduced their guests to the bee hives that are placed all around the forest to the benefit of biodiversity and people. Photo: Nutdanai Trakansuphakon.

Mechanism for validation	Examples
Discussions in expert forums, e.g. institutions for cultural governance	Council of elders <i>Njuri ncheke, kiama kia Ma or Kiburu</i> in Kenya. For example, in <i>Kiburu</i> , women will meet and discuss what actions to take if a sacred site is disturbed. In Tinoc, Philippines, the council of elders (<i>eemed di bebeley</i>) act as advisers, consultants, law makers and enforcers, and mediators in the community. Networks of expert practitioners , such as pastoralist farmers in Kenya.
Consultation with experts	Elders . For example, from Mindanao and Tinoc, in the Philippines, where documented traditional knowledge is reviewed and verified with the elders. The same is done in Hin Lad Nai, where the findings of the research group are discussed with the elders. Diviners Shamans
Consultation with ancestors/spirits	Rituals . For example, rituals carried out in Hin Lad Nai, to ask permission to open a field or harvest. Divination Dreams
Cross-checking with knowledge carriers or repositories	Calendars . Inferring, for example, current weather patterns with what is recorded in cultural calendars. Poems, songs . In Hin Lad Nai, the elders are recording activities and experiences into poems. Proverbs . Knowledge and experience captured in proverbs, which are used to evaluate decisions to be made.
Dialogues in communities	Ecocultural calendars and mapping . As explained by the African groups as well as in Tinoc, Philippines, the mapping creates a space to bring out and discuss experience and knowledge about the landscape and changes that have happened. Different experiences are discussed and consensus can be reached, and lead to specific actions, such as the Land Use Plans in Tinoc, or policy decision by the National Museums of Kenya to register sacred sites in Kenya. Traditional conflict resolution mechanism , as a forum for discuss and to elaborate on issues in the community, and look for a solution as well as appropriate ways to cleanse wrong doing. Explain above for Mindanao, Philippines. Restoration of sacred sites as a process to bring back and reinforce knowledge, rituals, and norms and rules in the community.
Experiential	Learning by doing in everyday practice , for example evaluating the harvest outcome on a particular soil type or crop variety. General observations of change . For example, of increase of wildlife or forest regeneration in Hin Lad Nai. Observation of specific indicators that are well recognised in the knowledge system, such as bird song indicating time for harvest of particular crops in Tinoc and Hin Lad Nai. Long term observation of what has worked over time . For example, the rotational farming system has sustained people over long time periods without deteriorating the environment.
Experimental	Active experimenting in new practices or new crops and evaluating outcomes. Several example from walking workshop, e.g. introduction of paddy fields as a new component of the farming system, first done by one family, also then trying out new seeds and varieties.

Table 1. Summary of discussion on validation in indigenous knowledge systems

Day 3:

Visiting the paddy fields, further sharing of usefulness of mobilising knowledge, and meeting closure



Sharing experiences in the paddy fields. Photo: Pernilla Malmer.

The third and last day started with a visit to the paddy fields, the most recently added component of the Hin Lad Nai biocultural system. The walk revived the discussions around validation. In the afternoon, a discussion session was held on the applications of community research. The day and the meeting was concluded with an evaluation of the meeting, and a final ceremony.

Walking session 3: Paddy fields

The morning started with a walking session to the part of Hin Lad Nai community territory that consists of valleys with low rice terraces, surrounded by rotational farming areas in the surrounding slopes.

These paddy fields were constructed only 45 years ago. An elder farmer who guided the group and was responsible for managing these paddy fields remembers how it was done; he was a little boy at that time. The construction was a strategy of the community to increase their own production of rice to ensure food security. The idea emerged from observations of practises in the lowlands in other parts of Thailand and was

combined with their own experiences, local realities and innovative solutions, followed by experiments to test it in practice, until it succeeded. The seeds that were brought from the lowlands did not perform well in Hin Lad Nai; the straw grew too high. So they had to bring seeds from other highland communities as well and test them until they finally found varieties that they liked and that thrived well in the paddy fields.

However, even if the community appreciates the paddy fields in a limited area, the heart of the cultivation cycle and food production in Hin Lad Nai will always be centred around the rotational farming system, where the full diversity of crops and plants are growing, and where the cycle of rituals guides the various practices around the year, including in the paddy. The paddy fields can never provide the broad range of food and other materials, or the spiritual guidance through the calendar that the rotational farming system provides. When, at some point, they tried to expand the paddy fields more, they noted that the wildlife decreased, and also that the wildlife ate more of the crops on other fields. It is

easier to protect paddy fields from wildlife, as the areas are more limited and possible to overlook. Other communities, known by the Hin Lad Nai farmers, that have abandoned the rotational farming practice and only cultivate areas with annual crops, are losing a substantial part of their wildlife. When the paddy fields were constructed, the villagers took advantage of what was already there: a natural dam created through a build-up of logs at the end of the valley. The community just had to enhance what nature already had created. They have been thinking a lot about why so many logs were gathered there, and why they have not been destroyed over time. It was believed it was a connection with the spirits, and their will. Therefore, they had to respect them, and to ask the spirits for permission, before they opened up the fields and allowed cultivation in the area. It is a very powerful area, spiritually.

The visitors were impressed and curious, and had a lot of questions and reflections regarding the paddy fields. This land is considered private, but generally it appears as if the rotational farming is community owned. Is this the case? The response was that the paddy is considered private, as labour is invested and the land actively managed and cultivated every year. The authority for a paddy field can also be transferred to someone who takes over the management and labour, as well as the right to the harvest. Whereas the rotational farming is one big land for one family, where the family has the right to the crop they sow the first year, community rights apply for what the land produces in the fallow in the second year and onwards; this means that anyone in the community can go and harvest root-crops, aubergines, medicines and all that grows there. In the beginning, when the paddy field was established, just one family had one big plot of land but that had now been split into smaller holdings. The farmers countered the question of how to manage the system in relation to population growth; they have not expanded cultivation, but rather shared resources better, they argued.

The visiting group observed that the rotational areas around the paddy fields were steeper here than the places that were visited the previous day, and asked what kinds of trees are good to control landslides. How is soil maintained? One action mentioned was cultivation of P'Dav trees. Seven years ago, the cultivation of P'Dav trees started to increase, and they have an advantage by growing fast and protecting and enriching the soil. They also create conditions for animals such as squirrels and birds to increase. Other measures taken include to put vertical erosion barriers such as logs and bushes across the slopes when cultivating.

There are different varieties of rice in the highland and lowland in the region, and the lowland rice did not work here. There are 4 rice varieties grown, and 3 kinds of sticky rice, but the sticky rice is only cultivated in the rotational area. The most appreciated of the paddy rice varieties is the "Chicken rice" that has a story of coming from the throat of a chicken that was hunted in the forest.

Finally, the group visited the outflow of the valley with the paddy fields where all the old logs are gathered, creating the dam that makes the regulation of the water for the paddy fields possible. It is still considered a spiritual place and it felt like an honour for the group to enter the place. It was a place to reflect upon the stories about the creation of the paddy fields, and how it happened that the logs gathered here at the outflow, without being destroyed, even after such a long time. Now these fields are serving the community with a substantial part of their rice for consumption.

Reflection from walking to paddy fields and validation discussion

When the group came back from the walking session in the paddy field area, the discussion about the morning experiences merged with the discussion about validation the previous day. The community leader of Hin Lad Nai, Chaiprasert, wanted to contribute additional experiences from the innovations in ecosystem management, and how these have provided new sources of income to Hin Lad Nai from sustainable management practises. The community has created a community fund, where all are contributing part of their incomes from tea, honey and rattan, and other marketed products. The strength of these sources, and their sustainability, Chaiprasert argued, is also part of the strong evidence that their management system works and is sustainable for the ecosystem as well as the livelihood of the community. A participant reflected that Hin Lad Nai appeared to be an exceptionally integrated and strong community. But what happens when one of the members in the community breaks a rule, or does not follow the others? The Hin Lad Nai leaders explained that they have a cultural council of elderly people that can be consulted. The chairman is the ritual leader and is responsible for the performance of rituals. The rituals must be performed and create forgiveness from the spirit. The way to solve problems can differ, but it is important to do it together. To ask for pardon could take different forms: one could be to sacrifice to the spirit, another to pray for peace for the whole community. The community law is still powerful.

One participant commented regarding the way the Hin Lad Nai community tested new practices, and rejected or adopted them, as was explained during the walks, for example the paddy fields. Innovations, such as tea or paddy fields, have been brought into the community, tested and adapted. The experimenting has similarities with the systematic testing that scientists do. In the community, the innovations are carefully filtered through cultural validation that is relevant to them. One part of the paddy field innovation was the discovery of the natural dam. They tested it, enhanced it step by step, and it worked. There are stories created on why the timber stock remains there, and it is said to be a very potent place for spirits. Through these kinds of experiments and testing, they were able to put more rice on the plates in the community, based on validation methods in their own

knowledge system. This is a very practical thing, as food was produced as a result. It brings validation down to earth, he concluded.

Another participant reflected that it appears we have many similarities among the countries and the different groups gathered here. One such thing is the sharing of the meaning through the stars. In our tribe, he said, we reflect the reality through the stars; we rely on them. As an example, for solving conflicts, rest until tomorrow if we cannot see the stars, because the stars ensure our minds are going straight. Another example is the relationships between the indigenous peoples and the forest; we have a very similar relation to our forest as they have here in Hin Lad Nai; we treat the forest in the same respectful manner. These similarities are another form of evidence. For indigenous peoples Nature is the connection, it is our life, Nature and humans have a relationship. He then also shared about how his tribe traditionally govern their territories. It's a practice since time immemorial, from long before the mainstream governance system. Our only way of preserving and protecting our culture is also in relation to the protection of our forest. This also linked back to the experiences shared from Guna Yala – that development

has to come from inside, being endogenous, in order to be sustainable and not destructive for the communities and their belief systems and practices. Self-governance is part of the right to self-determination.

The Hin Lad Nai leaders come back to the fact that their community has now managed to create new sources of income that are based on their own experiences and generation of knowledge. These new sources of income have stopped the out-migration from the community; no one like to leave the community any more, when there is income, and their income generation strengthens livelihoods and does not destroy nature at all, they said. A nearby community, Hin Lad Noh, has now adopted the same practices, and is also generating additional incomes in this way too.

At the end of the session, many of the participants concluded how much they had appreciated the sharing, and that so many important thoughts have been brought forward. Someone said: “I did not really know what to expect to communicate about validation to policymakers and scientists, it is still not clear how to do it, but we have made a lot of insights visible in these conversations, so let's continue to see how to develop this.”



The participants gathered at the Monument created for celebrating Hin Lad Nai as a Cultural Heritage of Thailand. Photo: Nutdanai Trakansuphakon.

Group discussion: applications of the indigenous and community research Facilitated by Pernilla Malmer and June Batang-ay

The objective of this session was to discuss how research implemented by communities, with their own selected methods and priorities of topics and questions – as in the pilots – can be used across different scales. The participants were divided into four groups; two Thai, and then two mixed groups for east Africa and the Philippines. The reflections were then shared in a common group.

The questions for the groups were: *Why is indigenous research important, and how can it be used, at different level, from local to global? How can it be encouraged and lead to uptake by policy and mainstream science?*

Local level

Firstly, the groups stated that the research is useful within the communities themselves; Hin Lad Nai, Tharaka, Kivaa, Ginderberet, Tinoc and Usdub. Generally, it was found that the research had supported recuperation of local ecosystems and their customary sustainable management. The exchange meetings carried out as part of the MEB piloting has also illustrated how communities can get support and ideas from other communities' research, regarding for example methods for mobilising knowledge as well as tested practices. An example is how the presentation from Ethiopia about sacred sites and its values, highlighted the value for the participants of protecting them also in other places where they are threatened and destroyed. The eco-cultural mapping revealed a method for how sacred sites could be recognised and documented on the communities' own terms and based on their own needs, including how to respect and take care of the sites. It was noted that mapping can also support awareness in the community and outside. Sharing good experiences, listening to others, and articulating your own experiences, creates self-confidence and recognition. You get direct confirmation on your work and are not alone in your testing and struggles. It strengthens the mobilisation of knowledge. This also gives strength and confidence for trying to influence policymaking.

The Thai group said that the Hin Lad Nai research had made them aware of a new way of looking at the fallow system. “We do not normally talk so much about the fallow land”, they said, “as it has been so discredited by governments and media. But the research here made elders realise that they need to articulate the good contributions of the rotational farming system, for food and wildlife conservation”. “We have to take the challenge to present the evidence we have from the ILK to the government who thinks that fallow system is destroying the environment and forest”, they concluded.

A specific point was also made based on the example of P'Dav research. It was stressed as an example of the importance

to always evaluate and discuss results of innovations in the community, as the base for adaptation and progress in the customary sustainable use of natural resources. The P'Dav experiments had tackled two issues: that weed is a problem – and P'Dav is a way to diminish that, without pesticides. Also that soil fertilisation and enrichment is needed, and it appears as if P'Dav has interesting contributions – but some farmers disagreed about its value.

It was stressed in the discussions that self-determination and identity-building go hand-in-hand with the revival and mobilisation of knowledge, and community monitoring and research could contribute substantially to them. Community research as was carried out as piloting MEB is not new, it has always been going on, though it has not always been articulated as such before. The MEB piloting and the community exchange at this meeting are making it visible. To write about it is to put attention on the fact that it has value beyond the community, and is worth recognition and support from society at large, on its own terms. A point was raised that if we have a network and coordination where all community research comes together to mobilise resources, we can be more visible and have a greater impact. A way of strengthening community research, at the same time as taking advantage of its outcomes, are exchanges between communities building on their own practices and ways of knowing and innovations.

It was agreed that one of the most critical contributions indigenous research can make, is to encourage children and young people to be curious and encourage them to learn about the traditional practices through participating in the research. In many communities, there are limited chances for children to learn from their parents, because they go to school. This can create tension for parents and community leaders – there is a need for spaces for children to learn about their culture and management of biodiversity in practice. Research serves as inspiration and incentives for them to be interested. Children can take part in research, and results can also be brought into schools, such as is done in several of the participating communities. An example from Hin Lad Nai is that the team of researchers are constituted of interested young farmers. They have also organised a youth camp about rotational farming, where young people were invited to spend time and engage in the community practices.

It was also stressed how these processes could contribute to empower the communities. Sharing of knowledge creates self-confidence. Several groups had found that their elders feel that the exchange makes them feel confident about their knowledge and that they can do much more to keep it living and in practice.

Another important contribution from community research is conflict resolution – mobilising knowledge and creating better understanding on a common ground can help resolve conflict issues. This is also emphasised in the MEB approach and illustrated in the figure in Box 1.

National level

The groups shared how documentation and insights from community research could be used to inform national level governments to get acceptance and recognition of knowledge, practices, and rights, and to contribute evidence for establishing more informed policies and laws that facilitate customary sustainable use rather than hindering it. This way, community research can contribute both to biodiversity conservation, and to improving indigenous peoples' livelihoods.

In many countries, monitoring and planning for biodiversity conservation is a top down process – but the processes at the heart of this meeting, based on CBMIS and indigenous research in communities, show a bottom-up opportunity, which governments should be encouraged to adopt.

An example is how rotational farming has been promoted as cultural heritage in Thailand, and received recognition that way, but that still does not mean general acceptance of rotational farming as a sustainable practice. National forest and protected area regulations still criminalise many rotational farming practices.

In Kenya, it was noted that there is some space to influence by using national laws, also because what they are doing locally has received interest and support internationally. This has, for example, applied to the recognition of sacred sites and the customary laws, as has been described above.

Customary laws have a place in the Kenyan constitution, but only if someone raises it. Much more work is needed to have continued impact at the national level.

Results of community research can also successfully be used to prepare educational material for informing the public about customary sustainable use and practices, for example, by producing documentary videos and learning materials, establishing webpages or Facebook pages. This has been experienced by several of the organisations.

From the Philippines, positive experiences were brought forward with applying CBMIS. In particular, piloting the indicators for traditional knowledge for the CBD Aichi Biodiversity Target 18 on traditional knowledge and customary sustainable use¹⁸, as part of their community monitoring that resulted in the land-use plan of Tinoc, has led to recognition at the national level. This work has been presented internationally, and the Philippine governments also recognises it as part of their contribution to the CBD and of their national reports.

International level

The Thai group reflected that the international level is far away for their elders. Despite this, their knowledge can contribute to others working in these processes; not the sacred and secret knowledge, but their general wisdom. So even when people focus on their local livelihoods, they can be important for the identity building and strength of others.

A well-known positive example of how community monitoring and research has been recognised for its opportunities to contribute globally, based on local work, is from the CBD and its Aichi Biodiversity Targets, where the COP12 agreed to encourage how the CBMIS can be further used to complement the conventional top-down monitoring that build on national statistics.¹⁹ This way, almost all international policy processes for conservation, protection of territories etc. could draw on indigenous community based research. Linking local knowledge from the bottom up creates legitimacy and credibility, and usefulness.

Pernilla and June concluded the session with the observation that there is a wealth of ways in which indigenous and community research can contribute to the revival and mobilisation of ILK, to supporting livelihoods and self-determined development. An important aspect is to support communication of ILK initiatives and research outcomes outside of the communities. This could be done through exchange and capacity-building across communities and their institutions and organisations. It is also important to encourage capacity-building of western scientists as well as politicians, by IPLCs and their institutions, in particular, those who are engaging in assessment of biodiversity and ecosystem services and their values, such as within IPBES. It would be possible to reach out to all levels, from local to global, by making use of the windows of opportunities created by bodies such as IPBES, that have committed to respect and recognise ILK, and the CBD that are encouraging the use of CBMIS in the monitoring of its Aichi Targets. But it is important to be very clear in the message on the conditions for ILK contributions: on equal terms with science; based on Free Prior and Informed Consent; and that it happens with support for indigenous institutions that are able and willing to take part in this sharing.

The dialogue on how to connect across knowledge systems based on equity and reciprocity will continue, with the objective of ensuring space for better policy decisions related to biodiversity and ecosystem governance, which includes the expertise of the holders of knowledge that are continuously observing and managing biodiversity on the ground.

Evaluation and meeting closure

Evaluation

The evaluation consisted of two questions; 1) what was good about the meeting, and 2) what could have been done better. In a short session everyone first discussed with a neighbour then shared their reflections in the wider group.

What was good about the meeting: Among the international visitors, the hospitality of the community of Hin Lad Nai

and the good organisation including for the logistics and transportation was very much appreciated. The visitors also praised the community and their food, they agreed unanimously that Hin Lad Nai is a wonderful place for such an exchange and workshop. They enjoyed the sites visited in the workshop, and the method of walking through the landscape and exchange on the way. One of the visitors concluded “In our country there is a saying: whenever you find elders, it would be difficult to find anything going wrong. I enjoyed so the process, and in particular I was very happy to meet the elders.” The group of Thai people taking part in the workshop from other parts of Thailand said it was the best cross-country workshop they had ever experienced. They did learn a lot, from Hin Lad Nai as well as from the international visitors. As an example, it was a reminder of how important it is to appreciate and respect our sacred sites in different parts of the world, as shown for example in the presentation from Ethiopia. This was a real inspiration, they said. There was also appreciation for the visit of inspiring, strong and bright women leaders, and for all the dancing in the cultural evening. “Also European women dance!” In Karen tradition, there is a lot of singing, and poems, but dancing is less practiced.

Could be done better: For the future, more women could be part of these kinds of processes. The walking workshop is great as a method, but we can make it more effective, by being better in maintaining the group and ensuring that everyone gets all information all the time. More time for further discussions together when back from the walk would also be good. Some comments also regarded housing and facilities, in Hin Lad Nai and in Chiang Mai.

As a last word, one of the visitors reflected over the incident that a snake was seen passing over the way when we came

back to the community after the last walk. “In Africa snakes are sacred. To see a snake, means the shaman has something to say. The snake appearance on our way when we went back through the village today was to say that the workshop was good, in our tradition. It's part of the validation – to say everything is ok, on the last day of the workshop. But what about the meaning here?”

The Hin Lad Nai leaders replied that the snake indicated the smoothness of the meeting, and a wish for the dialogue to continue.

Concluding session at the monument

As a final ceremony, all the participants went up to a monument that had recently been constructed for the inauguration of Hin Lad Nai as a cultural heritage. A ceremony was held that reconfirmed the recognition of Hin Lad Nai and the community's tireless work for the recovery of their forest, and the continued struggles to manage and protect it, based on their customary sustainable practices.

The organisers and the visitors warmly thanked the Hin Lad Nai community and its leaders, the research team, the group of women that had taken care of the cooking of great local food, as well as the local guides that had accompanied us in the walking sessions. Also, the families that generously had opened their houses for the visitors to stay. The whole community had demonstrated tremendous hospitality and generosity in sharing their culture and friendship. The elders were especially thanked, including the elders from visiting communities. SwedBio also specifically thanked IMPECT and PASD for their contributions in organising the logistics and travel arrangements of the meeting in a smooth and professional way.



Elders in the closing ceremony. Photo: Nutdanai Trakansuphakon.

18 <https://www.cbd.int/sp/targets>

19 CBD COP12 Decision XII/12 Article 8 (j) and related provisions <https://www.cbd.int/decision/cop/default.shtml?id=13375>

List of Annexes

Annex 1 Workshop schedule

Annex 2 List of participants

Annex 3 Description of the MEB piloting partner organisations

Annex 4 Summary of objectives for MEB piloting projects

ANNEX 1: Workshop schedule

Friday 12 February 2016

During the day National and international participants arriving.

6.00 pm Dinner at INA House

7.00 pm Information on agenda and plans for the meeting for international guests.

Saturday 13 February 2016

7.00 am Breakfast

8.00 am Setting off for Hin Lad Nai

10.15 am Arrival to Hin Lad Nai

10.30 am Welcome by Mr. Chaiprasert Phokha, Village Leader.

- Inagural Ceremony by Chief Mr. Poo Noo Papa
- Inagural Address Speech by Sheriff/District Governor Mr. Prasert Jitphlicheep
- Introduction of participants
- Introduction of the community of Hin Lad Nai by Mr. Chaiprasert Phokha and his team

12.30 pm Lunch

1.30 pm The Multiple Evidence Base pilot project and the meeting objectives. Introduction by Maria Tengö.

Moderator: Pernilla Malmer

3.00 pm Walking workshop to watershed site of Hin Lad Nai

Exchange of experiences among participants along the walk

6.00 pm Dinner

7.00 pm Presentations by the partners about their communities and the community research. Moderator: Million Belay

- Thailand / Hin Lad Nai
- Philippine / Tinoc
- Guna Yala / Usdub

Sunday 14 February

7.00 am Breakfast

7.30 am Walking workshop to the rotational farming area. Presentations of their methods for research, linking to yesterday's presentation. Discussions based on the experiences from all the pilots.

11.00 am Lunch in the field + discussion of what we have seen.

1.30 pm Continue presentations by partners about their communities and community research, and mobilisation of knowledge they have done within the MEB piloting projects. Moderator: Million Belay.

- Ethiopia / MELCA
- Kenya / Tharaka and Kivaa
- Eco-cultural mapping and eco-calendars, introduction of methods along with the Africa presentations.

3.30 pm Tea break

4.00 pm Methods for validation and mobilisation of knowledge within our knowledge systems. Group discussions.

- What is important, and how are we doing for validating new knowledge and ideas, are the methods useful?

Moderator: Maurizio Ferrari

6.30 pm Cultural evening and dinner.

Invitation from the community of Hin Lad Nai

All countries contribute from their countries

Monday 15 February

7.00 am Breakfast

7.30 am – Walking workshop to the area of the paddy fields. Exchange of experiences

12.00 pm Back home, continuation, validation and methods discussion

12.00 pm Lunch in the village.

1.30 pm How to best use the outcomes of our research, and make useful our progress for others? Examples:

- Contributing to local processes and decision making
- Contributing to national processes of monitoring of biodiversity (CBMIS)
- Contributing to international processes
- Contributing to develop better laws
- Contributing to conservation and protection of our territories

Moderators: June Batang-ay and Pernilla Malmer

3.00 pm Evaluation of meeting

Moderator: Million Belay

3.30 pm Closing ceremony

4.00 pm Leaving Hin Lad Nai to Chiang Mai

7.00 pm Dinner at INA House

Joint reflection

Tuesday 16 February

6.50 am Participants who will take part in the Centre of Distinction Workshop before IPBES 4, co-ordinated by FPP, will set off for Kuala Lumpur. Other participants leave to catch their flights and other plans.

Overall schedule of the workshop, and the continued schedule of meetings up to IPBES 4

12 of February Arrival day to Chiang Mai for participants in Hin Lad Nai meeting:

13 – 15 February Workshop in Hin Lad Nai

16 February Travel Chiang Mai to Kuala Lumpur for those who will attend the inception workshop for the ILK Centres of Distinction.

16 – 18 February Inception Workshop, ILK Centres of Distinction, in Kuala Lumpur, organised by FPP

19 February International Indigenous Forum on Biodiversity and Ecosystem Services (IIF BES) strategy and planning meeting for IPBES 4

20 – 21 February IPBES 4 Stakeholder Forum

22 – 28 February IPBES 4

ANNEX 2: List of participants

Hin Lad Nai Walking Workshop 12–15 February 2016

International exchange meeting for mobilisation of indigenous and local knowledge for community and ecosystem wellbeing.

From Thailand:

Local Researchers from Hin Lad Nai

1. Mr Chairprasert Phokha; Official leader, he got Award on Life is Learning (Non formal Education) from Princess Sirindhorn, HOSBEEHIVE co-founder
2. Mr Prasit Siri; Youth leader
3. Ms Phong Phan Papa; Former youth leader representing youth group to receive award on “Youth on Environment Conservation” from Green Globe Foundation
4. Mr Phichet Sriuangdoi; local research assistant
5. Mr Pricha Siri; Represented Hin Lad Nai to receive Award on “Forest Heroes” from United Nation Forum on Forest, Istanbul 2013
6. Mr Poov Noov Pa pa; Shaman and knowledgeable person
7. Mr Nivet Siri; Expert on P’Dav Knowledge and Practice
8. Mr Chalernpol Papa; Pha Yuang community’s leader
9. Ms Naw Cif hka Phokha; Former Youth leader
10. Ms Nauj Iv Pgaiz Naiv Hpo; Women’s group
11. Ms Charpen Siri; Women’s group
12. Mr Chaithawat Chomti; Local Organiser in Hin Lad Nai

Elders and leaders from other Karen communities

13. Mr Cau Nif Odochao; Ecological Movement’s leader of Karen, and Leader from Na Taw poo Community
14. Mr Ta Yae; Knowledgeable person and leader from Mae La Htaf Community
15. Mr OO ka Amphaphrai; Young Leader, leader from Baf Paiv hki Community
16. Mr Nav Moo Chodo; Knowledgeable person from Mu wi Khee Community
17. Mr A-bu Pasrithong; Leader from Mu wi Khee community
18. Ms Nauj hkuf duf; Women’s leader & knowledgeable person
19. Ms Nauj Hauf Hsoof; Knowledgeable person

Researcher Team (PASD)

20. Dr Prasert Trakansuphakon; Research Team leader, IMPECT and PASD’s President
21. Mr Naruchai Sudseree; Researcher
22. Mr Nutdanai Trakansuphakon; Researcher, Campaigner and Co-founder HOSBEEHIVE

IMPECT Team

23. Mr Surachai Thaweejareonporn; Mapping expert from IMPECT
24. Ms Amphai Chaidet; Accountant of IMPECT
25. Ms Janttane Phichetkulsampahan; IMPECT’s Environment Program’s Secretariat

INA house

26. Ms Phatcharaporn Aw-sirichuchai; Volunteer of INA house

Interpreters

27. Mr Ajarn Chupinit Kesmanee; Thai-English, Academic expert on Indigenous Issues in Thailand, Former President of IMPECT and Vice President of PASD
28. Mr Prawit Nikorn-oychai; Karen-English, Program coordinator of Support Mapping Project of IMPECT
29. Mr Sao Kaew Moo Htoo; Karen-English, Former CONTO Coordinator, Farmer on Alternative Agriculture in Baf Paiv Hki

International Participants

Kenya

30. Mr Mburu George Gathuru; ICE Kenya, coordinator of the two eco-cultural mapping processes in Tharaka and Kivaa, which are part of the MEB piloting
31. Ms Sabella Kaguna; Tharaka women’s leader
32. Mr Simon Mitambo; Coordinator African Biodiversity Network, also from Tharaka
33. Ms Judith Wavinya Joel; Kivaa women’s leader

Ethiopia

34. Dr Million Belay Ali; Director of MELCA Ethiopia, the organisation implementing MEB piloting in Ethiopia
35. Mr Tesfaye Tolla Doyo; MELCA Ethiopia, Project coordinator for Bale, Ethiopia.

Philippines:

36. Ms Milanie June Cadalig Batang-ay; Tebtebba Indigenous Peoples and Biodiversity Program
37. Mr Osenio Lay-os; farmer
38. Mr Allan Tahay Olubalang; farmer

Sweden

39. Ms Pernilla Malmer; Senior Advisor, SwedBio at Stockholm Resilience Centre
40. Dr Maria Tengö; Researcher, Stockholm Resilience Centre

Italy

41. Dr Maurizio Farhan Ferrari, Forest Peoples Programme. Also presenting the MEB piloting in Guna Yala, Panama.

ANNEX 3: MEB piloting partner organisations

African Biodiversity Network

African Biodiversity Network is a network of individuals and organisations working across Africa in 12 countries at local, national, regional and international levels to avert social injustices and environmental destruction arising from the contemporary development paradigms, in order to enable local communities to control their lives and livelihoods while celebrating their social, cultural, spiritual and ecological diversity. ABN envisages vibrant and resilient African communities rooted in their own biological, cultural, and spiritual diversity, governing their own lives and livelihoods, in harmony with healthy ecosystems.

<http://africanbiodiversity.org/>

Institute for Culture and Ecology (ICE)

ICE promotes indigenous knowledge for environmental conservation and to enhance the livelihoods of local communities towards sustainable development. ICE is working with community-based environmental and resource management initiatives and is facilitating culture-based learning that would lead to social and ecological well-being of the earth community and are pioneering innovative culture-based strategies and policy advocacy for recuperation, recognition and promotion of indigenous knowledge and practices relevant to environmental rehabilitation and management.

<http://www.icekenya.org/>

MELCA-Ethiopia

(Movement for Ecological Learning and Community Action) was founded in 2004. MELCA means “ford” both in Oromiffa and Amharic languages, two of the most widely spoken languages in Ethiopia. The name is used symbolically to indicate the commitment of MELCA to connect young and elders, culture and environment, as well as scientific knowledge and traditional ecological knowledge. MELCA-Ethiopia arose out of the concern about the threats and loss related to environment, traditional ecological knowledge and culture. MELCA believes that there are many positive experiences in the indigenous and local cultures which could be used to address the current sustainability crisis. MELCA’s goal is to empower local communities to conserve their biocultural diversity and have a sustainable livelihood. MELCA projects include a youth program designed to encourage initiatives to advocate a sustainable life; environmental governance to empower local communities.

<http://melcaethiopia.org/>

Pgakenyaw Association for Sustainable Development (PASD)

PASD aims at creating networks among indigenous peoples on the issues of rotational farming and natural resource management and to establish education systems and an official curriculum for the indigenous peoples, which integrates the local knowledge. Another aim is to promote the Karen traditional agroforestry methods – both the technical and cultural dimensions – in a mutually beneficial relationship with forest biodiversity and food security.

<http://www.pasdthailand.org/>

Tebtebba

Tebtebba, an indigenous Kankanaey word of Northern Philippines, refers to a process of collectively discussing issues and presenting diverse views with the aim of reaching agreements. It is the name given to the Indigenous Peoples’ International Centre for Policy Research and Education, an indigenous peoples’ organisation working to have the rights of indigenous peoples respected, protected and fulfilled worldwide. Its two decades of work disseminated indigenous peoples’ worldviews, and key issues such as human rights, gender, environment and sustainable development. To elaborate and consolidate views and positions, Tebtebba and its networks continue to advocate and raise awareness and are in the process of creating models for self-determined and sustainable development and advancing their knowledge generation through community-based monitoring and information system.

<http://www.tebtebba.org/>

Forest Peoples Programme

Forest Peoples Programme (FPP) advocates an alternative vision of how forests should be managed and controlled, based on respect for the rights of the peoples who know them best. FPP works with forest peoples in South America, Africa, and Asia, to help them secure their rights, build up their own organisations and negotiate with governments and companies as to how economic development and conservation are best achieved on their lands.

www.forestpeoples.org

Fundación para la Promoción del Concimiento Indígena (FPCI)

The FPCI is an indigenous organization based in Panama that contributes to the recovery, promotion and strengthening of indigenous knowledge related to the environment and indigenous rights, to prevent loss, encroachment of our knowledge, natural resources, lands and territories, in order to reduce the cultural, socioeconomic and environmental deterioration of our indigenous peoples, with the participation of young people, women and members of the organization.

ANNEX 4: Objectives from MEB-pilot project plans:

Objectives from project proposals

ICE/ABN Kenya

The project is a way of supporting communities to clarify their common position and consciously maintain the integrity of indigenous knowledge in case the envisaged inter-knowledge connections do happen along the way.

- The MEB piloting is generally aiming at supporting communities in experimenting, validating and presenting their own knowledge and experiences on their own terms, related to ecosystem governance, zooming in on agro-biodiversity, food and culture.
- ICE will have two pilot sites – Tharaka and Kivaa. In Tharaka, the focus will be on customary ecological law and governance and how this can be used alongside conventional law to enhance the resilience of socio-ecological systems. The process will focus on Kathita River and the main strategy will be eco-cultural mapping. In Kivaa, the focus will be on the interactions between agro-biodiversity, food, culture and nature, and how this interaction can contribute to the resilience of the social-ecological system. The process will focus on sacred sites/earth spirituality, indigenous seeds and water, with eco-cultural calendar being the main strategy.

MELCA/ABN

- To compare knowledge generated in a formal, scientific way with eco-cultural mapping for an input to the MEB process.
- To document the traditional ecological knowledge of the Gindeberet community related to seed so that the output is used for effective protection of the system.

Tebtebba, Philippines

- Build capacities among communities to systematise their information on their lands territories and resources and associated knowledge systems and practices (e.g cultural practices on sustainable use) relevant to management/governance;
- Enable communities to formulate indicators of success in their intervention, (e.g. innovations and technology development) for increased food security and improved governance;
- Support activities to generate hard data [quantitative and qualitative] on effects of people's innovation on biodiversity and ecosystems services specifically in the forest and in the farmlands;

- Promote TK innovations and increase number of people engaged in knowledge and technology upgrade 1) among rice growers and innum-an cultivators within Tinoc and 2) Multi-sectoral Provincial Conference on TK promotion for sustainable agriculture and climate change adaptation;
- Demonstrate to the international community how TK promotion and innovations are cross-cutting to the attainment of the Aichi Targets of the CBD and for climate change mitigation and adaptation.

PASD, Thailand

- To strengthen the existing evidence of the sustainability and positive effects on wildlife, biodiversity and bio-cultural and spiritual values of the rotational farming system in the Hin Lad Nai village, in order to ensure that it will be recognised by the Thai government as a good and positive practice.
- To present that evidence in the form of a Multiple Evidence Base presentation based on the diverse knowledge systems contributing to the study.

FPCI, Guna Yala, Panama

Reinforce the capacity and awareness in the Usdub community related to the loss of their traditional knowledge and resources that is taking place in the Guna Yala Region, allowing the consolidation and rescue of the resources, along with plans for the future regarding creation of sustainable community management.

Cross visit to Hin Lad Nai Initiating the pilot projects in 2014

General objective of the cross-visit:

Exploring the foundations for a knowledge-generating process across diverse knowledge systems, based on a Multiple Evidence Base approach, between SRC/ SwedBio and partners from diverse knowledge systems

Specific objectives:

- Exchange with the Hin Lad Nai community initiating the process of co-producing a Multiple Evidence Base (MEB) approach from scratch related to generation of knowledge with synergies across knowledge systems.
- Initiating the planning with the Hin Lad Nai community for their research process.
- Based on learning and insight from Hin Lad Nai, continue the planning for the MEB pilot project between SRC, SwedBio and partners.

About the report

This is a report from a walking workshop, held in the community of Hin Lad Nai, Chiang Rai, Thailand, 13–15 February 2016. The participants exchanged experiences between community research projects piloting the implementation of a Multiple Evidence Base (MEB) approach for connecting across knowledge systems, based on equity and reciprocity, and usefulness for all involved. The participating partners were Tebtebba Foundation, Philippines; Pgakenyaw Association for Sustainable Development (PASD), Thailand; African Biodiversity Network with Institute for Cultural Ecology (ICE), Kenya and MELCA, Ethiopia; Forest Peoples Programme (FPP) with Fundación para la Promoción de Conocimiento Indígena (FPCI), Panama and SwedBio at Stockholm Resilience Centre, Sweden. Leaders and elders from Thai indigenous communities and organizations participated as well, along with the elders and the pilot research team in the host community of Hin Lad Nai.

The exchange dealt with certain areas of experiences: rotational farming; marketing; revitalisation of seed systems; eco-cultural calendars etc, and based on this, a discussion on validation methods in diverse knowledge systems was held. An important part of the workshop

was to reflect how to best use the outcomes of the community research, and share the progress made with others. For example, by contributing to local processes and decision making, to national processes of monitoring of biodiversity, such as for the CBD Aichi Biodiversity targets, to international processes and to better laws and better conservation.

The dialogue on how to connect across knowledge systems based on equity and reciprocity will continue, with the objective of ensuring space for better policy decisions related to biodiversity and ecosystem governance, and which includes the expertise of the holders of knowledge that are continuously observing and managing biodiversity on the ground.

SwedBio

SwedBio is a knowledge interface at Stockholm Resilience Centre contributing to poverty alleviation, equity, sustainable livelihoods and social-ecological systems rich in biodiversity that persist, adapt and transform under global change such as climate change. SwedBio enables knowledge generation, dialogue and exchange between practitioners, policymakers, and scientists for development and implementation of policies and methods at multiple scales.



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