Summary Report and Abstracts

The Seventh Global Conference of the International Partnership for the Satoyama Initiative (IPSI-7)

Dates:	29 September - 2 October 2018
Venue:	New Grand Hotel, Kanagawa, Ishikawa Prefecture, Japan
Co-organized by:	Secretariat of the International Partnership for the Satoyama Initiative (United Nations University Institute for the Advanced Study of Sustainability)
	Ministry of the Environment, Government of Japan (*Conference costs borne by UNU-IAS were made possible through the financial contribution of the Ministry of the Environment, Japan*)
Hosted by:	Ishikawa Prefectural Government

Overview

The Seventh Global Conference of the International Partnership for the Satoyama Initiative (IPSI-7) was held from September 30 to 2 October 2018 at the New Grand Hotel in Kanazawa, Ishikawa Prefecture, Japan. IPSI-7 was co-organized by the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) as host of the Secretariat of the International Partnership for the Satoyama Initiative (IPSI), and the Ministry of Environment of Japan, and hosted by the Ishikawa Prefectural Government. Like previous IPSI Global Conferences, IPSI-7 consisted of a meeting of the IPSI General Assembly and a Public Forum. The Thirteenth Meeting of the IPSI Steering Committee (SC-13) was also held back-to-back with IPSI-7 on 29 and 30 September.

The IPSI General Assembly is made up of diverse IPSI member organizations, and its meeting at IPSI-7 was attended by over 100 representatives of IPSI members from all over the world, plus observers and members of the general public. The General Assembly covered a number of items related to the operations and strategic planning of IPSI, including reports from the IPSI Steering Committee and the IPSI Secretariat. Discussions also resulted in IPSI's endorsement of an output document titled the "Ishikawa Statement 2018", which expresses the participants' commitment to disseminate IPSI-7 outcomes and promote the importance of SEPLS in the post-2020 global biodiversity framework.

The theme of the IPSI-7 Public Forum was "Assessing the Satoyama Initiative's Contributions towards Achieving the Aichi Biodiversity Targets and Sustainable Development Goals". The event was well-attended by more than 130 participants from both IPSI members and non-members. Plenary presentations at the Public Forum focused on IPSI's work since 2010, including contributions to the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) and ongoing activities in Ishikawa Prefecture.

After the plenary and working group sessions, participants were invited on an excursion hosted by the Ishikawa Prefectural Government to sites around the Noto Peninsula. Participants were able to observe activities related to economic revitalization, education, and traditional knowledge, and observed a wide variety of production practices in addition to enjoying the local scenery and foods.

IPSI-7 participants in the conference hall

Public Forum

The IPSI-7 Public Forum was held from the afternoon of 30 September. The IPSI Public Forum is an event held at each IPSI Global Conference for the purpose of sharing knowledge and informing the general public about IPSI and its activities. Participants are invited to hear presentations by IPSI members and others actively engaged in a wide variety of promising activities for the revitalization and sustainable management of production landscapes and seascapes around the world, and to engage in lively discussion.

The IPSI Global Conference's Public Forum aims to (1) strengthen collaboration and synergies among IPSI members and other relevant initiatives and programs, and (2) enhance understanding and raise awareness of the importance of socio-ecological production landscapes and seascapes (SEPLS). Over 130 people were present for the event.

The theme of the IPSI-7 Public Forum was "Assessing the Satoyama Initiative's Contributions towards Achieving the Aichi Biodiversity Targets and Sustainable Development Goals". The Aichi Biodiversity Targets was adopted at the 10th Meeting of the Conference of the Parties to the Convention on Biological Diversity as the element of the Strategic Plan for Biodiversity 2011-2020 which its vision of "*Living in Harmony with Nature by 2050*". IPSI was established at the same time of the Strategic Plan adopted and eight years have passed since then. Meanwhile, the United Nations' Sustainable Development Goals (SDGs) were endorsed in 2015. Since its beginnings, IPSI has grown to 240 members and developed numerous collaborative activities. Thus, this Public Forum was a chance for IPSI to discuss how IPSI has contributed to the Aichi Biodiversity Targets and how IPSI can contribute to the roadmap for the CBD's post-2020 global biodiversity framework.

Prof. Kazuhiko Takemoto

The Public Forum started with opening remarks by Prof. Kazuhiko Takemoto, Director of the United Nations University Institute for the Advanced Study of Sustainability; Mr. Yutaka Shoda, Director General of the Nature Conservation Bureau, Ministry of the Environment, Japan; and Mr. Masanori Tanimoto, Governor of Ishikawa Prefecture, whose remarks were read by Mr. Hideo Yoshizumi, Director General of the Planning and Development Department, Ishikawa Prefectural Government.

Next, two keynote speeches were given, the first by Prof. Kazuhiko Takeuchi, Senior Visiting Professor at UNU-IAS, Director and Project Professor of IR3S at the University of Tokyo, and President of the Institute for Global Environmental Strategies (IGES). Prof. Takeuchi spoke on "Satoyama Initiative's Contributions towards Aichi Biodiversity Targets and SDGs", highlighting the development and progress of the Satoyama Initiative and IPSI from their beginnings to today, as well as several related projects in Japan.

Prof. Kazuhiko Takeuchi

The second keynote speech was by Prof. Eduardo Brondizio of the Anthropology Department at Indiana University and Co-chair of the IPBES Global Assessment of Biodiversity and Ecosystem Services, with "An Overview the IPBES Global Assessment of Biodiversity

Prof. Eduardo Brondizio

and Ecosystem Services". Prof. Brondizio provided background and recent information on the development and structure of the IPBES assessment processes, and also comments on the importance of the SEPLS concept for the assessments and for biodiversity conservation as a whole, in particular the role of areas governed by indigenous peoples and local communities (IPLCs).

The keynote speeches were followed by a panel session, with experts from within Japan and abroad explaining various aspects of assessment and activities related to the Satoyama Initiative. Dr. Simon Ferrier, Senior Principle Research Scientist at the Commonwealth Scientific and Industrial Research Organization, Honorary Professor at Australian National University, and Honorary Fellow of UNEP-WCMC, spoke on "Multiscale Scenarios for Nature Futures". Ms. Yoko Watanabe, Global Manager of the GEF Small Grants Programme at UNDP, introduced the "COMDEKS Programme: Community action to achieve the Aichi Biodiversity Targets". Mr. Shinjiro Sasaki of the Secretariat of Japan Network for Promoting the Satoyama Initiative and the Nature and the Environment Division of the Fukui Prefectural Government in Japan, and Mr. Yoshinori Miyahara of the Biodiversity Biwako Network and the Quality Control Group of Sekisui Jushi Corporation together presented the "Japan Network for Promoting the Satoyama Initiative, JNPSI". Finally, Dr. Daisuke Utsunomiya, Researcher in the Sustainable Society and Ecosystems Office of Suzu City and Cooperative Researcher in the Institute of Nature and Environmental Technology at Kanazawa University, described "Activities for Sustainable Conservation of Satoyama in Suzu City". An open Q&A and discussion followed the panel presentations.

IPSI-7 Public Forum Panel Session

General Assembly

The IPSI-7 General Assembly meeting was held in on Monday, 1 October 2018, with registration by 98 representatives from 51 IPSI member organizations. The meeting opened with welcome remarks by Prof. Takemoto, followed by State Minister of the Environment of Japan, Ms. Naomi Tokashiki. Welcome remarks were also given by the Governor of Ishikawa Prefecture Mr. Masanori Tanimoto, and a video message was played, sent by Dr. Cristiana Pașca Palmer, Executive Secretary, Secretariat of the Convention on Biological Diversity. Each of the speakers touched on the increased awareness and growing importance of the Satoyama Initiative in their respective fields, from prefectural-level governance in Japan to national and international policy-making, and expressed their hopes for a successful IPSI-7.

Dr. Hiroaki Takiguchi, Director of the IPSI Secretariat at the United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS), proposed as co-chair for the meeting of the IPSI General Assembly Prof. Takeuchi, who was approved by the General Assembly without objection.

Agenda Item 1 was the adoption of the agenda for IPSI-7. A provisional agenda was proposed by the co-chairs, which was adopted immediately.

Dr. Hiroaki Takiguchi, Prof. Alfred Oteng-Yeboah, Prof. Kazuhiko Takeuchi, and Mr. Eiji Tanaka

Agenda Item 2 was a Report from the Chair of the IPSI Steering Committee. Steering Committee Chair Prof. Oteng-Yeboah gave a report of results from Eleventh Meeting of the IPSI Steering Committee (SC-11), held in November 2016 in Takarazuka, Hyogo, Japan, the Twelfth Meeting of the IPSI Steering Committee (SC-12), held in October 2017 in Kanazawa, and the Thirteenth Meeting of the IPSI Steering Committee (SC-13), held 29-30 September 2018 also in Kanazawa, immediately before IPSI-7. Prof. Oteng-Yeboah reported on the new members accepted and collaborative activities endorsed at those meetings, as well as the updated IPSI Plan of Action 2013-2020, and the Steering Committee's planned roadmap for the partnership up to and beyond 2020.

Agenda Item 3 was a report from the Director of the IPSI Secretariat. Dr. Takiguchi reported on the increasing number of IPSI case studies and ongoing efforts to analyze their contributions to the Aichi Biodiversity Targets and the United Nations' Sustainable Development Goals (SDGs), as well as accomplishments in terms of the Satoyama Initiative's recognition in CBD policy-making processes. He also presented an overview of plans for the production of the final report of IPSI's activities over the UN Decade on Biodiversity 2011-2020, which is expected to be presented at CBD COP 15 in China in 2020.

Agenda Item 4 was on Assessment of IPSI's Contributions to the Aichi Biodiversity Targets and SDGs, which primarily involved the participants breaking into working groups for in-depth discussion. The five groups were created according to the five strategic goals of the CBD's Strategic Plan for Biodiversity 2011-2020: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society; Reduce the direct pressures on biodiversity and promote sustainable use; Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity; Enhance the benefits to all from biodiversity and ecosystem services; and Enhance implementation through participatory planning, knowledge management and capacity building. The groups met for several hours, including presentations from selected participants, the abstracts of which can be found in the annex to this report. After returning to plenary, each group gave a brief presentation of their outcomes, which can also be found in their respective presentations in the annex.

Working group discussion

Participants in the General Assembly

Agenda Item 5 was the endorsement of the “Ishikawa Statement 2018”, a document produced by IPSI in cooperation with the Ishikawa Prefectural Government, which recognizes the activities of both IPSI and Ishikawa Prefecture in working to realize the Satoyama Initiative vision of “societies in harmony with nature”, and expresses the participants’ commitment to further promote the outcomes of IPSI-7 and the importance of socio-ecological production landscapes and seascapes in the post-2020 global biodiversity framework. The Ishikawa Statement was endorsed by the General Assembly unanimously.

Agenda Item 6 was about the planning of the next IPSI Global Conference. New IPSI member Kumamoto Prefecture, Japan announced their offer to hold the Eighth IPSI Global Conference (IPSI-8) in 2019. This offer was welcomed by the General Assembly, and the IPSI Secretariat agreed to work towards planning the conference along with Kumamoto Prefecture.

The final item, Agenda Item 7, was on other matters, and the only issues raised were an announcement of a side event held by Conservation International and thanks to the organizers from the participants, so the General Assembly was brought to a close by Prof. Takeuchi.

Final discussion of the General Assembly

Reception

In the evening of 30 September, a reception was hosted by the Ishikawa Prefectural Government for all participants in IPSI-7. In addition to the local foods and drink provided, the programme also included a show of cultural performances with dance and music. Thanks to the host's generosity, participants had a chance to talk and get to know each other in a more relaxed atmosphere before the General Assembly discussions of the next day.

Participants enjoying the reception

IPSI Steering Committee Chair, Prof. Alfred Oteng-Yeboah

State Minister of the Environment of Japan, Ms. Naomi Tokashiki

Local foods provided at the reception

Excursion

Participants went on an excursion on 2 October, visiting a number of sites related to sustainable production efforts and *satoyama* landscapes and *satoumi* seascapes on Ishikawa Prefecture's Noto Peninsula. Noto's *satoyama* and *satoumi* production system is recognized as one of the FAO's "Globally Important Agricultural Heritage Systems" (GIAHS), and participants were divided into three groups focusing on economic revitalization, education, and traditional knowledge, to observe practices including seaweed production, model farms, and the famous Shiroyone Rice Terraces.

Visiting a mushroom production facility

Lunch with local ingredients at a model farm

Group photo at the Shiroyone Rice Terraces

Presentation Abstracts

Contents

Use of Mobile Technology for assessing community and wildlife use of rangeland resources

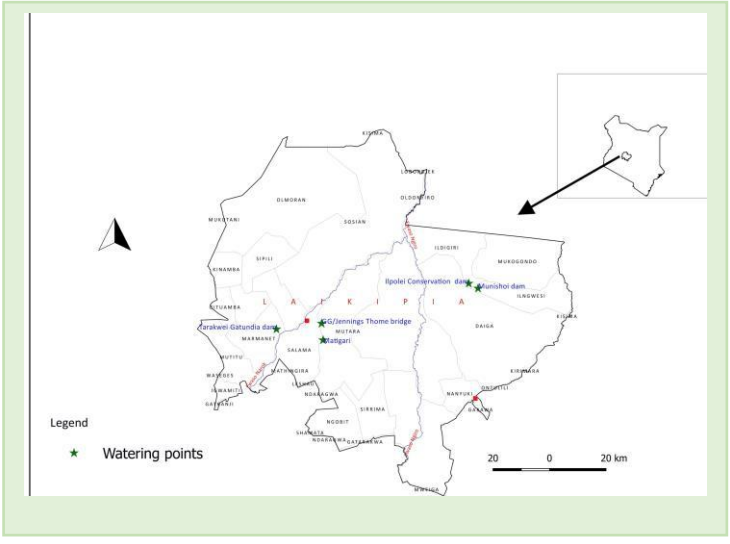
Dr. Mordecai O. Ogada
Conservation Solutions Afrika, P.O. Box 880-10400 Nanyuki, KENYA

Mordecai Ogada is a carnivore ecologist who has been in conservation work for the last 20 years in Kenya and other parts of Africa, mainly on human-wildlife interactions. Dr. Ogada's work has included research and teaching at Colorado State University. He currently works in community based conservation, and wildlife policy.

mordecai.ogada@csa.or.ke

Geographic and demographic information

Country	Kenya
Province	Rift Valley
District	Laikipia
Size of geographical area	10,000 km^2
Number of indirect beneficiaries	13,000,persons (Men: 6,000) (Women: 7,000)
Dominant ethnicity	Maasai



Size of project area	700 km^2
Number of direct beneficiaries	10,000 persons (Men: persons) (Women: persons)
Geographic coordinates (longitude and latitude)	0.3970° N, 37.1588° E
Dominant ethnicity	Maasai

Ecosystem Types

	Forest	x	Grassland		Agricultural		In-land water
	Coastal	x	Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Elephant	*Loxodonta Africana*	Source of human-wildlife conflict at water points
Olive Baboon	*Papio Anubis*	Source of human-wildlife conflict at water points
Common Zebra	*Equus Burchelli*	Competition with cattle for grazing/pasture
Domestic cattle	*Bos Indicus*	Important source of livelihood
Domestic goat	*Capra hircus*	Important source of livelihood

General introduction

Laikipia county in Central Kenya covers an area of 10,000 square kilometres, approximately 70% of which is semi- arid and used mainly for livestock production. This semi-arid sector of Laikipia is also one of the most important wildlife habitats in Kenya, being home to elephants, rhino, lions, leopard, giraffe, buffalo and several other megafauna species that are an integral part of the tourist industry. The same area is also the mainstay for livestock production which is the major economic activity for local communities in Laikipia. Laikipia is therefore one of the biggest and most productive SEPLs in Kenya. This study aims to assess the spatial, temporal and seasonal uses of Key natural resources in Laikipia by wildlife, and livestock production. The focus of this project will be rangeland (pasture) resources, forests, and water resources. The main objective of the project will be to identify the balance between the needs of wildlife and pastoralist communities with reference to availability and access to the rangeland, forests and water resources. We will achieve this by identifying geographical, ecological and social indicators and their baselines, which can be used by conservation and economic planners to manage this landscape. We have done this by conducting community interviews and doing continuous resource and biodiversity surveys in the study area through the entire study period.

Reticulated giraffe and grevys zebra in the study area

Interviewing Maasai pastoralist

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	Community interviews	They are aware, but many still attach the value of biodiversity to tourism, instead of their own livelihoods like farming and pastoralism
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Community interviews	They are aware and willing to take the steps, and they want to have a share in the benefits.
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies	Reference to 'Vision 2030' Government development plan	
		Biodiversity values integrated into national and local planning processes	Reference to 'Vision 2030' Government development plan	National biodiversity strategy now includes economic valuation of biodiversity and natural heritage
		Biodiversity values incorporated into national accounting, as appropriate	Reference to 'Vision 2030' Government development plan	National biodiversity strategy now includes economic valuation of biodiversity and natural heritage.
		Biodiversity values incorporated into reporting systems	Reference to 'Vision 2030' Government development plan	Development plans are now including ways of mitigating biodiversity costs, especially in infrastructure development
	TARGET 3	Incentives, including subsidies, harmful to biodiversity, eliminated, phased out or reformed in order to minimize or avoid negative impacts		N/A
		Positive incentives for conservation and sustainable use of biodiversity developed and applied	Community interviews	These have been developed, including the sharing of tourism profits with local communities in the form of 'bednight fees' and lease fees where applicable
	TARGET 4	Governments, business and stakeholders at all levels have taken steps to achieve, or have implemented, plans for sustainable production and consumption…	Reference to EMCA environmental management a conservation Act.	Standards have been imposed to limit the impacts of business and industry on natural resource use and the natural environment
		… and have kept the impacts of use of natural resources well within safe ecological limits	Reference to Laikipia county water strategy	There is still unsustainable use of water and forest resources, but this is improving with better planning and law enforcement.

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	■	■	●	●		●		●	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■	■		●	■	●	■	●	●	■
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●							
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	■	●	■		●	■		
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

There were violent resource conflicts that occurred in 2017 in the study area between pastoralists and ranchers. This led to insecurity and we could not cover all the areas which were planned originally. We therefore had to change so of the survey area and this increased the costs. Also, only 70% of the grant was given at the beginning of the project and this limited the resources available to cover the new areas.

Key messages for the CBD in planning for the post-2020 Targets

The post-2020 targets should include the livelihoods and rights of local communities who are the stewards of the resource. In many areas, the exclusion of local people from natural resources like water and grazing lands for conservation purposes has compromised their rights and food security. This contravenes UN SDG Number 1, 2, and 3.

Enhanced Biodiversity through timber out-grower schemes in Malawi

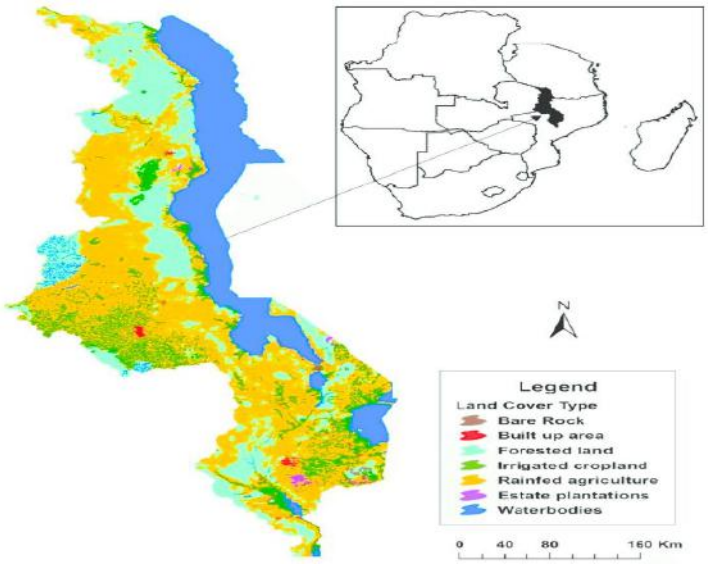
Harold Chisale[1*], Joyce Njoloma[2], Maggie G. Munthali[3]
Department of Forestry, Bunda Campus, Lilongwe University of Agriculture and Natural Resources[1*], SADC ICRAF, Chitedze Research Station, Lilongwe Malawi[2], Department of Geography, University of Pretoria, South Africa[3]

* Joined Lilongwe University of Agriculture and Natural Resources, Bunda Campus in 2015 as A Lecturer in Forestry Department after working for Malawi Government Forestry department for 7 years. He holds a BSc in Forestry from Mzuzu University, Malawi, MSc in Cliamte Change and Risk Management from University of Exeter, UK. Currently pursuing a PhD in Forest Science with University of Pretoria, South Africa.

Chisale.harold2@gmail.com

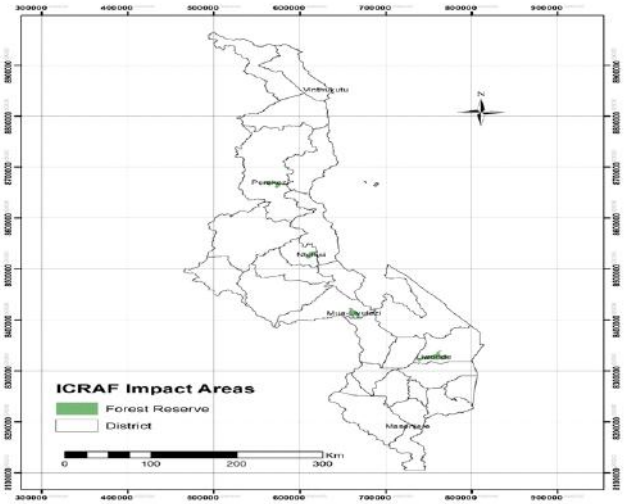
Geographic and demographic information

Map of Malawi showing Districts



Country	Malawi
Province	National
District	Karonga, Mzimba, Ntchisi, Dedza, Machinga and Chikwawa
Size of geographical area	27,522 km^2
Number of indirect beneficiaries	28,000 persons (Men:11200 persons) (Women:16800 Persons)
Dominant ethnicity	Chewa, Tumbuka, Mang'anja, Ngoni

Map of Malawi showing Impact area



Size of project area	786.03 km^2
Number of direct beneficiaries	23,609 persons (Men:11372 persons) (Women:12237persons)
Geographic coordinates (longitude and latitude)	
Dominant ethnicity	Chewa, Tumbuka, Mang'anja, Ngoni

Ecosystem Types

x	Forest	x	Grassland	x	Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Blue gum	*Eucalyptus Spp*	For poles and fuelwood and sale
Accacia	*Accacia spp*	Fuelwood and sale
Mangos	*Mangifera indica*	Fruits for food and fuel wood
Pawpaw	*Asimina triloba*	Fruits for food and sale

Accacia Tree in Chikwawa

General introduction

Malawi is endowed with a diversity of natural resources including forests, flora and fauna, fresh water and fertile soils (Government of Malawi, 2012). Majority of the forests in the country are located within rural and frequently remote areas. Malawi as one of the poorest and densely populated countries in Southern Africa makes management of natural resources such as forests a challenging task and this create unnecessary pressure on the forests resulting in forest degradation (Clarkson, 2012). Over the years, the Malawi government through the Department of Forestry has been encouraging tree planting, protection and conservation of forest resources. However, deforestation and forest degradation continue to be a major challenge despite the emphasis on forests protection and conservation by government (Kambewa and Utila, 2008). The deforestation and forest degradation are a result of uncontrolled firewood collection, infrastructure development, agriculture expansion, illegal charcoal production, shifting cultivation; urbanization, high population, and curing tobacco in the smallholder and estate sectors (Maumbeta et al. 2011; Kambewa and Utila, 2008).

Malawi government through its Forestry Department, together with other private institutions have introduced several initiatives to hot forest deforestation and degradation. As one of the research institution, International Centre for Research in Agroforestry (ICRAF) in conjunction with World Vision Malawi implemented "*Empowering Forest Dependent Communities through Commercialization of Small Scale Forestry Project*" between 2015 and 2018. The project goals were to contribute to the commercialization of small scale timber out-grower schemes and sustainable utilization of natural forests, and utilizing sustainable management practices for natural forests and timber out-grower schemes or plantations.

Through timber out-grower scheme project, ICRAF Malawi helped smallholder farmers to substantially contribute to their income, provide markets and access to technical services in the production and use of innovative cocking stoves, and inputs such as tree seedlings, fertilizer and tree seeds. As a result of the entry and establishment of out-grower schemes into forestry industry, there is need to examine farmers' knowledge and perceptions towards timber out-grower schemes. The level of their knowledge and how they understand and perceive it will help different stakeholders to upscale the approach in the future. This study, therefore, assesses the farmers' knowledge, attitudes and perceptions towards timber out-grower schemes in Malawi.

Mango Seedlings at Department of Forestr Nursery, Bunda

Farmers produce Briquette mbaula ready for sale in Liwonde

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	Number of people participated in the tree out grower schemes	23, 609 farmers participated in the tree out grower schemes and valued biodiversity.
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Number of people trained in biodiversity conservation and management	80% of the farmers participating in tree out grower scheme were trained in forest management and biodiversity conservation
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies		
		Biodiversity values integrated into national and local planning processes		
		Biodiversity values incorporated into national accounting, as appropriate		
		Biodiversity values incorporated into reporting systems		
	TARGET 3	Incentives, including subsidies, harmful to biodiversity, eliminated, phased out or reformed in order to minimize or avoid negative impacts	Number of farmers who uses innovative cooking stoves substituting charcoal /Number of farmers producing fuel saving cooking stoves	3761 households producing fuel saving stoves while 12237 household using fuel saving stoves
		Positive incentives for conservation and sustainable use of biodiversity developed and applied	Number of farmers who received the free tree planting materials and implements for tree planting	23,609 farmers received and planted tree seedlings
	TARGET 4	Governments, business and stakeholders at all levels have taken steps to achieve, or have implemented, plans for sustainable production and consumption…		
		… and have kept the impacts of use of natural resources well within safe ecological limits		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
									
Strategic Goal C			Strategic Goal D			Strategic Goal E			
									

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

Any difficulties you found during your assessment

The baseline was a problem as it was not provided

Key messages for the CBD in planning for the post-2020 Targets

IPSI should be continued for post-2020 target and evolved into a new phase to consolidate the potential capacity of existing members to scale up the work to conserve and revitalize SEPLS around the world.
As described in difficulties above, the challenge we found through network is that most of the members did not have baseline data which makes them difficult to assess.

Ancient Grains Varieties provide new livelihood in Tuscany, Italy

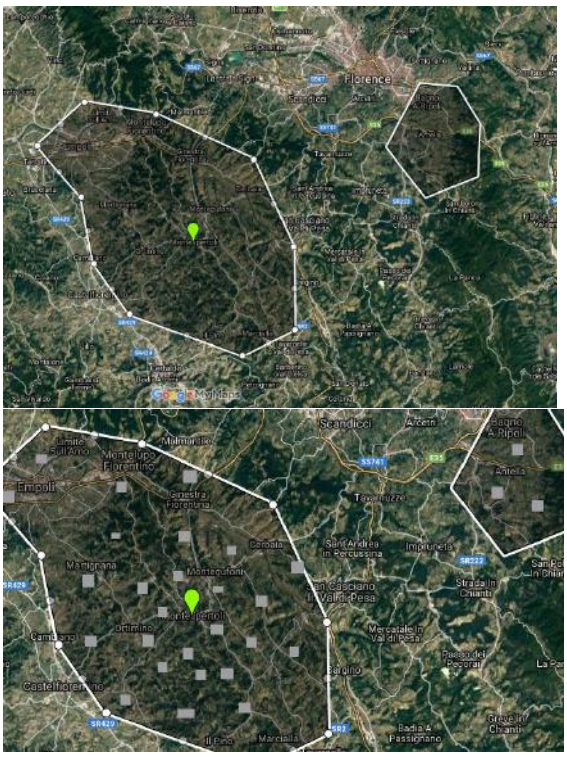
Guido Gualandi
Associazione Grani Antichi Montespertoli, Podere Gualandi, Gonzaga University

Guido Gualandi teaches History of Food in the Mediterranean at Gonzaga University in Florence and Accent International. He studied at the University of Florence Italy and EHESS in Paris France. He worked as an archaeologist in France, Italy and the Middle East. He owns a farm in Tuscany and is the president of the Ancient Grains Association in Montespertoli.

guido@guidogualandi.com

Geographic and demographic information

Country	Italy
Province	Tuscany
District	Florence Province
Size of geographical area	3.514 km^2
Number of indirect beneficiaries	1.014.423 persons (Men: 485.845 persons) (Women: 528.578 persons)
Dominant ethnicity	Italian



Size of project area	10 km^2
Number of direct beneficiaries	250 persons (Men: 130 persons) (Women: 120 persons)
Geographic coordinates (longitude and latitude)	43°38'31.0"N 11°07'10.9"E
Dominant ethnicity	Italian

Ecosystem Types

	Forest		Grassland	x	Agricultural		In-land water
	Coastal		Dryland		Mountain	x	Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Gentil Rosso Wheat (picture)	*Triticum Aestivum*	Local variety of Wheat cultivated for bread
Emmer wheat or hulled wheat	*Triticum dicoccum*	Farro medio, cultivated for soup or pasta
Einkorn wheat	*Triticum monococcum*	Piccolo Farro cultivated for soup or pasta
Andriolo wheat	*Triticum Aestivum*	Local variety of Wheat cultivated for bread
Sieve wheat	*Triticum Aestivum*	Local variety of Wheat cultivated for bread

General introduction

The Grani Antichi association project sponsors and controls sustainable agriculture in the province of Florence, Tuscany, to increase biodiversity in wheat and local flora and fauna. It aims to provide the consumer with better quality products with several health benefits, to increase biodiversity and respect the ecosystem while providing livelihood to those involved in production and transformation.

The initiative is characterized by the unique cooperation between Florence University, millers, bakers, farmers who cultivate ancient and biodiverse varieties of wheat called Andriolo, Inallettabile, Sieve, Frassineto, Autonomia B, Verna, Gentil Rosso, Farro monococco and dicocco, that are grown, milled and transformed locally. The association has also introduced other cultivations such as rye, hemp, chickpeas, fava beans and other traditional rotation crops.

The association controls 500 hectares and several other hundreds are cultivated in the same way independently by other farmers. The quantity of wheat sold at the prices suggested by the association were above 200.000 kg in 2017, double the amount of 2015 and 20 times more than 2014. This price is more than double the market price for organic wheat and four times the price of conventional wheat.

Challenges to the project initially consisted in educating the stakeholders involved. At present, the main challenges are the proliferation of wild boars who eat and destroy crops and managing the increased number of farmers and products involved. The association is focusing on replicating our model in other towns, rather than expanding itself.

Ancient rain wheat field in

Ancient grains and Montespertoli

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	People who regularly buy the bread pasta etc. are aware of what we do to support biodiversity.	At least 1500 students and their families. At least 5000 poople who eat the bread regualrly. And the rest who buy the products and read our newsletter. 10.000 people directly involved. More people involved indirectly.
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Groups of people involved in ancient grains cultivation who are in contact with the association.	100 farmers in 10 different projects and 14 communes in Italy. People who work in the transformation chain. Government officials who believe in the project. Around 2000 people.
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies	Councils who have integrated our biodiversity values.	6 councils and one region have integrated our value in their development strategy.
		Biodiversity values integrated into national and local planning processes	Councils who have planned to incorporate our guidelines.	Specifically both Montespertoli and Montelupo councils have voted a resolution to use their land respecting our policies (no insecticides fertilizers and pesticides). School canteens use our biodiverse products. Other 6 councils are trying to implement the values.
		Biodiversity values incorporated into national accounting, as appropriate	The association is going through registration of ancient varieties of wheat.	2 new varieties of wheat, previously disappeared, were accepted into the regional and national registry. So they now can be sold and reproduced legally. Many others originally lost seeds are in the process of being registered.
		Biodiversity values incorporated into reporting systems	biodiversity grain in national system reporting.	3 varieties registered and several other in process.
	TARGET 3	Incentives, including subsidies, harmful to biodiversity, eliminated, phased out or reformed in order to minimize or avoid negative impacts		
		Positive incentives for conservation and sustainable use of biodiversity developed and applied	Incentives by the government received by farmers and the association.	Subsidies were given to members of our association to buy agricultural machinery and to create a seed bank that can select, store, clean and resell our many varieties of wheat and other seeds. The amount is up to 500.000 euros. The government will finance any investment up to 50%. Incentives are given annually to the association to sponsor and market biodiversity of wheat.
	TARGET 4	Governments, business and stakeholders at all levels have taken steps to achieve, or have implemented, plans for sustainable production and consumption…	Documents issued by local and regional governments and of local stakeholders.	Specifically, the City council of Montespertoli, Montelupo and Certaldo and the Tuscan region have incorporated some of our biodiversity values into their guidelines. Montespertoli and Montelupo have committed their schools and arable land to ancient grains cultivations and rotation following our practices.
		… and have kept the impacts of use of natural resources well within safe ecological limits	The association checks that all farmers respect our rules.	Adopting our method means no use of herbicides insecticides and fertilizers, increasing biodiversity of weeds and insects as a consequence in more than 500 hectares.

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●	■	●	■		●	●	●	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■	■	●	■			●	●	●	■
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	●	●					●	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●	●			●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Assessing the results numerically can be a challenge, especially some indicators. It is hard to decide how many people to include.

Key messages for the CBD in planning for the post-2020 Targets

Sustainable farming and biodiversity can only succeed if there is a cooperation among all stakeholders. Governments and local authorities can help substantially by sponsoring investments and helping educating the people. Our experience proves that schools are essential for educating the population. Children can educate their parents. The ancient grain project was successful initially because of the enthusiasm of a group of volunteers, then because the right price was given to farmers, then because of local policies who helped selling and marketing the products. Finally financial help has arrived form the government for new investments. The project still needs to be helped by appropriate policies, for example control of wild boars population. And last but not least, incentives and policies are useless if there is no economical viability, in our case, the policies and incentives, associated with the school buying the products is responsible for the success of the project.

COMMUNITY-BASED PASTURE CONSERVATION: A CASE OF KYRGYZSTAN

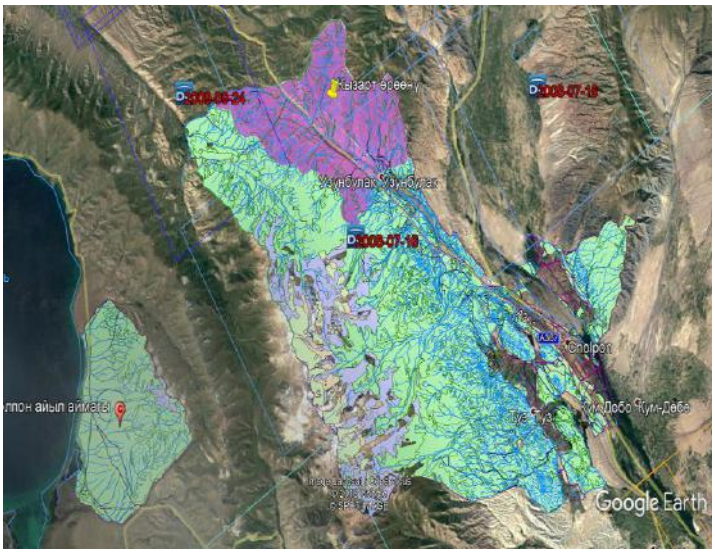
Anara Alymkulova,
Executive Director of "Institute for Sustainable Development Strategy" Public Fund

Anara holds Master of Social Work with concentration on Community & Organizational practice from Michigan State University. She has over 18 years of experience in community-oriented programs focusing on capacity building, outreach, and empowerment around social/biocultural issues.

anaraal@gmail.com

Geographic and demographic information

Country	Kyrgyzstan
Province	Naryn province
District	Kochkor
Size of geographical area	45,200 km^2
Number of indirect beneficiaries	34 822 persons (Men: 17690 persons) (Women: 17132 persons)
Dominant ethnicity	Kyrgyz



Size of project area	52,928 km^2
Number of direct beneficiaries	8,723 persons (Men: 4,432 persons) (Women: 4,291 persons)
Geographic coordinates (longitude and latitude)	42.04929° N, 74.98168° E
Dominant ethnicity	Kyrgyz

Ecosystem Types

X	Forest	X	Grassland	X	Agricultural		In-land water
	Coastal	X	Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Sheep (*koi*)	Ovis aries	Sheep farming is the ancient leading branch of agriculture in Kyrgyzstan. This is due to the peculiar natural and economic conditions associated with the mountain character of the relief. The presence of huge areas of mountain pastures led to the development of sheep breeding. Sheep are bred in all climatic zones of the republic. Sheep breeding in high mountain regions is one of the leading branches, which is the main source of income for the villagers.
Cow (*ui*)	Bos taurus	Cows are bred almost in all regions, in the suburban zone - in the dairy sector, and in the mountain areas - meat. Livestock products are widely used as raw materials in the processing industry and as a food product in fresh form.
Horse (*at*)	Equus caballus	Kyrgyz horses are small hardy animals, coping well with harsh climate and terrain conditions.
Yak (topoz or kotos)	Bos grunniens	Semiwild herbivores, common in the highlands of Kyrgyzstan (Naryn, Issyk-Kul and Osh provinces). Yaks live at an altitude of 2000 to more than 6,500 meters at sea level. No other species of animals (horses, sheep) can compare with yaks for a full-fledged use of high-mountain pastures.

General introduction

The Cholpon rural municipality is located in the northern part of Kyrgyzstan (on the territory of Kochkor district of Naryn province). The total area of the municipality is 52,928 hectares, of which natural pastures make up 49,386 hectares. The total population (2017) is 8,723 people. The main part of the farmland of the territory is made up of natural pastures. The main part of the farmland of Cholpon rural municipality territory is made up of natural pastures.

Most pastures are clogged and prone to erosion. Particularly alarming is the condition of the village pastures located around villages with an area of 9,200 hectares. These pastures are subject to excessive grazing, constantly trampled by road. In addition, pastures are strongly affected by climate change factors, so in recent years, the number of snow and rainfall has decreased, which has led to aridity of the soil, which affected the growth of pasture plants. The local population views pastures as an inexhaustible resource, not using traditional methods, the culture of using pastures and modern zoo technical methods, which led to the degradation of pastures. The pastoralists do not use traditional methods of nomadic movement and remain in the same place all season, which does not allow the pasture plants to recover.

The main objective is to empower local communities to increase their resilience and adaptation to climate change through revival and preservation of traditional pastoralism practices in Cholpon rural municipality. Introduction of community-based pasture conservation based on traditional knowledge and practices, interaction of all stakeholders to enhance the adaptive potential of the local population, including youth, to climate change by creation and development of Community Climate Adaptation Center.

Activities employed

Creation of Community Climate Change Adaptation Center was created in the Cholpon municipality to revive indigenous and traditional systems and climate adaptation strategies by Participatory Rural Appraisal approach to map traditional knowledge and practices reducing the vulnerability of the local community to the effects of climate change, reveal the available tools of collective solutions for climate change, and pasture management;

Conducting inventory and documenting the cattle and pastures to develop pasture management and conservation strategy and introduce it into practice;

Revival of traditional knowledge and customs of nomadic migration to remote pastures and conservation of pastures by combination of modern methods of pasture management and traditional practices;

Community campaigns and public meetings to systematize traditional knowledge and **popularize** it among other pastoral committees in the region;

Integration of climate monitoring system based on the best practices of traditional pastoralism.

Reviving of 9000 hectares of the Kyzart pasture near the village by reviving the traditional practice of conservation of pastures.

Reviving of intergenerational connections and passing traditional ecological knowledge (TEK) and ancient pastoralist culture to young generation of Cholpon municipality (young herders and local schools children).

Caption: ISDS Archive

Caption: ISDS Archive

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	We used both qualitative and quantitative indicators such as a number of people participated at community/village meetings. Several community meetings on a village and municipality level were conducted using participatory approach. Approximately, 50% of total population took part at the meetings in 7 villages of Cholpon municipality. (about 4,500 villagers). Seven local schools of the municipality were involved in the project activities, over 100 school students were informed about values of biodiversity. Qualitative indicators – changes in behavior of villagers and their role and support of values of biodiversity, incl. careful attitude to lands/pastures by using traditional knowledge. Measurement – observation of changes in behavior and attitudes.	Over 4,500 villagers are informed about values of biodiversity, particularly about importance of revival of rangelands/pastures based on indigenous/traditional knowledge and practices. Over 100 school children learned more about local history, documented local legends and myths, now they become more concerned about pastures, wild and domisticated animals, have a sense of place in relationships with nature, with the past and elder generations. A number of informational materials were produced and dissiminated among local villagers and other pasture users associations around the country. Local ppastoralists started using the knowledge and practices inherited from the experiences of their ancestors to sustainably maintain their livelihoods and improve their resilience to the impacts of climate change.
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Direct work with local schools mostly located in the remote rural areas, creation and maintenance of biocultural/ecological centers opened in schools (biodiversity values included in the school programs). Intergenerational transmission of biodiversity values/traditional knowledge from elders/custodians to younger generations. Capacity building of pasture users/herders/farmers on innovative and traditional methods of husbandry	Biodersity values/community-based range lands conservation issues included in local development plans in targeted areas of Naryn and Chuy provinces, particularly, 5-year plans of pasture/range lands use of rural municipalities.
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies	Awareness raising among a National Government, local stakeholders about degradation issues of pastures through participation of our organization in National Coordination Council of National Pasture Users Association "Kyrgyz Jaiyty"; Capacity building of pasture users/herders on a district and municipal level on innovative and traditional methods of pasture use.	Pasture degradation issues are taken into account by the national and local government and included in the local development plans in the targeted areas

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●?	●	■	●	●	●		■?	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●	●?	●	●	●	●	●	●	●	●?
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●	●	●	■	■	■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■		●	●	●	●	■	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

It was difficult to measure of how biodiversity values are integrated in national plans as my organization is working mostly on a grass root level.

Key messages for the CBD in planning for the post-2020 Targets

IPSI should have a special orientation program for building capacity of new members on SEPLS model to expand it around the world.

Conservation of Plant Diversity in Agro-Ecological Production Landscape in Malawi

Prof James H Seyani*
National Herbarium & Botanic Gardens of Malawi (NHBG), P O Box 528, ZOMBA, MALAWI

Director General of NHBG with BSc (Agric.)-University of Malawi, MSC (Systematics)-University of Reading, UK and D.Phil (Systematics) – Oxford University (UK). Active negotiator for the CBD and its Protocols and first Chairman of CBD-SBSTTA. Founding member of IPSI. Satoyama researcher.

seyanijh@aol.com

Geographic and demographic information

Country	Malawi
Province	Central
District	Lilongwe
Size of geographical area	6,159 km^2
Number of indirect beneficiaries	1 346 360 persons
Dominant ethnicity	Malawians

Size of project area/study area	5.85 km^2
Number of direct beneficiaries/	300 people from 50 smallholder farms
Geographic coordinates (longitude and latitude)	-13.73707, 33.81401
Dominant ethnicity	Malawian

Ecosystem Types

	Forest		Grassland	x	Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

Common name (*Local name*)	Scientific name	Description
Maize	*Zea mays*	Widely grown in pure or mixed stands for food, feed and sale. Dry maize stalks are grazed by cattle, goats and sheep in dry season.
Beans	*Phaseoulus vulgaris*	Widely grown as protein source and for sale. Grown both as pure or mixed stands. Improves soil fertility through nitrogen fixation.
Groundnuts/Peanuts	*Arachis hypoaea*	Grown for food and oil from seeds, mainly as pure stands. Improves soil fertility through nitrogen fixation.
Velvet bushwillow	*Combretum molle*	Indigenous tree found in farmers' fields and important for building materials, firewood and fodder.
Camel-foot/monkey fruit	*Piliostigma thonningii*	Indigenous tree found in farmers' fields and important for building materials, firewood and fodder. Pods edible and liked by grazing animals.

General introduction

Malawi is an agriculture-based economy where 90% of the farmers are smallholder farmers who grow different crops for food and sale. The land they cultivate once flourished with rich plant diversity. But today growing population and increased demand for land for food and fodder, monocultures, building materials and firewood have destroyed many plants and vegetation. However, the smallholder farming land continue to preserve some indigenous plants which grow together with their crops. This practice has led to preservation of many indigenous plants across the agro-ecological production landscapes in Malawi.

The overall objective of the project is to study the conservation of plant diversity in the agro-ecological landscapes in Lilongwe, Malawi, specifically:

a. To study plants farmers preserve on their fields; b. To document tree species and crops that grow in farmers' fields; c. To find out the main reasons why farmers prefer some indigenous plants over others; d. To study the role tree plants play in providing fodder for domestic animals such as goats and cattle during the dry season; e. To find ways and means of encouraging farmers to preserve more plant diversity in their fields.

Data collections involves interviews with farmers in the study areas in Lilongwe. Quadrats measuring 25 x 25 meters are used to document crops and trees growing in 50 farmers' fields. The study also involves the survey of domestic animals that feed on these trees and crop residues. The studies are carried both in dry and rain seasons.

Indigenous Trees in Farmer's Field with grazing cattle in Lilongwe, Malawi

Trees *of Combretum molle* in farmer's field in Lilongwe, Malawi

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	Participation of the farmers in the interviews	50 smallholder farmers took part in the interviews.
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Understanding of farmers on importance of plant diversity in their fields.	Farmers are starting to preserve more plants and planting some nitrogen fixing plants in their fields
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies	Extension Planning Areas (EPAs) have been established by Ministry of Agriculture where biodiversity values are being taught to farmers.	With help of agriculture extension officers, some farmers are practicing conservation agriculture.
		Biodiversity values integrated into national and local planning processes	Same as above	Same as above
		Biodiversity values incorporated into national accounting, as appropriate		
		Biodiversity values incorporated into reporting systems		
	TARGET 3	Incentives, including subsidies, harmful to biodiversity, eliminated, phased out or reformed in order to minimize or avoid negative impacts		
		Positive incentives for conservation and sustainable use of biodiversity developed and applied		
	TARGET 4	Governments, business and stakeholders at all levels have taken steps to achieve, or have implemented, plans for sustainable production and consumption…		
		… and have kept the impacts of use of natural resources well within safe ecological limits		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●		●	●		●	●	●	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
	●	●	●	●	●		●	●	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●					●		
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		●	●		●			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

The study areas are private property for the smallholder farmers who have the right to maintain tree species on their land or not. Sometimes trees are harvested for firewood and building materials when such trees play a vital role in reducing rainfall impact on the soil thus reducing soil erosion and improving water infiltration; while other leguminous trees such the Acacia species fix nitrogen that is beneficial to the crops. The small size of the study area makes it difficult to apply the CBD Aichi Biodiversity Targets and Indicators, as well as the UN SDGs.

Key messages for the CBD in planning for the post-2020 Targets

The Targets and Indicators are very important and should become standard tools for assessing biodiversity status. They should therefore be maintained as long-term assessment tools and beyond 2020. Parties should share their experiences in the use and application of the Targets and Indicators locally, regionally and nationally as well as across different ecosystems with other Parties through the CHM. Furthermore experience from Parties should help refine further the current Targets and Indicators.

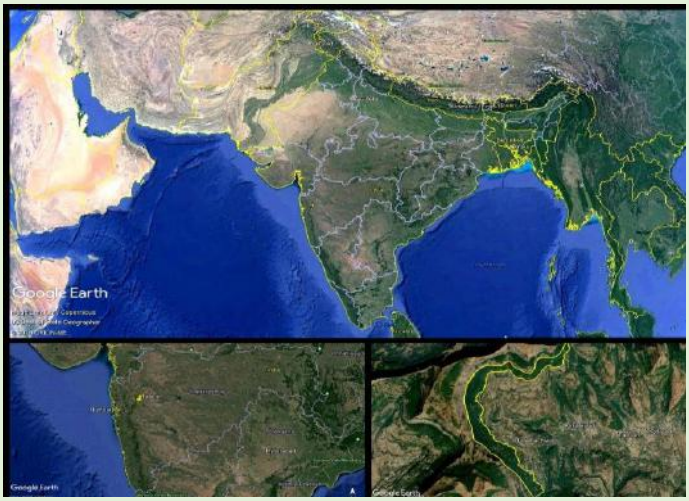
Saving forests for business, climate and communities in the northern Western Ghats of India

Sarnaik Jayant*, Godbole Archana Dr., Hiremath Umesh Mr.
Applied Environmental Research Foundation (AERF), India

Jayant Sarnaik is founder member and joint director of AERF. Mr. Sarnaik has 18 years of experience in community-based conservation in the Western Ghats of India. His area of expertise lies in developing innovative approaches and solutions to address the cross-cutting issues of energy, biodiversity and climate change.

jayantsarnaik@aerfindia.org

Geographic and demographic information



Country	India
Province	Maharashtra
District	Pune
Size of geographical area	30 km^2
Number of indirect beneficiaries	10,000 Men: approx. 5,500 Women : approx. 4,500
Dominant ethnicity	Hindu-Mahadeo Koli – Indigenous community

Size of project area	10 km^2
Number of direct beneficiaries	2,356 Men: Approx-1,200 Women: 1,156
Geographic coordinates (longitude and latitude)	19°17'54.24"N 73°45'57.87"E
Dominant ethnicity	Hindu, Mahadeo Koli -indigenous community

Ecosystem Types

☑	Forest	☑	Grassland	☑	Agricultural		In-land water
	Coastal		Dryland	☑	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Indian giant squirrel	*Ratufa indica*	Canpoy dependent mammal, important disperser and indicator of healthy forest
Haritaki	*Terminalia chebula*	Important medicinal tree in Indian system of traditional medicine(Ayurveda). Economically very important
White cheeked barbet		Bird endemic to the Western Ghats of India.
South western langur	*Semnopithecus hypoleucos*	Primate species threatened by habitat loss mainly forests.
Tytlers leaf warbler	*Phylloscopus tytleri*	Bird belonging to IUCN redlist category of Near Threatened (NT)
Shendri	*Mallotus phillipinensis*	Economically important tree. Fruits used for natural color extraction.

General introduction

This is a new project site in the northern Western Ghats identified for long term conservation by AERF. Important characteristics of the site include- forest dependent communities, presence of community owned and managed healthy forest, presence of many endemic birds and mammals indicating need for long term conservation. Key challenges faced by the location and people are- lack of better economic opportunities related to forests, degradation of forests due to energy needs, migration of young generation. AERF has initiated a project at this site about nine months ago for building a strong business case for saving these forests. Abundant availability of the medicinal tree- *Terminalia chebula* fruits of which find application in herbal tea making in Europe can attract private sector investment in conservation and sustainable use of the forests from this region. The forests have old growth trees which store and sequester large amount of carbon. The local communities have been traditionally collecting and selling fruits of *Terminalia chebula*. Thus the site has all the necessary ingredients for linking conservation with green economy. We have so far completed detailed biodiversity assessment, resource assessment of target species- Terminalia chebula ,and energy profile surveys in 3 villages from this site.

Valley forest in Nimgiri-Talmachi

Local farmer collecting fruits of *Terminalia chebula*

Contribution to Aichi Biodiversity Targets' Strategic Goal A

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal A	TARGET 1	People are aware of the values of biodiversity	Socio-economic survey among the target communities.	Local communities care only about economically important plants and non-timber forest produce.
		People are aware of the steps they can take to conserve and sustainably use biodiversity	Awareness generation and orientation workshops, cost benefit analysis of destructive use.	After knowing the intricate relationship between biodiversity conservation , food security and sustainable livelihoods and receiving compensation for sustainable biodiversity use, the communities have agreed to adopt sustainable forest management practices.
	TARGET 2	Biodiversity values integrated into national and local development and poverty reduction strategies		
		Biodiversity values integrated into national and local planning processes		
		Biodiversity values incorporated into national accounting, as appropriate		
		Biodiversity values incorporated into reporting systems		
	TARGET 3	Incentives, including subsidies, harmful to biodiversity, eliminated, phased out or reformed in order to minimize or avoid negative impacts		
		Positive incentives for conservation and sustainable use of biodiversity developed and applied	Stakeholder analysis, threat assessment, opportunity costs of conservation survey	It turns out that at this particular site, there is no understanding of economics of deforestation however it is important to provide direct incentives to local communities so that they are able to perceive the benefits of conservation and can commit to conservation as a land use. AERF has succeeded in convincing the local communities at this site for long term conservation in lieu of livelihood opportunties and direct incentives.
	TARGET 4	Governments, business and stakeholders at all levels have taken steps to achieve, or have implemented, plans for sustainable production and consumption…	Feasibility study for setting up supply chain driven conservation initiative. Consultations have been conducted with financial institution such as Credit Suisse for support	AERF is working with UK's leading herbal tea maker for establishing supply chain of Haritaki. A processing facility will be set up for value addition and maximizing economic benefits from the resource which will result in higher income for the local communities.
		… and have kept the impacts of use of natural resources well within safe ecological limits		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
		●	●	●					
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■			■						
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

		●						
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			●		●		●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

No

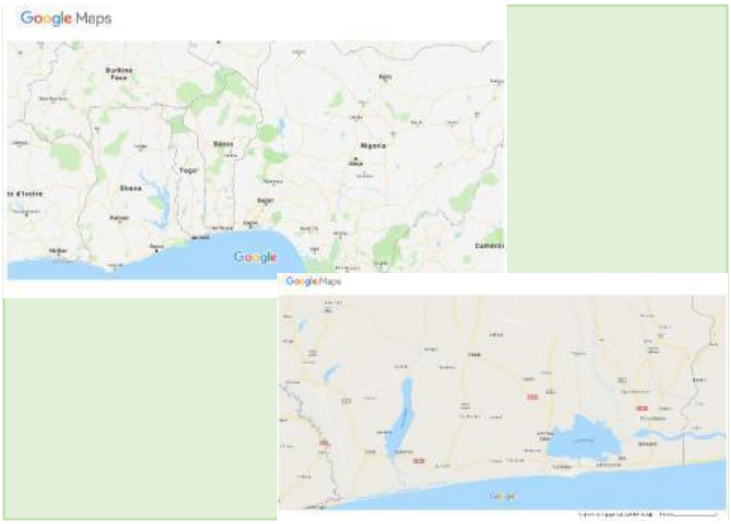
Key messages for the CBD in planning for the post-2020 Targets

It is becoming increasingly difficult to emphasize the importance of biodiversity as life supporting system on earth. Climate change has dominated the agenda of the discussion at high level meetings and it continues to get maximum attention from the key stakeholder groups including governments. It is critical that a major initiative is undertaken to mainstream biodiversity in important economic sectors otherwise it will be difficult to achieve the targets set for 2020 and beyond.

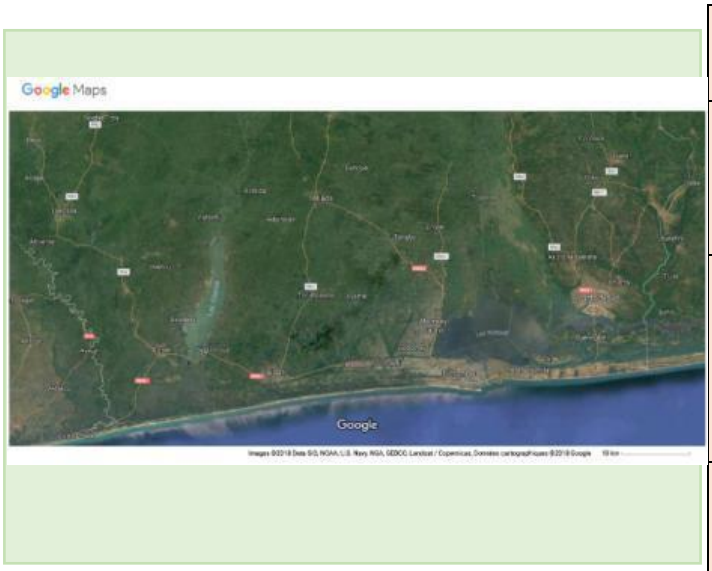
Community Integrated Management Of Migratory Species (West African Manatee And Sea Turtles) And Their Habitat In The Coastal Region In Benin

Josea Sagbo DOSSOU BODJRENOU
Nature Tropical NGO
Mr Josea S. DOSSOU BODJRENOU is a Naturalist - veterinarian and working for more than
twenty years in the conservation of migratory species, communities' management of Ecosystems, audiovisual for the conservation of nature and the promotion of Ecotourism in the wetlands and whale watching in Benin.
Contact address: ntongmu@yahoo.com, info@naturetropicale.org

Geographic and demographic information



Country	Benin
Province	Ouémé, Littoral, Atlantique, Mono
District	Oueme and Mono Valley
Size of geographical area	9 462 km^2
Number of indirect beneficiaries	4 297 250 persons (Men: 2,062,680 persons) (Women: 2,234,570 persons)
Dominant ethnicity	Wémé, Fon, Goun Mina, Pedah



Size of project area	3 460 km^2 (91,600 ha)
Number of direct beneficiaries	2 623 458 persons (Men: 1,227,778 persons) (Women:1,395,679 persons)
Geographic coordinates (longitude and latitude)	RAMSAR Site 1017; East Complex 6°21'48''N - 6°57'N, 20°2E - 2°45'E; RAMSAR site 1018: West Complex, 47,500 ha at 6°16'48''N - 6°57'N, 1°40'E - 2°20'E
Dominant ethnicity	Wémé, Fon, Goun Mina, Pedah

Ecosystem Types

X	Forest		Grassland	X	Agricultural	X	In-land water
X	Coastal		Dryland		Mountain	X	Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
West African manatee	*Trichechus senegalensis*	Present in the rivers in RAMSA site 1017 and 1018 and are threatened when there are migrated
Olive ridley sea turtle	*Lepidochelys olivacea*	Common on all the beaches from August to November. There are captured by fishermen, their eggs are collected by the communities
Leatherback sea turtle	*Dermochelys coriacea*)	Same like Olive ridley
Green sea turtle	*Chelonia mydas*	Captured by fishermen but don't lay eggs in Benin beaches.
Hawksbill sea turtle	*Eretmochelys imbricata*	Same like Green sea turtle

General introduction

The geographical area covered by the project is located in the coastal region, the RAMSAR sites 1017 and 1018, including the municipalities of Sèmè, Cotonou, Abomey, Ouidah and Grand Popo. It extends about 125 km from the Benin-Togo border in the West (at Hillacondji) and the Benin-Nigeria border in the East (at Sèmè - Kraké). All this region are habitat for marine turtles. For the migration corridor of the West African manatee, the project concerns communities in the Ouémé Valley. In general, these ecosystems and their resources are threatened for various reasons such as the population explosion and its direct pressure on natural resources, and the lack of basic education and transfer of knowledge from one generation to another coupled with ignorance of the need for sustainable management of resources. Species that live in unprotected ecosystems are victim of intensive and illegal poaching by fishermen, coastal and wetlands residents.

The general objective is to contribute to sustainable resources management by improving the livelihoods of poor communities through integrated and participatory management. The specific objectives are to: Raise awareness among local communities and authorities; Strengthen the capacities of the communities including the young; Preserve and restore ecosystems; Encourage effective mitigation to climate change; Develop alternative activities generating benefits to local communities; Improve governance in natural resource management and synergy actions between actors. Activities include: Organization of awareness campaigns; Capacity building for stakeholders (local authorities, Eco-guards); Eco-mapping and participatory videos in different ecosystems or key sites; Organization of the training of young leaders "Seed for the Future"; Development of alternative livelihood activities generating benefits to local communities (ecotourism, sustainable energy); Organization of advocacy and lobbying for enforcement of laws on flora and fauna; Monitoring of natural resources (marine turtles, West African manatee); Development of useful partnerships; Production and distribution of audiovisual documentaries on nature, environment and biodiversity.

Oueme valley

Babies of marine turtle release on the beach in Grand-Popo

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero		
		The loss of all habitats is at least halved and where feasible brought close to zero		
		Degradation and fragmentation are significantly reduced		
	TARGET 6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches		
		Recovery plans and measures are in place for all depleted species		
		Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems	Relation between the fisheries and the capture of threatened species such as marine turtles, African manatee and their vulnerable ecosystems	The traditional technics of fishing have adverse impacts on threatened species and vulnerable ecosystems. The implementation of the laws and regulation are follow
		The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided	Number of awareness sessions and communities dialogue on the implementation of the regulation on fishing	In the flooding period, all stakeholders are active to avoid overfishing in the coastal area and in the wetland
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity	Through awareness and communication	Areas under agriculture in the wetlands are managed sustainably, ensuring conservation of biodiversity
		Areas under aquaculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity		
	TARGET 8	Pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity	Monitoring of the pollutants use in the wetlands for agriculture and for fishing	The communities are aware to reduce the use of pollutants for agriculture and fishing to the levels that are not detrimental to ecosystem function and biodiversity
		Pollution from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity		
	TARGET 9	Invasive alien species identified and prioritized	Invasive alien species like Jacinth (Eichhornia crassipes) have impact of navigation and communities activities	Community management of this invasive alien are undertaken
		Pathways identified and prioritized		
		Priority species controlled or eradicated		
		Introduction and establishment of IAS prevented		
	TARGET 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and*" ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●	■	■	●	●	■	■	■	●1
Strategic Goal C			Strategic Goal D			Strategic Goal E			
●	●	■	●	■	●	●	●	■	■

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	■		●	■	■			
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	●	●	■	●	●	●	■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Poor enforcement of regulations; low technical capacity and weak governance and policy in natural resource management, lack of basic education and knowledge transfer from one generation to the next, coupled with ignorance of the need for sustainable resource management are a serious threat to resources and monitoring activities.

Key messages for the CBD in planning for the post-2020 Targets

IPSI should be continued for post-2020 target and evolved into a new phase to consolidate the potential capacity of existing members to scale up the work to conserve and revitalize SEPLS around the world. Especially some focus have to be address to African' countries.

Living in harmony with nature must enter the collective consciousness. So all stakeholders must work for the sustainable management of nature and its resources by actively working for the enforcement of both international and national regulations.

Developing a Localized and Area-based Conservation Priority Setting of the Useful Plants among Alangan Mangyans of Halcon Range, Mindoro Island, Philippines

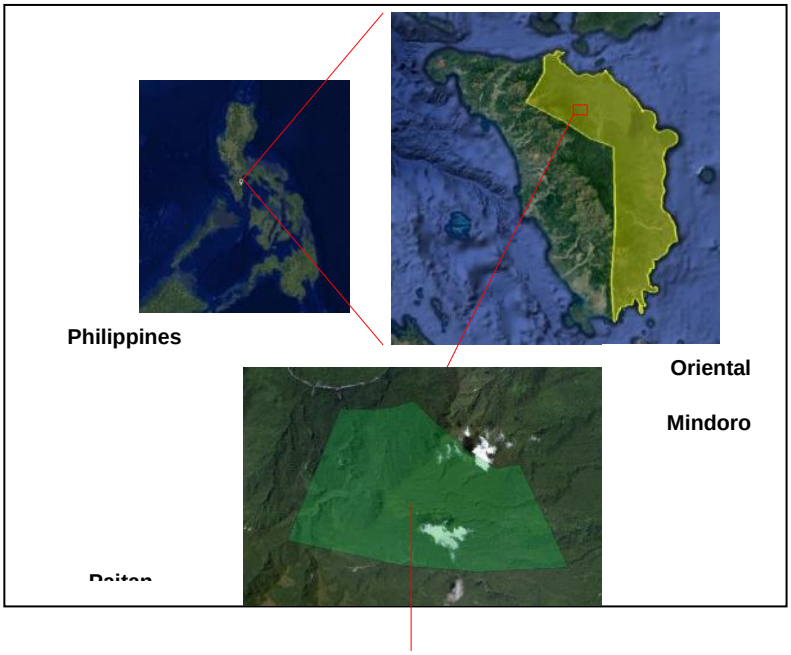
Elaine Loreen Villanueva, Inocencio E Buot Jr.*

University of the Philippines Los Baños and University of the Philippines Open University

Joined the University of the Philippines in 1998. He holds a BSc in Agriculture (Cebu Technological University), MSc in Botany (University of the Philippines) and PhD in Ecology (Chiba University). He also underwent postdoctoral research on satoyama landscape dynamics at the Forestry and Forest Research Institute in Kyoto.

iebuotjr@upou.edu.ph

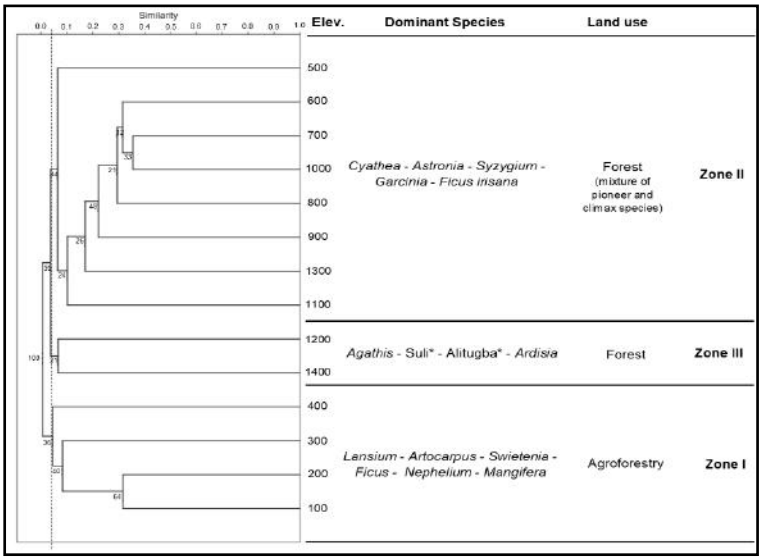
Geographic and demographic information



Country	Philippines
Province	Oriental Mindoro
District	Naujan
Size of geographical area	503.10 km^2
Number of indirect beneficiaries	102,998 persons
Dominant ethnicity	Mangyans

Size of project area	320 km^2
Number of direct beneficiaries	1,519 persons
Geographic coordinates (longitude and latitude)	13° 15′ 58.4″ N 121° 5′ 37″ E

Dominant ethnicity	Alangan Mangyans



Cluster diagram showing the forest zones and land uses along elevational

Ecosystem Types

X	Forest		Grassland	X	Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

Common name (*Local name*)	Scientific name	Description
Almasiga	*Agathis philippinensis*	A large endemic tree in the Philippines noted for its expensive resin collected by locals. It has been listed as threatened species both in the national list and in the IUCN (Critically Endangered).
Kalingag	*Cinnamomum mercadoi*	A small tree used as medicine by local people
Balobo	*Diplodiscus paniculatus*	A native of lowland rainforest in the Philippines and is largely harvested for timber. It has high frequency of harvesting in the project site.
Betik	*Hopea plagata*	A large tree with available threat status in the Philippines, as well as in IUCN (Critically Endangered).

Agathis

General introduction

Localized and area-based conservation priority setting has been a useful tool in conservation strategy. This study is the first attempt for a localized conservation priority setting of plants in the Philippines, integrating both ecological and socio-cultural dimensions of biodiversity. This study aimed to set conservation priorities of plant species that are useful to the Alangan people of Mindoro Island, southern Luzon, Philippines, a unique biogeographic region. Alangan tribes are part of the ethnic group, Mangyans. In the Philippines almost a hundred ethnic groups exist throughout the archipelago. Each group has its unique traditional practices in interacting with nature.

Key informant interviews were done to list the useful plants and the frequently harvested ones by the people as these could be vulnerable to various threat categories of the IUCN. Then actual field ecological assessment was conducted to verify the status of the plants in the nearby forest ecosystem. Using a point scoring procedure, seven criteria of the index (Conservation Priority Index) were applied to the important plant species for conservation priority setting (Table 1). This index utilized available bibliographic information, field surveys, and vegetation surveys. A multivariate analysis using non-linear principal component analysis was also performed.

Among the 199 plants used as food, medicine, fodder, etc., 72 species were frequently harvested. Applying the Conservation Priority Index, 17 species were categorized as medium priority plants for conservation at the local level and the rest were of low priority as identified from the non-linear PCA. None among the species got a high priority risk, signifying sustainable harvesting or utilization of forest products by the Alangan IPs. This result supports the various claims that IP practices are benign to nature. Nevertheless, there is a need for regular monitoring using the developed instrument to ensure conservation of plant biodiversity as well as the Alangan agroforestry culture.

Table 1. Conservative priority classification based on CPI score

Score	Priority level	Decision
1-12	Low	Sustainable for high-impact harvesting
13-24	Medium	Can be harvested with specific quotas
23-25	High	Requires strict regulation in harvesting

A portion of the agroforestry site in Paitan

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero	Species inventory/enumeration of useful plants Number of FREQUENTLY harvested plants by the Alangan IP from the forest, through key informant interview.	Established baseline information: 199 plants used in various categories as food, medicine, fodder, lumber, handicraft, ornamental, etc. 72 frequently harvested plants identified by the Alangan Mangyans
		The loss of all habitats is at least halved and where feasible brought close to zero	Area in sq m	To be obtained after 5 years
		Degradation and fragmentation are significantly reduced	Area in sq m	To be obtained after 5 years
	TARGET 6	By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits.		
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under aquaculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity	Developed scoring system (1-5 with 1 as lowest) for the seven customized criteria for the Conservation Priority Index of a species using formula as follows: ***Conservation Priority Index*** *= Harvesting Risk + Economic Use + Cultural Use + Species Distribution + Relative Frequency + Global Threatened Status + National Threatened Status*	None were under high priority for conservation: There was sustainable utilization of forest resources. 17 out of 72 useful plants were considered of medium priority for conservation 55 out of 72 useful plants were considered of low priority for conservation
	TARGET 8	By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity.		
	TARGET 9	By 2020, invasive alien species and pathways are identified and prioritized, priority species are controlled or eradicated, and measures are in place to manage pathways to prevent their introduction and establishment.		
	TAGERT 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning	Number of households domesticating vulnerable wild plants	To be obtained after 5 years

Relations to other Aichi Biodiversity Target & SDGs
Legend: ● for direct *and* ■ for indirect contributions to the Aichi Biodiversity Targets and SDGs.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A			Strategic Goal B						
■	■		●	●		●	●		■
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●	●	●	●	●			■	■	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	■				●		●	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		■	●	■	●			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Coordination with local leaders and the community was quite a challenge due to lack of network of collaborators and inadequate telecommunication facility. Besides almost all local people were busy in their farm life tending agricultural fields, agroforest farms and gardens. The coming up with a formula in determining localized conservation priority of important species for the community was the first in the Philippines, hence the identification of indicators and procedures were difficult due to lack of baseline data we can base from.

Key messages for the CBD in planning for the post-2020 Targets

IPSI should be sustained for post-2020 targets. IPSI has been efficiently establishing the global network to conserve beneficial human-nature interaction inside the SEPLS around the world. Incidentally, these ecosystems are ecologically and economically important, though had been neglected most of the times. Sustaining IPSI will enable all the members of this global network to interact and communicate on how to scale up in their existing conservation activities d how to overcome challenges as experienced by other partners.

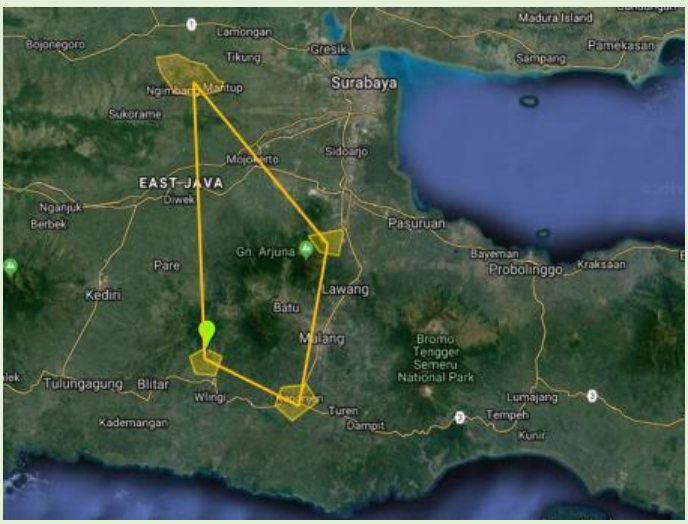
Complex Rice Systems

Uma Khumairoh[1,2*], Egbert A. Lantinga[2], Didik Suprayogo[1], Rogier, P.O. Schulte[2] and Jeroen, C.J. Groot[2]
Integrated Organic Farming Systems Research Centre (IORC), Faculty of Agriculture, Brawijaya University, Indonesia[1] ; Farming Systems Ecology Group, Wageningen University and Research, The Netherlands[2]

Joined in IORC-UB as the coordinator of community services in 2011. She holds a MSc in Organic Agriculture from Wageningen University in 2011 and pursues PhD in November 2013 at the same university. During her PhD, she also work as a teacher at UB since the early 2014.
Contact address: uma.kh@ub.ac.id/ uma.khumairoh@wur.nl

Geographic and demographic information

Country	Indonesia
Province	East Java
District	Lamongan, Pasuruan, Malang, Blitar
Size of geographical area (four districts)	Land: 8,380 km^2
Number of indirect beneficiaries (four districts)	6,670,000 persons (Men: 3,336,000 persons) (Women: 3,334,000 persons
Dominant ethnicity	Javanese and Madurese



Size of project area	25.5 km^2
Number of direct beneficiaries	350 persons (Men: 190 persons) (Women: 160 persons)
Geographic coordinates (longitude and latitude)	7º08′31.95″S-112º23′46.9″E 7º40′58.79″S-112º40′19.77″E 8º09′25.35″S-112º32′41.24″E 7º57′29.08″S-112º19′55.83″E
Dominant ethnicity	Javanese and Madurese

Ecosystem Types

	Forest		Grassland	x	Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Javanese runner duck	*Anas platyrhynchos Javanicus*	Commonly found after rice harvest in traditional Javanese rice field to eat leftover rice grain
Rice	Oryza sativa	Staple food of Indonesian
Silver rasbora	*Rasbora argyrotaenia*	Commonly found in the water body of traditional Javanese rice field

General introduction

East Java is the biggest rice producer province in Indonesia. However, their majority of rice is produced under conventional production systems, which produce high yields, but is dependent on agro-chemicals, having detrimental effects to the environment. On the other hand, moving to organic rice production systems are environmentally more sustainable but produce low rice yields that may threat food security.

Our project aimed to develop bio-diversified rice-based farming systems by combining diverse plant and animal species and integrated sustainable rice cultivation methods, referred to as complex rice systems (CRS), with the ultimate goal to improve rice yields along with yield stability in an ecological way.

To support the development of CRSs we conducted participatory experiments and farmer field schools (FFSs) in four districts of East Java, Indonesia. The experiments were set in a gradient complexity from monoculture to the most complex systems consisted of compost, azolla, fish, ducks, and border plants. FFS as a means of knowledge transfer and CRS adaption were modified and simplified to comply with our objectives. By modifying the FFS method, feedback from farmers was generated for adaptation measures of CRSs to the contextual conditions (socio-economic and biophysical conditions). Meanwhile, simplification improved the cost-effectiveness of the FFSs.

Monoculture rice before the project

Complex rice system implementation

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero		
		The loss of all habitats is at least halved and where feasible brought close to zero		
		Degradation and fragmentation are significantly reduced		
	TARGET 6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches		
		Recovery plans and measures are in place for all depleted species		
		Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems		
		The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided		
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity	Monitor the use of inputs for production, plant and animal diversity, as well as beneficial organisms	- At least 8 experimental rice farms have eliminated the use of pesticides and herbicides and more than 50% artificial fertiliser reduced. - Natural enemies and detritivores are more abundant - Frogs, eel, and bumble bees significantly appear
		Areas under aquaculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity		
	TARGET 8	Pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity	Monitor the use of agrochemicals	At least 8 rice experimental farms eliminated the use of pesticides and herbicides.
		Pollution from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity	Assess NH3 and NO3 concentration	NH3 concentrations in complex systems were lower than in conventional, but NO3 concentrations were higher, which need further study for their reduction.
	TARGET 9	Invasive alien species identified and prioritized		
		Pathways identified and prioritized		
		Priority species controlled or eradicated		
		Introduction and establishment of IAS prevented		
	TARGET 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●					●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■		●	●		■		■	●	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●	■	●	●	■	●	■
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
●	●	●	●	●	●	●	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Our project covers four districts. Due to the distant and limited resources (tools/ equipment and costs), this moment the assessment is still intensively conducted in one location. Although the intensive experiments were only on 12 rice farms, but 80 farmers participated in these participatory experiments. The impacts might be higher than what has been measured, and thus need to be conducted in the near future.

Key messages for the CBD in planning for the post-2020 Targets

As the centre of many smallholder livelihood and human life, the link between agriculture & biodiversity should be given more room in the target goal. Addressing a specific target goal on biodiversity-related farming maybe can be more meaningful than combined with strategic goal for natural biodiversity conservation. Emphasizing the link to the SDGs would in turn make explicit strong focus on implementation, such as biodiversity-related farming. IPSI has a central role in facilitating networking and collaboration among its members, which can make better impacts, ensuring biodiversity implementation in many aspects. Therefore, IPSI should be continued for post-2020 target.

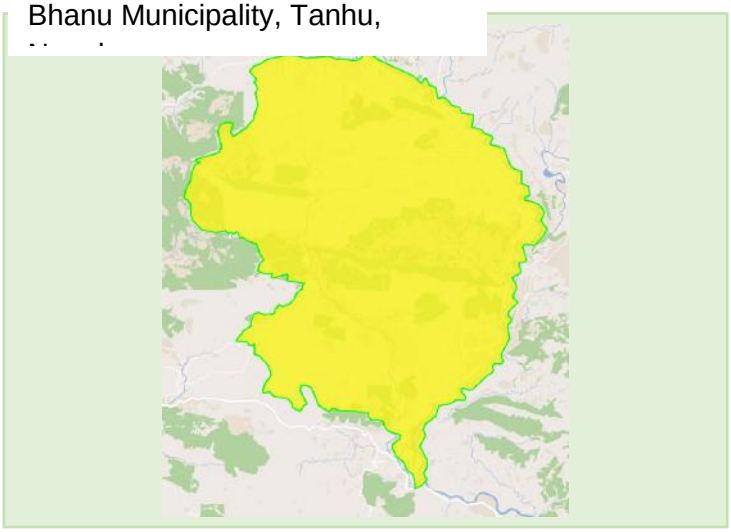
Building villag**e** e**c**onomies t**h**rough clim**a**te farmi**n**g & forest **g**ard**e**ning (BeChange)

Bishnu Hari Pandit[1*] and Hans- Peter Schmidt[2]

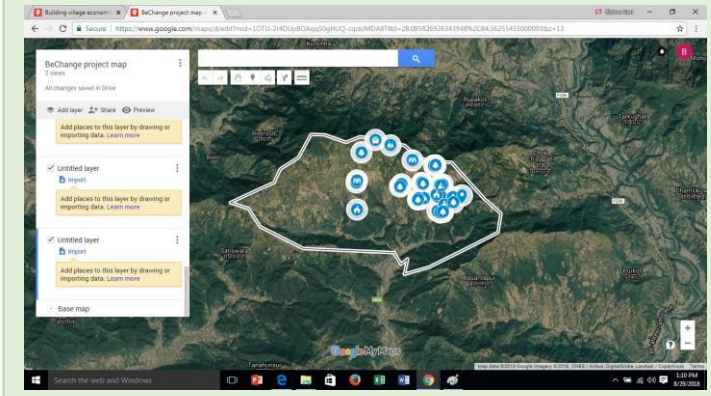
Kathmandu Forestry College, P.O. box: 1276, Kathmandu Nepal[1*],
Ithaka Institute for Carbon Strategies, Switzerland[2]

Bio* Graduated PhD in Rural Development and Watershed Management from Asian Institute of Technology, Thailand in 2004, Dr. Pandit has been involved in promoting forest garden project with 218 farming families as a collaborative activities of IPSI, KAFCOL, Ministry of Forests and Environment (MOFE) and Ithaka Institute for Climate Farming, Nepal. Completed more than a dozen of research projects with various organizations (FAO, ADB, CIFOR, SDC Nepal, SNV Nepal, ICIMOD, FECOFUN etc.) related to climate change adaptation, forest enterprise development and biochar based organic fertilization. Recently, he has been involved as a Lead National Agroforestry Expert for developing National Agroforestry Strategy and Action Plan with the Ministry of Forests and Environment funded by Food and Agricultural Organization of United Nations.

Geographic and demographic information



Country	Nepal
Province	Pokhara
District	Tanhun
Size of geographical area	184 km^2
Number of indirect beneficiaries	46,179 persons Men : 20,045 persons Women:26,134 persons
Dominant ethnicity	Gurung/Magar and Chhetri/ Brahmin



Size of project area	25.4 km^2
Number of direct beneficiaries	persons (Men: persons) (Women: persons)
Geographic coordinates (longitude and latitude)	Longitude: 84.3625^{0}E Latitude: 28.08582^{0}N
Dominant ethnicity	Chhetree and Gurung

Ecosystem Types

X	Forest	X	Grassland	X	Agricultural		In-land water
	Coastal		Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Bay leaf	*Cinnamomum tamala*	Cinnamon leaf and bark is used for spices and perfume making. Its essential oil is good medicine for gastric.
Blue marble or bead tree	*Elaeocarpus ganitrus*	Has religious significance and its bead is use as garland by Hindu Priest.
Champak	*Michelia champaca*	Used as a source of food, medicines and a range of commodities. It is particularly valued for its essential oil and timber
Mulberry	*Morus alba*	Leaf of cinnamon is used for food of silk worm and also used for making organic tea
Butter tree	*Bassia butyracea*	Vegetable ghee production, candle manufacturing and soap making.

Figure 1 *Michelia champaca*

General introduction

BeChange project has been implemented in two villages (Ratanpur and Bandipur) of Tanhu district of Nepal. A total of 42000 mixed tree species that are locally threatened (such as Michelia, Elaeocarpus, Cinnamon tamala) were planted on 50 ha of abandoned agriculture land of 218 farm families. About one-third of the population in these villages falls below the poverty line (base line report). Food produced in private farm lands can feed only 11 percent of households for the whole year. The remaining households depend on off-farm and other sources for their food and survival. Farmers in these villages have been hard-hit by water scarcity. To address the climate related risks and to enhance livelihoods of the people living in these villages, this project provided support to mostly disadvantaged, low-income woman farmers to establish sustainable forest-garden systems on abandoned private farmlands. These activities were linked to cultural eco-tourism, cinnamon leaf essential oil distillation and intercropping of high value shade loving crops such as ginger, turmeric, and lentils. Moreover, the project contributed to the conservation of upstream and downstream watersheds by planting erosion resisting trees and vegetation, and by constructing small irrigation ponds. Since 2016, the project has been mainly financed by voluntary carbon credits paid for atmospheric carbon sequestered in forest biomass and soil applied biochar.

Caption: Forest garden on abandoned agricultural land

Livelihood

Caption: Lady receiving carbon payment

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero	Community monitoring and observation	First year 60 % tree survived; Second year and third year tree survival reached to 70% from the total of 42000 trees planted.
		The loss of all habitats is at least halved and where feasible brought close to zero	Community reporting	Bear and tiger re-appeared in the village. One of the village men was attacked by bear in 2017.
		Degradation and fragmentation are significantly reduced	Mapping of forest garden	1039 farmers established forest garden, now using plant from farmers' grown nurseries
	TARGET 6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches	NA	NA
		Recovery plans and measures are in place for all depleted species	Planning of forest nurseries of threatened species with local government	Five forest nurseries already established and functional producing at least 30,000 tree saplings of threatened species
		Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems	NA	NA
		The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided	NA	NA
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity	Observation and mapping	Disappeared species (Michelia, Cinnamon and *Elaeocarpus* spp) re-appeared and people taking benefits of intercropping.
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity	A triad system of forest management adopted	A total of 50 ha abandoned and degraded agricultural land managed by planting locally threatened tree species (Michelia, Elaeocarpus, Cinnamon tamala)
	TARGET 8	Pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity	NA	NA
		Pollution from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity	NA	NA
	TARGET 9	Invasive alien species identified and prioritized	Eupatorium species are used as feedstock for making biochar	Invasive species (Eupatorium odoratum) are used to make biochar, by means of which their population decresed by 50%
		Pathways identified and prioritized		
		Priority species controlled or eradicated	Community leaders evaluate about removal of alien species	At least half of the farming households (total 218 hhs) are engaged in biochar making using Eupatorium feedstock
		Introduction and establishment of IAS prevented		
	TARGET 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	■	■	■	■	NA	●		●	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
	●		■	●	■	■	■	■	■
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	■	■			■			
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			●		●			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Measuring or doing assessment of the biodiversity is time consuming and largely based on qualitative judgment, which demands for a highly qualified and professional researcher. In the context of increasing demand of additional agricultural commodities to supply food for increasing population, . only addressing biodiversity needs may not be enough for rural population. In order to address this challenge, we need to increase food production and productivity of agricultural land with maintaining biodiversity of the plant communities. Most male partners are out of their villages and communities, only involving female members of the households increase workload of female members of the households.

Key messages for the CBD in planning for the post-2020 Targets

Considering the potential consequences of gradual reduction in the production and biodiversity loss on the agricultural land and increasing scale of abandoned land, the following points need to consider as key messages:(i) aassessing the current status of biodiversity on abandoned agricultural land applicable to generate income for the poor farmers (ii) testing of best-bet agro forestry options that provide high income and at the same time maintain local biodiversity; (iii) exploring market possibilities for the selected products from these options;(iv) analyzing institutional challenges, especially tenure issues, associated with increasing biodiversity on abandoned agricultural land; and (v) proposing options for wider application while simultaneously analyzing policy implications associated with growing and marketing products from under-utilized/abandoned agricultural land.

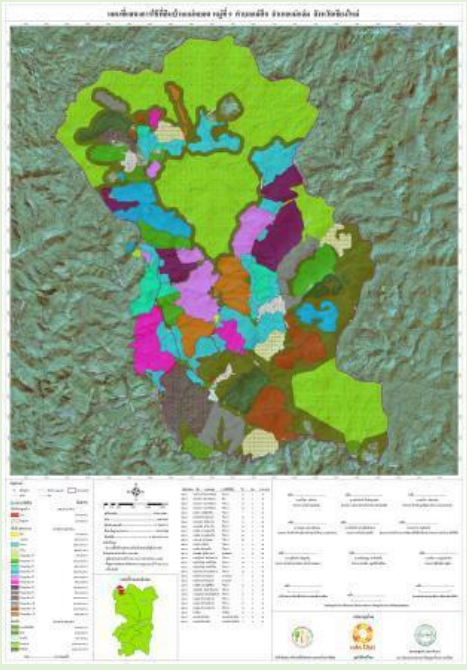
IMPECT- GEF-Satoyama Project, Thailand

Prasert Trakansuphakon
Pgakenyaw Association for Sustainable Development (PASD); Chairman cum Managing Director, Chairman of Intermountain Peoples Education and Culture in Thailand (IMPECT)

Prasert Trakansuphakon is a specialist of Indigenous Study in Thailand. Of Karen origin, he is Doctor in Sociology and he develops an expertise that he put to good use both in academic world. Director of (IKAP) for many years, he is Chairperson of PASD, Chairperson IMPECT and he is also Advisor Board Committee of (AIPP).

Geographic and demographic information

Country	Thailand
Province	Chiang Mai and Mae Hongson
District	Chomthong, Mae Chaem and Mae La Noi
Size of geographical area	90,237 hectares
Number of indirect beneficiaries	27,808 persons (Men:12,500 persons) (Women: 15,308 persons)
Dominant ethnicity	Karen people Thailand



Size of project area	6,057 hectares
Number of direct beneficiaries	2,136 persons (Men: 1,022 persons) (Women: 1,114 persons)
Geographic coordinates (longitude and latitude)	18.4516995, 98.1942275
Dominant ethnicity	Karen people Thailand

Ecosystem Types

	Forest	x	Grassland		Agricultural	x	In-land water
	Coastal		Dryland		Mountain	x	Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Haw Waw		Special plants species in rotational field
Bu hka		Traditional rice species in rotational faming
Di hkwa		Traditional big cucumber in Rotational farming
S' klev		Traditional burner Shu grow in rotational field
Nwaij gauz nwai wa		Traditional Red and white Yam in rotational farming

General introduction

The Mae Yod and Mae Um Pai communities are still strongly based on the practice of rotational farming, while the Khun Tae community is mostly based on paddy fields and other smaller crops but almost no more on rotational farming practice because the National Park policies and bilateral development project have forced people to abandon the traditional agricultural practice. The 3 villages have a strong community cohesion that has served as the basis for them to manage their resources in spite of many external pressures. The centuries-old sustainable practice of rotational farming is now threatened by the expansion of commercial monoculture farming projects. Main threat and challenges - Government policy and highland development projects push for shorter rotational farming cycle. - People are threatened with detention or arrest for practicing rotational farming as the forest and protected areas law is discriminatory against rotational farming- Government collaboration with large agricultural companies promoting cash crop in the highland (e.g. corn, cabbage etc.) leading to stop of rotational farming system.

Objectives Strengthen and promote culturally-based agriculture and natural resource management of Karen people in target area and for them to become a good model recognized by government agencies and replicable by other communities. Empower community leaders, organizations and networks to become effective in expressing their cultural and traditional knowledge and practices, Mainstream customary sustainable practices into local and national sustainable development and biodiversity policy (e.g. NBSAP) and practice through recognition by government agencies and in relevant policies and laws.

Morning walking for do weeding in the rotational field

Young girls collecting seasoning products in the rotational field

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero	Increasing of forest land after zoning the land use area	Increasing forest area and people develop regulations to manage the forest, land use in sustainable way
		The loss of all habitats is at least halved and where feasible brought close to zero		
		Degradation and fragmentation are significantly reduced		
	TARGET 6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches		
		Recovery plans and measures are in place for all depleted species		
		Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems		
		The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided		
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity	The GIS mapping has developed and create clear zone of land use area and forest area, then the villagers will manage through traditional and new regulation to sustain their land use and forest.	Land use based on traditional method and philosophy increasing seeds and plants species, products and innovation packaging to marketing etc.
		Areas under aquaculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity	The villagers develop regulations for take care and protect their forest and ecosystem, they assigned the focus group of take care of forest and natural resources	Increasing of biodiversity both plants and wild life, people have seen in their every day life. Forest products for gathering aalso increasing for food and income.
	TARGET 8	Pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity		
		Pollution from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity		
	TARGET 9	Invasive alien species identified and prioritized		
		Pathways identified and prioritized		
		Priority species controlled or eradicated		
		Introduction and establishment of IAS prevented		
	TARGET 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
○	○	■	■	■	○				
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
				■			○		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	■	■		■	○	■	■		
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING		4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		■		○	■	■	■	■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION		13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Not many project implementers did not conduct baseline assessment, thus difficult to measure the clear outcome after implementation

Key messages for the CBD in planning for the post-2020 Targets

IPSI should be continued for post-2020 target and evolved into a new phase to consolidate the potential capacity of existing members to scale up the work to conserve and revitalize SEPLS around the world. As described in difficulties above, the challenge we found through network is that most of the members did not have baseline data which makes them difficult to assess. IPSI shall collect know-how for base-line analysis for members.

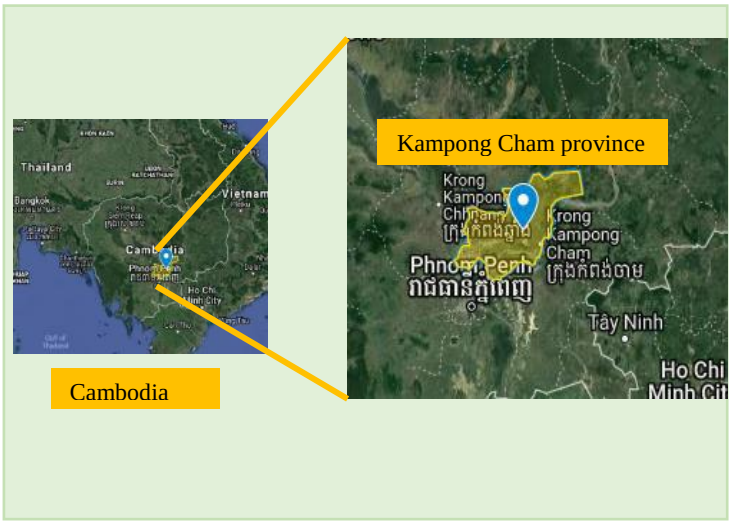
Scaling up lessons: promoting sustainable agriculture in Cambodia

Jeeranuch SAKKHAMDUANG*, Koji Miwa[2] and Machito Mihara[3]
*Institute of Environmental Rehabilitation and Conservation, ERECON, Southeast Asia Office, ERECON Headquarters[2], Tokyo University of Agriculture[2, 3]

Joined ERECON since 2007 after served 10 years in Royal Forest Department, Thailand. Jeeranuch holds BA in Community Development from Khon Kaen University, MSc in Forest Resource Administration from Kasetsart University, Thailand and Ph.D from Tokyo University of Agriculture, Japan. She currently works to promote sustainable agriculture and reforestation in Cambodia.

Contact address: seasia-erecon@hotmail.com; j.sakkhamduang@gmail.com

Geographic and demographic information



Country	Cambodia
Province	Kampong Cham
District	All 10 districts in the province
Size of geographical area	4,549 km^2
Number of indirect beneficiaries	1,679,992 persons (Men: 818,662 persons) (Women: 861,330 persons)
Dominant ethnicity	Khmer

Size of project area	4,549 km^2
Number of direct beneficiaries	1,000 persons (Men: 818,662 persons) (Women: 861,330 persons)
Geographic coordinates (longitude and latitude)	11° 59′ 0″ N, 105° 27′ 0″ E
Dominant ethnicity	Khmer

Ecosystem Types

	Forest		Grassland	X	Agricultural	X	In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Rice (ដំណាំស្រូវ: Srov)	*Oriza sativa*	Paddy rice is the staple food of Cambodian which is cultivated as a main product in Kampong Cham. Rice ecosystem provides additional protein such as fish, shrimp, snail and etc. to human and animals.

Rice (ដំណាំស្រូវ: Srov)

General introduction

Kampong Cham province located on the central lowland of the Mekong River. Main products of the province include rice and vegetables as shown in Figures 1 and 2. The usage of chemical fertilizers and pesticides has significantly increased to promote agricultural productivity. However, due to the inappropriate use of agricultural chemicals such as overuse and application without sufficient knowledge, it has caused various problems to human and environmental health.

In 2011-2016, ERECON implemented the program on Promoting Sustainable Agriculture in Samroung Commune of Kampong Cham. The program created positive impacts in term of changing farming practices in the commune from the prevalent applications of agro-chemicals to those of organic fertilizers which improve soil fertility and conserve biodiversity. Drawing on the lessons of positive impacts of the previous project, on September 2017, ERECON has launched the program on Promoting Sustainable Agricultural Conditions for Poverty Reduction, which covers the whole province and the target participants of the project include farmers and agricultural extension officers.

The project aims to 1) building capacity on sustainable agriculture based on cyclic use of natural resources for agricultural extension officers in provincial and district levels, 2) promoting sustainable farming practices based on cyclic use of natural resources for local farmers and 3) promoting conditions for sales of agricultural products with low chemical inputs.

Trainings and workshops related to sustainable agricultural practices are provided to officers and farmers. Farmers who attended the training and workshop share their knowledge to their neighbors. Agricultural materials such as compost boxes and tanks for making liquid fertilizer are provided to famers. Networks of safety agricultural products will be formed and marketing channel for the products will be introduced to farmers in the final year of the project.

Contribution to Aichi Biodiversity Targets' Strategic Goal B

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal B	TARGET 5	The rate of loss of forests is at least halved and where feasible brought close to zero		
		The loss of all habitats is at least halved and where feasible brought close to zero		
		Degradation and fragmentation are significantly reduced		
	TARGET 6	All fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches		
		Recovery plans and measures are in place for all depleted species		
		Fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems		
		The impacts of fisheries on stocks, species and ecosystems are within safe ecological limits, i.e. overfishing avoided		
	TARGET 7	Areas under agriculture are managed sustainably, ensuring conservation of biodiversity	Data of farmland under sustainable agricultural practices, amount of compost, liquid fertilizer and bio-pesticide applied in farmland and percentage of agro-chemical reduced after participated in the project.	100 percent of farmers who received agricultural equipment from the project produce and apply organic fertilizer in their farmland.
		Areas under aquaculture are managed sustainably, ensuring conservation of biodiversity		
		Areas under forestry are managed sustainably, ensuring conservation of biodiversity		
	TARGET 8	Pollutants (of all types) have been brought to levels that are not detrimental to ecosystem function and biodiversity		
		Pollution from excess nutrients has been brought to levels that are not detrimental to ecosystem function and biodiversity	Amount of cow manure applied directly in paddy field and amount of agro-chemical applied in farmland.	Farmers apply cow manure and compost in a proper way to prevent eutrophication. Agrochemicals application is minimized.
	TARGET 9	Invasive alien species identified and prioritized		
		Pathways identified and prioritized		
		Priority species controlled or eradicated		
		Introduction and establishment of IAS prevented		
	TARGET 10	Multiple anthropogenic pressures on coral reefs are minimized, so as to maintain their integrity and functioning		
		Multiple anthropogenic pressures on other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
						●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	●	■	■					
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		●			■			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

So far we assess project activities by using questionnaire and check sheet for sustainable agricultural practices such as amount of compost that made and applied in farmland, percentage of agro-chemical reduced after farmers convert to organic fertilizers, size of area under sustainable agricultural practices and etc. However, it is difficult to measure the changes in soil biodiversity or physical/chemical properties before and after farmers applied organic fertilizers. Baseline survey of the project mainly provides general information, socio-economic information and level of understanding/knowledge of sustainable agriculture of participants before the project.

Key messages for the CBD in planning for the post-2020 Targets

IPSI members should continue their contribution for post-2020 target and IPSI should consolidate the potential capacity of existing members to scale up the work to conserve and revitalize SEPLS around the world.

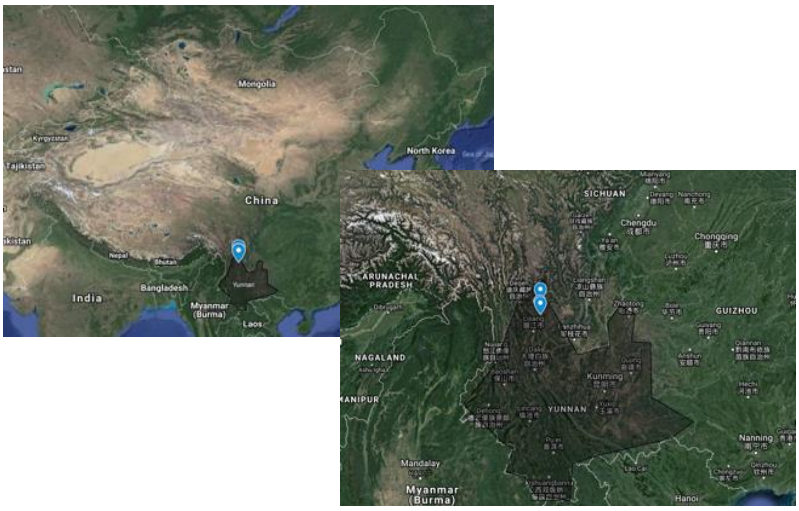
Farmers' Seed System Enhancement and Traditional Knowledge Revitalizationf for Climate Change Adaptation in 3 Naxi Mountainous Communities in Yunnan, Southwest China

Yiching Song
Senior researcher and program leader,
Centre for Chinese Agricultural Policy, Chinese Academy of Science

Dr Yiching Song obtained her PhD in rural sociology and development in Wageningen University in the Netherlands. She started to work in the Centre for Chinese agricultural policy under Chinese Academy of Science since 2000 until now. She initiated and lead a Farmer Seeds Network (in china) since 2013 in SW China and scaling out to 35 communities in 10 provinces at national level now.

songyc.ccap@igsnrr.ac.cn

Geographic and demographic information



Country	China
Province	Yunnan,
District	SW China
Size of geographical area	394,100km^2
Number of indirect beneficiaries	300,000 persons (Men: 100,000) (Women: 200,000)
Dominant ethnicity	

Size of project area	120 km^2
Number of direct beneficiaries	6,000 persons (Men: 2000 persons) (Women: 4000 persons)
Geographic coordinates (longitude and latitude)	Youmi Village 27.85764,100.45182 Stone Village 27.47641,100.43133 Wumu Village 27.40134,100.45413
Dominant ethnicity	Rice farming t erraces

Ecosystem Types

	Forest		Grassland	x	Agricultural		In-land water
	Coastal		Dryland	x	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Rice		Staple food crop, important for tarries farming
Wheat		Staple food crop for communities
Maize		Local adapted Crop for pig raising etc
Tibet barley		Traditional food crop
potato		Local adapted food crop preferred by local people
Yunnan red flower	*Jsudbkhf*	Local Herb medicine for local people us and income generation
Sichuan peper	*ZanthoxylumbungeanumMaxim*	Local specific spicy for income generation

Shichuan Peper

General introduction

The project involved in three Naxi (Moso) mountain villages located along Jinsha Rivier valley in the neighborhood of the 3 big paralyzed rivers national park in Northwest Yunnan. It is UNESCO identified Natural Heritage site, which is biodiversity hot spot with the main water source for some southeast Asian countries.

The main indigenous residents in these mountain areas are ethnic groups resident in mountainous areas, and Naxi people is one of the big ethnic groups in this area. The 3 villages participated in the project are all Naxi communities i.e. Stone Village, Wumu and Youmi. The 3 Naxi villages were facing challenges of climate and socio-economic changes and resulted biodiversity disappearing, traditional culture and knowledge losing etc in recent years.

The project started in 2013 and the specific objectives are agro-biodiversity enhancement, traditional culture and knowledge revitalization, and farmers, mainly women farmers, empowerment. The main types of activities are 1) assessment of community bio-culture and eco-systems through baseline study, 2) traditional cultural and knowledge documentation and revitalization, 3) farmer seed system enhancement through PPB, PVS and community-based seed registration, seed banks and seed production.

The 3 villages' experiences reflect some common human and nature features of indigenous mountain communities globally. The collective memories of these villagers are curial for waking up self-confidence for cultural revitalization and collective action. This is significant for addressing our common challenges in sustainable development!

Contribution to Aichi Biodiversity Targets' Strategic Goal C

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved	Quantity of Water sources are maintained and managed	Achied in 2 of the 3 villages
		At least 10 per cent of coastal and marine areas are conserved		
		Areas of particular importance for biodiversity and ecosystem services conserved	Number of species and forest area increase	Achieved in all 3 villages
		Protected areas are ecologically representative		
		Protected areas are effectively and equitably managed		
		Protected areas are well connected and integrated into the wider landscape and seascape	Forest Area size	Achieved in all 3 villages
	TARGET 12	Extinction of known threatened species has been prevented	Number of crops, varieties and household conserved	Achieved in all 3 villages
		The conservation status of those species most in decline has been improved and sustained	Agro-biodiversity and farmers' seed system enhanced	Achieved in all 3 villages
	TARGET 13	The genetic diversity of cultivated plants is maintained	Number of crops, varieties and household conserved	Achieved in all 3 villages
		The genetic diversity of farmed and domesticated animals is maintained	Documented and increase the diversity	Not yet achieved....
		The genetic diversity of wild relatives is maintained	Documented and conserve	Not yet achieved....
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained	Documented and value adding through market linkage	Achieveing gradually .....
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity	-Through farmer seeds system enhancement and community seed bank setting up linking to formal gene bank, policy suggestion and advocacy	Influencing seed law revision and will continueing on more impelemntation mechnisms and tools for scaling out and up through farmer seeds Network platform

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	■	■	■	●	■	●	●	■	●
1	2	3	4	5	6	7	8	9	10
Strategic Goal C				**Strategic Goal D**		**Strategic Goal E**			
●	●	●	●	■	■	●	■	■	■
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	■	■	●	■	■	■	■
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			●	■	●	■	■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Some indicators are difficult for measure quantitatively, some qualitative…short stories and examples and cases could be helpful.

Key messages for the CBD in planning for the post-2020 Targets

IPSI should be continued for post-2020 target and give members more support for capacity building and policy advocacy at national and international levels

Empowering Local Communities to Protect Threatened Socio-Ecological Production Landscapes and Seascapes (SEPLS)

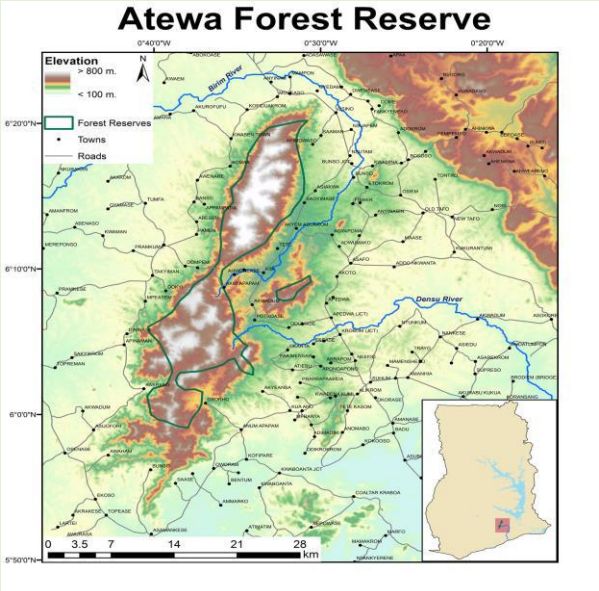
Seth Appiah-Kubi*
National Director, A Rocha Ghana*

Seth is the National Director of A Rocha Ghana. He is an environmentalist and holds a PhD Finance, member of Chartered Institute of Management Accountant (CIMA), UK and the Chartered Global Management Accountant (CGMA) and Institute of Chartered Accountants (ICA), Ghana.

Contact address: seth.appiah-kubi@arocha.org

Geographic and demographic information

Country	Ghana
Province	Eastern Region
District	East Akyem District
Size of geographical area	238,535km^2
Number of indirect beneficiaries	5 million persons (Men: 2.4 M persons) (Women: 2.6 M persons)
Dominant ethnicity	Akyems



Size of project area	233 km^2
Number of direct beneficiaries	2.63 million persons (Men: 1.29 M persons) (Women: 1.34 M persons)
Geographic coordinates (longitude and latitude)	6° 09' 60.00" N 0° 35' 59.99" E
Dominant ethnicity	Akyems

Ecosystem Types

x	Forest		Grassland	x	Agricultural	x	In-land water
	Coastal		Dryland	x	Mountain		Urban/peri-urban

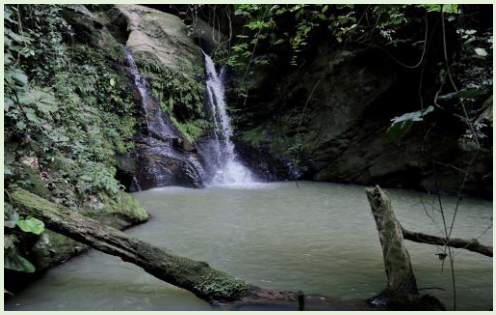
Important species in the site

English common name (*Local name*)	Scientific name	Description
White-naped mangabey	Cecocebus lunulatus	IUCN Critically Endangered
White-bellied Pangolin	Phataginus tricuspis	Vulnerable Species
Afia Birago Puddle Frog	Phrynobatrachus afiabirago	Rare & Critically Endangered.
West African Dwarf Crocodile	*Osteolaemus tetraspis*	IUCN Endangered Species (Vulnerable)
Atewa Dotted Border	*Mylothris atewa*	Endemic species of the forest

General introduction

Within Ghana, there are few other forests that are as biologically important as the Atewa Range Forest Reserve. The forest is distinct because of its physical elevation rising to over 800 m contributing to its unique and rare Upland Forest type. Atewa Forest, at just 26,300 hectares, represents 33.5% of the remaining closed forest in Ghana's Eastern Region.

The Atewa forest reserve is a habitat for over 100 endangered species and the source of three rivers which provide water to over 5 million people in Ghana. The forest has been targeted for Bauxite mining, the raw material for alumina by the government of Ghana. Our campaign is to get government to rescind on its bauxite mining plans and designate the forest as a National Park. The campaign is also advocating for "green landscape investments" that would secure water, biodiversity and the livelihoods of 40 communities fringing the forest. To achieve these results, local communities have been empowered to support the protection of the forest. Again, several dialogues with related state agencies including government is ongoing to get the forest protected. This is being done in collaboration with other civil society organizations within the country.



Caption: One of the 3 waterfalls which provides water to over 5 million people

Caption: Community member selling Giant African Snail (local delicacy)

Contribution to Aichi Biodiversity Targets' Strategic Goal C

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved	Three water bodies and 19 tributaries have been conserved	Water supply for over 5 milion people secured
		At least 10 per cent of coastal and marine areas are conserved		
		Areas of particular importance for biodiversity and ecosystem services conserved	Habitat for 100 species on IUCN Red List saved	0ver 100 species saved from extinction
		Protected areas are ecologically representative		
		Protected areas are effectively and equitably managed	Level of illegal logging and hunting drastically reduced	Community conservation education has targeted hunters and illegal loggers
		Protected areas are well connected and integrated into the wider landscape and seascape		
	TARGET 12	Extinction of known threatened species has been prevented	Habitat for over 100 IUCN listed critically endangered and other vulnerable species and biodiversity have been protected.	5 Community Resource Management Areas (CREMAs) have been formed in communities to support and check illegal poaching and other unsustainable environmental practices
		The conservation status of those species most in decline has been improved and sustained	Discovery of rare and endangered primate specie in 2017	Opportunity for management to save a specie thought to be extinct
	TARGET 13	The genetic diversity of cultivated plants is maintained		
		The genetic diversity of farmed and domesticated animals is maintained		
		The genetic diversity of wild relatives is maintained		
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained		
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●	■		●		■			
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●	●	■	●	●		■	■		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

					●			
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●	■	●	■	●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Projects fail to collect data that would help in the measurement of outcomes of targets

Key messages for the CBD in planning for the post-2020 Targets

The results of the current targets ending in 2020 should serve as a baseline for post-2020 projections. IPSI therefore should be able to capture results of members to feed into CBD to give a good baseline for post-2020 targets

Restoration and Extension Plantings after SDM

Kien Dang[1*], Duoc Hoang[2], Giang Le[3], Vin Loc[4], Vu Pham[5]
HEPA Eco-Farming School, Community Entrepreneur Development Institute (CENDI)

Kien Dang had a Master of Science (Forestry Science and Management, 2013) at the Australian National University. Since 2015, Kien has worked for CENDI, a local Institute working towards restoration of local traditional knowledge, local species, trees planting, and Nature and Cultural conservation.

Contact address: dtkien@cendiglobal.org

Geographic and demographic information

Vietnam

Ha Tinh

Son Kim 1

Country	Vietnam
Province	Ha Tinh Province
District	Son Kim 1 Commune
Size of geographical area	197 km^2
Number of indirect beneficiaries	4,387 persons (Men: persons) (Women: persons)
Dominant ethnicity	Vietnamese

HEPA Eco-farming School

Size of project area	5,17 km^2
Number of direct beneficiaries	3,000 persons (Men: persons) (Women: persons)
Geographic coordinates (longitude and latitude)	North: 18.42852, 105.21435 South: 18.40093, 105.2195
Dominant ethnicity	Vietnamese

Ecosystem Types

X	Forest		Grassland		Agricultural		In-land water
	Coastal		Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Cồng trắng	*Castanopsis cerebrina* (Hick. et A. Camus) Barnett, 1944 Fagaceae	Good conservation and valuable timber tree species for housing material and income.
Mỡ (*Giổi Mỡ*)	*Manglietia conifera* Dandy, 1930 Magnoliaceae	Good conservation and valuable timber tree species providing multi-purpose domestic uses.
Xoan đâu	*Melia azedarach* L., 1753 Meliaceae	Increased use for in-door facilities in the last 5 years.

Cồng trắng

General introduction

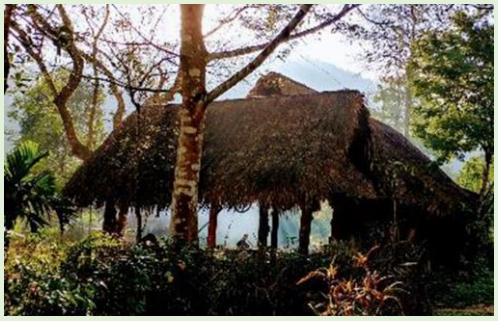
HEPA Eco-farming site is located in Son Kim 1 commune, a bordered commune in the past experienced heavy illegal logging due to weak law enforcement over the forest and ecosystem management. The flooding in 2002 caused enormous losses over property and human's lives and livelihood whilst the forest landscape highly damaged. Natural forests in the area are poorly managed and increasingly converted to acacia and pine plantations.

Loss of forests results to loss of local valuable tree species and ecosystem function, which are of significant values for cultural and livelihood, biodiversity and habitat, and water for agriculture for downstream communities. Restoration of local species through efforts in nursery of seedlings, extension of plantings, and field seminars and documentation dissemination to farmers and interested groups is highly urgent to raise public awareness whilst having concrete steps for restoration and planting.

The SDM project (2016) restored more than 08 local native tree species with more than 20,000 seedlings production.

After SDM (2016-2018), the number of people benefitted from field seminars and accessed to seedlings is up to 500 people. Local communities and stakeholders whom have been raised awareness on importance of local trees for species conservation and ecosystem restoration is up to 3000 people. Documentation has continued widely distributed to stakeholders in Vietnam and Lao PDR. Number of local trees planting after SDM is about 30,617 trees on a total area of 38 hectares covering 03 local communities and 12 direct smallholders throughout 05 provinces in Vietnam and Lao PDR.

Caption: Forest landscape in HEPA site.



Caption: Wooden house near kitchen.

Contribution to Aichi Biodiversity Targets' Strategic Goal C

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved		
		At least 10 per cent of coastal and marine areas are conserved		
		Areas of particular importance for biodiversity and ecosystem services conserved	We rely on official data on forests assessment from 2002, 2005, and 2010, 2015 assessments to compare areas increased and species increased for forest and biodiversity and ecosystem conservation.	The official data is not yet available here. I am in the process of tracking the formal data please.
		Protected areas are ecologically representative		
		Protected areas are effectively and equitably managed		
		Protected areas are well connected and integrated into the wider landscape and seascape		
	TARGET 12	Extinction of known threatened species has been prevented		
		The conservation status of those species most in decline has been improved and sustained	In terms of some listed important species, we rely on local data by a combination of farmers, personal, and institutional field-based experiences. In terms of those tree species initially proposed in the last SDM-funded program, we use counting technique and also continuous monitoring of other initiatives building on after-SDM also on trees planting and species restoration.	Conservation status of the 03 listed species has been improved and increased in planting, restoration by landscape observation. Number of local valuable tree species restored and planted increasing: (2016) from 2,379 trees over 05 hectares at HEPA (2016-2018) now 30,617 trees over 38 hectares at covering 03 local communities and 12 direct smallholders throughout 05 provinces in Vietnam and Lao PDR
	TARGET 13	The genetic diversity of cultivated plants is maintained		
		The genetic diversity of farmed and domesticated animals is maintained		
		The genetic diversity of wild relatives is maintained		
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained		
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity	We are planning the proposals for continue working on restoration and also seeds sovereignty. It is important to have a baseline to document the species including the traditional seeds (status from now) to see how things develop later in 5-10 years.	

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	■								
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
	■	■	●	●			■		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■		■	●	●				
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
			●		●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

We have limited resources including technical and finance to conduct a really good comprehensive assessment. The counting on number of trees is an easy one, but to measure other variables than that and also continuous monitoring of the quality/survival rate of these trees as well as beyond social, ecological and environmental parameters will be the next challenge(s) for our comprehensive assessment.

Key messages for the CBD in planning for the post-2020 Targets

To deliver Target 12 'The conservation status of those species most in decline has been improved and sustained' and Target 13 'Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity', IPSI/CBD should prioritize and support (1) more local restoration initiatives including traditional seeds/genetic varieties documentation and (2) setting-up a baseline data measurement and system where local and global communities can together join-in-one-platform so that they can update and exchange and measure changes to be equally shared and easily visualized.

Bikin: 30 years battle for conservation

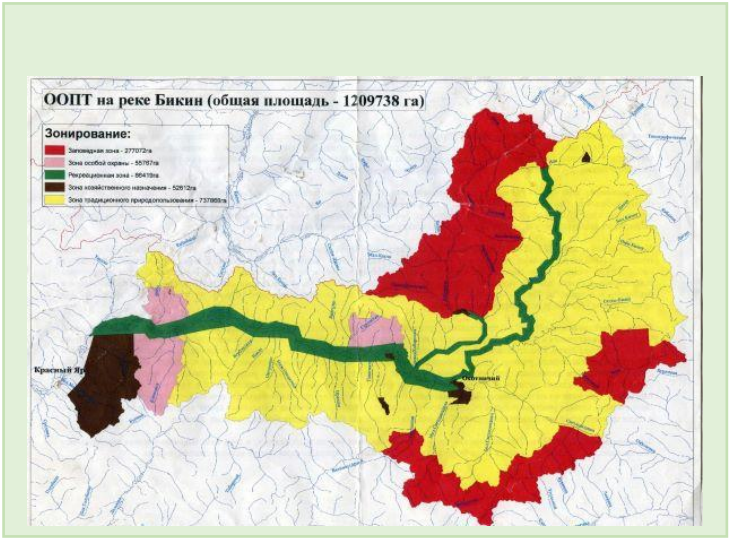
Anatolii Lebedev
Chairman of the Board, NGO BROC

Being engineer by education, I mostly was active as writer and journalist, focusing on human behavior on the intact wilderness of Far East, conservation and sustainable resource use. That became key goal of BROC registered in 1997 with a group of journalists, scientific experts and local activists.

Contact address: 63 Pologaya str., suite 12, Vladivostok 690600, swan0741@gmail.com, ph/fax +7-423-240-8095

Geographic and demographic information

Country	Russia
Province	Far East
District	Primorye
Size of geographical area	11 600 km^2
Number of indirect beneficiaries	1500 persons (Men: persons) (Women: persons)
Dominant ethnicity	Udege



Size of project area	11 600 km^2
Number of direct beneficiaries	1000 persons (Men: persons) (Women: persons)
Geographic coordinates (longitude and latitude)	137° East, 46-47° North
Dominant ethnicity	Udege

Ecosystem Types

X	Forest		Grassland		Agricultural	X	In-land water
	Coastal		Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Siberian tiger	*Panthera tigris*	Endangered, Red Data Book
Mergus sguamatus	*Mergus sguamatus*	Endangered, Red Data Book
Fish owl	*Ketupa blakistonni*	Endangered, Red Data Book
Panax ginseng	*Panax ginseng*	Endangered, Red Data Book
Japanese crane	*Grus japonensis*	Endangered, Red Data Book

General introduction

Bikin river watershed, home for endangered Siberian tiger and small indigenous community of udege, is the last entire plot of intact temperate forest at the whole Northern Eurasia. It contains 150 species of birds, 48 species of animals, plenty species of plants, fish, insects and reptiles. That level of biodiversity was reason for environmentalists to create national park here and get status of World Heritage for it recently in 2018. But, surrounding forests are hardly suffering from destructive logging and poaching, which operators always tend to enter Bikin area for illegal prey and timber. That makes protection of Bikin watershed borders highly essential not only for park rangers and udege hunters, but for whole environmental community of Primorye. Key tool for that is education and promotion of long term dramatic 30-years history of protection this territory – example of joint efforts of civil society, indigenous community, municipal, regional and national officials, global environmental and scientific community, unique for new Russia. This history, textually prepared by NGO BROC as a core player, has to be published not only for park visitors, but also for governmental officials and some local hunters, during years experienced to fish and hunt without limitations, seriously destroying wildlife.

Contribution to Aichi Biodiversity Targets' Strategic Goal C

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved	On Bikin watershed 100 % of inland rivers are legally protected, but practically upper part of basin is while weakly controlled, which need special educational and public control together with park rangers.	We plan to finally reduce number of illegal fishing, hunting and logging invasions to the area to minimum, by changing broad public perception of the territory as sacred global heritage.
		At least 10 per cent of coastal and marine areas are conserved	Bikin watershed is completely inland area without coastal parts, while whole Primorye region has quite poor level of coastal conservation – all coasts are openly used for fishing and recreation.	
		Areas of particular importance for biodiversity and ecosystem services conserved	Whole Bikin area is of highest biodiversity at the region and is legally conserved. But it needs special educational and inspecting efforts to make conservation realistic	
		Protected areas are ecologically representative	Bikin national park is highly ecologically representative as recognized as World Heritage site.	
		Protected areas are effectively and equitably managed	Management of national park is basically efficient and is under constant development with a help of environmental NGOs like WWF and BROC and whole civil society	Management of park will be more and more efficient when it's history become publically broadly available
		Protected areas are well connected and integrated into the wider landscape and seascape	Bikin national park is initially a part of entire environmental system of Amur eco-region.	
	TARGET 12	Extinction of known threatened species has been prevented	Extinction of any species is completely prevented here.	
		The conservation status of those species most in decline has been improved and sustained	Key goal of creation this park was just sustainable conservation status for tiger and other endangered species habitat	
	TARGET 13	The genetic diversity of cultivated plants is maintained	There is no cultivated plants	
		The genetic diversity of farmed and domesticated animals is maintained	This territory is total wildlife area with full restriction of any animal farming and inhabitance	
		The genetic diversity of wild relatives is maintained	Genetic diversity of all wildlife is fully granted	
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained	Genetic diversity of all wildlife species used by indigenous community is controlled strictly by special Council under park and whole environmental community of the region	
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity	Public perception of all hunting and fishing restrictions is a long term educational goal even for indigenous community and mainly for external visitors, accustomed to hunt and fish here without any control during decades. To change people's mind is out core goal.	

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●	●	●	●	●	●		■	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
			●	●	●	●	●	●	●
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■						●		■
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●	●	■	●	●	●	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

That was not enough clear to whom all these assessment point mainly concern – to national or regional government, managers of selected territory (national park Bikin) or our NGO, conducting sustainable campaigns in favor of the marked targets and goals. The point is that civil society in Russia, both national and regional, try to do it's best to follow CBD targets and SDGs, versus most corrupt officials of both levels, which has the only target and goal – to enrich budget and their own pocket by the loss of ecosystems and biodiversity. Therefore mainly on the country and regional level all the listed goals and targets are inaccessible, and only success may be achieved in framework of one certain territory, as Bikin watersted and national park.

Key messages for the CBD in planning for the post-2020 Targets

To get such kind of goals and targets UN and CBD secretariat has to reflect in new document, that any capitalistic model of country governance basically contradict CBD strategy and ideology. To be successful in it and safe civilization as a whole, most countries should refuse from prioritization of capital, and rich countries should find the model to seriously match their treasury and lifestyle with poor countries, providing more balance in the consumption level and level of population growth.

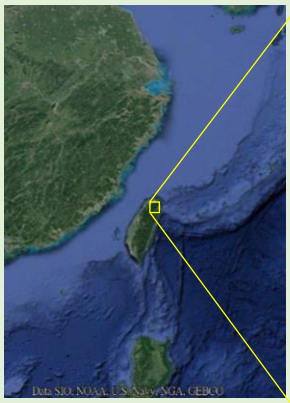
Transformations towards sustainability – A SEPLS restored by the Gongrong community

Jung-Tai Chao[1*], Yie-Hom Lin[2], Chen-Yang Lee[3], Chen-Chuan Huang[4] and Ling-Ling Lee[1, 5*]
SWAN International[1*], Gongrong community[2], Soil and Water Conservation Bureau (SWCB)[3], SWCB Taipei Branch[4], Biodiversity Research Center, National Taiwan University[5*]

[1]Board member of SWAN International, former Senior Scientist and Deputy Director of Taiwan Forestry Research Institute, [5]Professor of Institute of Ecology and Evolutionary Biology and Director of Biodiversity Research Center, National Taiwan University.

[1]jt00chao@gmail.com, [5]leell@ntu.edu.tw

Geographic and demographic information



Chinese Taipei

Sanzhi District, New Taipei City, Northern Taiwan

Country	Chinese Taipei
Province	New Taipei City
District	Sanzhi
Size of geographical area	2.2km^2
Number of indirect beneficiaries	23,072 persons (Men:11,884 persons) (Women:11,188 persons)
Dominant ethnicity	Han Chinese

Size of project area	2.2km^2
Number of direct beneficiaries	362 persons (Men: 194 persons) (Women: 168 persons)
Geographic coordinates (longitude and latitude)	25°14’57.5”N 121°30’27.7”E
Dominant ethnicity	Han Chinese (70% Hakka, 30% Hoklo)

X	Forest	X	Grassland	X	Agricultural	X	In-land water
	Coastal		Dryland		Mountain	X	Urban/peri-urban

Important species in the site

Common name (*Local name*)	Scientific name	Description
Crested serpent eagle	*Spilornis cheela*	A legally protected raptor. Living in forest area, these medium-sized raptor specialize in feeding on snakes and lizards.
Taiwan blue magpie	*Urocissa caerulea*	An endemic species of Taiwan. It is now listed as other conservation-deserving wildlife.
Chestnut tiger	*Parantica sita*	A danaid butterfly found in Asia. It has been found migrating from Japan to Taiwan and Hong Kong.
Japanese mitten crab	*Eriochier japonica*	A native crab living in clean river or stream. It migrates between upper stream and estuary.

Crested serpent eagle
Spilornis cheela

General introduction

The 210 ha production landscape managed by the Gongrong community is located in the northwest corner of New Taipei City, adjacent to the Yangmingshan National Park (YNP), the largest protected area in northern Taiwan. Human activities on this production landscape can have a major impact on the conservation effectiveness of the YNP.

The challenges the site faced included land degradation due to illegal landfilling and improper land development, pollution from open-air trash burning, unmanaged domestic wastewater, overuse of chemical fertilizers and pesticides, improper stream construction, interception of irrigation water, etc., which led to abandonment of agricultural land, reduction in income from farming, disappearance of traditional knowledge, loss of job opportunities, decreasing productivity, and an aged population.

The objective of this project is to report challenges Gongrong community faced in reviving its SEPLS, the process and key elements that facilitated the transformation of Gongrong, the lessons learned, and how such a transformation helped biodiversity conservation, benefited local livelihoods and enhanced the conservation effectiveness of the adjacent YNP.

The transformation of Gongrong involved implementing its rural regeneration plan collectively to stop further land degradation, clean up the environment, initiate environmental friendly activities including eco-friendly farming, revive abandoned agricultural land by cultivating diverse crops, thereby bring back biodiversity and ecosystem services that had once vanished.

A bird's-eye view of the production landscape managed by the Gongrong community.

Farmers' market run by local farmers selling eco-friendly agricultural produce help increase farmers' revenue

Contribution to Aichi Biodiversity Targets' Strategic Goal C

Please showcase your project outcomes by describing how you assessed/ measured the progress /achievement to the Aichi Biodiversity Target by using quantitative and qualitative information and/or figure as much as possible. Please focus on the Aichi Biodiversity Target Group that you have been assigned in the working group.

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved		
		At least 10 per cent of coastal and marine areas are conserved		
		Areas of particular importance for biodiversity and ecosystem services conserved		
		Protected areas are ecologically representative		
		Protected areas are effectively and equitably managed		
		Protected areas are well connected and integrated into the wider landscape and seascape	Methods used in collecting information for this project included literature review, document search, observation and interviewing of residents of the Gongrong community.	The SEPLS managed by Gongrong and Ankang communities serve as an Other Effective Area-based Conservation Measure (OECM) that have helped to expand the effectiveness of biodiversity conservation of the adjacent Yangmingshan National Park and integrated it to this human-nature interactive landscape.
	TARGET 12	Extinction of known threatened species has been prevented		
		The conservation status of those species most in decline has been improved and sustained	Methods used in collecting information for this project included literature review, document search, observation and interviewing of residents of the Gongrong community	Having cleaned up the environment, prevented air and water pollution, used eco-friendly farming practices, etc. the once vanished migratory Japanese mitten crab (*Eriocheir japonicas*), native fishes such as the Taiwan shovel-jaw carp (*Varicorhinus barbatulus*) and ray-finned fishes (*Zacco pachycephalus* and *Acrossocheilus paradoxus*), protected species such as serpent eagle and at least 10 frog species have become much more abundant than before.
	TARGET 13	The genetic diversity of cultivated plants is maintained		
		The genetic diversity of farmed and domesticated animals is maintained		
		The genetic diversity of wild relatives is maintained		
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained		
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●			●			●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●	■		●				●	●	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●		●	■		●		●	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	●	●	■	●	●	■		
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

It is challenging for local communities to collect scientific data for quantitative assessment on progress of conservation of biodiversity and ecosystem services.

Key messages for the CBD in planning for the post-2020 Targets

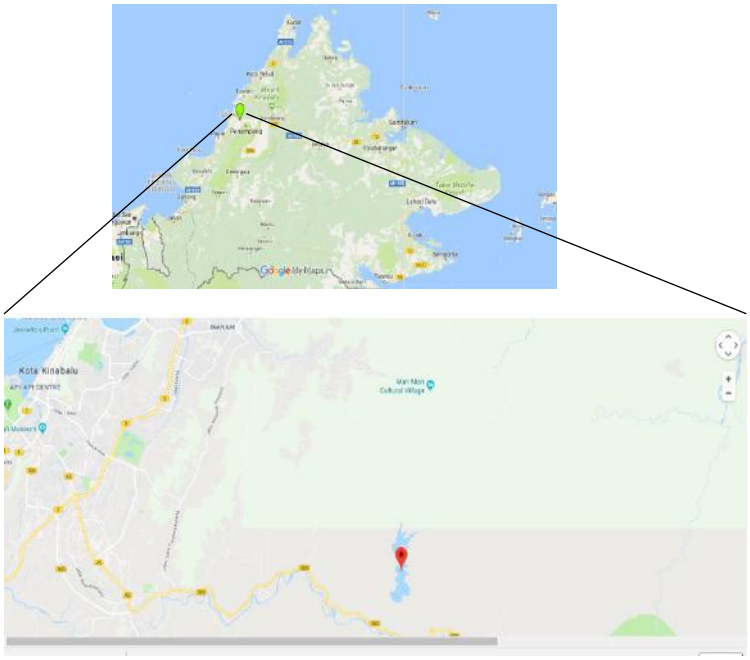
A continuous expansion of SEPLS all over the world, based on principles of the *Satoyama* Initiative, has delivered and will continue to extend effective and enduring *in situ* conservation of biodiversity and ecosystem services through sustainable use of biodiversity beyond the boundary of protected areas. Therefore, as one mechanism to carry out activities identified by the *Satoyama* Initiative, IPSI should further disseminate knowledge, build capacity, promote projects and programs, provide guidelines and successful case studies for the sustainable use of biological resources.

Introduction of incentives for control activities within water conservation area-study on community readiness for payment for ecosystem services (PES) in Babagon, Penampang, Sabah.

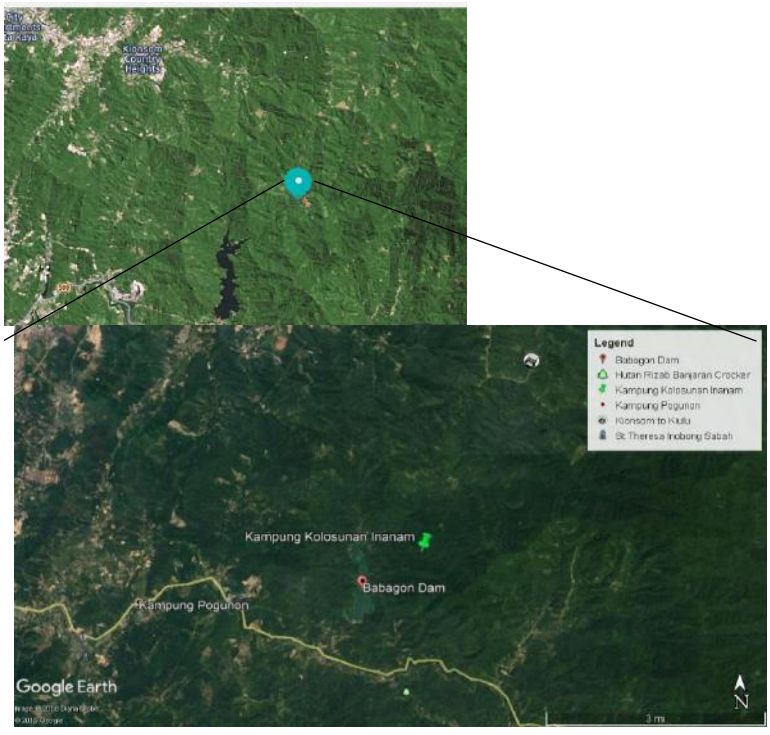
Gerald Jetony
Natural Resource Office, Sabah

Contact address:

Geographic and demographic information



Country	Malaysia
Province	Sabah
District	Kota Kinabalu Penampang
Number of indirect beneficiaries	500,000
Dominant ethnicity	Malaysian



Size of project area	3000 hectare
Number of beneficiaries	1400
Geographic coordinates (longitude and latitude)	Kampung Kolosunan Inanam : 5.9437, 116.2111
Dominant ethnicity	KadazanDusun

Ecosystem Types

	Forest		Grassland		Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

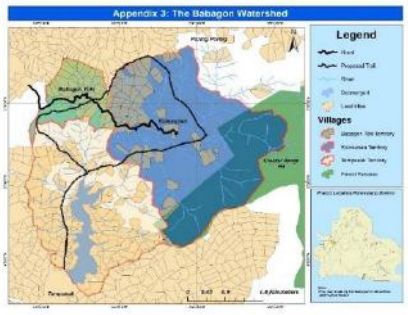
Important species in the site

English common name (*Local name*)	Scientific name	Description

General Introduction

Babagon catchment areas is situated in Penampang District. Babagon Dam was built in 1994 to supply water for Kota Kinabalu city and Penampang areas. Currently 57 % of water supply in these two urban areas are originated from this Dam area. Most of catchment areas are under protected areas but some part are inhibited. There are three villages in the catchment areas with the population of about 1400 people. Some areas outside of the protected areas are still forested but claimed by villagers as their customary areas. Most of villagers are farmers and very much depend on natural resources such as land, river and forest resources for their livelihoods. Furthermore most of the areas outside of protected area are still a state land which subject for alienation. Villagers are complaining that outsiders got land title in the area without their knowledge.

In order to address the problem on increase of human activities, The Sabah state government through Sabah Water Resources Enactment, 1998, intend to introduce development control in the areas. Section 38 of Water Resources Enactment provide for gazettment of particular areas as water conservation areas to prevent pollution and degradation of water. The introduction of this development controls definitely affect the livelihoods of the villagers whom are depend on the natural resources in that areas for their livelihoods. Therefore the state government decided to explore the possibility of implementing the Payment of Ecosystems (PES) mechanism in the areas. Yayasan Hasanah has funded a project implemented by two Non-governmental organisation (NGO), i.e LEAP Spiral and Forever Sabah to study local community's readiness for PES initiative. The project was implemented from April 2017 until April 2018. The objectives among others are to enhance knowledge of villagers about PES and the need for water conservation in the area, enhancing community capacities especially on leadership, livelihoods, management and planning of village area and to establish relationship with the government agencies. Through discussion and dialogues under this project managed to build trust and working relationship between government and the community. This project is also provide the opportunity to get prior inform consent for the implementation of development control in the areas. A number problem related to land in the project areas have also been resolved during the duration of the project. Yayasan Hasanah has also agreed to extend the collaboration for another two years, focusing on finding an alternative livelihoods for the villagers. Relevant government agencies such as Kota Kinabalu City Hall, Sabah Tourism Promotion Board and University Malaysia Sabah(UMS) have been brought in to help in designing and implementing programme for sustainable livelihood of people.



Contribution to Aichi Biodiversity Targets' Strategic Goal C

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal C	TARGET 11	At least 17 per cent of terrestrial and inland water areas are conserved	Gazettment under the relevant laws	Gazettment of forest Reserve (Class 1) and ICCA
		At least 10 per cent of coastal and marine areas are conserved		
		Areas of particular importance for biodiversity and ecosystem services conserved		
		Protected areas are ecologically representative		
		Protected areas are effectively and equitably managed		
		Protected areas are well connected and integrated into the wider landscape and seascape		
	TARGET 12	Extinction of known threatened species has been prevented		
		The conservation status of those species most in decline has been improved and sustained		
	TARGET 13	The genetic diversity of cultivated plants is maintained		
		The genetic diversity of farmed and domesticated animals is maintained		
		The genetic diversity of wild relatives is maintained		
		The genetic diversity of socioeconomically as well as culturally valuable species is maintained		
		Strategies have been developed and implemented for minimizing genetic erosion and safeguarding genetic diversity		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●	●	●	●	●	●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●		●	●	●	●	●	●	●	●
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●	●		●		●	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●	●	●	●	●	●	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Key messages for the CBD in planning for the post-2020 Targets

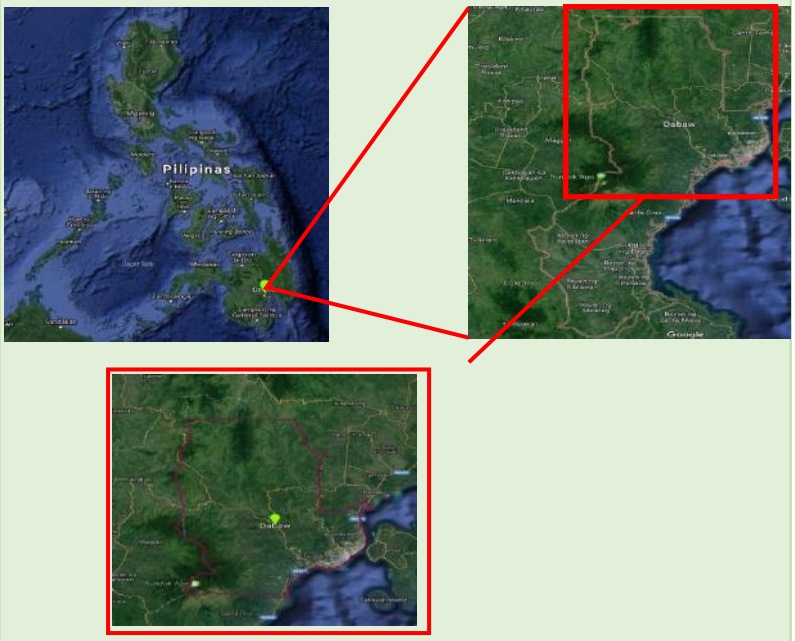
Vulnerability Assessment of the Urban Water Supply System of Davao City, Southern Philippines

Hydie Reyes Maspiñas
Hydrology for Environment Life and Policy (HELP) Davao Network
Davao City Water District

Present treasurer of HELP Davao Network, and a member since 2000. Finished post graduate courses in Participatory Development and Environmental Management at DMSF Philippines and Ceddet Foundation Spain respectively. Granted a Fellowship in International Atomic Energy Agency in Vienna, Austria for Isotopic Hydrology and Urban Water and Sanitation in Lund University Sweden.

Contact address: hydie_1111@yahoo.com

Geographic and demographic information



Country	Philippines
Province	Davao del Sur
District	Davao City
Size of geographical area	2,444 km^2
Number of indirect beneficiaries	1,100,270 persons
Dominant ethnicity	Filipino

Size of project area	2595.4km^2
Number of direct beneficiaries	1,100,270 persons
Geographic coordinates (longitude and latitude)	7° 11' 56.4036'' N and 125° 27' 17.7876'' E
Dominant ethnicity	Filipino

Ecosystem Types

X	Forest		Grassland	X	Agricultural	X	In-land water
	Coastal		Dryland		Mountain	X	Urban/peri-urban

General introduction

The urban water system (UWS), which includes water supply, wastewater and storm water, has been identified to be particularly at risk to climate change. If the UWS is at risk, then impacts on the system infrastructure are anticipated. Particularly for the water supply system (WSS), vulnerability assessment to climate change impacts, such as flooding, is necessary to determine the system's resilience.

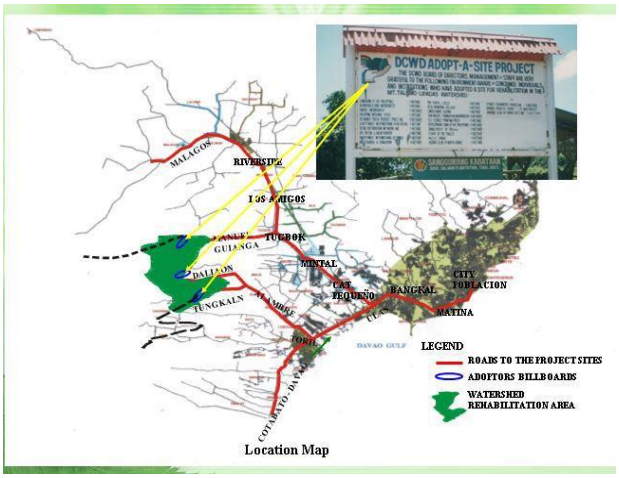
In Davao City, Level III WSS is served by the Davao City Water District (DCWD). Of the 182 barangays comprising Davao City, 110 are served by DCWD. The remaining 72 barangays are served by Levels I and II water systems that are sourced from springs, deep wells and shallow wells. For DCWD, 99.9% of production comes from groundwater sources extracted through production wells.

It is likely that climate change may result to increased risk of flooding. Based on the projections of the Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA), the increase in precipitation during the months of December to February may cause rivers to overflow and impact on Davao City communities and infrastructures. Thus, this study assessed and mapped vulnerabilities of the WSS *vis-à-vis* vulnerabilities of the communities to 100-year return floods, in 67 riverine and floodplain barangays located in 4 of 8 watersheds in Davao City.

Indicators for exposure, sensitivity and adaptive capacity were selected based on best available data. Database development and data integration used the Geographic Information System; geographical areas prone to floods at least 1.5 m high are overlaid with other datasets to show where vulnerable people and WSS infrastructure are in relation to the flood-prone barangays.

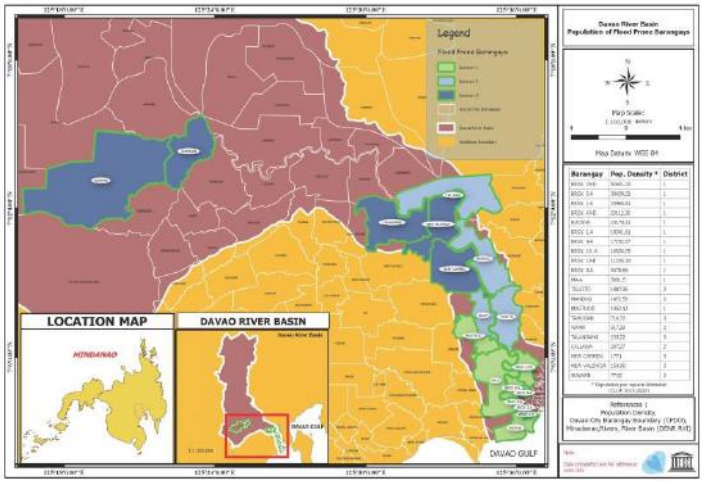
Result of the study showed the very high vulnerability to 100-year return floods of some of the DCWD pipe bridge crossings and reservoirs, including the communities in 4 barangays. DCWD WSS is resilient in 3 aspects namely functional redundancy, flexibility and responsiveness. In conclusion, there are three (3) areas that need intervention. First. Regular maintenance of all DCWD pipelines and the timely rehabilitation of replacement of ageing pipelines must be assured. Second. Environmental sanitation must be improved, particularly by proper management of wastes at all levels. Third. Environmental preparedness need to be increased, by providing the barangays with access to functional early warning systems and by putting the Barangay Disaster Risk Reduction Management (BDRRM) Council into full functional use. Interventions have been done like Adopt-a-Site Project and Rehabilitation of Community Learning Center so as to mitigate possible effects of heavy floods in the city.

This is a collaborative research of five institutions in Davao City

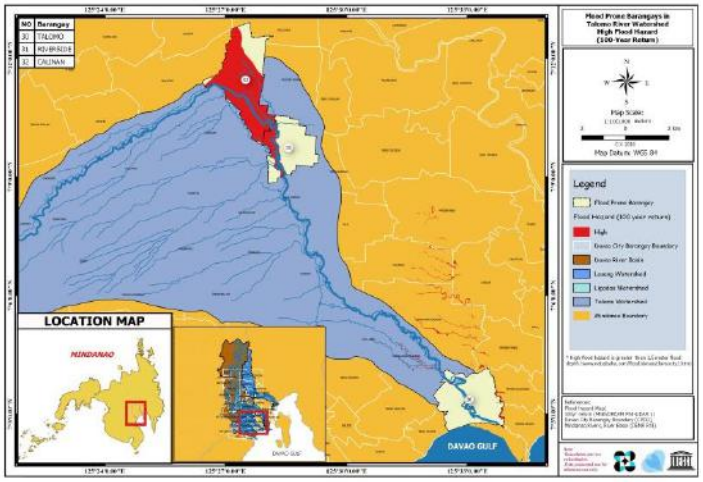


DCWD Adopt-A-Site Project

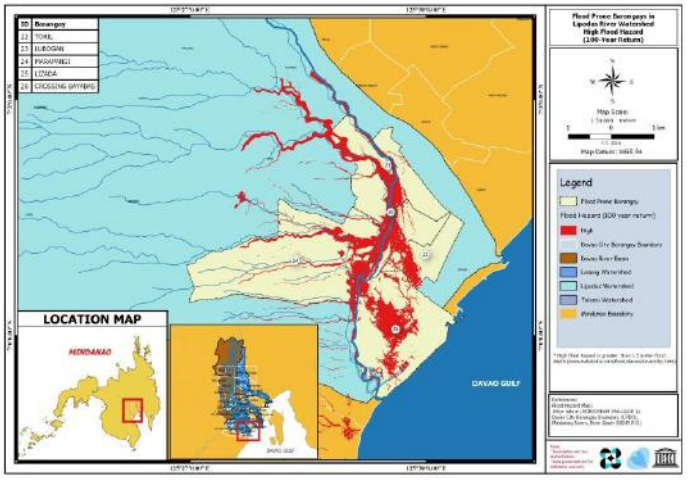
Disaster Preparedness Training at the Community Learning Center



Davao River Watershed Flood Prone



Talomo Watershed Flood Prone



Lipadas Watershed Flood Prone

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	No. of Hectares Adopted No. of Community Learning Center Rehabilitated No. of Adopters No. of Service Connections (Residential/Commercial) No. of Flood Prone Maps Generated Using LIDAR Technology No. of Disaster Preparedness Plan for the city	183 Hectares 1 Rehabilitated Community Learning Center 101 Adopters 220,054 Service Connections 34 Flood Prone Maps 1 Disaster Preparedness Plan
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable		
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration		
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification		
	TARGET 16	The Nagoya Protocol is in force		
		The Nagoya Protocol is operational, consistent with national legislation		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●		●		●		●			
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
			●	●			■	●	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

		■		■	●		■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●		●		●	■	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Assigning scores for vulnerability using indicators on exposure, sensitivity and adaptive capacity and securing secondary data from institutions that are needed in the study. There is also a lack of vertical and horizontal integration of the city's Disaster Preparedness Plan.

Key messages for the CBD in planning for the post-2020 Targets

Ecologically sustainable development is the environmental component of sustainable development. I strongly believe that if there are threats of serious irreversible environmental damage one has to use the precautionary principle, lack of full scientific certainty should not be a reason for postponing measure to prevent environmental degradation. Strengthening science based researches as a critical tool for decision making and policy adaption should be a priority. We also need to make strong the technical and institutional capacities if our IPSI members. Communication strategies to the people, participatory approach, regular monitoring, review and accountability are still some of the important factors for a sustainable happy mother earth.

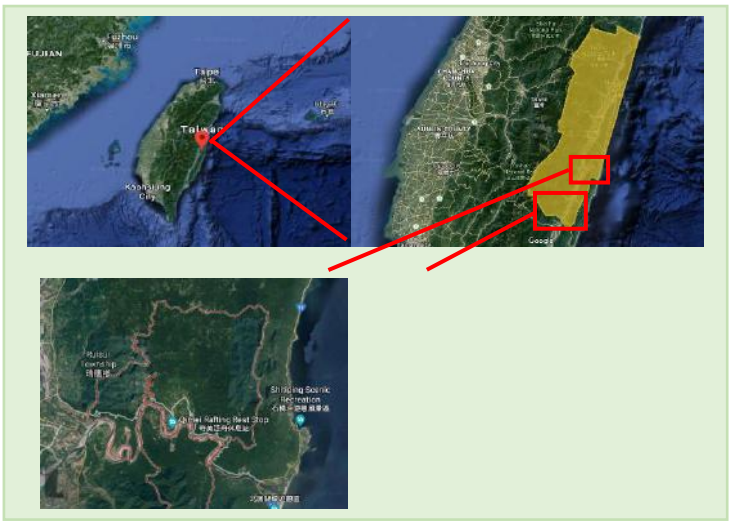
Organic Value Chain Development of Indigenous Communities in Eastern Taiwan

Yu-Chun Chan*, Szu-Ming Lee, Yu-Chuan Chuen, Pao-Hua Liu
Tse-Xin Organic Agriculture Foundation

Joined Tse-Xin as a Specialist to support the organic agriculture extension initiative in 2015. She holds a B.Sc. in Psychology from National Chung Cheng University (Taiwan) and an MSc in Tourism and Recreation Management from National Dong Hwa University (Taiwan).

Contact address: a.chen@toaf.org.tw

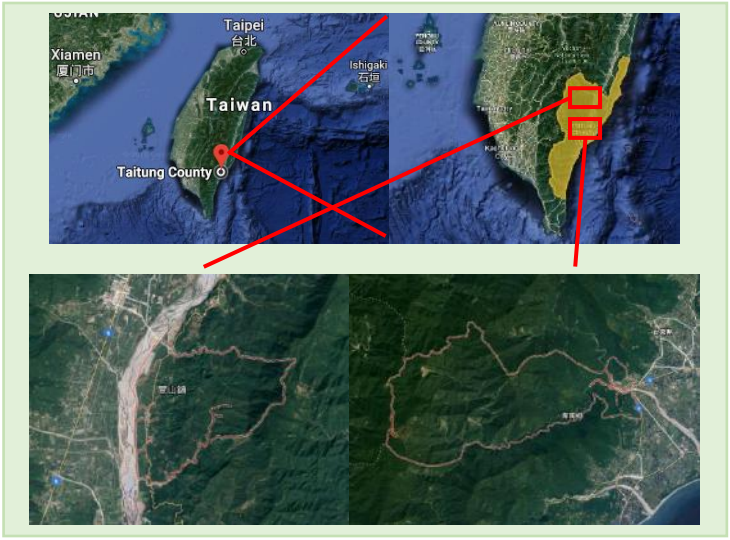
Geographic and Demographic Information



Kiwit Community Cilamitay Community

Taiwan Taitung County

Country	Taiwan
Province	Hualien and Taitung County
District	Ruisui, Fuli, Guanshan, and Beinan Township
Size of geographical area	783.38 km^2
Number of indirect beneficiaries	48,186 persons (Men: 25,662 persons) (Women: 22,524 persons)
Dominant ethnicity	Chinese



Kaadaadaan Community Taromak Community

Size of project area	188.24 km^2
Number of direct beneficiaries	46 persons (Men: 1,743 persons) (Women: 4,924 persons)
Geographic coordinates (longitude and latitude)	23.31˚N, 121.22˚E (Kiwit) 23.10˚N, 121.14˚E (Cilamitay) 23.03˚N, 121.09˚E (Kaadaadaan) 22.47˚N, 121.07˚E (Taromak)
Dominant ethnicity	Chinese, Amis, Rukai

Ecosystem Types

	Forest		Grassland	x	Agricultural		In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important Species in the Site

English common name (*Local name*)	Scientific name	Description
Reeves' Muntjac (magcel)	*Muntiacus reevesi*	Subspecies endemic to Taiwan, harmful to crops
Formosan Wild Boar (fafoy)	*Sus scrofa taivanus*	Native to Taiwan, damages crops and destroys fields
Maize ('ariray)	*Zea mays*	Government encourages farmers to grow local varieties towards achieving food self-sufficiency
Asian Rice (panay)	*Oryza sativa*	Main crop, flooded paddies provide habitat for wetland wildlife
Red Quinoa (kowal, baae)	*Chenopodium formosanum*	Traditional crop, it holds cultural importance amongst the indigenous communities

General Introduction

To promote sustainable development of rural areas in eastern Taiwan, the National Development Council of Taiwan launched this project together with Tse-Xin Organic Agriculture Foundation and selected four indigenous communities as representative pilot study areas. It is important to develop an integrated, holistic approach to policy development and implementation because of the important linkages between food, tourism, and cultural and creative industries. The approach is to focus on innovative activities and interventions through the combination of the primary sector (agriculture) and tertiary service sectors (tourism) activities with strong links to the cultural sector (creative industry).

As eastern Taiwan attracts more visitors to consume local food products, visitors not only satisfy their vital needs but also interact with local culture and support local development by stimulating demand. In turn, the contribution made by local goods help increase revenue, boost employment, generate social value or 'dividend' shared by people in the community, and create a virtuous circle of rural development.

Based on the principles of the Satoyama Initiative, our organization collaborated with indigenous communities since 2016 on organic value chain development to help farmers transition to organic and support them to adopt wildlife-friendly approaches for the benefit of both biodiversity and human livelihoods.

The results of the project can be summarized as follows:

- 62.3 ha of land under certified organic management
- 30.5 ha land under environmentally-friendly management
- 24 environmentally friendly value-added products

Contribution to Aichi Biodiversity Targets' Strategic Goal D

Please showcase your project outcomes by describing how you assessed/ measured the progress /achievement to the Aichi Biodiversity Target by using quantitative and qualitative information and/or figure as much as possible. Please focus on the Aichi Biodiversity Target Group that you have been assigned in the working group.

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	To help farmers transition to organic and support them to adopt wildlife-friendly approaches for the benefit of both biodiversity and human livelihoods	• 62.3 ha of land under certified organic management • 30.5 ha land under environmentally-friendly management
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	In support of organic value chain development, to develop value-added products with wildlife conservation objectives to increase income of rural women and smallholder farmers	• 24 environmentally friendly value-added products • corn prices (in U.S. dollars per kilogram) from 0.30 USD/kg to 43.30 USD/kg
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration		
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification		
	TARGET 16	The Nagoya Protocol is in force		
		The Nagoya Protocol is operational, consistent with national legislation		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" and "■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●		■			●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
		■	●	●	■	■	●	■	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●					●	●
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	●	●	■		●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Due to insufficient scientific data of farmland biodiversity, it is difficult to assess how declines in wildlife are linked to changes in agricultural practices and the sustainability of land use.

Key messages for the CBD in planning for the post-2020 Targets

We hope to gain more practical experience about the construction of a more environmentally sound, socially just and economically sustainable local food system.

At the intersection of global goals and local well-being: A lens from the Pacific Islands

Pua'ala Pascua*, Eleanor Sterling, Amanda Sigouin, Nadav Gazit, Erin Betley, Joe McCarter
Center for Biodiversity and Conservation – American Museum of Natural History

Pua'ala Pascua, a biocultural specialist at the CBC, is of Native Hawaiian descent and holds degrees in Hawaiian Studies, Marine Science, and Natural Resource Management. The CBC's interdisciplinary team explores the junction of research, policy, and resource management in place-based and indigenous communities across the Pacific and around the world.

Contact address: ppascua@amnh.org

Geographic and demographic information

Figure 2. General boundaries of the Pacific Island Region

Region	Pacific Islands/ Oceania[1]
Sub-regions	Melanesia, Micronesia, Polynesia
Size of geographical area	≈ 45 million km^2 (incl. ocean area) ≈ 800,000 km^2 (land)
Number of indirect beneficiaries	≈ 18 million persons (total population)
Dominant ethnicity	Pacific Islander[2]

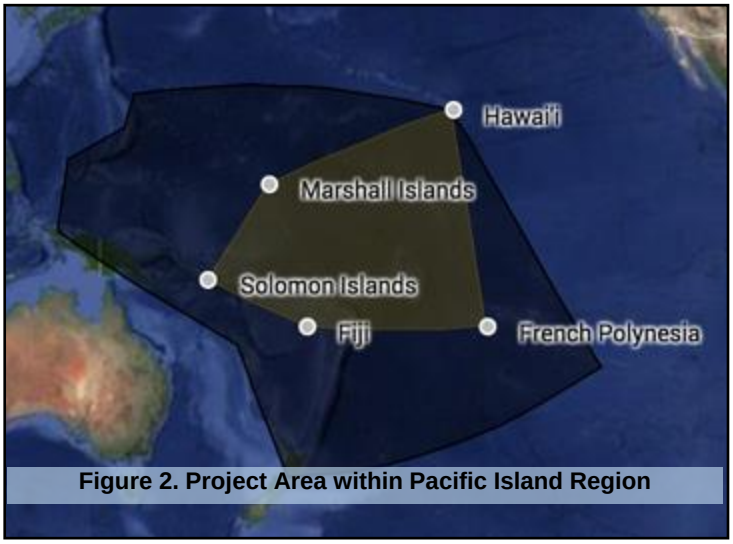


Figure 2. Project Area within Pacific Island Region

Size of project area	≈18 million km^2
Number of direct beneficiaries	N/A; Project area encompasses Hawai'i, Marshall Islands, Solomon Islands, Fiji, and French Polynesia, but may have broader benefits across the Pacific Islands Region
Geographic coordinates (longitude and latitude)	19.89676, 155.58278; 7.13147, 171.18447; -9.6457, 160.15619; -17.71337, 178.06503; -17.67974, -149.40684
Dominant ethnicity	Pacific Islander[2]

[1] The Pacific Islands region, also referred to as the cultural region of Oceania, encompasses Melanesia, Micronesia, and Polynesia. It is generally recognized to include American Samoa, Aotearoa New Zealand, Cook Islands, Fiji, French Polynesia, Guam, Hawai'i, Kiribati, Marshall Islands, Nauru, New Caledonia, Niue, Northern Mariana Islands, Palau, Papua New Guinea, Rapa Nui, Samoa, Solomon Islands, Tokelau, Tonga, Tuvalu, Vanuatu, Wallis and Futuna Islands, and all ocean areas in between.

[2] A broader grouping encompassing a number of individual ethnicities, for instance Samoan, Tongan, Fijian, etc.

Ecosystem Types

X	Forest	X	Grassland	X	Agricultural	X	In-land water
X	Coastal	X	Dryland	X	Mountain	X	Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Not applicable, this project did not include a species-specific focus.		

General introduction

Global biodiversity and sustainability targets are intended to inform national-level actions. However, their cascading impacts are ultimately realized at the local level through the direction of international aid and related programs. Thus, it's important to understand how global measures to inform sustainable development intersect with local values, priorities, and perceptions of well-being. To do so, we focus on the Pacific Islands, a region characterized by resilient communities and a hotspot for global development projects.

We highlight components from an analysis examining gaps and overlaps between a regionally-derived list of well-being characteristics (the Pacific Island Well-being Elements) and global development targets (the Sustainable Development Goals and Aichi Biodiversity Targets). The Pacific Island Well-being Elements draw from a series of community workshops and were triangulated with an interdisciplinary research team with considerable experience in the Pacific. Together, these 93 elements under 8 dimensions represent critical dimensions of biological and cultural well-being across the Pacific. Results of our coding activity identify the areas where the Aichi Targets overlap and contrast with local-level perspectives of well-being and, presented together with highlights from our complementary efforts, inform recommendations for identifying goals that account for both international and local priorities and outcomes.

Figure 3. Marine and intertidal ecosystems are important natural settings in the Pacific Islands.

Figure 4. Livelihood practices in the Pacific Islands are often characterized by subsistence-based practices.

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	Using a biocultural approach involving a series of community-visioning workshops and triangulation within an interdisciplinary research team, we identified ways ecosystems provide essential services to Pacific Island communities, in particular their contributions to health, livelihoods, and well-being. This information is ultimately intended to inform future restoration and safeguard measures at local to global scales.	Through this iterative process we developed the Pacific Island Well-being Elements, a list of 93 elements grouped under 8 overarching dimensions. Together this list represents critical characteristics of biological and cultural well-being and resilience across the Pacific Islands, which may also have broader relevance in place-based communities around the word. This is described in further detail in Mawyer et al. forthcoming.
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	Our process uses a systematic approach to understand well-being from a foundation of local priorities and values and uses participatory mechanisms to inform relevance and applicability. As such, this target can be measured through community visioning workshop and interdisciplinary research team participation/representation.	100% of community visioning workshops engaged women, indigenous and local community members, and individuals who either come from, or who work closely with poor and vulnerable populations. Our interdisciplinary research team also included representatives from these demographic groups or those who work closely with these groups. We found that inviduals would not typically self-describe as poor/vulnerable, suggesting potential issues with the framing of this target.
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration	N/A	N/A
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification	N/A	N/A
	TARGET 16	The Nagoya Protocol is in force	N/A	N/A
		The Nagoya Protocol is operational, consistent with national legislation	N/A	N/A

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and* "■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
		■	■	■	■	■	■	■	■
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■	■		●	■			■		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

■	■	■	■	■	■	■	■	■
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	■	■		■	■	■	■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

We highlight components of a larger assessment encompassing all of the Aichi Targets and SDGs indicated above (full results forthcoming, Sterling et al. Submitted). True to its intention, we found that many of the existing Aichi indicators focus on characterizing the environmental state (i.e. IUCN Red List), however this focus may preclude important human dimensions. For instance, there are limited indicators on socio-economically and culturally-valued species (i.e. Target 13) and other value-related measures. This was a challenge because as our project describes, environmental state is one dimension in a larger set of characteristics that contribute to biological and cultural well-being.

Key messages for the CBD in planning for the post-2020 Targets

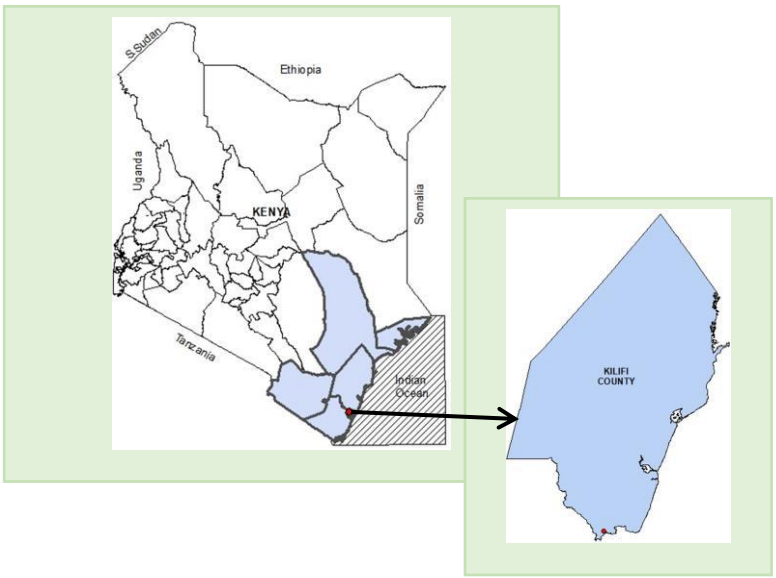
Consistent with the CBD's desire to use a variety of approaches including quantitative indicators, expert opinion, stakeholder consultation and case studies, we propose that post-2020 targets focus on better integrating the relationship between human and ecological well-being, which has potential to enhance both monitoring and implementation of the Convention. Indicators informed by local and/or cultural relevance may provide strong evidence and can enable and support meaningful on-the-ground actions to address issues and key threats. Acknowledging and more directly incorporating this information would enhance our understanding of linked biological and cultural diversity, highlighting both benefits and trade-offs posed by development goals.

Restoration of Sacred *Kaya* forests in Kenyan Coast for enhanced provision of ecosystem services and products for improved livelihoods

Chemuku Wekesa
Kenya Forestry Research Institute, Taita Taveta Research Centre, P.O. Box 1206-80304, Wundanyi

Contact address: chemukukefri@gmail.com

Geographic and demographic information



Country	Kenya
Province	Coast
District/County	Kilifi
Size of geographical area	12,246 Km^2
Number of indirect beneficiaries	128,459 persons (Men: 83,499 persons) (Women: 44,960 persons)
Dominant ethnicity	Mijikenda

Size of project area	5.8 Km^2
Number of direct beneficiaries	10,000 persons (Men: 6,500 persons) (Women: 3,500 persons)
Geographic coordinates (longitude and latitude)	S 03^o 55′ 55” E 39^o 35′ 46”
Dominant ethnicity	Mijikenda

Ecosystem Types

×	Forest		Grassland	×	Agricultural		In-land water
×	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	**Scientific name**	**Description**
Mvada-paka	*Harrisonia abyssinica*	A spiny shrub or tree 2-6m with red, globose or lobed fruits. Highly valued medicinal plants.
Mkwaju	*Tamarindus indica*	It is well known for its juice, souring porridge and seasoning and for its durable timber and high quality firewood.
Muzambaraho	*Syzygium cumini*	Its purplish sweet fruits are very popular and are sold in markets when in season. The tree is also used for timber, furniture, construction poles and firewood.
Muyu	*Adansonia digitata*	It has large fruits with many seeds embedded in white-pink, dry, edible pulps are very popular. Lumps of dry pulp with the seeds embedded within are dyed with bright colors and sold as sweets in the local market. A refreshing drink is made from the fruit pulp. Seeds are fried and eaten.
M'chakaya	*Ziziphus mucronata*	The tree has many uses including; firewood, fodder, edible fruits, live fence, ornamental, bee forage and of high medicinal value.

Harrisonia abyssinica

General introduction

Characteristics and importance of *Kaya* forests

Located along the coastal region of Kenya, the *Kaya* forests are peculiar examples of a multifunctional landscape referred to as socio-ecological production landscapes and seascapes (SEPLS). *Kaya* forests provide both direct and indirect benefits for human well-being. The forests occur as small isolated forest patches ranging from 2.0 to 200.0 hectares in size. *Kaya* means homestead in the Mijikenda language. Historically, these forest patches sheltered small fortified villages *(Kayas*) which were set up by the Mijikenda people when they first appeared in the region many centuries ago after fleeing their enemies in the north. As security improved in the last century, the Mijikenda groups moved out and settled in the surrounding areas, but the *Kaya* forests were preserved as sacred places where prayers, rituals, sacrifices and burials took place. Protection of the *Kaya*s remains deeply entrenched in traditional Mijikenda culture and their integrity and sanctity are safeguarded by a council of *Kaya* elders who employ a system of taboos and traditional rules to protect these forests.

Local communities living around *Kaya* forests are small scale farmers mainly involved in intensive agriculture to sustain their livelihoods. Despite land being intensively cultivated by locals, *Kaya* forests represent areas of relatively untouched vegetation rich in biodiversity. The *Kaya* forests form part of the once extensive Zanzibar-Inhambane lowland mosaic, known for high species diversity and endemism; as such they are a very important part of Kenya's threatened natural vegetation communities given the role they play in facilitating how local communities adapt and cope with climate change. *Kaya* forests exhibit a very high level of biodiversity both in terms of sheer diversity, endemism and rarity in a significant number of biological groups.

The diverse flora and fauna of the *Kaya* forests and the associated processes support local communities in sectors such as biomass energy, food, shelter, herbal medicine, eco-tourism industry and agriculture productivity. *Kaya* forests are also important sources of non-provisioning ecosystem services such as air and water purification, pollination, seed dispersal, climate modification, soil stabilization, drought and flood control, recycling of nutrients and maintaining healthy habitats. Others include spiritual and aesthetic values, supporting indigenous knowledge systems and education.

Challenges facing *Kaya* forests

- Disregard for traditional knowledge systems
- Over-exploitation
- Population pressure
- Unsustainable land use practices

Objectives of your project

To restore degraded sites in *Kaya* forests for enhanced biodiversity conservation and improved local livelihoods.

Activities employed

1) Building the capacity of local communities to effectively undertake forest rehabilitation and restoration
2) Establishment of community tree nurseries to provide planting materials for participatory rehabilitation
3) Maintaining the community seed bank for preservation of important but threatened medicinal and wild food plants
4) Development of community based monitoring tracking tool to track the tree nurseries, tree survival and landscape restoration
5) Documentation of indigenous knowledge of wild and food plant species in and around the *Kaya* forests

Aerial view of *Kaya* forest

Basketry products made from *Kaya* forests

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	Survival rate (%) of seedlings of native tree species planted in the degraded sites	Survival of the restored 3.0 hectares established using the tracking tool. The survival rate stands at 89%
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	Number of biocultural innovations and practices of indigenous communities applied in sustainable conservation and use of biodiversity	Sixteen (16) biocultural innovations identified and documented; and disseminated widely for up scaling
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration	Number of studies undertaken to generate information on carbon stocks and biodiversity status of the *Kaya* forests and associated landscape in order to develop restoration technologies for conserving biodiversity	Three studies have been undertaken on *Kaya* forests and the following publications generated: policy brief, Guide on the floral diversity of *Kaya Mudzi Muvya* and Technical report on the biocultural innovations of Mijikenda Community. Publications have been shared widely for application of the knowledge to conserve biodiversity
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification	Area (ha) of degradation hotspots mapped and replanted with native tree species raised in the community nurseries	Five (5.0) hectares of degraded sites within *Kaya* forests mapped and identified for replanting to restore them. Already, 3.0 hectares of the degraded sites restored with native/indigenous tree species
	TARGET 16	The Nagoya Protocol is in force	Number of community members participating in seed exchanges and sharing; number of community seed banks established to preserve and promote seed sharing and exchange among community members	1,150 community members have registered as members of the established community seed bank to easily access seeds for traditional crop varieties for planting
		The Nagoya Protocol is operational, consistent with national legislation		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
■	●	■	■	●		●		■	
Strategic Goal C			Strategic Goal D			Strategic Goal E			
●	●	●	●	●	●	■	●	●	

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	■		●	●		●	
		●	●		●	■		

Any difficulties you found during your assessment

The baseline study was not conducted prior to the start of the project, hence difficult to measure clear outcome

Key messages for the CBD in planning for the post-2020 Targets

The work of IPSI should continue beyond post 2020 targets and the capacity of members consolidated to scale out the conservation and revitalization of SEPLS globally.

Aquaculture of Native Alga in Inundated Coastal Farmlands: A Pro-poor Climate Adaptive Intervention for Restoring Ecosystem Services

Dipayan Dey*
South Asian Forum for Environment [SAFE]

A restoration ecologist by training, the author is presently leading 'SAFE' a CSO, working at science-society interface on climate initiatives, adaptive and resilient agriculture and habitat restoration under the aegis of UN Environment, APN Global Change Research, ICIMOD, IWMI etc. Author has recently won the GDN Award from JICA for 'Most Innovative Developmental Project'.

Contact address: chair@safeinch.org

Geographic and demographic information

Country	INDIA
Province	West Bengal
District	24 Parganas (South)
Size of geographical area	296.4 km^2 (Gosaba Community Development Block)
Number of indirect beneficiaries	Gosaba CDB has total rural population of 246,598. There are 125,901 males & 120,688 females.
Dominant ethnicity	Scheduled ethnic group makes 62.65% (154,484 heads) while scheduled tribes make 37.35% (23,343) of the total populace.

Size of project area	14 km^2
Number of direct beneficiaries	2570 persons (Men: 1020 persons) (Women: 1550 persons)
Geographic coordinates (longitude and latitude)	22°12′44″N 88°46′42″E
Dominant ethnicity	Mostly ethnic (62%) and local tribal (28%) and rest (10%) migrants from other parts of the state

Ecosystem Types

	Forest X		Grassland		Agricultural X		In-land water X
	Coastal X		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Algae *(Shaola)*	*Enteromorpha intestinalis*	Green filamentous algal flora that grows profusely in saline water, used as feed fodder fertilizer and fuel. Local phytoplankton significant for sustaining primary productivity and carbon capture as well.
Algae *(Pana)*	*Ulva compressa*	Same as above. This is also a biological indicator for salinity and reduced dissolved oxygen.
Mangrove *(Sundari)*	*Heritiera fomes*	Important mangrove flora, dominant species and significant for the habitat. Supports local livelihood.

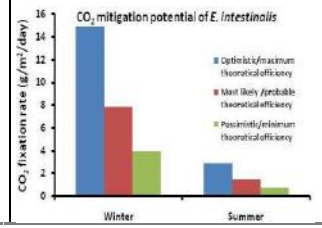
General introduction

The intervention area is in the deltaic villages within Sundarban World Heritage site in India, which is highly vulnerable to climate impacts owing to sea level rise, coastal catastrophe and salinity ingression leading to loss of mangrove habitat and biodiversity, inundation of farmlands and fall in primary productivity. This directly impacts life and livelihood displacing marginal farmers.

The main aim of this action-research was to build capacities in the locale and promote algaculture as a community based adaptive mitigation strategy for sustainable alternative livelihood in coastal villages of Sundarbans in India. The underlying principle was to demonstrate algaculture integrated with fisheries in brackish and trapped storm surge waters in inundated coastal areas as a promotional capacity building programme for marginal farmers, who have lost their farmland in saline water ingress owing to sea level rise. Another important rationale behind the programme was to disseminate this cultivation technology amongst local stakeholders and enrich scientific knowledge in regard to carbon sequestration potential of local algal species as a strategic mitigation measure for climate change resilience and as well species conservation.

The programme envisioned the development of a scientific aptitude in abating climate change impact with low cost conservation paradigm and place-based restoration of habitat through community intervention. This built capacities among farmers on low-cost *in-vivo* aquafarming, management and monitoring of algaculture, harvesting of algal biomass and its commercial usage for food fodder feed fuel and fertilizer.

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	The outcome was measured through strategic social impact assessment indicators like enhancement in food security of inhabitants and livestock, increase in beneficiary payments through creation of alternative livelihood opportunities, reduction in internal displacements and migration etc which were directly dependent on the ecosystem services of this coastal habitat and revived with the sustainable intensification of the nature services.	Perusal of results showed that enhanced primary productivity due to integrated aquafarming in inundated farmlands enhanced food security of inhabitants and livestock by 40-44% on average while per head payments of USD 32-35 could be assured in lean periods to each beneficiary. Farmer migration reduced drastically with intensification of productivity and betterment of habitat health, as evidenced from diversity indices and limnological data.
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	Outcomes were measured through sociometric study and analysis, livelihood vulnerability indexing (LVI) and need assessment surveys (NAS) in the local community inhabiting the area of intervention.	Analytical results revealed that 86% of the beneficiaries with LVI below 0.3 (highly vulnerable) could be supported, who were victims of climate impacts and habitat loss. Post intervention, in 30 months the index shifted to 0.74 (stable). 60-65% of the beneficiaries were female and nearly 97% were indegenous ethnic community members, who adopted the aquafarming practice in coastal area.
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration	Ecosystem resilience could be measured through geospatial mapping of ecosystem services and its intensity indices (IWMI 2016), while impacts of conservation and habitat restoration could be measured from biodiversity indices of the planktons (Simpson's Species Richness Index - **D**) and change detection studies on carbon capture and storage potentials in algal flora through aquafarming (Total CO2 fixation = K × biomass productivity X fixation efficiency; wherein K is the rate constant with value 1.89) .	Species richness enhanced by 17% in the first two years of intervention (D = 0.469 to 0.549) while 8 significant provisioning and supporting ecosystem services could be rejuvenated in the area. **Carbon capture& storage potential** 
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification	The results were estimated on the percentage of area brought under sustainable aquafarming through this intervention over the total inundated area in the Gosaba Community Development Block (GCDB) and as well total area of mangrove vegetation conserved through this intervention.	Total area of inundation in GCDB was almost 32% of the habitable land that is 948 hectare of which arable land (coastal agro-ecosystem) was nearly 270 hectare that was inundated. Out of this, 48.5 hectares (18%) could be restored through aquafarming, while alga culture alone was done in 27 hectares. Similarly almost 30% mangrove vegetation could be conserved through this intervention.
	TARGET 16	The Nagoya Protocol is in force	This could be measured through equity in access to biological resources, ecosystem services and socio-economic benefits based on sociometric survey assessments and FGDs and following LNOB (Leaving No One Behind) principles.	An overall 85-87% increment was observed on the equitability in access to biodiversity resources and ecosystem services and as well there have been a 68% growth in participation and conservation efforts in the locale as evidenced from a 7-point attitude scaling survey in the community.
		The Nagoya Protocol is operational, consistent with national legislation	This was assessed by the impacts of ratification of Nagoya Protocol by the Ministry of Environment, Forest and Climate Change, Govt. of India on coastal conservation in general and to this intervention in particular.	Post 14th July 2014, when Nagoya Protocol was ratified in India, it has been duly incorporated in the coastal zone management policies. MoEF&CC also supported for scaling up in Sundarbans.

Relations to other Aichi Biodiversity Target & SDGs

Use "●*"and"*■"to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	●		■	●	●	●		■	
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■			●	●	■	■	●	●	■
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	■	■		■			■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
●		●	●	●	●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

The main difficulties in assessments were due to highly dynamic ecology of the area of intervention that was often disturbed with anthropogenic interferences and standardizing the strategic assessment tools were a great challenge. Further, erratic weather conditions and geographical remoteness were to some extent a bottleneck in working in this area. Social dynamics is also very complex owing to vulnerability and resolving conflicts of interests of stakeholders have been an issue in itself. However, more potential works are needed to address such multifaceted paraphernalia for conservation in areas under direct impact of climate.

Key messages for the CBD in planning for the post-2020 Targets

1. Enterprise-oriented community-ecosystem based conservation approach can be viable and contribute more to local economies, diversify income streams and generate multiple social benefits.
2. Local institutions can take on non-traditional products and services including ecotourism, carbon sequestration, water, and agro-forestry as well as traditional bio-energy resources, as in case of bio-fuels from algae, but they must be duly formalized.
3. Conservation policy framework should be place-based and needs to be developed through participatory approach so as to incorporate TEK and resource budgeting principles for sustainable production and consumption.

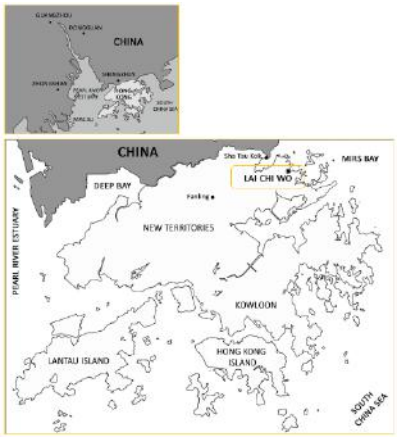
Rural Sustainability Programme in Lai Chi Wo, Hong Kong

CHICK, Hiu Lai Katie
The Policy for Sustainability Lab (PSL), Faculty of Social Sciences, the University of Hong Kong

Katie joined PSL as Project Manager for Rural Sustainability programmes since Apr 2014. Her expertise covers both nature and cultural conservation. She obtained her Mphil. And Msc degrees in Forest Ecology and Architectural Conservation at the University of Hong Kong. Before joining the university, she worked at local environmental NGOs for almost ten years.

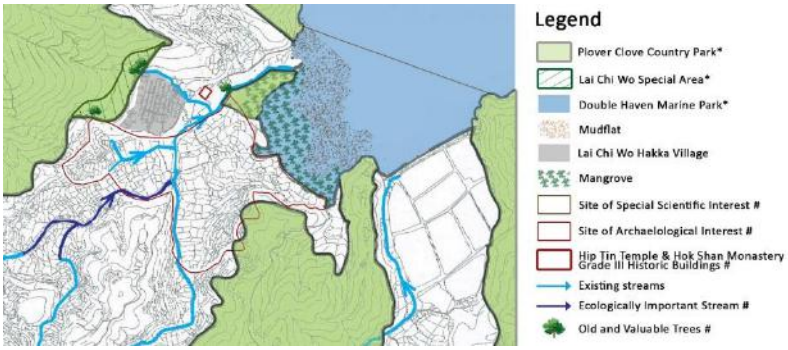
ktchick@hku.hk

Geographic and demographic information



Country	Hong Kong, China
Province	New Territories
District	North District
Size of geographical area	136.7km^2
Number of indirect beneficiaries	315 270persons (Men :147494 persons) (Women: 167776 persons)
Dominant ethnicity	Hong Kong Cantonese

Size of project area	5 km^2
Number of direct beneficiaries	About 1200 persons (no figure of sex distribution)
Geographic coordinates (longitude and latitude)	22.5304° N, 114.2588° E
Dominant ethnicity	Hong Kong Hakka



Detailed map of Lai Chi Wo

Ecosystem Types

X	Forest		Grassland	X	Agricultural	X	In-land water
X	Coastal		Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Chinese bullfrog	*Hoplobatrachus chinensis*	China Class II National Protection species, associated with traditional paddy farming practice
Paddy rice	*Oryza sativa*	Traditional crop, providing seasonal wetland habitat for freshwater species
Heritiera & White flower derris	*Heritiera littoralis* & *Derris trifoliata*	Largest colony present in Hong Kong which is traditionally maintained by the villagers. Major ecotourism spot .
Incense tree	*Aquilaria sinensis*	Common species found in the site. The species is under threat of illegal logging for agarwood production. Agroforestry trial is carried out to promote conservation and wise use.

Chinese bullfrog

White flower derris

General introduction

Lai Chi Wo is a historic farming valley located within the UNESCO Global Geopark of Hong Kong, China. The agricultural landscape is the result of more than 300 years of interaction between a traditional Hakka settlement and its natural environment, which reflects the ancient Chinese Fung Shui philosophy. The site is also an important ecological hotspot where the diverse and unique habitats house numerous concerned species and individuals. Unfortunately, villagers began to leave and move out to urban areas or European countries for a better living in 1950s. Desertion of the village led to a loss in traditional culture and biodiversity due to a lack of active management. In the late 70s, a substantial part of the surrounding woodland was designated as part of the Plover Cove Country Park. While the designation has provided a statutory protection of the area with high ecological value, it further isolated the village and made it inaccessible by vehicles.

An multi-year action project has been launched since 2013 which seeks to replenish and revitalize the disappearing cultural and natural capital of this once-deserted village. The project adopts a collaborative model to engage local community, academics, NGOs, government and business sector to work on an array of activities, ranging from agricultural rehabilitation and community revitalization, to cultural reinvention, community building, rural research and education, and biodiversity conservation.

Probably the most intact “Seabed-Mangrove-Forest Ecosystem” in China can be found in Lai Chi Wo
© Kin-Ming Lau.

Original villagers, new settlers and volunteers from the city are being engaged in the paddy field rehabilitation
© Hon-Lung Li..

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	• Area of the restored habitats and diversity. • Change of species richness and abundance.	• 6 ha of agricultural wetlands and open farmlands are restored for crop production, biodiversity conservation and education purposes. • Abundance of concerned amphibian species, Chinese bullfrog is enhanced as the agricultural rehabilitation creates and diversifies micro-habitats.
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	• No. of stakeholders being involved in the process. • Income and benefits brought to the local community.	• Indigenous community is engaged and empowered in nature and cultural conservation. Over 50% of indigenous community and landowners is involved. • The projects bring visitors and new income sources for local community are created. All current residents of the village are benefited.
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration	• Any application of mitigation measures against climate change and its impact • Impacts on ecosystem services such as flooding prevention and irrigation	• Agroforestry practice is adopted to enhance the agro-ecosystem resilience. On-going monitoring is carried out to document its impact. • Renewal energy and Biochar have been adopted to enhance the carbon sequestration of the farming practice. • Flooding incidents have been intensified in the recent year. Adaptation strategies have been developed to enhance the ecosystem and also the community resilience to the intensified flooding problem.
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification		
	TARGET 16	The Nagoya Protocol is in force		
		The Nagoya Protocol is operational, consistent with national legislation		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●						●			
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
●		●	●	●			■		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

	●	●	■		■	■	■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
	●	●	●		●		●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

Social, ecological and economic conditions are intertwined and it is difficult to select suitable indicators and measurement methods for assessment. For example, there are many different resilience measurement methods available and some indicators need substantial input to collect enough data for assessment. Sometimes it is not easy for local projects to secure resources for assessment.

Key messages for the CBD in planning for the post-2020 Targets

The role of different players (e.g. government, universities, NGOs, corporate; local and international parties) in the pursuit of the CBD objectives are dynamic and continuously changing Collaboration among different players, sectors and disciplines for conservation and sustainability becomes more challenging. Practical partnership frameworks and financial models to sustain the conservation and sustainability initiatives are always in demand. CBD should also take a stronger lead to encourage both governments and also other funding sources to invest both regional and local level projects.

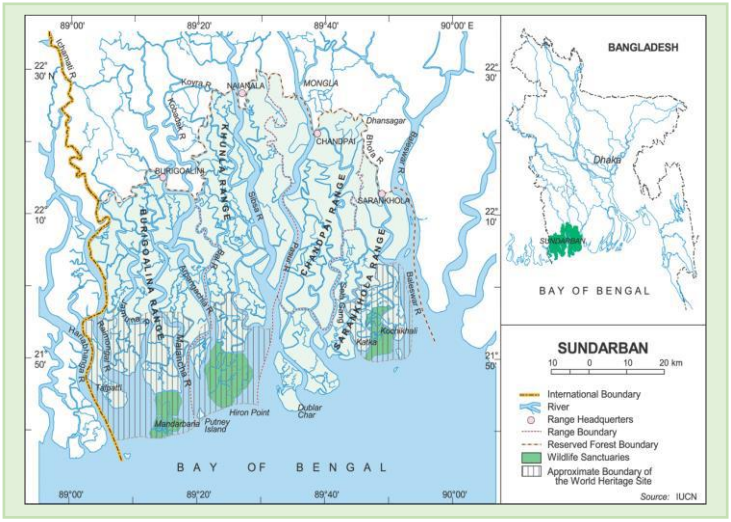
The mechanism and framework that would allow area-based/project-based success to inform the strategies and policies at the wider national and regional level should be also shared and facilitated.

Promotion of Customary Sustainable Use of Biodiversity and Ecosystem Services in the Sundarbans

Rashed Al Mahmud Titumir
Professor, Department of Development Studies, University of Dhaka and Chairperson, the *Unnayan Onneshan*, Dhaka, Bangladesh,

Prof. Titumir holds Ph.D. in Economics from the University of London, M.Sc in Development and Financial Economics from the University of London, Certificate in Trade Policy and Commercial Diplomacy from the Universities of Carleton and Ottawa, BSS (Hons.) in Economics from the University of Dhaka, and HSC and SSC from Jhenidah Cadet College. He has worked in diverse constituencies, namely, academia, governments, think-tanks, international organisations and media. He has published widely.
rtitumir@unnayan.org

Geographic and demographic information



Country	Bangladesh
Province	
District	Khulna, Satkhira and Bagerhat
Size of geographical area	6,071 km^2
Number of indirect beneficiaries	3.5 Millions
Dominant ethnicity	Bangladeshis

Size of project area	km^2
Number of direct beneficiaries	350 persons
Geographic coordinates (longitude and latitude)	$21^0$30' and $22^0$30' North $89^0$00'and $89^0$55' East
Dominant ethnicity	Bangladeshis

Ecosystem Types

X	Forest	X	Grassland	X	Agricultural	X	In-land water
X	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Sundari	*Heritiera fomes*	The tree species upon which the Sundarbans is named.
Royal Bengal Tiger	*Panthera tigris*	The most magnificent animal.
Chingri (Shrimps/prawns)	*Penaeus monodon*	24 shrimps, 7 crabs, 8 lobsters
golpata	*Nypa fruticans*	high value non-timber forest products
estuarine crocodile	*Crocodylus porosus*	The population has declined further due to rapid destruction of their breeding grounds and unchecked poaching

General introduction

The Customary Sustainable Use project for promoting diverse values of biodiversity and ecosystem services is implemented by three traditional forest resource users' communities with the overall goal of establishing a just, sustainable resource management regime in the Sundarbans that ensures livelihood security of the traditional resource users. The project is located in the Sundarbans in Bangladesh, which is the world's largest mangrove forest.

The Sundarbans, a UNESCO World Heritage Site, Mangrove Biosphere Reserve and Ramsar Site, is situated at the coastal region of Bangladesh. The various ecosystems (forest, coastal and wetland) make the Sundarbans home to several uniquely adapted aquatic and terrestrial flora and fauna. Yet, this globally important ecosystem is now vulnerable due to anthropogenic pressures (e.g. over-harvesting, pollution, coastal development, destructive fishing and habitat degradation, climate change, intense and frequent natural disasters) amidst fragile institutions and ineffective command-driven governance system.

The Unnayan Onneshan (UO) researches[3] imply that there is a significant number of anthropogenic pressures that not only cause degradation of biodiversity resources but also negatively hamper the balanced relationship between the biotic and the abiotic components of this mangrove ecosystem. The continuous encroachment into the forest region, conversion of mangrove forest land into commercial shrimp cultivation farms and the marginalization of IPLCs signify that institutional fragility exists in management of the Sundarbans. Specifically, the unstable nature of property rights, harboured by politically and administratively powerful groups, restricts access to resources by the traditional resource users of the Sundarbans and squeezes their tenurial security.

In response to problems and deprivations, the Unnayan Onneshan (UO) advocated them to establish cooperatives. Accordingly, three forest people cooperatives came into existence in three unions of Koyra Upazila, namely the *Koyra Bonojibi Bohumikhi Unnayan Samity* (Koyra Forest Dependent Peoples' Cooperative), the *Horinagar Bonojibi Bohumukhi Unnayan Samity* (Horinagar Forest Dependent Peoples' Cooperative), and the *Adibasi Munda Unnayan Samity* (Indigenous Munda Cooperative). The UO provides logistic and technical support to the cooperatives. The Cooperatives serve as a common ground for sharing information, experience and enhancing cooperation among the members. The establishment of cooperatives has helped the traditional forest peoples to walk to the avenues of claiming their rights and a journey towards self-sufficiency.

[3] Kabir & Hossain, 2008; Baten & Kumar, 2010; UO 2010; Baten, 2011; Titumir, 2014; Titumir, 2015; Titumir, Afrin &Islam, 2017

On the positive side, the UO researches demonstrate that customary sustainable practices and traditional knowledge of traditional resource users (TRUs) such as wood collectors (*Bawalis*), fisherman (*Jele*), honey collectors (*Mouals*), shell collectors (*Chunary*) and crab collectors can play a major role in reversing destructive trends. They contribute to conservation, restoration and sustainable uses efforts, both within the protected areas system and potentially as other effective area-based conservation measures, if they are given a chance and are supported by government and non-government agencies.

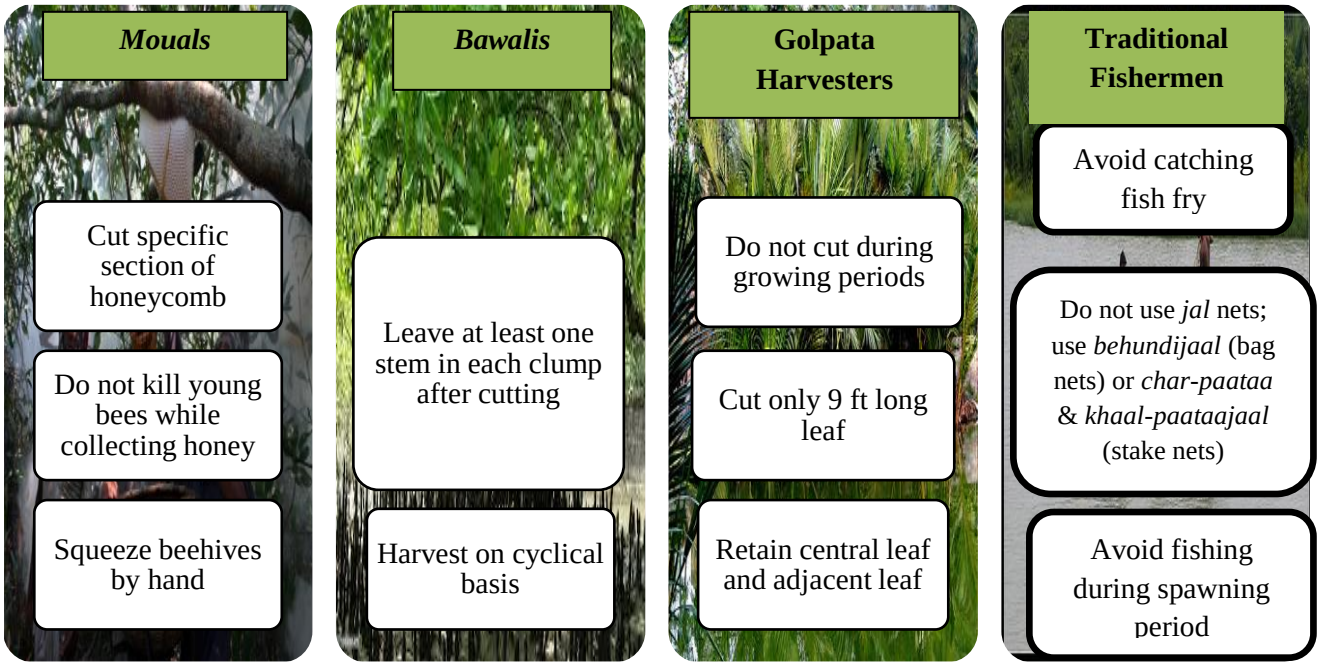


Figure -1. Traditional rules and practices followed by IPLC occupational groups at a glance (Source: authors)

The Pioneer of Community-based Mangrove Agro-Aqua Silvi (CMAAS) culture -Khaibar Sardar in his farm

Sustainable use of traditional knowledge

Climatic variabilities leading to disasters, including chronic river bank erosions

Sustainable fishing using traditional knowledge

Contribution to Aichi Biodiversity Targets' Strategic Goal D

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal D	TARGET 14	Ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded …	Formation of three cooperatives Regular activities of the Cooperatives Inter-generational transfer of knowledge	Formation of three cooperatives. The community is participating and the membership of the cooperatives increasing
		… taking into account the needs of women, indigenous and local communities, and the poor and vulnerable	The Cooperative Members have gathered formally at least once in a month and informally in regular intervals throughout the whole year. In these group meetings, a session was devoted to share their experiences to promote their traditional knowledge and to keep records of their practices through written formats. They also discussed different aspects of sustainable livelihoods in relation to the management of Sunadarbans' resources	Inter-generational transmission of traditional knowledge promoted and ensured
	TARGET 15	Ecosystem resilience and the contribution of biodiversity to carbon stocks have been enhanced through conservation and restoration		
		At least 15 per cent of degraded ecosystems are restored, contributing to climate change mitigation and adaptation, and to combating desertification	Restoration activities by the three cooperatives Support to groups of practitioners of traditional occupations, for enhanced bio-diverse adaptation to climate change in the Sundarbans	Models for sustainable livelihood activities developed and implemented
	TARGET 16	The Nagoya Protocol is in force		
		The Nagoya Protocol is operational, consistent with national legislation		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●		■	■	●		●	●		■
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
		●	●	●			●	■	
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●	■	●	●	■	■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■	■	●	●	●	●	■	●	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

The Cooperatives have mobilized the traditional forest users or *Banajibis*, and provided a space for discussion, consultation, planning, and claiming their rights. These have also become platforms for inspiration for innovations amidst the difficulties and distress they face in leading their day to day livelihoods. They have come up with **innovative options** such as locally available climate adaptive economic activities and cultivating honey in boxes. Yet these have not been piloted and upscaled due to financial constraints.

Key messages for the CBD in planning for the post-2020 Targets

Progress is being made through direct efforts by Indigenous People and Local Communities (IPLCs) on protection and restoration of vulnerable ecosystems, particularly mangrove forests. Increased attention to the impacts on IPLCs who are depending on vulnerable ecosystems with declining integrity and functioning as a result of anthropogenic pressures is needed in post 2020 framework. The contributions of IPLCs towards vulnerable ecosystems and knowledge regarding adaptation to changing ecosystems have to be promoted.

Facilitating the implementatin of Nagoya Protocol through Documentation of Traditional Knowledge Associated with Biological and Genetic Resources in China

XUE Dayuan[1*], ZHANG Yuanyuan[2], YANG Jingbiao[1]
Minzu University of China[1*], Chinese Research Academy of Environmental Sciences[2],
XUE Dayuan. Ph.D, Professor in Minzu University of China. More than 30 years of experience in the area of biodiversity conservation, particularly in the research area of governance and management of nature reserves, management of genetically modified organisms, conservation of biological genetic resources and associated traditional knowledge (TK), classification of China's TK associated to genetic resources, access to genetic resources and associated TK and sharing the benefits arising out of its utilization (ABS).
Contact address: xuedayuan@hotmail.com

Geographic and demographic information

Country	People's Republic of China
Province	All the provinces besides Taiwan
District	Yunnan, Guangxi, Hunan, etc.
Size of geographical area	9,600,000 km^2
Number of indirect beneficiaries	1.3 billion persons
Dominant ethnicity	Li, Miao, Yi, Zhuang, etc.

Size of project area	9,600,000 km^2
Number of direct beneficiaries	1.3 billion persons
Geographic coordinates (longitude and latitude)	N4° - 53° 30′ ; E1 35° 05′ -73° 40′
Dominant ethnicity	Li, Miao, Yi, Zhuang, etc.

Ecosystem Types （all included）

X	Forest	X	Grassland	X	Agricultural	X	In-land water
X	Coastal	X	Dryland	X	Mountain	X	Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Dendrobe	*Dendrobium nobile Lindl*	The Dendrobium orchid (known as "Shihu" in Chinese) has long been recognized for its unique properties and use as a treatment for stomach and kidney disorders and also for diabetes (Compendium of Materia Medica, at pp. 254-255). Locally, it is also recognized to have curative properties in regard to vascular conditions such as phlebosclerosis . Initial chemical analysis confirms that dendrobia contain a number of compounds of potential interest, including their own varieties of Dendrobine and natural generation of other more than ten kinds of elements that are beneficial to human health, as well as high levels of polysaccharides and amino acids. The presence of anti-tumorals (Chrysotoxene and Erianin) was also noted. Local entrepreneurs have begun processing dendrobe extracts for consumption in a variety of forms, including granules, lozenges, capsules and other boluses, wine, tea bags and other beverages, currently focused on the local market. In addition, one company is focusing on developing the components of dendrobe reproduction (agriculture), including seedlings for commercial marketing. One other company's use of the dendrobe focuses on its fragrance, extracting esters as either raw materials or semi-manufactured goods for sale to foreign manufacturing companies. The opportunity to further explore the uses and properties of dendrobia is significant.
Luohanguo	*Momordica grosvenori*	It is a plant that is extremely sweet, possessing a very high proportion of glycosides, which are, moreover not sugars. As such it has a potentially important role in medical treatments relating to diabetes and obesity, and also in the development of a naturally derived low-calorie sweetener. While the traditional medicinal uses remain important and companies continue to have an interest in production of Mormordica extracts, in the form of capsules, liquids, pills, mixtures and granules for medicinal use, as well as the marketing of mormordica extracts as "healthcare beverages," others have taken an interest in producing extracts for export.
Golden Camellia	*Camellia chrysantha*	It is a relatively rare flower that is included in the IUCN Red List of Endangered Species. Approximately 90% of the remaining flowers in the wild are found in a relatively limited area within the Guangxi Zhuang Autonomous Region. Within that area, the camellia has a traditional use as a beverage – a use that has become known and desirable throughout China. Recognizing the potential challenges of ensuring the camellia's sustainability while encouraging the development of the market, Guangxi designated the entire area in which most of the extant wild camellias are found as a State Nature Reserve. Most of this reserve is a strict protection area, from which no collection of camellias is permitted. The remainder includes areas in which the staff of the reserve have obtained and multiplied camellia germplasm, which they have provided to a number of local companies, which multiply and cultivate the camellias ex situ, without any further need to return to the Nature reserve.
Xiangxi black pig		Throughout Xiangxi Prefecture, traditional rural farming communities raise Xiangxi Black Pigs, a variety known for the excellence of the bacon and other cured meats produced. Each individual community's pigs, however, were facing a decline in the quality of breeding stock, owing to the fact that each community's selection pool was limited to pigs within that community. The arrival of public and private companies whose goals included strengthening the gene pool of the Xiangxi Black Pig, primarily through carefully monitored interbreeding of specimens obtained from all of the communities raising Xianxi Black Pigs has, in effect, rescued the species and local farming communities from the consequences of this decline. It is an ongoing process and one of great importance in China, where addressing the diminution of the number and variety of agricultural species has been identified as a governmental priority.
Baojing Golden tea and Guzhang Tippy tea		The germplasm that was originally used in the development of Baojing Golden Tea and Guzhang Tippy Tea can, in each instance, be traced back to a particular tree. These two varieties of China's most important agricultural product have been chemically examined and shown to include high levels of amino acids, Theaflavin (an antioxidant polyphenol) and pectin (a natural compound with many uses).



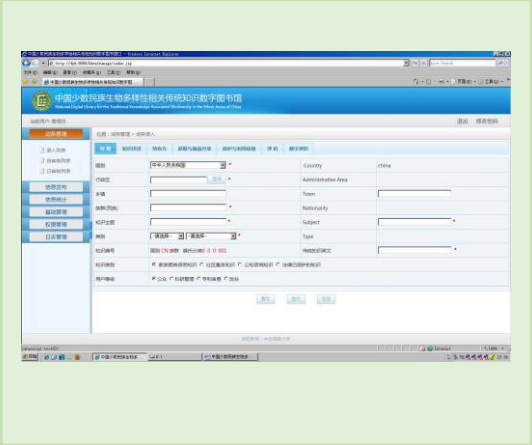

General introduction

China is considered as one of the world's mega-diverse countries. China is also a country with multiple ethnic groups. The distribution of ethnic groups in varied geographic areas has enabled people to create diverse traditional knowledge in the process of conserving and sustainably using biodiversity. Such traditional knowledge includes: (1) Biological knowledge of crop resources with unique characters; (2) Traditional medicine; (3) Traditional farming methods and production models that facilitate comprehensive and recycled utilization of biological resources; (4) Traditional culture and customs that promote biodiversity conservation; and (5) Traditional biological products—including some that have been granted geographic indications. It is a party to the Convention on Biological Diversity and its Nagoya Protocol on access and benefit sharing.

However, TK associated with genetic resources is disappearing due to rapidly changing traditional lifestyles. The convenience of modern medicine, easily available modern technology, increasing connectivity with urban civilization, and the lack of awareness of the importance of TK among ethnic minorities and communities also cumulatively contribute towards the erosion of traditional knowledge. Due to almost completely lack of documented TK system, in most cases, such knowledge has been accessed and utilized without any record to be traced. Thus, it is in China's best interest to develop a systematic catalog of its TK, which is a treasure trove to the long-term social and economic development of the country.

With China's ratification of the Nagoya Protocol, documentation of TK system becomes an essential step towards implementation of NP principles and provisions effectively. The development of a systematic, comprehensive, coordinated and detailed traditional knowledge system based on national history and conditions is in urgent need in order to protect China's TK, ensuring the fair and equitable sharing of benefits arising from utilization of such knowledge system. The documented TK system can be used to calculate the actual and potential benefits from the exploration and exploitation of biological and genetic resources, which will significantly facilitate the implementation of Nagoya Protocol in the long run.

Design of National digital library of traditional knowledge associated with genetic resources



National digital library of traditional knowledge associated with genetic resources

Contribution to Aichi Biodiversity Targets' Strategic Goal E

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of NBSAPs to Secretariat by (end of) 2015		
		NBSAPs adopted as effective policy instrument		One of China's NBSAP priority area is to carry out surey, evaluation and monitoring of biodiversity. In this area, it requires to carry out survey, compiling and cataloging of biological genetic reousrces and associated TK. The NBSAP also promotes access to, utilization and benefit sharing of genetic resources and associated TK.
		NBSAPs are being implemented		
	TA1RGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected		
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …	Investigation, field survey, inventory, documentation and database for traditional genetic resources and traditional knowledge by entries compilation	More than 10 000 entries for traditional GR and TK (including Tradtional Chinese Medicine, traditional agricultural technologies such as rice-fish ecosystem) have been documented for all 55 minorities in China and the research team is developing a TK digital library.
		… with the full and effective participation of indigenous and local communities	How many indigenous people and local communities participated in the efforts of documenting China's TK associated with genetic resources.	More than 1000 indigenous people and local communities participated in the efforts of documentation.
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved		
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied		
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011–2020 from all sources has increased substantially from 2010 levels		

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
									
Strategic Goal C			Strategic Goal D			Strategic Goal E			
				X			X		
									

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

Any difficulties you found during your assessment

Due to rapidly changing traditional lifestyles, the convenience of modern medicine, easily available modern technology, increasing connectivity with urban civilization, and the lack of awareness of the importance of traditional knowledge among ethnic minorities and communities, the erosion of various traditional knowledge systems is increasing. The information and data available are insufficient and fragmented. The staff members responsible for documenting traditional knowledge are lack of capacity and necessary knowledge.

Key messages for the CBD in planning for the post-2020 Targets

We suggest that following targets could be included in the post-2020 targets:

By 2030, ILCs will be able to participate more broadly in the conservation and sustainable use of domestic biodiversity in accordance with national laws, administrative or policy measures, meanwhile their TK associated with biodiversity conservation and sustainable use is effectively protected.

By 2030, traditional knowledge associated with genetic resources of indigenous peoples and local communities are effectively protected, and the ABS regime for TK associated with genetic resources established by the CBD and its Nagoya Protocol can be effectively implemented.

By 2030, the ability of indigenous peoples and local communities to make free, prior and informed consent, approval and involvement in accordance with national laws, administrative or policy measures and customary practices has been significantly enhanced and their rights to equitable sharing of traditional knowledge-related benefits are guaranteed.

Use of wild edible plants in the forest reserves of Teso-Karamoja region, Uganda

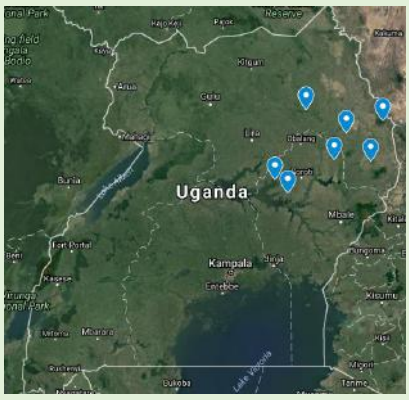
Samuel Ojelel[1,2*], Patrick Mucunguzi[2], Esther Katuura[2], Mary Namaganda[2], Esezah Kakudidi[2] & James Kalema[2]

[1]Save A seed for the Future (SAFE), P.O. Box 703 Soroti, Uganda;
[2]Makerere University, College of Natural Sciences, Department of Plant Sciences, Microbiology and Biotechnology; P.O. Box 7062 Kampala, Uganda

Co-founder of Save A seed for the Future (SAFE) and Head of Environment department. He holds a BSc in Conservation Biology and MSc. Botany from Makerere University. At present, he is also a PhD (Botany) fellow and Assistant Lecturer at Makerere University's Department of Plant Sciences, Microbiology and Biotechnology

samojelel@gmail.com

Geographic and demographic information



Location of Forest reserves

Country	Uganda
Province	Teso-Karamoja
District	Katakwi, Serere, Kaberamaido, Moroto, Abim, Napak & Nakapiripirit
Size of geographical area	1,241.8 Km^2
Number of indirect beneficiaries	239 Persons (Men: 112 persons), (Women: 127 persons)
Dominant ethnicity	Nilo-Hamites

Ecosystem Types

X	Forest	X	Grassland		Agricultural		In-land water
	Coastal	X	Dryland	X	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Shea tree (Ekungur, Yao)	*Vitellaria paradoxa*	This is a deciduous, small to medium-sized tree (15-25 m) whose seeds provide Shea butter.
Desert date (Ecomai, Ekoreete, Thoo)	*Balanites aegyptiaca*	This is a slow growing, evergreen or semideciduous, multi-branched, spiny shrub or tree. Its fruit and leaves are edible.
Mango (Emiebe)	*Mangifera indica*	*Mangifera indica* is a large evergreen tree to 20 m tall with a dark green, umbrella-shaped crown. It is among the most economically and culturally important tropical fruits.
Tamarind (Cwa, Apedur)	*Tamarindus indica*	This is a large evergreen tree up to 30 m tall. The seedpod of the tamarind is widely used for food with a wide range of medicinal applications and other uses.
Carrisse (Aimuria, Ekamuriei,	*Carissa spinarum*	This is a much-branched spiny, evergreen shrub or small tree. It is gathered from the wild for food and medicine.

Shea nut fruits

General introduction

Teso-Karamoja region is located in North Eastern Uganda. Teso experiences a humid and hot climate with rainfall between 1000-1350 mm per annum while Karamoja is comprised of semi-arid lands with variable, unpredictable and sparse rainfall ranging from 500-800 mm per annum. This region in located in the Somali-Masai Regional Centre of Endemism. This region suffers from food scarcity almost annually. In early 2017, it was the among the most food insecure areas in the country (IPC 2017[4]). The region also faces high rates of deforestation (Drichi 2003[5]). In addition, armed conflicts dominated this area up to early 2000's. This project sought to establish an inventory and use of wild edible plant species in and around eight forest reserves. We administered semi-structured questionnaires to 240 respondents between November 2017 and May 2018. Focus group discussions (8-12 members) per forest reserve and collection of plant voucher specimens was undertaken. The voucher specimens were identified at Makerere University Herbarium. This was followed by data analysis and drafting of manuscript.

Wild edible fruits and tuber

Using oxen to plough the land in Teso

[4] IPC. Uganda-Current Acute Food Security Situation: January–March 2017. Integrated Food Security Phase Classification. 2017. www.ipcinfo.org. Accessed on 30 March 2017

[5] Drichi, P. National Biomass Study. Forest Department, Kampala, Uganda. 2003;230p.

Contribution to Aichi Biodiversity Targets' Strategic Goal E

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of NBSAPs to Secretariat by (end of) 2015		
		NBSAPs adopted as effective policy instrument		
		NBSAPs are being implemented		
	TARGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected		
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …		
		… with the full and effective participation of indigenous and local communities	Number of local people who participated directly and indirectly in our activities	240 people (an average of 30 per forest) living in and around the forest reserves directly participated in the ethnobotanical studies. This excludes the leaders who act as gate keepers in each of the districts, sub-counties, villages and forest reserves surveyed.
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved	Documentation of Wild edible plants and associated Indigenous Knowledge	Draft manuscript titled "**Wild edible plants used by communities in and around selected forest reserves of Teso-Karamoja region, Uganda"** with 100 wild edible plant species. We are on the look-out for resources to publish a handbook of these wild edible plants
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied		
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011–2020 from all sources has increased substantially from 2010 levels	Access to resources for conducting ethnobotanical surveys	Secured a PhD scholarship for Samuel Ojelel from the German Academic Exchange Service (DAAD) and rsearch equipment (in-kind) from IDEA WILD.

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
									
Strategic Goal C			Strategic Goal D			Strategic Goal E			
									

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

Any difficulties you found during your assessment

We faced logistical constraints during the survey of forest reserves which delayed our activity schedule. In some places, we had difficult access due to the poor and non-motorable road network. We also continue to face a challenge of limited capacity to mobilize resources to implement our programs effectively.

Key messages for the CBD in planning for the post-2020 Targets

In cognizance of the difficulties above, we strongly appeal to IPSI to continue their support to members. This will bolster their capacity and aggregately contribute to effective management of Socio-Ecological Production Landscapes and Seascapes (SELPS). It is also paramount to document the success stories, lessons and challenges encountered. This review shall inform the formulation of post-2020 targets. There needs to be a platform for continuous engagement among stakeholders in order to share knowledge and experiences. These platforms can include but not limited to online discussion foras and conferences.

Contribution of biocultural territories for the conservation and sustainable use of biodiversity

Onel Masardule A.

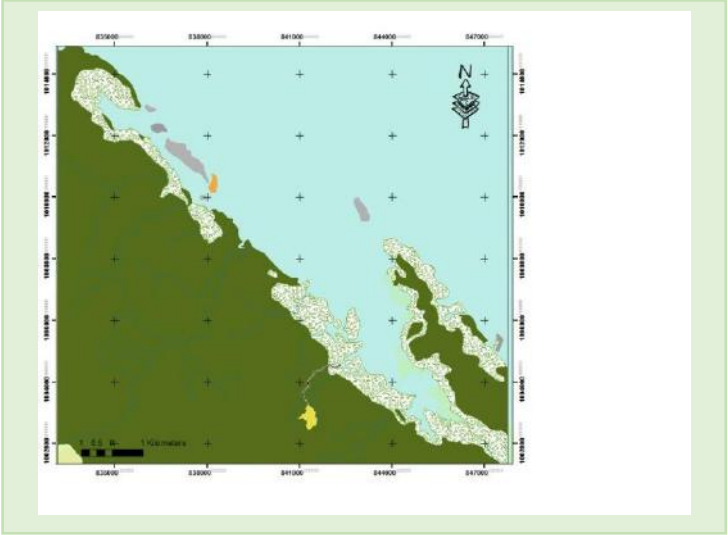
Executive director, Foundation for the Promotion of the Indigenous Knowledge.

He studied Chemistry and specialization courses on Sustainable Development and Environmental Management. With extensive experience in the promotion of the Rights of Indigenous Peoples

masardule@gmail.com

Geographic and demographic information

Country	Panama
Province	Gunayala
District	Gunayala
Size of geographical area	3,200 km^2
Number of indirect beneficiaries	80,000 persons (Men: 38,000 persons) (Women: 42,000 persons)
Dominant ethnicity	Guna



Size of project area	10 km^2
Number of direct beneficiaries	5,000 persons (Men: 2,300 persons) (Women: 2,700 persons)
Geographic coordinates (longitude and latitude)	9°17′46″N 78°20′39″O
Dominant ethnicity	Guna

Ecosystem Types

X	Forest		Grassland	x	Agricultural		In-land water
x	Coastal		Dryland	x	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Hawksbill turtle	*Eretmochelys imbricata*	Species of marine turtle of the family of chelonians, which is in critical danger of extinction
Lion fish	*Pterois antennata*	Invasive species that has reached the coasts of Gunayala endangering the native species of the Gunayala region.
Spiny lobster	*Panulirus argus*	Important species for food and economic income for the Guna population.
Octopus	*Octopus vulgaris*	Important for the economic income of the region.

General introduction

The Usdub community is in small island of Gunayala, mainly depend the forests and mangroves located nearby the islands, although also get products from the sea. From forests they obtain, among other things, food, medicine and materials to build their houses. Therefore, is vital the conserve those forests and marine ecosystem for its own value as well as for the survival of future generations.

The region has been affected in the decrease of the live coverage of the coral reefs, fishing, the loss of native seeds that served as food for the population, putting at risk the food security of the population and the erosion of the soil. For this reason, it has been identified that there are three fundamental aspects of which serve as a basis to mitigate the problems described above.

Indigenous biocultural heritage indigenous knowledge cultural and spiritual values maintain a relationship of mutual dependence with biological and ecological resources. By breaking down the components of the indigenous cultural heritage, the need and desire to face the challenge of **protecting indigenous knowledge fr**om a holistic perspective, based on the cosmovision and systems of organization to guarantee the conservation of biodiversity for future generations, emerges. .

The concept of biocultural territories is relevant to achieve the conservation of indigenous territories and ecosystems in recognition of the intrinsic relationship between ecosystems and the role of indigenous peoples as guardians and protectors of their natural resources within their territory.

The first one refers to the sensitization to the population, reassessing the feeling towards mother earth. This approach means training, educating children, youth, leaders, educators and the population in general. The training should be based on in situ research, of the ancestral knowledge that is being lost and obtained results transmitted or disseminated. Environmental education will be a transversal purpose in the other two components of the project.

The second approach research will be the basis through which the topics related to the recovery of native seeds and forest products and many other household products that are being lost will be analyzed and reinforced.

A third approach is the protection and / or conservation of the biodiversity of the forest and the sea. With monitoring and patrol activities on behalf of the FPCI with support from the Ministry of Environment, establishing land and marine protection programs.

These three approaches will help increase community climate resilience, placing people at the center of activities, supporting individual needs; strengthening the sense of sociability in search of community self -management, where joint or collective work are the engines to face the risks in the face of climate change.

Contribution to Aichi Biodiversity Targets' Strategic Goal E

Please showcase your project outcomes by describing how you assessed/ measured the progress /achievement to the Aichi Biodiversity Target by using quantitative and qualitative information and/or figure as much as possible. Please focus on the Aichi Biodiversity Target Group that you have been assigned in the working group.

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of NBSAPs to Secretariat by (end of) 2015		
		NBSAPs adopted as effective policy instrument		
		NBSAPs are being implemented		
	TARGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected	A survey was conducted among young people, women and community leaders to know the importance of traditional knowledge, innovations and practices. We identified strengths, opportunities, weaknesses and threats.	1. Systematized results on the situation of indigenous knowledge associated with biodiversity and ecosystems. 2. Program for the recovery of indigenous knowledge. 3. Environmental education plan aimed at young people and women.
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …	A case study was carried out on the implementation of the Convention in relation to traditional knowledge, innovations and practices.	The aspects relevant to traditional knowledge are not yet integrated or implemented.
		… with the full and effective participation of indigenous and local communities	Through a case study on the participation of indigenous peoples and local communities.	1. There is no full participation of IPs and LCs. 2. Little participation of IPs and LCs in the preparation of national reports 3. There is no strategy to increase the full participation of IPs and LCs.
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved		
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied		
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011-2020 from all sources has increased substantially from 2010 levels		

IPSI-7 Homework template

Relations to other Aichi Biodiversity Target & SDGs
Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			Strategic Goal D			Strategic Goal E			
							■		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

		■						
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
				■	■			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment
The main difficulties in the evaluation:
1. Variation of climate that in many occasions postponed field work.
2. Limited budget that limits the displacement of more technical team to the study area.
3. Lack of support from the Ministry of Environment.

Key messages for the CBD in planning for the post-2020 Targets
Key messages for CBD:
1. Ensure the full and effective participation of IPs and LCs.
2. Support the strengthening and rescue of traditional knowledge of IPs and LCs for the conservation and sustainable use of biodiversity.
3. Recognize the importance of biocultural territories for the conservation and sustainable use of biodiversity.

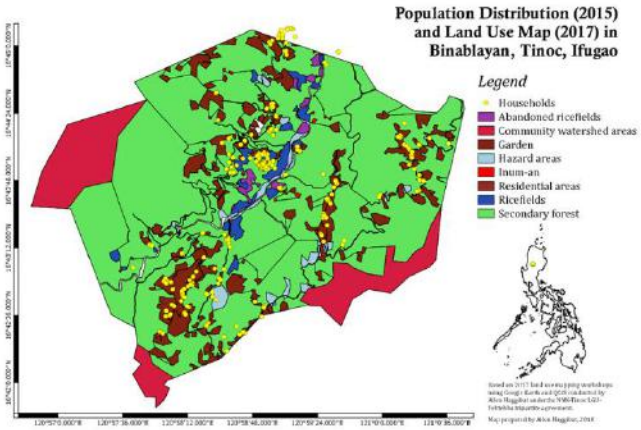
Increasing Community Resilience for Food Security

Florence Mayocyoc Daguitan
Tebtebba Foundation, Inc

An indigenous person belonging to the Kankanaey group. Present Coordinator of the Indigenous Peoples and Biodiversity Program and leads in the implementation of the Ecosystems-Based Approach is pilot sites in the Cordillera, Philippines. An agriculturist by profession, she helps facilitate community processes (community action research, strategic and project planning, implementation and assessments) to enhance capacities of indigenous peoples to innovate on their traditional knowledge for community development.
Contact address: flor@tebtebba.org

Geographic and demographic information

Country	Philippines
Province	Ifugao, Kalinga and Mtn.Province
Municipality	Tinoc, Pasil and Sagada
Size of geographical area	486.45 km^2
Number of indirect beneficiaries	Total :22,468 Female : 10,777 Male : 11,691
Dominant ethnicity	Peoples: Guinaang; Pidlisan; Kalanguya



Size of project area	27.41 sq km^2
Number of direct beneficiaries	974 females 890 males
Geographic coordinates (longitude and latitude)	16 degreed43mins12 seconds North; 121 degrees, 0 minute,0 seconds East
Dominant ethnicity	Kalanguya

Ecosystem Types

x	Forest	x	Grassland	x	Agricultural	x	In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Rice	*Oryza sativa*	Cereal, staple food
Azolla	*Azolla filiculoides*	Nitrogen fixing plant, food for pigs, source of green manure
Sunflower	*Tithonia diversiflora*	Most common material for green manure and being promoted for propagation in Tinoc also for hedgerows to minimize topsoil run off
Giant fern	*Angiopteris evecta*	Water bearing plant
Golden Kohol	*Ponacea canalicuta*	Invasive species that caused disappearance of mudfish and other snail species

Golden Apple Snail

General introduction

Tinoc, retained its intact mossy forest and a forest cover of more than 86% of the 376.57 km2, total land area up to 1996. Its watersheds contribute to two major river systems and one supplies the Magat Dam[6]. Because of the need for cash, people adopted monocrop commercial chemical based vegetable production. They converted the rotational agricultural areas, rice lands and forestlands to vegetable production sites, veering away from their tradition of keeping a harmonious balance of the different ecosystems of their territories.

This resulted to increased deforestation, decreased agrobiodiversity [of the 36 food crops grown, 24 are decreasing, 3 not seen anymore), increased food insecurity, e.g people experience 'no food' when vegetable prices fluctuate.

The project takes off from the territory assessments that recommended actions on revitalization and innovations on farming systems. Activities included research community-based information and monitoring systems (CBMIS) , public awareness raising, projects development and advocacy. For this report, the specific activity is "determining effectiveness of innovation in the rice land". The innovation combines cultural practices of using decomposed plants, indigenous micro-organisms in the healthy forests with some features of the systems rice intensification system, and innovations in composting.

Caption: Ricelands

Caption:

[6] Magat dam generates electricity of 360 megawatts

Contribution to Aichi Biodiversity Targets' Strategic Goal E

Please showcase your project outcomes by describing how you assessed/ measured the progress /achievement to the Aichi Biodiversity Target by using quantitative and qualitative information and/or figure as much as possible. Please focus on the Aichi Biodiversity Target Group that you have been assigned in the working group.

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of NBSAPs to Secretariat by (end of) 2015		
		NBSAPs adopted as effective policy instrument		
		NBSAPs are being implemented		Comprehensive land use plan that contain revitalization of the food systems among others has elements that can contribute to attaining ABT 1,5,7,8, 10, 12, 14, 15,17, 18, 19,20
	TARGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected	Number of communities re-affirming their traditional knowledge, innovations and practices No. of communities taking action to revitalize TK; No. of abandoned paddies reclaimed Land areas of forest restored	All 12 of the 12 communities Six communities (areas that the project is monitoring) in one area Additional 2 IP groups = 10 communities
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …	Number of farming IP households adopting innovations	From three IP households in three villages to 23 farming households in 4 villages
		… with the full and effective participation of indigenous and local communities	Number of peoples attending key meetings	From only council of leaders (around 11-17) from 4 villages to average of 35 people each from the four villages (about 140 peoples)
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved	Laboratory test to measure effectivity of innovations for soil fertility enhancement Inventories: traditional food crops, insects Mapping to assess land use change	Innovation applied Improved soil pH and increased organic matter in the soil; Insect inventory showed that balance between good and bad insects prevails due to cultural pest management, traditional food crops were listed and assessed Need to protect forest and increase forest cover was agreed on
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied	No. of forum convened to share the innovations Publication	At least 1 forum for each of the 4 villages; one forum to the municipal local government unit Two publication to share the innovation and experience
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011–2020 from all sources has increased substantially from 2010 levels	No of proposals pertinent to activities contributing to ABT approved, No. of activities by community partners in regards ABT funded by local government unit	1 proposal approved –Tebtebba expanded to 2tribal areas 2 activities in 1 IP community- funding for revival of traditional water managers, technical support from Dept of Agriculture in product development for organic farm inputs

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●*" and "*■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●	■		●	●		●	●		
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
■	●	●	●	■			●	●	●
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	●	●			■		■	
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
■		●	●		●		■	
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

[*this is limited to the assessment of the work on our innovations, not the whole project]*

1. The project is envisioned as initial steps in advancing knowledge so that these be used in attaining self-sufficiency in rice and stop the trend of decreasing agrobiodiversity. However, there was limited mobilization, and while other farmers applied the innovations in their farms, these were not monitored;

2. There were no baseline information on some matters that needs to be monitored;

3. While there was monitoring system set up, this depended on the availability of the staff/s to be on the field, manifesting lack of capacity of partners

Key messages for the CBD in planning for the post-2020 Targets

1. Revitalization, innovations on traditional knowledge that enhances and protect biodiversity and ecosystems services cuts across the Aichi Biodiversity targets and Agenda 2030 as these are linked to well-being of human and nature. Direct support on initiatives for promoting and strengthening these knowledges systems and practices should be extended to communities. Partnerships and network building is needed to upscale to contribute to the transformative change.

2. One fundamental condition for IPLC's to continue to practice and innovate their traditional knowledge systems is the security of their rights to their lands, territories and resources, the base of their knowledge system.

Making Landscapes Work- A Case of the Kakum Conservation Area

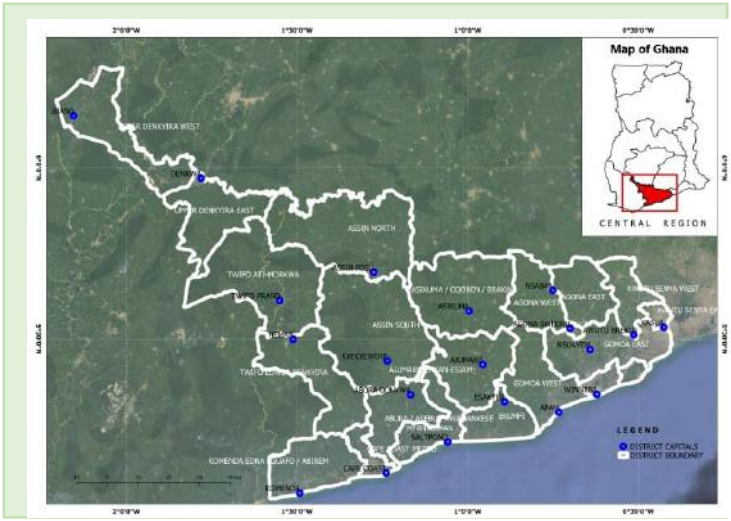
Yaw Osei-Owusu[1]* Vincent Awotwe-Pratt[2], Abigail Frimpong[3], Paa Kofi Osei-Owusu[4]

Conservation Alliance International[1,] Biodiversity Heritage Associates[2], Conservation Alliance International[3], Conservation Alliance International[4]

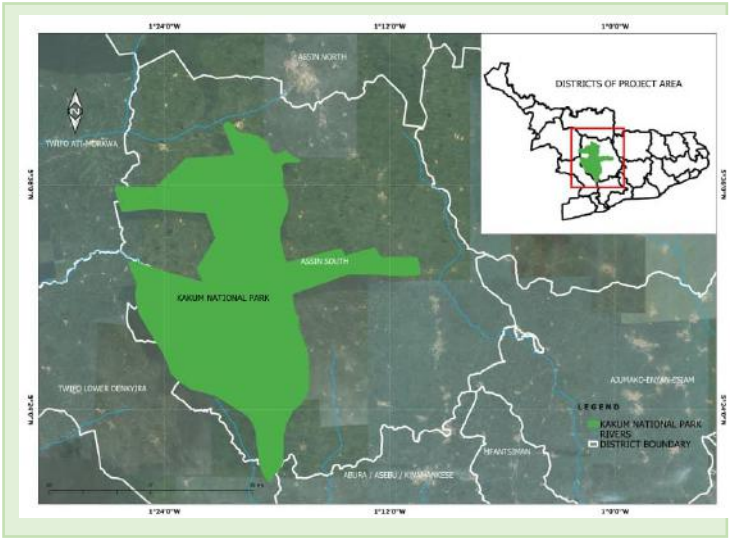
Joined Conservation Alliance International in 2008 as a Country Director.
Became African Representative for Biodiversity Heritage Associates in 2015.
Has a background in environmental management, agriculture and policy from the University of Ghana, the University of Cape Coast and Walden University.

yosei-owusu@conservealliiance.org

Geographic and demographic information



Country	Ghana
Province	Central Region
District	Twifo- Hemang Lower Denkyira
Size of geographical area	575.5 km^2
Number of indirect beneficiaries	2000 persons (Men : 1,200 persons) (Women: 800 persons)
Dominant ethnicity	Ghanaian (Akans)



Size of project area	375 km^2
Number of direct beneficiaries	240 persons (Men :171 persons) (Women: 69 persons)
Geographic coordinates (longitude and latitude)	5.3501° N, 1.3819° W
Dominant ethnicity	Ghanaian (*Akans*)

Ecosystem Types

X	Forest		Grassland	X	Agricultural	X	In-land water
	Coastal		Dryland		Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Cocoa	*Theobroma cacao*	Cocoa is an evergreen tree grown for its seeds (beans) which are used primarily in the manufacture of chocolate. Cocoa production is a major land use and economic activity within the forest areas in Ghana.
African Forest Elephant	*Loxodonta cyclotis*	The African forest elephant is a forest-dwelling species of elephant found in the Kakum National Park. There are an estimated 150-245 individuals of forest elephants within the Kakum Conservation Area.
Diana Monkey	*Cercopithecus diana*	The Diana monkey is found in West Africa and live in groups of 15 to 30 individuals with a single adult male.
Odum	*Milicia excelsa*	Milicia excelsa is a tree species from tropical Africa, threatened by habitat loss. It is one of the most desirable timber trees species in Ghana.
Mahogany	*Khaya ivorensis*	Khaya ivorensis is a tall forest tree with a buttressed trunk in the family *Meliaceae*. It grows to be about 40–50 m high. The bark of the tree is reported to have medicinal properties.

Cocoa Tree with Pods

General introduction

Ghana's Kakum Conservation Area is part of the Upper Guinean Hotspot in West Africa described among the world's biodiversity hotspots. The area is rich in biodiversity and contains isolated populations of several globally endangered species, including the forest elephant estimated to be 150-245 individuals.

Available data indicated that there are over 80 farming communities with an estimated 2000 households within a 5km radius of the area that typically maintain about 4 to 8 acres.[7] of cocoa and 2 to 3 acres of food crops The designation of the Kakum Conservation Area sparked a number of socio-cultural, economic and environmental challenges. The traditional production practices that were deeply rooted in the culture of the communities were no more entertained within the landscape because of the perceived threats to the area.

The project provided opportunity for integrating culture and nature into the management of the agricultural production landscape to enhance community members' livelihoods without destroying the health of the ecosystem. The outcome of the project reflected in the health of the ecological landscape and the economic wellbeing of households within the landscape. The project promoted of economic incentives for adoption of sustainable cocoa production practices

River flowing through Kakum Park

Communal breaking of cocoa pods

[7] One acre is equivalent to 0.405 hectares.

Contribution to Aichi Biodiversity Targets' Strategic Goal E

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of NBSAPs to Secretariat by (end of) 2015	Evidence of official document submitted	Broad array of stakeholders from government, private sectors and communities participated in the devlopment of Ghana's NBSAP.
		NBSAPs adopted as effective policy instrument	Availability of policy and legal instrument	There is wide-scale acceptance of NBSAP as effective tool for addressing biodiversity challenges in Ghana.
		NBSAPs are being implemented	National and local level development plans	The key elemnts of NBSAP are being implemented by the various government's agencies at the local, district and national levels.
	TARGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected	Reflected in national development document	Traditional knowledge and practices currently find expression in development plans at the local, district and national levels.
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …	Ministry of Environment, Science, Technology and Innovation annual reports	Implementation of development plans at district and local levels reflects wide scale integration of traditional knowledge and practices.
		… with the full and effective participation of indigenous and local communities	Local government and other non-state actors' field reports	Community members are fully involved in the management of off reserves under the Community Resource Management Area (CREMA) initiative.
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved	National development planning commission annual report.	Government is working with the media, the military, the local government and local communities to avert the adverse effect of illegal mining activities.
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied	National development planning commission annual report.	Clearing House Mechanism (CHM) providing opportunity to mobilize and share biodiversity data and technologies.
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011–2020 from all sources has increased substantially from 2010 levels	Budgetary allocation to Ministry of Environment, Science, Technology and Innovation and allied agencies.	Substantial increase in national budgetary allocation and environmental funds from donors for implementing Strategic Plan for Biodiversity 2011-2020.

Relations to other Aichi Biodiversity Target & SDGs

Please indicate the Aichi Biodiversity Targets other than the targets your working group focuses and SDGs that your activities contribute to if any. Use "●" *and"* ■" to indicate the "direct" or "indirect" contributions to the targets.

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

Strategic Goal A				Strategic Goal B					
●				●		●			
1	2	3	4	5	6	7	8	9	10
Strategic Goal C			**Strategic Goal D**			**Strategic Goal E**			
	●		●			■	●		
11	12	13	14	15	16	17	18	19	20

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

●	■							
1 NO POVERTY	2 ZERO HUNGER	3 GOOD HEALTH AND WELL-BEING	4 QUALITY EDUCATION	5 GENDER EQUALITY	6 CLEAN WATER AND SANITATION	7 AFFORDABLE AND CLEAN ENERGY	8 DECENT WORK AND ECONOMIC GROWTH	9 INDUSTRY, INNOVATION AND INFRASTRUCTURE
		■			●			
10 REDUCED INEQUALITIES	11 SUSTAINABLE CITIES AND COMMUNITIES	12 RESPONSIBLE CONSUMPTION AND PRODUCTION	13 CLIMATE ACTION	14 LIFE BELOW WATER	15 LIFE ON LAND	16 PEACE, JUSTICE AND STRONG INSTITUTIONS	17 PARTNERSHIPS FOR THE GOALS	

Any difficulties you found during your assessment

While there is evidence to suggest that the project recorded marked improvement in the ecological health of production landscape and the wellbeing of community members, there is no baseline to compare results.

Key messages for the CBD in planning for the post-2020 Targets

The IPSI recorded significant improvement in the health of socio-ecological production landscape and seascapes across the globe. The benefits of the initiative reflected in the improvement in the health of biodiversity and the wellbeing of humans. To further deepen the impacts at the global, national and local levels, the implementation of the initiative must be sustained with increased number of networks, funding and technical support. It will also be critical to clearly quantify the impacts in quantitative and qualitative terms.

IPLC voices from Antigua and Barbuda in various CBD processes

Ruth Spencer
Marine Ecosystems Protected Area Trust

A graduate of Yale University trained with a MA in Development Economist who is passionate about local community development so she uses her knowledge, skills and experiences to enable development and empowerment to thrive. She believes in building partnerships and synergies to achieve mutiple benefits and outcomes. Ruth is the national coordinator for the GEF/SGP

ruthspencer5@gmail.com

Geographic and demographic information

Country	Antigua
Parish	St Mary's
District	John Hughes
Size of geographical area	680 ha or 1,680 acres
Number of indirect beneficiaries	Residents: Men: 2,000 Women: 3,000 Tourists / visitors Men: 1,000 Women: 1,500
Dominant ethnicity	Afro Caribbean

Size of project area	50 acres
Number of direct beneficiaries	Tour guides, women: 75
Geographic coordinates (longitude and latitude)	17.0608° N, 61.7964° W
Dominant ethnicity	Afro Caribbean/Caucasians

Ecosystem Types

x	Forest	x	Grassland	x	Agricultural	x	In-land water
	Coastal		Dryland-	x	Mountain		Urban/peri-urban

Important species in the site

English common name (*Local name*)	Scientific name	Description
Guava Berry		
Lemon Grass	*cymbopogon citrates*	Introduced nonnative species now an invasive alien species but has numerous opportunities for use for in health and beauty products.
Neem	*Azadirachta indica*	Introduced non native species –used in traditional medicine
Cocoa		
Lemon		

General introduction

The group uses a wide variety of activities for regular engagement of the community people and for providing timely information of all the actions ongoing in the watershed. The group is engaged in various forms of vocational, and skills training. There are regular village consultations, regular social events that brings the community together, weekly cleaning of the Wallings Watershed, cleaning and maintaining the trails, noting the changes taking place and reporting on the fires. They function as "Wardens of the area... On Sept 1, the group made a report of major theft in the Reserve.

Wallings falls within a major watershed. The water generating capacity of the watershed has been subject to various stresses such as pollution from agriculture (e.g., crops, livestock grazing) and burning of the fever grass. The degradation and buildup of sediments and clogging of the pipes has negatively impacted the water supply causing the recharge rates to the aquifers will be reduced. Biodiversity has been affected, contributing to a decline in ecosystem health.
The local group is turning the threats from the lemongrass into opportunities and sees a way forward for sustainable use of this resource even through the growth of the fever grass is expanding and its susceptibility to fire, is a major cause of continual land degradation within the watershed.
The Wallings group aims for effective management of Wallings Forest as a protected area within the legal and institutional frameworks of Antigua is through watershed management, looking at the broader landscape in terms of conservation and management of natural resources. They want to turn the "paper park into a reality". APUA the utility company who is in full support of the local group has legal rights over all water resources but no legal obligation for either watershed protection or maintenance.

The business plan put forward by the groups demonstrates that the erection of a bathroom can generate revenues in addition 75 jobs can be sustained from the ecotourism activities including the tours and the 8 trails which guests and visitors love to explore with signage and visitor guide materials and a communication system in place. There are more than 800 native trees, shrubs and other plants, including a wide range of tropical tree, shrub, lichen, fern and orchid species. A tree inventory identified forty-seven species in a half acre (2000 m) quadrant of the Wallings forest. The vegetation community types are Evergreen forest, mixed evergreen and deciduous forest, mixed shrub land and Grassland. The lemon grass is of major concern for watershed management and for the Wallings area and was introduced as an erosion control measure. The collective actions of the group are aimed at meeting the critical importance of ecosystem restoration. As the Wallings forest matures, many species of plants and animals increasingly rely on it for survival since it acts as an ecological anchor. The forest is older than most of the surrounding woodlands but provides a source for the re-colonization of many species to nearby young plant communities by dispersing its seeds to them, by helping to regulate and maintain moisture, wind, climate and other factors and by acting as a nursery and sanctuary for animals. The area is a habitat for bats and local pollinators. Bird numbers and species fluctuate greatly, depending on the season, the amount of rain, the availability of food, and nesting habitat but the birds in Wallings include the White Crowned Pigeon, Scaly Naped Pigeon, Ruddy Quail Dove, Bridled Quail Dove, Purple Throated Carib, Antillen Euphoria, Scaley breasted Thresh and the , Brown trembler.

Challenges: Many threats to biodiversity in Wallings result mainly from the changes brought about by human action and can be summarized as follows:

1. **The loss of habitat** primarily through the wanton clearing of land, leading to soil erosion:, changing of land use, destruction of the wild species of plants leading to the migration of the pollinators with changes on the composition of the species, The resulting loss of soils and land productivity, reduction in food supply leading to gaps in food security and nutrition for the country and it's resident.

2. **The introduction of non-native species** of introduction of non-native flora (e.g., Citronella lemongrass) which has a detrimental effect on native wild species by acting as predators, parasites and competitors with suck out the little available water. Farmers put fire to it to get rid of it but the seeds are dispersed by the wind and spreads to other areas

3. **Overgrazing by livestock** mainly goats, sheep, cattle and donkeys that pose a serious threat, particularly in upper watershed areas.

4. **Pollution** through pesticide and chemical usage which seep from farms into the soils stemming from the unregulated and excessive use of pesticides.

5. **Droughts and hurricanes** that have severely impacted the bird population, as well as vegetative communities and their dependent fauna

6. **Ineffective Management** with poor management and budgetary support from the Government Ministry namely the /Forestry Dept which has not shown or demonstrated effective management or responsible for maintaining the watershed that is responsible for the rainwater catchments and ground water management systems in our watersheds contributing to the ongoing 4-year drought.

.

Objectives: The group is undertaking activities aimed at sustainable livelihoods and income generating opportunities that can come from natural uses of the alien invasive species-The Lemon Grass which was introduced by an uninformed British Governor during the colonial period. It grows fast and this had led to a lot of burning and forest fires by the local farmers during which the seeds are spread and dispersed by the wind. The group is discouraging the burning of the grass hoping that eventually the regeneration of the natural forest will return... The group has trained community youth as rangers and forest guards which is essential to reducing these fires". The group is constructing nature based huts in key areas in the forest equipped with communications equipment. The group has already submitted a proposal to the Bio Bridge Initiative to develop value added products in health, wellness, beauty products and cosmetics. The group members has already undergone training and is making a variety of soaps from the lemon grass and the other plants in the Wallings area.

Activities employed: regular village consultation, regular social events that brings the community together, weekly cleaning of the area, noting changes. On Sept 1, the group makes a report of major theft in the Reserve

Contribution to Aichi Biodiversity Targets' Strategic Goal E

Please showcase your project outcomes by describing how you assessed/ measured the progress /achievement to the Aichi Biodiversity Target by using quantitative and qualitative information and/or figure as much as possible. Please focus on the Aichi Biodiversity Target Group that you have been assigned in the working group.

		Breakdown Target	How did you measure the outcome?	Result
Strategic Goal E	TARGET 17	Submission of 6th National Report to Secretariat by (end of) 2018	Level of participation in national events that enables and allows information from local community to be included into the report	Great knowledge and awareness of local biodiversity issues-more attention to local flora and fauna creating more awareness of what exists and how we must conserve these.Inhow the local actions are contributing to global targets
		NBSAPs adopted as effective policy instrument	Wide usage and mentions of the document and how it is utilized in the local educational processes –in schools curriculum and in sharing events in our local communities	The messages that come out of the national reports act as guidance to the local groups, informing them of what is hapeing to the local biodiversity and what stepa they can take .
		NBSAPs are being implemented	For the first time, groups are hearing about how their local actions are making important contributions to the Aichi targets of the CBD, and that their ideas and actions will be important for sharing in the 6th national Report and this has inspired and motivated.	Wide sharing of what is in these reports, groups see how they can contribute and have buyin to this local sharing process.
	TARGET 18	Traditional knowledge, innovations and practices of indigenous and local communities are respected	Regular village meetings and planning events where the local people gather to share information.	The local knowledge enable the villager to mark the early trains and found roads and pathways that were once used but now overrun by bushes.
		Traditional knowledge, innovations and practices are fully integrated and reflected in implementation of the Convention …	The ongoing efforts of the local groups to put steps in place to halt the degradation taking place. The planting of different varieties of local trees support pollinators and their action to inform the public toward halting land clearing which destroy our scrubs and species living in the low grasses	Plans put in place for the lemon grass-an invasive special planted years ago for soil maintenance but now it has gotten out of hand to be proceeded into tea, and cosmetics
		… with the full and effective participation of indigenous and local communities	Networking and outreach developed at local and regional level to find solutions for the lemon grass-The WNR submitted a proposal to the Bio bridge Initiative and found a partnering group in Trinidad and Tobago who has knowledge and skill sets to get the products developed into useful commodities.	Teaching the people the added value and uses of the lemon grass has reduced the burning
	TARGET 19	Knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved	The impacts of the sharing and the connections made and follow up results and achievements.	sharing at local, regional and international events and building the linkages and networks that bring about the exchange of knowledge and information
		Biodiversity knowledge, the science base and technologies are widely shared and transferred and applied	Sharing events like BES NET triologue and, those funded by Forest Peoples Program and SwedBio provides the learning, and the information on the values of the local collective actions bringing knowledge and capable persons coming together is a process of transformation. The trainer must be committed to share the information and train others.	The group is haring information widely and posting pictures of their actions on their facebook page and this has motivated other groups to undertake bold moves for protection of community biodiversity
	TARGET 20	Mobilization of financial resources for implementing the Strategic Plan for Biodiversity 2011–2020 from all sources has increased substantially from 2010 levels	Number of proposals written and funded	The initiatives of the groups are recognized and values and local support comes from many sectors, incluidn public citizens, private sector and government agencies who have supported providing letters of recommendation.This leads to relication, upscaling of projects, proposal writing for accessing technical and finacial resources to make major advances and demonstares base case and best practices coming from a local community group..

Relations to other Aichi Biodiversity Target & SDGs

CBD Aichi Biodiversity Targets (https://www.cbd.int/sp/targets/)

UN Sustainable Development Goals (SDGs) (https://sustainabledevelopment.un.org/sdgs)

Any difficulties you found during your assessment

It is the first time this exercise is being done in the island and it is an urgent and important priority for all of our groups to be involved in this process and produce case studies. It will build knowledge and capacity, bring understanding and awareness. As a follow up to the 7th IPSI Plenary MEPA through the FFP/SWEDBIO support and GEF/SGP on October 22 2018, is bringing 20 groups involved and engaged in biodiversity conservation projects to hear their stories of collective actions and of their contributions to the Aichi targets, the SDG's and showing the linkages and coherence with the other conventions. The outputs will be the future development of several new case studies with a video to be produced on the process.

Key messages for the CBD in planning for the post-2020 Targets

The groups are becoming more knowledgeable about their role through local collective actions in Biodiversity Conservation and this is growing and the outreach is empowering many new groups throughout the island to take actions. Local ownership and buy in is key in these processes and groups realize that their very survival is at stake if the forests are not conserved and protected to support pollinators which is key to their agricultural and food and nutrition security. Therefore, it is important for national community level knowledge and awareness building sessions to be done continually and strategic interventions and demonstration projects implemented in between reporting deadlines. The process is a long term one so this is just a snap shot of the start of this journey but the commitment and dedication exists in the local groups to stop the loss to biodiversity and habitat loss and to protect the local species of both plants and animals. Local Focal Points must be open and engage in participatory processes to get the full knowledge and sharing from the local community groups.

Information sharing must be timely and must be widely disseminated to get the inputs of the majority of persons who want to be a part of the process to identify sources of support for countries lacking capabilities to get the engagement of their local groups in biodiversity processes and knowledge of their NBSAP's

Annex 1: Working Group Outcome Slides

Working Group 1

Strategic Goal A: Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Discussion Result

Working Group 1

Strategic Goal A

Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society

Understand Values

Mainstream Biodiversity

Address Incentives

Sustainable Production

Working group presentations

Q1: How do you assess/monitor contributions to ABTs?

How to assess/monitor?	ABT	Example
Number of participants/stakeholder-types involved/participated/trained		Case in Kenya demonstrated that range-land management was done only by two stakeholders (government and landowners) in 2012 and increased to seven stakeholder by adding pastoralists, water-users, security officers, wildlife management officers in 2017
Identification of habitat-fragmentation causes by using mobile technology (ODK Collect platforms)		Case in Kenya identified a core causes of human-wildlife conflict which is establishment of fence to block livestock. It is consulted with relevant stakeholders and livestock route is restores in 2017
Hectares revitalized		Case in Italy converted 500 ha of abandoned agriculture land to organic farm land
Number of project replicated and farmers directly involved		Case in Italy involved 3 farmers in 1 project (2013) and expanded to 100 farmers in 10 projects (2018)
Policy-uptake and securing government incentives		Case in Italy did not have any fund/incentive in 2013, but two local councils created policy for diverse wheat cultivation and annual grant and investments have been promised to continue and scale up projects.
Number of varieties in National reporting and registry system		Case in Malawi showcased absence of or little information of biodiversity mainstreaming in draft RED+ strategy (2014) and Malawi National Forest Policy (2006) which both were revised to in 2015 and 2016 to emphasize mainstream
Establishment of education/learning center		Case in Kirgizstan built "community climate change adaptation center" to map traditional knowledge and practice as well as identifying useful tools to reduce vulnerability of community
Number of stakeholder-types involved/participated/trained		Case in Kenya demonstrated that range-land management was done only by two stakeholders (government and landowners) in 2012 and increased to seven stakeholder by adding pastoralists, water-users, security officers, wildlife management officers in 2017

Q1: How do you assess/monitor contributions to ABTs?

The participants of the group 1 were mostly NGOs and research institutes. All of participants agree the importance of "communication" and "education". Yet, as most of them work at the community-level, their communication strategy tends to be designed for awareness raising within community only. Some demonstrated their communication strategy includes policy makers to drag their attention.

Whether the tools/indicators that the participants apply on the ground reflected/covered on international indicator list is highly up to whether the project engage with national government. If the project does not engage with government, their tools/indicators would not be known by government whereas if successfully engaged, it would be increase the chance that the tools/indicators to be reflected into the national aggregated database directly or indirectly.

Q2: Challenges in achieving ABTs?

- Lack of baseline assessment
- Difficult to articulate and measure in number particularly behavioral/attitude changes
- Although advocating to government is important factor, it costs greatly to produce material to drag attention of government. Higher level of government to approach from local to national level, it cost more and gets more difficult to approach.
- Many indicators lack socio-economic aspect. Likewise Kyrgyzstan alpine environment is not rich biodiversity in natural, social and cultural aspects shall be considered in indicators.

Q2: Key message to post-202

- The target shall be designed that could help to contribute to coordinate efforts to establish world-baseline database as well as to other global targets such as SDGs and Climate Change goals.
- Breakdown targets to describe more details. For example, stakeholder engagement could have different meaning according to which stage of project the government involved. Is the government involved from planning phase? Do they refer case in their official report? Such level of engagement can be described by having sub-category of target and it will improve the quality of qualitative analysis which is difficult to measure as well as awareness raising.
- Realistically, government needs to be mobilized to collaborate with different divisions within same ministry, other ministry, and stakeholders to make actual contributions. Thus next target shall be designed to include target which mobilizing government.
- Also it shall be designed to drag more attention of private sectors

Q3: Expectations to IPSI

<Capacity building>

- Evolve the partnership to enhance consolidate the potential capacity of existing members
  - Creation of feedback system to members especially for those who could not being accepted proposal for IPSI-related project/events
  - Longer term of engagement with individual project for scaling up and enhancing sustainability
  - Exchange of techniques

<Communication>

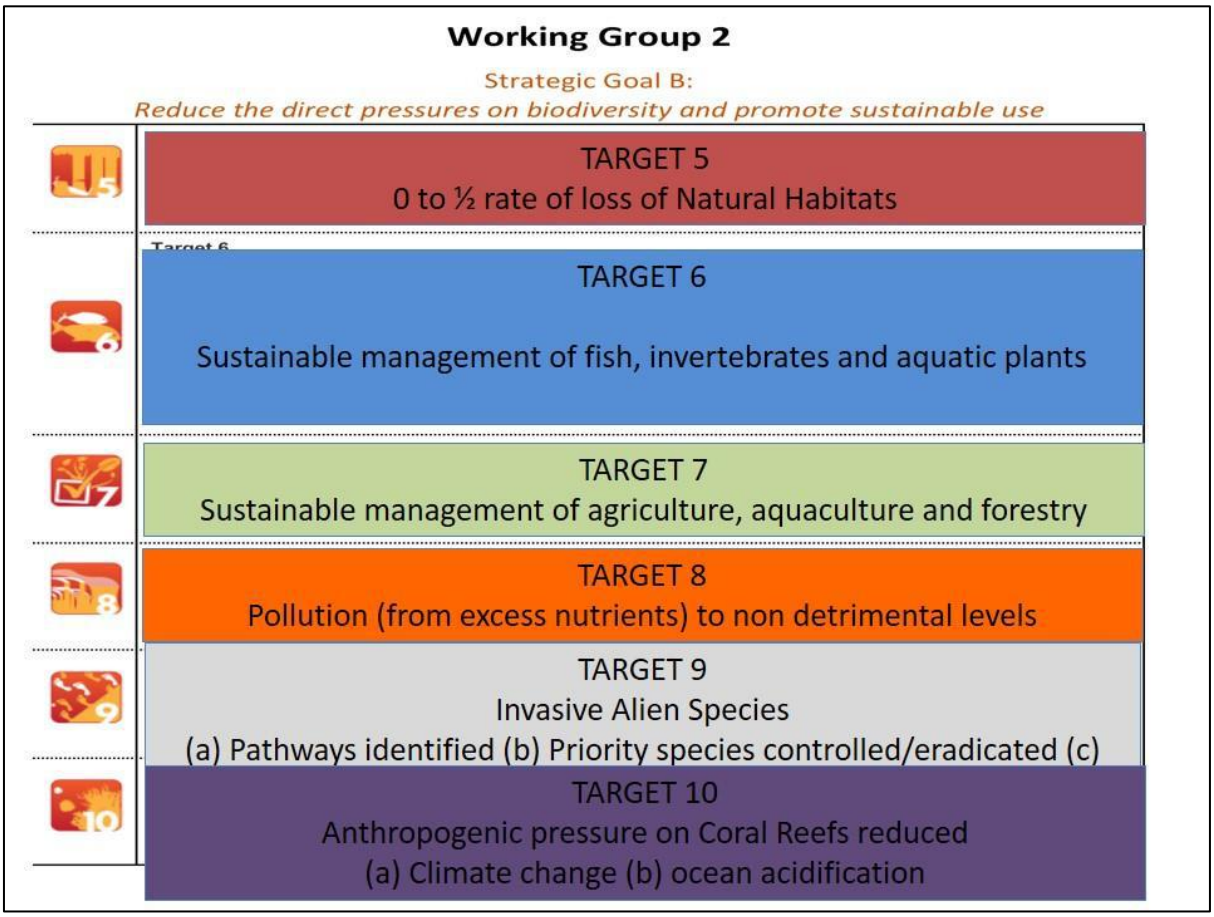
- Communication is still weak. Outside of CBD arena, not well known. Enhance communication strategy
- Keep publishing and spreading good practices
- IPSI should play a role to translate difficult international language to the level that many public can understand including children.
- Communication shall be differentiated according to the type of stakeholders: government, private sectors

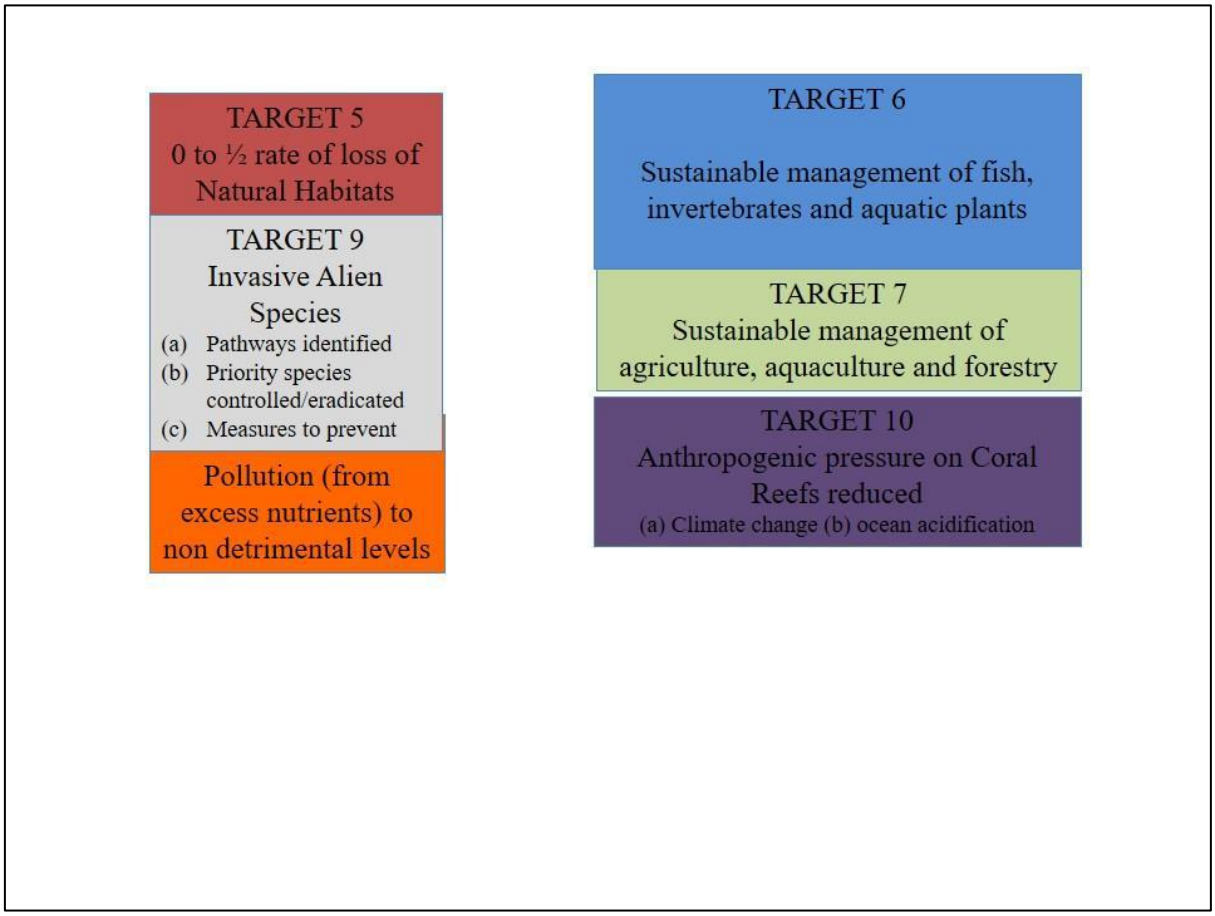
<Networking>

- Encourage and facilitate members to form more national network like Japan Satoyama Initiative Network
- Further engage with national government (national focal points), different ministry, and private sectors

Working Group 2

Strategic Goal B: Reduce the direct pressures on biodiversity and promote sustainable use





TARGET 5 0 to ½ rate of loss of Natural Habitats
GIS Mapping and Ground truthing
TARGET 8 **Pollution (from excess nutrients) to non detrimental levels**
water quality indicators
TARGET 9 **Invasive Alien Species**
tons/hectare (harvesting data)

Assessing / Monitoring Contributions to ABTs?

TARGET 6 Sustainable management of fish, inverts and aquatic plants		
IPSI PARNERS	**ABT**	**OTHERS**
Species Conservation Status (fish)	Fish Red List	Ramsar
Number of turtles (population)	Trends in populations of non-target species	CITES (Sea Tutles, Manitee and Elephants
By-catch species (sea tutles)		CMS
		UNESCO

TARGET 7 Sustainable management of agriculture, aquaculture and forestry		
IPSI PARNERS	**ABT**	**OTHERS**
	Area under conservation agric or organic	
Species Integrity (in aquaculture) (Tools Morphology and Genetics)	None	
	Proportion of agricultural area under productivity and sustainable agriculture	WARDA (West African Rice Development Authority)

TARGET 10 Anthropogenic pressure on Coral Reefs reduced		
IPSI PARNERS	**ABT**	**OTHERS**
Proportion of bleached corals	Trend in proportion of live coral cover	
Acidity measurements		
Coral species diversity		

TARGET 5 0 to ½ rate of loss of Natural Habitats	
Elements for post-2020 Agenda	**Message for post-2020 planning**
finance; geographic identification is difficult;	Ground truthing needs to be well funded, emphasized and to be properly correlated to the right data.
	Holistic/multi-disciplinary research is needed within the same landscape.
	Community monitoring

TARGET 8 Pollution (from excess nutrients) to non detrimental levels	
Elements for post-2020 Agenda	**Message for post-2020 planning**
Multidisciplinary approaches needed to evaluate this target (One Health Approach)	There is a need to recognize and validate the usefulness of bioindicators.
	Integrated Pest Management needs to be considered and documented.

TARGET 9 Invasive Alien Species	
Elements for post-2020 Agenda	Message for post-2020 planning
Use of invasive species needs to be documented.	IPSI should document the use of invasive species in the areas of its members.

Challenges to achieving ABT through actual implementation?

TARGET 6 Sustainable management of fish, invertebrates and aquatic plants	
Land-use policies in conflict with conservation	Mainstreaming biodiversity in all sectors
Lack of Independent EIA/SEAs	fish farming
Lack of enforcement	Formal and informal environmental education
Lack of transparent participatory process	
Land tenure	

TARGET 7 Sustainable management of agriculture, aquaculture and forestry	
Lack of incentives for sustainable agric., aquaculture and forestry	Mainstreaming biodiversity in all sectors
Conflict between economic interests and sustainability	fish farming
Price competitiveness	Formal and informal environmental education

TARGET 10 Anthropogenic pressure on Coral Reefs reduced	
Lack of coral reef research capacity	Formal and informal environmental education
Illegal fishery vessels	vessel monitoring and tracking systems

Expectation from IPSI after 2020? Online Survey for 2019

- **Short and concise**, clear no jargon
- how we can have **baselines for case studies**
- Important **area-based management; hot spots**
- ways to improve **communication and interaction** of IPSI members
- How to increase IPSI membership based on SEPLs
- Are the **ABTs considered in the day to day implementation of the project** and appreciated by stakeholders? If yes how?
- How do you **involve local people** in project design, monitoring and evaluation?
- Do you use **bioindicators in the evaluation.** What types?
- Do you use **traditional knowledge** in the assessment of this target?
- Are you collecting **human health data** in the evaluation of this target.
- What are the uses of **invasive species** in your locality?

Accomplishment Report

Highlight Successes or projects

Types of data: baseline, trends

Accomplishments of online IPSI course

Case study contributions to IPSI development
Can increase effectiveness of BES conservation
Knowledge on new hotspots
Connection of SEPLs into larger landscapes
How to involve media effectively in SEPLs for public awareness

Working Group 3

Strategic Goal C: Improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

Working Group 3

Strategic Goal C:

To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity

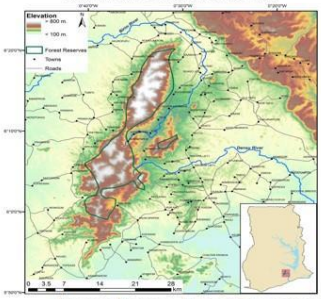
	**Target 11** By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes.
	**Target 12** By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained.
	**Target 13** By 2020, the genetic diversity of cultivated plants and farmed and domesticated animals and of wild relatives, including other socio-economically as well as culturally valuable species, is maintained, and strategies have been developed and implemented for minimizing genetic erosion and safeguarding their genetic diversity.

Presentations of Group 3

HEPA Forest landscape (Vietnam)

Bikin river watershed (Russia)

Atewa Forest Reserve



Atewa Range Forest Reserve (Ghana)

Naxi (Moso) mountain (China)

Question 1: How do you assess/monitor contributions to the Aichi Biodiversity Targets?

Target 11
(Protected Areas & Other Effective Area-based Conservation Measures)

Indicators used:

- Area of forest and wild plants in the landscape increase
- Number/Area of habitat for 100 species on IUCN Red List saved
- Official data on national forests assessment for forest and biodiversity and ecosystem conservation.

- While PAs are measurable, OECMs remains difficult to measure
- But we recognize **SEPLS is important for OECMs**, vice versa

Question 1: How do you assess/monitor contributions to the Aichi Biodiversity Targets?

Target 12 (Extinction)

Indicators used:

- Number of local threatened tree species restored and planted
- Number of hectares planted and revitalized with those species
- Number of people access to practical conservation knowledge and seedlings for planting
- Number of household involved in the seed activities
- Number of registered cases of illegal invasion to territory for logging, fishing and poaching
- Number of staff / external voluntary inspectors
- Reporting from hunters and park inspectors on declines in some wildlife population
- Number of invasive species and those removed
- Number of incidences to habitat destruction (e.g. natural catastrophes)

Question 1: How do you assess/monitor contributions to the Aichi Biodiversity Targets?

Target 13 (Genetic Diversity)

Tools/Indicators used:

- Number of crops and varieties increased
- Number of genetic and traditional seeds restoration
- Community Registry of Local Varieties
- Gene Bank
- Seed field
- Livelihood indicators (still in-development)
- Number of varieties, households and area of extension

Question 2: What are the challenges to achieving the Aichi Biodiversity Targets identified by your group through actual implementation?

- No **baseline data measurement system available** where local and global communities can exchange and measure changes
- **Limited linking in-situ to ex-situ**, **traditional knowledge to scientific knowledge** for complementing and enriching both for enhancing biodiversity
- Lack of **policy support** for community based initiatives
- Lack of **incentives for scientists** to working with local people and communities
- **Prioritization** of money and income from jobs versus environmental and social sustainability
- Finding effective mechanisms to **making the Payment for environment/ecosystem services (PES) scheme work** and contribute to achieving ABT
- Lack of **capacity building, knowledge, empowerment** and **inclusiveness**

- **The above are what post 2020 should address!!!**

Question 3: What is your expectation from IPSI after 2020?

IPSI should be continued for post-2020 target and evolved into a **new pha**se to consolidate the potential capacity of existing members to **scale up the work** to conserve and revitalize SEPLS around the world

- Setting-up a **baseline data measurement system** where local and global communities can exchange information and monitor changes
- Be able to **capture results** of members to feed into post-2020 targets
- **Strengthen the capacit**y of its members towards contribution and measurement of future (post-2020) targets
- Encourage all members to **set good baselines in commencing projects** to be able measure outcomes - IPSI could develop simple tools for measurement
- Give support for and between partners for **capacity building in assessment, action/policy research and analysis**, and **advocacy** at national and international levels

Question 3: What is your expectation from IPSI after 2020?

- Invite and encourage **more active involvement of governments** at IPSI and key CBD events
- **Actively collaborate with international organizations/fora**, indigenous people concerned and other global conventions and agreements to prioritize SDG and biodiversity targets in all economic development frameworks
- Keep **community based approach** as a key alternative to monopoly based development models
- **Mainstream SEPLS** across all sectors at all levels (local/national/regional/international)
- **Encourage adherence** to principles and criteria of **sustainable development** by relevant international instruments
- Create **SEPLS Certifications**

- **IPSI members should proactively strive to achieve the above!!!**

Other takeaways

- Need more **comprehensive legislation changes**, for e.g. upgrading to national parks/PAs, while ensuring opportunities for livelihood enhancement of indigenous people and local communities through sustainable use and benefit sharing
- **Greening value chain** for local biodiversity products towards SEPLS branding
- **Recognizing the contribution of indigenous communities** in safeguarding ecosystem and genetic diversity through indigenous species related knowledge and culture provides opportunities for engaging and enriching indigenous communities
- **Diversity of species** provide a variety of possibilities and opportunities compared to mono-crop farmlands/plantation/timber forests
- Local communities can contribute to biodiversity conservation but often feel that they are **not getting enough support from the government**
- **Women and youths** play very important roles in biodiversity conservation
- **IPSI has enable communities to realize their own value** through interacting and networking with other communities, locally or abroad

Working Group 4

Strategic Goal D: Enhance the benefits to all from biodiversity and ecosystem services

Working Group 4

Working Group 4

Strategic Goal D:

Enhance the benefits to all from biodiversity and ecosystem services

14	**Target 14** By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable.
15	**Target 15** By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.
16	**Target 16** By 2015, the Nagoya Protocol on Access to Genetic Resources and the Fair and Equitable Sharing of Benefits Arising from their Utilization is in force and operational, consistent with national legislation.

Question 1

How do you assess/monitor contributions to the Aichi Biodiversity Targets?

- See appendix for consolidated list of case studies under the working group
- Coordinating work with the CBD agenda and/or other policy agendas:
  - Develop the indicators currently missing under the CBD:
    - Customary sustainable use by Indigenous peoples and local communities (IPLCs) (e.g. Target 14)
    - Cultural association with aesthetic and cultural value of ecosystem
    - Ecosystem resilience and innovation of the local communities to adaptation to climate change (e.g. Target 15)
  - Disaggregate data across spatial/governance scales (e.g. Target 15 needs to be differentiated across global, national, sub-national levels)
  - Align available statistical data with the indicators

Question 2

What are the challenges to achieving the Aichi Biodiversity Targets identified by your group through actual implementation?

General Challenges:

- Difficult to account for highly dynamic ecology within study site
- Need sufficient baseline data prior to demonstrating change (e.g. wildlife surveys)
- Difficult to articulate relevance/importance of global biodiversity policies/processes at regional scales (currently only captured in ABT Goal A). E.g. Navigating terminology – what do indicators of resilience look like in the local setting?
- Enhanced full and effective multi-stakeholder participation and coordination across global, national, and sub-national scales. Capacity gap for policy development and implementation.
- Establishing monitoring and reporting processes at national or sub-national levels
- Unclear actual and perceived benefits of achieving ABT at national and sub-national levels (e.g. ABS)

Question 2 (continued)

Challenges with existing indicators for Strategic Goal D:

- Primarily characterize the environmental state, but needs to include human/nature contributions
- Are closely linked to access to natural/cultural resources, which needs to be clearly defined (ownership, capacity to use the resource in an efficient way)

Post-2020 Recommendations:

- Paradigm shift towards paired human/natural environments (i.e. Satoyama, Satoumi)
- Stronger emphasis on sustainable use of biodiversity, customary traditional knowledge and use
- Establish stronger links to SDG 1, 2, 10, 12, 13, 14, 15
- "Better" disaggregation of social groups (e.g. IPLC, women, vulnerable populations). Consider separate, yet cross-cutting indicators.
- Develop time-bound milestones
- Strengthen support for science/research by providing additional funds/resources

Question 3

What is your expectation from IPSI after 2020?

- Facilitate process that enables both IPSI and members to jointly monitor on-the-ground impacts of each case study
- Strengthen member capacity, for example by targeting capacity building to enhance participation in CBD processes (e.g. IPSI focus on LDC and DC, governments and members)
- Explore mechanisms for further use of the Indicators of Resilience in SEPLS
- Enhance multidisciplinary focus - bridge cultural, social, ecological sciences
- Expand regional forums and thematic groups to identify contributions to post-2020 agenda
- Focus on marine and coastal ecosystems, specifically emphasis on mangrove ecosystems, peatland, blue carbon)
- Expand collaborations beyond IPSI members, for instance researching development approaches through partnerships/collaborations with local NGOs/development agencies
- Continue discussions and actions to expand administration and funding beyond Japan
- Promote and enhance information sharing and technology transfer among IPSI partners

Appendix. Aichi Biodiversity Targets Strategic Goal D - Measuring Targets

Target 14	
Location	Indicator
Philippines	No. of Hectares Adopted No. of Community Learning Center Rehabilitated No. of Adopters No. of Service Connections (Residential/Commercial) No. of Flood Prone Maps Generated Using LIDAR Technology No. of Disaster Preparedness Plan for the city
Taipeh	To support farmers transiting to organic farming and adopting wildlife conservation on farmlands which is benefit both biodiversity and human livelihoods.
Taipeh	Through developing community-based organic six-level industries to support indigenous farmers and developing value-added products which is wildlife & eco-friendly to increasing women's and farmers' income.
Pacific	Using a biocultural approach involving a series of community-visioning workshops and triangulation within an interdisciplinary research team, we identified ways ecosystems provide essential services to Pacific Island communities, in particular their contributions to health, livelihoods, and well-being. This information is ultimately intended to inform future restoration and safeguard measures at local to global scales.
Pacific	Our process uses a systematic approach to understand well-being from a foundation of local priorities and values and uses participatory mechanisms to inform relevance and applicability. As such, this target can be measured through community visioning workshop and interdisciplinary research team participation/representation.
Kenya	Survival rate (%) of seedlings of native tree species planted in the degraded sites
Kenya	Number of biocultural innovations and practices of indigenous communities applied in sustainable conservation and use of biodiversity
Kenya	Number of studies undertaken to generate information on carbon stocks and biodiversity status of the Kaya forests and associated landscape in order to develop restoration technologies for conserving biodiversity
India	The outcome was measured through strategic social impact assessment indicators like enhancement in food security of inhabitants and livestock, increase in beneficiary payments through creation of alternative livelihood opportunities, reduction in internal displacements and migration etc which were directly dependent on the ecosystem services of this coastal habitat and revived with the sustainable intensification of the nature services.
India	Outcomes were measured through sociometric study and analysis, livelihood vulnerability indexing (LVI) and need assessment surveys (NAS) in the local community inhabiting the area of intervention.
Hong Kong, China	Area of the restored habitats and diversity. Change of species richness and abundance.
Hong Kong, China	No. of stakeholders being involved in the process. Income and benefits brought to the local community.
Bangladesh	Formation of three cooperatives Regular activities of the Cooperatives Inter-generational transfer of knowledge
Bangladesh	The Cooperative Members have gathered formally at least once in a month and informally in regular intervals throughout the whole year. In these group meetings, a session was devoted to share their experiences to promote their traditional knowledge and to keep records of their practices through written formats. They also discussed different aspects of sustainable livelihoods in relation to the management of Sunadarbans' resources

Target 15	
Location	Indicator
Kenya	Number of studies undertaken to generate information on carbon stocks and biodiversity status of the Kaya forests and associated landscape in order to develop restoration technologies for conserving biodiversity
Kenya	Area (ha) of degradation hotspots mapped and replanted with native tree species raised in the community nurseries
India	Ecosystem resilience could be measured through geospatial mapping of ecosystem services and its intensity indices (IWMI 2016), while impacts of conservation and habitat restoration could be measured from biodiversity indices of the planktons (Simpson's Species Richness Index - D) and change detection studies on carbon capture and storage potentials in algal flora through aquafarming (Total CO_2 fixation = K × biomass productivity X fixation efficiency; wherein K is the rate constant with value 1.89)
India	The results were estimated on the percentage of area brought under sustainable aquafarming through this intervention over the total inundated area in the Gosaba Community Development Block (GCDB) and as well total area of mangrove vegetation conserved through this intervention.
Hong Kong, China	Any application of mitigation measures against climate change and its impact Impacts on ecosystem services such as flooding prevention and irrigation
Bangladesh	Restoration activities by the three cooperatives Support to groups of practitioners of traditional occupations, for enhanced bio-diverse adaptation to climate change in the Sundarbans

Target 16	
Location	Indicator
Kenya	Number of community members participating in seed exchanges and sharing; number of community seed banks established to preserve and promote seed sharing and exchange among community members
India	This could be measured through equity in access to biological resources, ecosystem services and socio-economic benefits based on sociometric survey assessments and FGDs and following LNOB (Leaving No One Behind) principles.
India	This was assessed by the impacts of ratification of Nagoya Protocol by the Ministry of Environment, Forest and Climate Change, Govt. of India on coastal conservation in general and to this intervention in particular.

Working Group 5

Strategic Goal E: Enhance implementation through participatory planning, knowledge management and capacity building

WORKING GROUP 5

Strategic Goal E:

Enhance implementation through participatory planning, knowledge management and capacity building

Working Group 5

Strategic Goal E:

Enhance implementation through participatory planning, knowledge management and capacity building

	**Target 17** By 2015 each Party has developed, adopted as a policy instrument, and has commenced implementing an effective, participatory and updated national biodiversity strategy and action plan.
	**Target 18** By 2020, the traditional knowledge, innovations and practices of indigenous and local communities relevant for the conservation and sustainable use of biodiversity, and their customary use of biological resources, are respected, subject to national legislation and relevant international obligations, and fully integrated and reflected in the implementation of the Convention with the full and effective participation of indigenous and local communities, at all relevant levels.
	**Target 19** By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred, and applied
	**Target 20** By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan for Biodiversity 2011-2020 from all sources, and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization, should increase substantially from the current levels. This target will be subject to changes contingent to resource needs assessments to be developed and reported by Parties

Assessing & Monitoring Contributions to ABT

APPROACH THREE LEVELS

- GOVERNMENT (EFFECTIVENESS OF THE POLICY)
- COMMUNITY EDUCATION / AWARENESS OF COMMUNITIES (INCENTIVES, PARTICIPATION)
- LANDSCAPE (HEALTH OF THE ECOSYSTEM)

Technical Tools / Indicators

- Surveys / policy studies whether achieving goals (government/policy level)
  - Number and relevance of the policies
  - Effectiveness of policies on the ground
  - Level of commitment of governments/ financial commitment
  - Capacities
- Technical tools including GIS/Mapping & Biological assessment (landscape level)
  - Level of deforestation or loss of biodiversity
  - Biophysical assessments
- Socio-economic & cultural assessment/baseline surveys (community level)
  - Level of community participation
  - Number of community members aware
  - Number of communities adopting recommended practices
  - Incentives biodiversity conservation

Alignment & Coordination with CBD

- Mainstreaming biodiversity across sectors

Challenges to Implementation of ABT & post-2020 Considerations

Messages for post 2020 planning

- Governments should mainstream targets into national development plans
- All sectors including IPLC must have full and effective participation in all planning
- Recognizing that much of the world's biodiversity is on indigenous peoples' lands by recognizing their rights would be effective way to achieve the targets

Challenges

- Ineffective participation of all stakeholders
- Lack of respect of traditional indigenous and other knowledge systems
- Poor dissemination of targets to the grassroots
- Inadequate financial resources
- Biopiracy
- Political will & availability of easy data for decision-making and to inform policies

ELEMENTS POST-2020

- Synergies with other environmental targets - National plans/SDGs
- Local & indigenous peoples participation (IPLC)
- More effective ABS regime implementation

Expectation of IPSI post-2020

- Institutional reform
  - Divide membership in regional or thematic (TK, agriculture, etc.) sub-groups (5-10)
  - Could group institutionally such as by universities or communities
- Financing
  - MoE Japan and new international partners
  - Increase case studies and demonstration
  - Benefit-sharing that really increases incomes of local communities through IPSI projects on sustainable use of genetic resources (new projects)
- Information Sharing
  - Online interactive portal with forum/workshops
  - Demonstration & Site visits
  - Complete the planned IPSI accomplishment report

Elements for the Future

- Enhance relationships between IPSI & IPBES including ILK Task Force to increase responsibilities of international institutions
- Enhance relationships between IPSI members and local governments
- Enhance participation from other stakeholders such as education/research and industry
- IPSI's framework after 2020 could be based on members inputs

Member contributions

- Contribution to design of IPSI framework post 2020
- Participation in activities organized by IPSI

Annex 2: List of IPSI-7 registered participants

- Akane Matsuo, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Alfred Oteng-Yeboah, University of Ghana
- Alice Cunningham, Shumei International
- Anara Saparovna Alymkulova, Institute for Sustainable Development Strategy
- Anatolii Lebedev, Bureau for Regional Outreach Campaigns (BROC)
- Andre Mader, Institute for Global Environmental Strategies (IGES)
- Anil Kumar, M. S. Swaminathan Research Foundation
- Ayami Imai, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Beria Leimona, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Bishnu Hari Pandit, Kathmandu Forestry College
- Chemuku Wekesa , Kenya Forestry Research Institute (KEFRI)
- Chang Su Hua, Fuli Farmers Association
- Cheng-Hua Sun, Hualien District Agricultural Research and Extension Station Council of Agriculture, Executive Yuan, Chinese Taipei
- Chi-Yen Lo, Tse-Xin Organic Agriculture Foundation
- Chin-Lung Tsai, Soil and Water Conservation Bureau (SWCB), Executive Yuan, Chinese Taipei
- Daisuke Utsunomiya, Kanazawa University
- Dayuan Xue, School of Life and Environmental Science, Minzu University of China
- Devon Dublin, Conservation International
- Diwakar Maskey, Ministry of Forests and Environment, Nepal
- Dorothy Wanja Nyingi, Kenya Wetlands Biodiversity Research Group (KENWEB)
- Eduardo Brondizio, Indiana University
- Eiji Tanaka, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Evonne Yiu, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Florence Daguitan, Tebtebba: Indigenous Peoples' International Centre for Policy Research and Advocacy
- Gerald Jetony, Sabah Biodiversity Centre
- Guido Gualandi, Grani Antichi di Montespertoli
- Harold Chisale, Forestry Department, Lilongwe University of Agriculture & Natural Resources
- Hidefumi Ishiwa, Ishikawa Prefectural Government
- Hideo Yoshizumi, Ishikawa Prefectural Government
- Hidetada Kawasaki, Kumamoto Prefectural Government
- Hiroaki Murai, Ministry of the Environment, Japan
- Hiroaki Nagae, Ishikawa Prefectural Government
- Hiroaki Takiguchi, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Hirofumi Shindo, Ministry of the Environment, Japan
- Hiu Lai Chick, Policy for Sustainability Lab, The University of Hong Kong
- Hwan-ok Ma, International Tropical Timber Organization (ITTO)
- Hydie Maspiñas, Hydrology for the Environment, Life and Policy (HELP) Davao Network
- Inocencio Buot, University of the Philippines Open University

- Jameson Seyani, National Herbarium & Botanic Gardens of Malawi (NHBG)
- Jayant Sarnaik, Applied Environmental Research Foundation
- Jeeranuch Sakkhamduang , Institute of Environmental Rehabilitation and Conservation, Southeast Asia Office
- Jorge Malleux, Asociasion Pro Desarroillo Agroindustrial de Camana (APAIC)
- Josea Sagbo Dossou Bodjrenou, Nature Tropicale ONG
- Juan Pastor Ivars, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Jung-Tai Chao, Society for Wildlife and Nature (SWAN) International
- Kanako Higashi, Ishikawa Prefectural Government
- Kanako Yoshino, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Kawasaki Megumi, Ishikawa Prefectural Government
- Kazuaki Nishimura, Kumamoto Prefectural Government
- Kazuhiko Takemoto, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Kazuhiko Takeuchi, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS) and Integrated Research System for Sustainability Science (IR3S)
- Keiichi Nakazawa, Biodiversity Strategy Office, Ministry of the Environment, Japan
- Kenji Nakajima, Ministry of the Environment, Japan
- Kien To Dang, Community Entrepreneur Development Institute (CENDI)
- Kristina Mayo, Shumei International
- Kuang-Chung Lee, National Dong-Hwa University
- Kuramoto Kazuo, Ishikawa Prefectural Government
- Ling-Ling Lee, Society for Wildlife and Nature (SWAN) International and National Taiwan University
- Makiko Yanagiya, Secretariat of the Convention on Biological Diversity
- Masahide Yoshida, Ishikawa Prefectural Government
- Masanori Tanimoto, Ishikawa Prefectural Government
- Maurizio Farhan Ferrari, Forest Peoples Programme
- Megumi Matsuzaki, Kumamoto Prefectural Government
- Mikiko Nagai, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Minako Takahara, Conservation International
- Ming-Cheng Chen, Soil and Water Conservation Bureau (SWCB), Executive Yuan, Chinese Taipei
- Mordecai Ogada, Conservation Solutions Afrika
- Naoko Nakajima, Institute for Global Environmental Strategies (IGES)
- Naomi Tokashiki, Ministry of the Environment, Japan
- Noriaki Sakaguchi, Japan International Cooperation Agency (JICA)
- Norihiro Yamabe, Kumamoto Prefectural Government
- Onel Masardule, Fundación para la Promoción del Conocimiento Indígena
- Osamu Saito, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Peisheng Kao, Soil and Water Conservation Bureau (SWCB), Executive Yuan, Chinese Taipei
- Pua'ala Pascua, Center for Biodiversity and Conservation - American Museum of Natural History
- Raffaela Kozar, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)

- Rashed Al Mahmud Titumir, Unnayan Onneshan and University of Dhaka
- Ruth Spencer, Marine Ecosystems Protected Areas (MEPA) Trust
- Ryan Jeffrey Miller, Fuli Farmers Association
- Saki Sano , Fukui Prefectural Government
- Samuel Ojelel, Save Aseed for the Future (SAFE)
- Sarah Wyatt, Global Environment Facility (GEF)
- Sayako Koyama, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Seheno Ramanantsoa, Ministry of Environment, Ecology and Forests, Madagascar
- Seth Appiah-Kubi, A Rocha Ghana
- Shinjiro Sasaki , Fukui Prefectural Government
- Simon Ferrier, Commonwealth Scientific and Industrial Research Organisation (CSIRO), Australian National University, and United Nations Environment Programme World Conservation Monitoring Centre (UNEP-WCMC)
- Somaly Chan, National Council for Sustainable Development, Ministry of Environment, Cambodia
- Taisuke Ono, Kumamoto Prefectural Government
- Takako Sako, Ministry of the Environment, Japan
- Takao Harada, Kumamoto Prefectural Government
- Takuya Nishi, Kumamoto Prefectural Government
- Tomohiko Hideta, Ministry of the Environment, Japan
- Tsunao Watanabe, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Uma Khumairoh, Integrated Organic Farming Systems Research Centre (IORC), University of Brawijaya, Indonesia
- Wataru Suzuki, Secretariat of the Convention on Biological Diversity
- William Dunbar, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- William Olupot, Nature and Livelihoods
- Yasuo Takahashi, Institute for Global Environmental Strategies (IGES)
- Yasuyuki Morimoto, Bioversity International
- Yaw Osei-Owusu, Conservation Alliance International
- Yiching Song, Centre for Chinese Agricultural Policy, Chinese Academy of Science
- Yohsuke Amano, IPSI Secretariat, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- Yoko Watanabe, United Nations Development Programme
- Yoji Natori, Conservation International
- Yoshihiko Iida, Operating Unit Ishikawa/Kanazawa, United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS OUIK)
- Yoshihiko Nakade, Ishikawa Prefectural Government
- Yoshinori Miyahara, Secretariat of the Biwa Lake Network
- Yosuke Nagata, Ishikawa Prefectural Government
- Yu-Chun Chan, Tse-Xin Organic Agriculture Foundation
- Yusuke Asai, Ishikawa Prefectural Government
- Yuta Kokura, Ishikawa Prefectural Government
- Yutaka Shoda, Ministry of the Environment, Japan
- Zheng-An Wang, Observer Ecological Consultant Co.

Annex 3: IPSI members accepted after IPSI-6 through IPSI-7

- Accelerated Rural Development Organisation (ARDO) – Ghana
- Agrarian Research Foundation (ARF) – Bangladesh
- AGRUCO, University of San Simón – Bolivia
- Amis de l'Afrique Francophone (AMAF) – Benin
- Ancient Grains Association Montespertoli – Italy
- Asociación de campesinos vecinos del Parque Natural Nacional Serranía de los Yariguies (ASOCAPAYARI) – Colombia
- Asociación para la Investigación y el Desarrollo Integral (AIDER) – Peru
- Association for the Sustainable Development of Rural San Jose (ADESSARU) – Costa Rica
- Borneo Conservation Trust Japan – Japan
- Center for Green Economy Development (CGED) – Nepal
- Chinese Society for Environmental Education (CSEE) – Chinese Taipei
- The Commemorative Foundation for the International Garden and Greenery Exposition, Osaka, Japan, 1990 – Japan
- Committee of Intermunicipal Associations of the State of Jalisco (CAIEJ) – Mexico
- Community Entrepreneur Development Institute (CENDI) – Viet Nam
- Corporación Ambiental y Forestal del Pacífico (CORFOPAL) – Colombia
- Dahari – Comoros
- Ethiopian Biodiversity Institute – Ethiopia
- Forestry Bureau, Council of Agriculture, Executive Yuan – Chinese Taipei
- Fostering Education & Environment for Development, Inc. (FEED) – Philippines
- Fuli Farmers Association – Chinese Taipei
- Fundacion para la Promocion del Conocimiento Indigena – Panama
- Fundación Semillas de Vida, A.C. – Mexico
- Green Islands Foundation – Seychelles
- Greenglobe Ghana – Ghana
- Groupe d'Intervention pour l'Encadrement et la Réhabilitation Intégrale (GIERI) / Landcare Network DRC – D. R. Congo
- HATOF Foundation – Ghana
- Hualien District Agricultural Research and Extension Station of the Council of Agriculture – Chinese Taipei
- Indigenous Partnership for Agrobiodiversity and Food Sovereignty (TIP) – Italy
- Institute for Sustainable Development Strategy (ISDS) – Kyrgyzstan
- Kumamoto Prefectural Government – Japan
- LEAF Co., Ltd. – Japan
- Madagascar Ministry of Environment, Ecology and Forests – Madagascar
- Marine Ecosystems Protected Areas (MEPA) Trust – Antigua and Barbuda
- Ministry of Environment and Tourism of Mongolia – Mongolia
- National Forest and Wildlife Service (SERFOR) – Peru
- National Pingtung University of Science and Technology – Chinese Taipei
- National System of Conservation Areas (SINAC) – Costa Rica
- Nature Tropicale – Benin
- Neotropical Montology Collaboratory, Geography Department, University of Georgia – USA
- Ny Tanintsika – Madagascar
- Observer Ecological Consultant Co., Ltd. – Chinese Taipei
- Pgakenyaw Association for Sustainable Development (PASD) - Thailand

- Policy for Sustainability Lab of the Faculty of Social Sciences at the University of Hong Kong – China
- Research Center for Rural Development (RCRD) of An Giang University – Viet Nam
- Royal Society for Protection of Nature – Bhutan
- “Satoyama Initiative” NGO of Mongolia – Mongolia
- Save Aseed For The Future (SAFE) – Uganda
- Shumei International – Japan
- Society for Environment Conservation and Agriculture Research and Development (SECARD) – Nepal
- Soil and Water Conservation Bureau (SWCB), Executive Yuan – Chinese Taipei
- South Asian Forum for Environment (SAFE) – India
- The Energy and Resources Institute (TERI) – India
- Tse-Xin Organic Agriculture Foundation – Chinese Taipei
- TZR Technology – Malaysia
- Universidade Federal da Fronteira Sul (UFFS) – Brazil
- Wildlife Conservation Society Madagascar – Madagascar

Annex 4: IPSI collaborative activities endorsed after IPSI-6 through IPSI-7

- “2018 International Symposium on Resilience of SEPL”. IPSI Partners: SWCB (Soil and Water Conservation Bureau), Chinese Taipei; SWAN International
- “Building sustainable and resilient village economies based on agroforestry forest fruit garden systems and 'fair trade carbon farming' offsets”. IPSI Partners: Kathmandu Forestry College (KAFCOL); Ministry of Forest and Soil Conservation, Nepal
- “Community integrated management of migratory species (West African manatee and sea turtles) and their habitat in the coastal region in Benin”. IPSI Partners: Nature Tropical; A Rocha Ghana
- “Development and sharing of multimedia learning resources for Massive Open Online Course (MOOC) on Satoyama”. IPSI Partners: University of the Philippines Open University; Kanazawa University
- “Enhancing the knowledge and adoption of IPSI protocols by district assemblies governing the Kakum Conservation Area”. IPSI Partners: Conservation Alliance International; A Rocha Ghana; National Biodiversity Committee
- “Improvement of the livelihoods of the communities through the sustainable management of productive landscapes and biodiversity conservation in mangrove (Estuaries Chone and Portoviejo), the dry forest (Cordillera del Balsamo) and rainforest (Comune Playa de Oro)”. IPSI Partners: Social Development and Research Foundation (FIDES); Conservation International
- “Integrated project of enhancing ecoagriculture and sustainable development of rural Taiwan through international cooperation”. IPSI Partners: Hualien District Agricultural Research and Extension Station, Council of Agriculture, Taiwan (HDARES); National Dong-Hwa University
- “Mobile technology for community-driven aquatic biodiversity monitoring in Ewaso Ng'iro Catchment, Kenya”. IPSI Partners: Kenya Wetlands Biodiversity Research Group (KENWEB); Conservation Solutions Afrika
- “Production of publication series ‘Satoyama Initiative Thematic Review’”. IPSI Partners: United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS); Institute for Global Environmental Strategies (IGES)
- “Promoting and Enhancing the Karen Indigenous Sustainable Socio-ecological Production System in Northern Thailand”. IPSI Partners: Inter Mountain Peoples Education and Cultural in Thailand Association (IMPECT); Indigenous Knowledge and Peoples Foundation (IKAP); Forest People Program (FPP); Conservation International
- “Research on development and implementation of National Biodiversity Strategy and Action Plans (NBSAPs) toward realization of societies in harmony with nature”. IPSI Partners: Integrated Research System for Sustainability Science (IR3S), The University of Tokyo; United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS)
- “Research on mainstreaming integrated approaches in production landscapes and seascapes approaches into National Biodiversity Strategies and Action Plans (NBSAPs)”. IPSI Partners: Integrated Research System for Sustainability Science (IR3S), The University of Tokyo; United Nations University Institute for the Advanced Study of Sustainability (UNU-IAS); Secretariat of the Convention on Biological Diversity
- “SATO-YAMA-UMI Project: Environmental Education and Public Awareness on Biodiversity Conservation in Asia Pacific Region”. IPSI Partners: Japan Environmental Education Forum (JEEF); Birdlife International; Conservation International