

Lijiang and Stone Village, Yunnan, China

19-22 May 2016

Event Report

Landscape approaches for mountain community sustainable development in a time of climate change

Policy consultation and South-South
exchange workshop



Author information

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About the event

The workshop on “Landscape approaches for mountain community sustainable development in a time of climate change: Policy consultation and South-South exchange” was organised by the Center for Chinese Agricultural Policy (CCAP, China), Asociación ANDES (Peru) and IIED, on 19-22 May 2016, in Lijiang and the Stone Village, Yunnan, China.

The Center for Chinese Agricultural Policy (CCAP) is a leading policy research and advocacy centre in China. Our goal is to analyse policies related to agricultural research and development, natural resource and environmental issues and integrated rural–urban development, as well as policy decision support systems in China, and to help formulate practical and feasible policies for sustainable development in rural China.

Asociación ANDES (Association for Nature and Sustainable Development) in Peru is a small international indigenous-led organisation that works to support indigenous peoples’ struggles for biocultural rights and self-determination, land rights and territorial development, and community-controlled and biodiversity-based food systems. ANDES’ support takes the form of independent research and analysis; engendering collective action; networking at local, regional and international levels; and fostering new forms of knowledge creation, partnerships and alliance-building.

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Acronyms

ANDES	Association for Nature and Sustainable Development
ARCOS	Albertine Rift Conservation Society
BMUB	German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety
CAS	Chinese Academy of Sciences
CBA	Community-based adaptation
CBD	Convention on Biological Diversity
CCAP	Center for Chinese Agricultural Policy
CGIAR	Consultative Group on International Agricultural Research
COMPACT	Community Management of Protected Areas for Conservation
COP	Conference of the Parties
EbA	Ecosystem-based adaptation
ECOTRUST	The Environmental Conservation Trust of Uganda
FAO	Food and Agricultural Organization of the United Nations
GEF	Global Environment Facility
GIAHS	Globally Important Agricultural Heritage Systems
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
ICCAs	Indigenous and Community Conserved Territories and Areas
ICRAF	International Centre for Research in Agroforestry (Kenya)
IFAD	International Fund for Agricultural Development
IIED	International Institute for Environment & Development
ILC	Indigenous and local community
INDC	Intended Nationally Determined Contribution
INMIP	International Network of Mountain Indigenous Peoples
IPBES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change
IPSI	International Partnership of the Satoyama Initiative
IUCN	International Union for Conservation of Nature
KIB	Kunming Institute of Botany
MAB	Man and the Biosphere programme
MFI	Mountain Futures Initiative
NGO	Non-governmental organisation

NIAHS	Nationally Important Agricultural Heritage Systems
SDG	Sustainable Development Goal
SEPLS	Socio-Ecological Production Landscapes and Seascapes
SGP	Small Grants Programme
SIFOR	Smallholder Innovation for Resilience
SNS	Sacred Natural Sites
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNU	United Nations University

Executive Summary

South-South exchange for climate adaptation, ecosystems and livelihoods

This Policy Consultation and South-South Exchange workshop brought together UN agencies and governments, NGOs and researchers from China, Peru and the Albertine Rift region in Africa, to explore different community-managed landscape approaches: Biocultural Heritage Territories, Indigenous and Community Conserved Territories and Areas (ICCAs), UNESCO designations, FAO Globally Important Agricultural Heritage Systems (GIAHS), Satoyama landscapes and Sacred Natural Sites. It examined their role in sustainable development and climate adaptation, with a particular focus on mountain regions. In parallel to the policy workshop, two community-to-community South-South exchanges were held in the Stone Village, Yunnan: the first, between Quechua communities from Peru and Naxi communities from China, to establish a biocultural heritage territory like the Peruvian Potato Park; the second between 18 communities from China, Nepal, Kyrgyzstan, Tajikistan and Peru to strengthen capacity for adaptation. Both these exchanges were organised by the International Network of Mountain Indigenous Peoples (INMIP)¹. The policy workshop participants visited the Stone Village for a policy dialogue with the communities.

In his keynote speech, the Vice Minister for Sustainable Development of Peru emphasised the need for different government ministries to work together to implement the Sustainable Development Goals (SDGs), including environment, culture and agriculture, and to use limited climate finance to test new approaches. Peru is piloting payments for agrobiodiversity services, to reward farmers for conserving traditional crop varieties. Alejandro Argumedo (ANDES, Peru), presented the Potato Park biocultural heritage territory where potatoes grow at a higher altitude than anywhere in the world, and five Quechua communities conserve about 650 different potato varieties, based on customary laws and collective governance. The Potato Park enables continued crop evolution and co-evolution for adaptation, while sustaining water ecosystem services for the Cusco population. Both the Quechua and Naxi worldviews focus on balance between the spiritual, wild and domesticated/human worlds, as evident from ancient graphics.

Dr Yiching Song (CCAP) presented the Stone Village biocultural heritage landscape, which dates back about 1400 years, highlighting the core role of biocultural heritage in community cohesion and resilience, and the fact that biocultural heritage is threatened and needs recognition and support. The Stone Village has a thousand year old irrigation system which has lessened the impacts of climate change, particularly drought. Professor Xue Dayuan (Ministry of Environment, China), presented China's policies on genetic resources and traditional knowledge, highlighting the need to share benefits with ethnic minorities.

Carlos Loret de Mola (Environment Ministry, Peru) highlighted that Peru and China are two of the few countries with ancient civilisations whose spirit is still alive. He stressed that we are losing traditional knowledge fast, at a high cost as we will have to invest a lot in the future to re-invent these technologies for climate resilience. Dr Jian Liu, head of UNEP-China, explained that China's new fund for South-South cooperation and climate change will focus on adaptation, ecosystems and livelihoods and the links between them. Dr Yuan Liu (Oxfam Hong Kong) highlighted that, despite remarkable success in reducing poverty, income inequality is rising in China, and at the end of 2014 there were still about 70 million living in poverty, largely ethnic communities in mountain areas.

¹ The report of the INMIP workshops is available here: Reilly, J. and Swiderska, K. (2016). Biocultural Adaptation in Mountain Communities: Third INMIP International Learning Exchange, Stone Village, China. <http://pubs.iied.org/14669IIED>

Community-led landscape approaches for sustainable development and adaptation

Community-led landscape approaches play a critical role in poverty alleviation, biodiversity conservation and climate resilience, and hence in achieving the SDGs, Aichi Targets and implementation of the UNFCCC Paris Agreement. Recent surveys show that, since 2002, incomes in Peru's Potato Park have nearly doubled through biocultural products and eco-tourism, and potato yields have increased despite severe climate change impacts. In Guangxi, China, Community Supported Agriculture has tripled incomes and revitalised heritage varieties and agroecological practices, and Participatory Plant Breeding has increased yields and resilience to drought and pests. Market innovations based on biocultural heritage are important to create economic incentives for conservation without undermining cultural incentives, as highlighted by IIED's SIFOR project (Smallholder Innovation for Resilience). Biocultural heritage is the interlinked traditional knowledge, biodiversity, landscapes, cultural and spiritual values of indigenous people and local communities.

Professor Pei of the Kunming Institute of Botany (KIB) in China explained that Sacred Natural Sites (SNS) are cultural landscapes that aim to protect biodiversity and ecosystem services, and are deeply rooted in traditional knowledge. A recent survey of seven SNS in Yunnan found that biodiversity is well protected. SNS play a 'gene bank role' for forest restoration using native species; and maintain ecosystem services such as stream water, despite drought. They are managed by local communities, which is very low cost and effective. Village regulations for protection of SNS are developed by community conservation groups.

The Satoyama Initiative supports Socio-Ecological Production Landscapes and Seascapes (SEPLS) which are dynamic mosaics of habitats and land uses, deeply rooted in culture and traditional knowledge. Many are already recognised under Protected Area category 5, Biosphere Reserves or GIAHS. The initiative has developed indicators of resilience of SEPLS which local communities can use to identify threats and challenges and enhance the resilience of SEPLS.

ICCAs span all types of ecosystems and are extremely diverse — they are characterised by collective decision-making by local institutions that leads to conservation of 'commons', for example water, land and natural resources. Governments should recognise and support ICCAs as areas governed by indigenous peoples or local communities under a common title (property or right of use) that is inalienable. Provided they maintain their own governance institutions, ICCAs can benefit from being recognised as protected areas. ICCAs fall under the Convention on Biological Diversity's (CBD) category "other effective area-based conservation measures".

UNESCO has three designations for sites of global importance: World Heritage Sites, Biosphere Reserves and Global Geoparks — which increasingly integrate indigenous people, local communities and culture. World Heritage Sites include mixed sites based on both natural and cultural criteria of 'outstanding universal value'. Many of UNESCO designated areas are mountain ecosystems, and many are managed according to traditional practices. However, designation means a compromise as communities need to adopt globally applicable, external concepts (e.g. zonation, management plans). Sustainable development is realised through revitalisation of traditional practices, and development of natural products and ecotourism.

FAO GIAHS are made up of a mosaic of land uses, landscapes and livelihoods, with important agrobiodiversity. China has 11 GIAHS (two in Yunnan province) and 62 NIAHS – Nationally Important Agricultural Heritage Systems, managed by the Ministry of Agriculture. A study of the Rice-Fish system in Qingtian by Bioversity International China, has found a decline in agrobiodiversity — 28 traditional rice varieties have disappeared, and only four varieties are mainly used. The fish population has shrunk dramatically and disappeared in some villages. Challenges include an overly commercial focus, with limited benefits reaching communities, promotion of new technologies by local government and loss of traditional knowledge. Experience of ARCOS in Africa also highlighted that culture is often forgotten but is very important for ownership by communities. Scientific studies in China show that climate change is

threatening food security and exacerbating poverty in rural and ecologically vulnerable areas, and point to the need to re-evaluate indigenous species and diversify crops to reduce susceptibility to disease. The Paris Agreement recognises the role of traditional knowledge in adaptation, but 80% of INDCs do not mention traditional knowledge.

Mountains and Biocultural Heritage Territories

Mountains face multiple challenges, for example climate change, mining, deforestation and intensive monocultures. Improving livelihoods and sustaining ecosystem services requires fostering innovation, knowledge exchange and co-learning across mountain regions, to scale out successful 'seeds of innovation'. It requires partnerships between institutions, governments and communities; and linking science and traditional knowledge. Medicinal plants are a crucial aspect for sustainable development in mountains, along with community enterprises and eco-tourism, and the revitalisation of traditional knowledge. Community-managed landscapes are a low cost and effective tool for conserving biodiversity and ecosystems, provided they are managed through self-governing local institutions, and focus on strengthening culture as well as markets.

Developing a common designation for biocultural heritage landscapes/territories may be useful to link the different landscape initiatives and enable better collaboration with indigenous peoples, as the concept focuses explicitly on cultural spiritual values and reflects their holistic worldview. All the existing designations focus on these values but also miss some parts. Biocultural heritage territories explicitly focus on the twin goals of endogenous development and biodiversity conservation, to reduce the risk of recognition leading to external control or imposition of western concepts. However, it is also important to avoid duplication and competition for funds — ICCAs already provide a mechanism for recognition of biocultural landscapes, and more work is first needed to promote understanding of biocultural heritage territories and their importance.

Next steps

A common set of indicators for biocultural heritage landscapes/territories should be developed, that can be used to measure how communities are being supported, ensure that communities are being rewarded by initiatives, and that communities can use to establish biocultural landscapes. The indicators should be broad and developed through a bottom-up process. They should build on the Satoyama indicators and the Sustainable Mountain Development indicators that are being developed. There is also a need to:

1. Enhance understanding and mainstreaming of the term 'biocultural heritage', through communication materials and engagement with policy fora (e.g. CBD IPBES; SDG indicators)
2. Facilitate South-South exchange between communities to scale out successful innovations for sustainable development and adaptation, such as biocultural heritage territories and UNDP-Small Grants Programme cases
3. Continue the dialogue and collaboration between different community landscape approaches, and
4. Create policies and institutions that support community-led landscape management and adaptation, and link science and traditional knowledge.



Participants at the Policy Consultation and South-South Exchange Workshop, Lijiang. Credit: CCAP

Introduction and Objectives

Sustainable management of mountain landscapes by communities is vital for sustaining ecosystem services such as water and food crop diversity, and for enabling climate change adaptation by vulnerable communities. Community managed landscapes connect neighbouring communities for collective stewardship of watersheds and biodiversity, and for exchange of diverse seeds and knowledge for adaptation. They can revitalise cultural and spiritual values that underpin ecosystem stewardship, and enable poor mountain communities to develop new sources of revenue (e.g. from eco-tourism and medicinal plants). Thus, they are important tools for achieving the SDGs, implementing the CBD's Aichi targets, the UNFCCC Paris Agreement, and the FAO treaty on plant genetic resources for food and agriculture.

The policy consultation and South-South exchange workshop brought together UN agencies, policy-makers from China and Peru, researchers and NGOs. Its goal was to explore and promote community-led landscape approaches as critical tools for sustainable development, climate adaptation and poverty alleviation, with a particular focus on mountain regions. Its specific objectives were to:

1. Learn from experiences with different integrated landscape approaches in China and around the world, including Biocultural Heritage Territories, Socio-Ecological Production Landscapes and Seascapes (Satoyama); Indigenous Community Conserved Areas; UNESCO Biosphere Reserves and World Heritage Sites, and FAO Globally Important Agricultural Heritage Systems
2. Explore the role of community managed landscapes in resilient agriculture and food systems, conservation of biological and cultural diversity, climate adaptation and mountain poverty alleviation
3. Promote knowledge sharing between traditional and scientific knowledge, and between sectors, and
4. Explore enabling policy tools and incentive measures for sustaining community-managed landscapes and biocultural heritage.

The workshop provided a forum for South-South exchange between China, Peru and the Albertine Rift in Africa on community managed landscapes for climate adaptation and sustainable development, involving both government and civil society actors. It was organised by the Center for Chinese Agricultural Policy (CCAP) of the Chinese Academy of Sciences (CAS), Association for Nature and Sustainable Development (ANDES, Peru) and the International Institute for Environment and Development (IIED), in collaboration with UNDP-GEF Small Grants Programme (China), and Kunming Institute of Botany (KIB).

A community to community South-South exchange workshop was held alongside the policy workshop, involving 18 indigenous mountain communities from China, Peru, Nepal, Tajikistan and Kyrgyzstan. This parallel South-South exchange, organised by the International Network of Mountain Indigenous Peoples (INMIP) in the Stone Village from 19-23 May, also enabled the policy workshop participants to engage in a direct dialogue with mountain communities, and to witness the 'walking workshop' methodology developed by Asociación ANDES (Peru) for South-South exchange and capacity strengthening for climate adaptation.

The two day workshop was divided into four sessions:

1. Sustaining biodiversity and resilient agriculture and food systems in community managed landscapes
2. Community managed landscapes, community resilience and the SDGs
3. Innovative policies and institutions for biocultural heritage stewardship, and
4. Climate change and mountain ecosystem-based adaptation (EbA) and community-based adaptation (CBA) collaboration for adaptation.

Day 1: Thursday 19 May 2016

Official Opening

Mr Xingyuan Chen, Deputy Mayor of Lijiang (China): The Lijiang region of Yunnan province has rich cultural heritage and biocultural resources. The municipal government has done much work to promote ecological civilisation and poverty alleviation in the region. The region still has a population of 75% living below the poverty line, and 54% ethnic minorities, as well as half of China's plant species. It attracts 30 million tourists each year.

Mr Alejandro Argumedo, ANDES (Peru): A key objective of the workshop is to see how biocultural heritage landscapes fit with other designations for community managed landscapes, and to highlight the role of such landscapes in implementing the Paris Agreement on climate change and the SDGs.

Dr Yiching Song, CCAP (China): This workshop provides an important opportunity for South-South learning between China and Peru on community managed landscapes and climate adaptation. It also involves two parallel South-South exchanges amongst mountain communities: a bilateral exchange between Quechua and Naxi farmers to establish a biocultural heritage landscape in the Yunnan Stone Village inspired by the Potato Park in Peru (19-20 May); followed by a wider community to community exchange in the Stone Village to strengthen capacity for climate adaptation and learn about the Stone Village's ancient water management system (21-23 May).



Participants from the Policy Consultation and INMIP Exchange Workshops, Stone Village. Credit: CCAP

Keynote speech: Investing in biocultural landscapes to achieve the SDGs in mountain environments

Gabriel Quijandria, Vice Minister for Sustainable Development and Natural Resources (Peru)

A number of SDGs are important for mountain environments, including SDG 1: No Poverty; SDG 2: Zero Hunger, SDG 6: Clean Water and Sanitation, SDG 7: Affordable and Clean Energy, SDG 13: Climate Action, and SDG 15: Life on Land. Achieving these goals is a major challenge — where will the funding come from? The GEF has a budget of US\$ 4.43 billion. China has announced a South-South Climate Cooperation Fund and a South-South Post-2015 Development Agenda Implementation Fund amounting to US\$ 5.1 billion. The Green Climate Fund amounts to about \$10 billion in total, but this is only about \$60 million per country when shared between 150 countries. This is not enough considering the scale of the challenge of climate change, so countries need to use these funds to test new approaches.

A key challenge for achieving the SDGs is getting different government ministries to work together and 'lower their defences' — it is often difficult to engage with the Ministry of Agriculture in Peru given that it is 60 years old and the Ministries of Environment and Culture are much newer. Peru has introduced new national strategies, policies and laws relating to sustainable development, on biodiversity, climate change, forests, agriculture, and so on. It has also introduced a Prior Consultation Law and is undertaking numerous consultation processes with communities regarding mining and oil and gas activities, protected areas and laws and regulations. There have been several proposals for establishing Cultural Landscapes in Peru following the regulation approved in 2011.

One innovative project of the Ministry of Environment and Bioersity International is on Payments for Agrobiodiversity Conservation Services, where communities are paid for planting rare crop varieties, using rewards in-kind and in cash, at both individual and community levels. The project is a response to the loss of traditional crop varieties. The existence of public good values such as future option values, contribution to wider agroecosystem resilience or maintenance of evolutionary processes and traditional knowledge, requires positive incentives to ensure socially desirable levels of agrobiodiversity conservation. The project ensures that poor farmers benefit from providing agrobiodiversity conservation and monitoring services for the public good. For quinoa, some varieties have been lost as they have no market, while the surge in international demand has led to large-scale chemical intensive commercial quinoa farming in coastal areas of Peru.

Session 1: Sustaining biodiversity and resilient food and agriculture systems in community managed landscapes

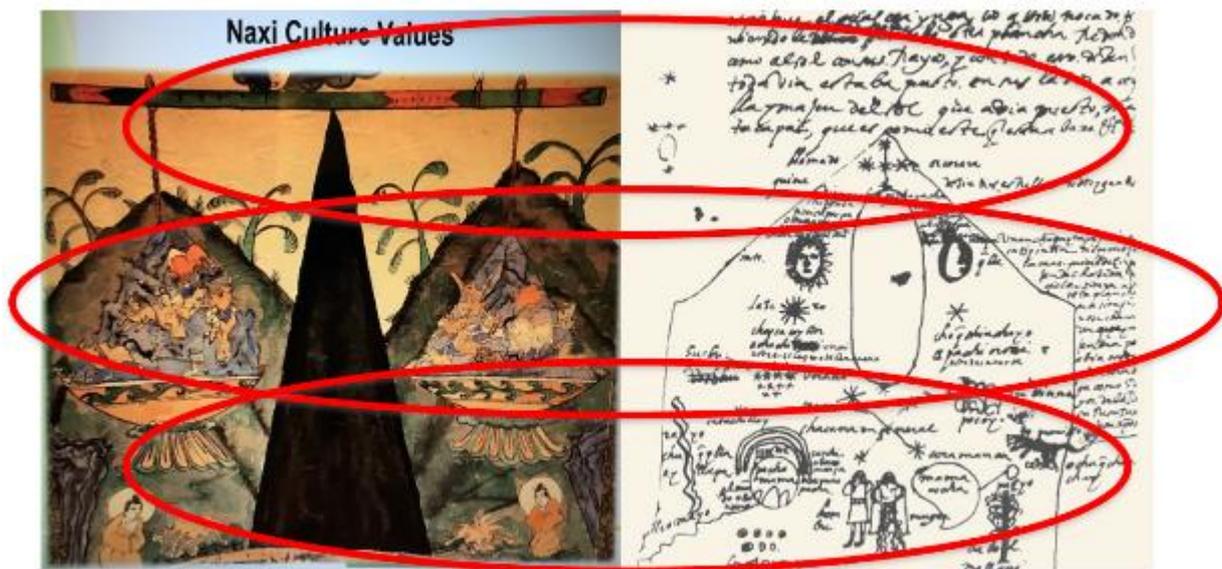
Biocultural heritage landscapes: Lessons from the Potato Park

Alejandro Argumedo, Director of Programmes, Asociación ANDES (Peru)

Mr Alejandro Argumedo introduced biocultural heritage landscapes through the case of the Potato Park in Cusco, Peru, where potatoes grow at a higher altitude than anywhere in the world. The Potato Park uses a traditional knowledge-based integrated landscape approach. It extends over 9000 hectares and is collectively managed by five Quechua communities based on customary laws. It aims to conserve potato diversity, wild crop relatives and neglected and under-utilised species in a centre of origin. The Potato Park communities conserve about 1350 types of potato (equivalent to about 650 different varieties) and conserve ecosystem services such as water and pollinators. They do this through traditional knowledge and cultural values, which create a biocultural environment for crop evolution in

response to climate change. It has created strong local and institutional capacity for conservation of plant genetic resources for food and agriculture, and integrates traditional and scientific knowledge. The communities are generating revenue from landscape-based biocultural goods and services such as indigenous gastronomy, potato-based natural products (e.g. shampoo, creams), agroecotourism and an informal Potato Park collective trademark. They have also developed a working model for repatriation and restoration of plant genetic resources for food and agriculture, and are conducting participatory plant breeding, for example to grow purple potatoes with high antioxidant content.

The Potato Park is guided by Andean cosmology (or worldview), where holistic development (or wellbeing) (Sumak Causay) is achieved through balance between three realms: human and domesticated species; wild species; and the sacred and the ancestors. These three realms can be seen in an Inca drawing found in the Golden Temple in Cusco, depicting the Southern Cross. The cosmology of the Naxi people in China is very similar, seeking balance between the spiritual, natural and human worlds — this is evident from a graphic of the Naxi peoples.



Naxi and Quechua graphics showing three realms: the sacred, the wild, and the human and domesticated. Source: Alejandro Argumedo / Asociación ANDES

The Potato Park biocultural landscape is managed by an association of Potato Park communities, which has a governance body, a management body and a technical consultative body. Currently the management body is exploring how best to be incorporated within a designation for national co-ordination which will assist with the management and promotion of biocultural landscapes. The challenge is that biocultural heritage landscapes are not legally recognised and have no formal designation, for example within the national protected area system. The focus on biocultural heritage can ensure that landscape management promotes pro-poor, inclusive green-grown and conservation of natural resources. The successful Potato Park model is being scaled out through South-South community to community cooperation facilitated by INMIP which is coordinated by ANDES, and includes a network of biocultural heritage territories, and community seed banks.

The Stone Village biocultural heritage landscape

Dr Yiching Song, Senior Researcher, CCAP (China)

The Stone Village in Yunnan province is the ancient capital of the Naxi people that dates back about 1400 years — it must be very resilient to have survived so many years. Balance is a core value of the Naxi peoples. Biocultural heritage is a core part that keeps the community together and enables it to

remain resilient. But the biocultural heritage system is threatened — it needs formal recognition and support. CCAP used a resilient innovation systems research inquiry framework to analyse Naxi traditional knowledge and biocultural heritage-based innovations in the Stone Village. The conceptual change from ecological agriculture to bio-cultural farming systems is a significant transition as agriculture is not only about farming technologies, but a whole comprehensive system. Our spiritual world, culture, and traditions are all embedded in our long farming history and agricultural civilisation, which is the starting point of our human civilisation and the essential basis for sustainable development.

CCAP has scaled up its participatory plant breeding programme in Guangxi to the Stone Village in Yunnan, and established a community seed bank with linkages to public gene banks in Yunnan, the Academy of Agricultural Sciences and KIB. The Stone Village has a thousand-year-old irrigation system with channels that go through and under fields. This has lessened the impacts of climate change, particularly drought, compared to villages without a traditional water management system. This system, and all the other elements of biocultural heritage, are rooted in the Naxi culture and wisdom on the harmonious co-existence between humans and nature.

Access and benefit-sharing from genetic resources and associated traditional knowledge in China

Professor Xue Dayuan, Minzu University and Ministry of Environment (China)

The CBD is part of the policy context for community managed landscapes. When genetic resources and traditional knowledge are used for scientific research and development to develop commercial crop varieties or new drugs, there must be benefit-sharing with the country of origin and prior informed consent. CBD Article 8(j) requires each party to ‘respect, preserve and maintain knowledge innovations and practices of indigenous and local communities’. The Nagoya Protocol recognises that the use of traditional knowledge requires prior informed consent and benefit-sharing with indigenous and local communities. States need to decide whether traditional crop varieties should be treated as genetic resources or traditional knowledge. The Inter-governmental Platform on Biodiversity and Ecosystem Services (IPBES), jointly established by UNDP, UNEP, FAO and UNESCO, has 124 member countries, including China. It aims to strengthen the science-policy interface for biodiversity and ecosystem services. It has a task force for indigenous and local knowledge consisting of 25 experts, which aims to develop procedures and approaches for working with indigenous and local communities (ILCs).

China has 55 minority ethnic groups, making up 10% of its population, and occupying over 50% of the land. It also has 34,984 species of higher plants, ranking third in the world, of which 51% are endemic, and is a key centre of origin of wild and cultivated fruit trees. Its Technical Guidelines for Classification, Investigation and Inventory for Traditional Knowledge Associated with Biodiversity identify five categories of traditional knowledge, including knowledge for use of genetic resources in agriculture, and knowledge of medicine, traditional technologies and cultivation practices, traditional cultures and biological indicators. Access and benefit-sharing issues are addressed in China’s National Intellectual Property Strategy and National Biodiversity Strategy and Action Plan, and the revised Patent Law (2009) requires disclosure of origin of genetic resources in patent applications. China also has a Law on Cultural Heritage for Intangible Goods which can be used for traditional knowledge protection, and Biological Geographical Indications, and is developing new legislation on access and benefit-sharing. A key challenge is that traditional genetic resources are linked to ‘traditional knowledge associated with genetic resources’ — should these genetic resources be state owned or ILC owned? Nagoya Protocol implementation depends on domestic legislation, but this will take a long time as it is a complicated issue. There is rich biodiversity in Chinese minority areas, so benefits should be shared with minorities. China has almost finished the legal procedures to ratify the Nagoya Protocol.

The Aichi biodiversity targets: Opportunities and challenges

Yoke Ling Chee, Director, Third World Network (Malaysia)

The CBD is not only an environmental convention, but also addresses sustainable development (sustainable use and benefit-sharing). China's centralised system is an advantage for meeting the Aichi targets because when the country decides to do something, it happens — China has strong capacity to bring about change, which other countries do not have. The Aichi Targets include five strategic goals, three of which have 2015 targets, which have already not been met. A lot of progress has been made on Strategic Goal E on participatory biodiversity management, largely through NGO work on indigenous and local resource management. Together, the Aichi Targets and the SDGs call for transformational change. Other opportunities include: scaling up the CBD beyond environment ministries; and a COP decision which means the CBD now uses the term 'Indigenous Peoples and Local Communities' supported by China. But the United States is still not a party to the CBD.

The report of the IPBES assessment on pollinators is very clear that if we fail to protect pollinators, this will negatively affect food production. Because of climate change, big companies (e.g. Monsanto) are looking to develop climate resilient seeds and therefore there has been an increase in the patenting of farmers' varieties. Another challenges are genome sequencing projects, mainly of ILC varieties, so big companies do not need to use actual seeds — they can just use the data and do not need to obtain prior informed consent. New trade and investment agreements that contradict the Aichi Targets and SDGs are also leading to more privatisation of seeds and biodiversity — there is a need to ensure that trade ministries do not have the final say.

Discussion

- Access and benefit-sharing policies should recognise the rights of indigenous and local communities over traditional crop varieties, as traditional varieties are the product and embodiment of traditional knowledge, and otherwise ILCs have no incentive for their conservation.
- Recent research shows that biocultural landscapes can play a key role in climate adaptation and achieving the SDGs. In the Potato Park, potato productivity has been maintained and slightly increased since 2002, despite a significant increase in pests due to rising temperatures, thanks to a strategy of varietal diversification. At the same time, incomes have almost doubled through biocultural heritage-based products and services, particularly agroecotourism. In Guangxi, southwest China, participatory plant breeding supported by CCAP has enhanced drought and pest resistance and increased maize yields by 15-30%; while associated community-supported agriculture has doubled or tripled household incomes and revived agroecological practices.
- There has been significant progress in the use of participatory methods in China in the last decade. It is important to share policy experiments to provide incentives for local communities.

Session 2: Community managed landscapes, community resilience and the SDGs

Poverty reduction & ethnic minority groups' development in China: Situation & policies

Dr Yuan Liu, Oxfam Hong Kong, Beijing office (China)

China was the first country to realise the Millennium Development Goal target of “reduce the poor population by a half”. Extreme poverty in China has decreased from 47% in 1990 to 14% in 2015. But income inequality is rising, for example between provinces and between rural and urban areas. Some provinces including Yunnan have more than 6 million poor, and at the end of 2014 there were about 70 million people still living in poverty. Eleven out of 14 poverty areas in China are mountain areas, mainly ethnic communities. Tackling poverty in these areas is difficult due to ecological fragility, frequent natural disasters, poor higher education coverage, and weakening traditional culture. The main groups affected are women, old people and children in rural areas, and ethnic minorities (20%). Targeted poverty reduction is now the major policy measure in China focusing on these regions. To be successful, the government should respect the free will of poor people, rather than acting on their behalf. The Chinese government highlights the necessity to learn about approaches and mechanisms for poverty reduction from other countries; and also hopes to share China's experiences with other developing countries.

Investing in mountain biocultural landscapes

Carlos Loret de Mola, Ministry of Environment (Peru)

This meeting has supported Peru–China relations between ancient civilisations whose spirit and philosophy are still alive — the Naxi and the Inca/Quechua people. Peru and China have a lot of similarities — in Peru we say ‘Our past is our future’. Ancient cities that first emerged in world, including Caral in Peru (which emerged 5000 years ago), linked lowlands and highlands for exchange of goods. This was a key factor in its success. Mesopotamia, India, Egypt, Peru, China and Mexico are the main old civilisations that are still alive — their spirit lives on. This is very important for future civilisations.

Opportunities for investing in biocultural landscapes:

- Peru is a mega-diverse country. It became involved in the Business and Biodiversity Offsets Programme. This could be extended to biocultural landscapes.
- Satoyama landscapes, GIAHS (FAO), payments for ecosystem services, and compensation for impacts.

There are a lot of instruments — we should see how to make a package of these so they do not compete with each other. We need to use these instruments in the very short time that we have to adapt to climate change. We have the climate change and SDG commitments — biocultural landscapes have to be part of this process.

Natural and spiritual value of indigenous Sacred Natural Sites (SNS) in Yunnan

Professor Shengji Pei, Kunming Institute of Botany (KIB) (China)

The international community has moved more into ground level participatory action, and now even community to community collaboration — 30 years ago it would not have been possible to have collaboration between the Stone Village and Potato Park communities. Worshipping nature is an ancient Chinese practice that can be traced back 3000 years in the records. A Sacred Natural Site is a folk protected area system built on the basis of indigenous cultural belief. In modern conservation

history, SNS is defined as a cultural landscape aimed at protection of plants, wildlife and ecological service functions of natural ecosystems. Over the last half century, SNS have become threatened due to rapid economic development and cultural changes, for example 95% of the Dai's Holy Hill Forest has been lost since 1960 (due to reduced number and size).

The term SNS started being used in 1992. In 2003, UNESCO/UNU/IUCN/KIB organised a conference on SNS and their importance for biodiversity conservation. In 2007, at the IUCN World Conservation Congress in Durban, IUCN established a working group on cultural and spiritual values of protected areas and recognised SNS as part of the world protected area system. In 2008 IUCN-UNESCO published principles and guidelines for the management of SNS located in legally recognised protected areas.² Also in 2008, Professor Pei submitted a proposal on the protection of Nong-Nan Sacred Site in Xishuangbanna, to the UN Permanent Forum on Indigenous Issues. In 2013, the Government of Yunnan issued the 'Biodiversity Conservation Strategy and Action Plan (2013-2030) of Yunnan' in which SNS survey, inventory and management are the main tasks. In 2014, Yunnan Government Funds on Biodiversity Conservation provided 1 million CNY (Chinese Yuan Renminbi) funds to the ethnobotany research team at KIB to conduct an action research project on SNS and biodiversity conservation in Yunnan.

SNS are deeply rooted in traditional ecological knowledge; they are an indigenous value system; SNS ethnobotanical knowledge has been accumulated through human interaction with the environment in their history. SNS vary in form, scale and management and in their role in biodiversity conservation at different levels. A survey was conducted to assess the impact of seven SNS in Yunnan on biodiversity conservation. It included: the Jizu Buddhist Sacred Mountain in Binchuan county, west Yunnan; the Zhuang's Nine-Dragon Sacred Mountain in Guangnan county, southeast Yunnan; the Wa's Sacred 'Se' Forest in Gengma county, southwest Yunnan; the Hani's Sacred Forest in World Nature Cultural Heritage site, paddy rice terrace Yuanyang county, southeast Yunnan; the Dai's Holy Hill Sacred Forest at Manyuan village, Xishuangbanna, south Yunnan; the Yao's Sacred Forest Mountain at Yuanyang county, southeast Yunnan; and the Tibetan Sacred Forest Mountain at Bazhu village in Weixi county, southwest Yunnan. The study found that:

1. Many cultural species are maintained in SNS; 'cultural species' are a new term — there is no difference between these and biological species in biological terms, but cultural species have special cultural meaning, for example sacred paddy rice which cannot be grown in another site (they were not allowed to do scientific research to see what species the rice is; the community only shared information about its use as sticky rice); dragon tree species; cultural landmark trees; Buddha trees. They found more than 40 cultural species in total.
2. Biodiversity in SNS is well protected: 1-12 nationally protected species in each site; tropical dry-seasonal rainforest; sub-alpine needle-leaf forest; and sub-tropical humid-monsoon broad leafed forest in southeast Yunnan are protected.
3. The co-evolutionary relationship of cultural beliefs and species protection is maintained in case study areas, for example the paddy-rice terrace and water supply; the Buddhist belief and Buddha trees; wild sacred mango tree, *Antiaris* tree in Dai's Sacred Forest, and so on.
4. The ecosystem service function of SNS increases with increased forest land area, for example stream water is maintained all year round in large sacred forest land, despite drought; and the wildlife habitat hosts more birds species.
5. SNS are important for spiritual cultural expression and worship by local and indigenous peoples.
6. They also serve as community education sites for biodiversity conservation; and play a 'gene bank role' for forest restoration especially for native species, and climate change adaptation.

² Wild R and McLeod C. Eds. (2008). Sacred Natural Sites: Guidelines for Protected Area Managers. IUCN Best Practice Guideline 6. Section 4. https://cmsdata.iucn.org/downloads/pa_guidelines_016_sacred_natural_sites.pdf

7. SNS are managed by the local community which is very low cost and effective. They are threatened in rapid development areas, for example where forests are replaced by rubber trees, tourism has a negative impact, and the younger generation has lost interest.

The objective of the SNS project is to establish community protected areas that are based on traditional SNS culture; have biodiversity conservation value; and have local government support. They are establishing five community conservation 'demonstration sites' in the Dai, Zhuang, Hani, Wa and Tibetan sacred forests, through community-led actions to demarcate SNS, and establish community conservation groups with 5-7 people, including the village head, traditional religious leader, and village representatives. Village regulations for protection of SNS are developed by community conservation groups; community education activities are conducted; and degraded sacred forest land is restored (e.g. rubber plantations in the forest are replaced with local trees). The results will be published in a book on SNS and biodiversity conservation by end of 2016.

Conservation of biodiversity, communication and psychology

Hanying Li, IUCN Commission on Education & Communication

The IUCN Commission on Education & Communication is a network of professionals that uses conservation psychology to integrate nature into policy, and seeks to incorporate human behavioural psychology into conservation education, since environmental education alone does not always work. People make decisions based on survival drive — for example the need for food comes first if you are hungry; and emotion influences decisions more than 'rational' thinking (e.g. decision to buy a car is often largely based on desire for status). So first, you need to get a person's attention; then appeal to their emotional side, and then reinforce the message using reason. Using conservation psychology entails four key aspects/steps:

- Be specific: who should do something and how?
- Motivate: why should they do it?
- Enable: how to make this behaviour easy
- Facilitate/remind them

Discussion: Indigenous peoples already have conservation values embedded in their culture — if conservation organisations mainstreamed respect for indigenous peoples across their programmes, there would be less need for environmental education. IUCN is increasingly supporting indigenous peoples, for example in its work with Parks Canada which controls a vast area of protected areas with indigenous people; and its guidance for foresters, government agencies and aboriginal people.

Criteria and indicators of sustainability in Socio-Ecological Production Landscapes and Seascapes (SEPLS)

Kazuhiko Seriu, Satoyama Initiative, UNU-Institute for the Advanced Study of Sustainability (Japan)

SEPLS are dynamic mosaics of habitats and land uses. Interaction between biodiversity and humans has contributed to biodiversity conservation — indigenous peoples and local communities have important knowledge for conservation. SEPLS entail a harmonious interaction between humans and nature; they are deeply rooted in culture and traditional knowledge. Many are already recognised, for example under Protected Areas category 5, Biosphere Reserves, GIAHS. SEPLS face challenges of urbanisation, population growth, over-use of natural resources and under-use of natural resources.

The Satoyama Initiative was formed in 2010 at CBD COP10 as a partnership between the Ministry of Environment of Japan and UNU. It aims to promote SEPLS around the world. It has established a global network, the International Partnership of the Satoyama Initiative (IPSI), which is open to all

stakeholders, has 184 members, and facilitates and accelerates activities for SEPLS through global conferences, collaboration of members on projects, sharing knowledge, and fostering synergies. It has 20 collaborative activities, including one on indicators of resilience of SEPLS and a toolkit. It has identified 20 indicators, covering social, economic, cultural and ecological aspects. Resilience is capacity to observe and adapt to disturbance. The indicators provide a tool for local communities. The aim is to understand the current status of landscapes, threats, challenges and assets, and use that to identify ways to enhance resilience in SEPLS. The assessment takes place at the community level not in a workshop. The indicators cover five main aspects: landscape diversity and ecosystem protection; biodiversity; knowledge and innovation; governance and social equity; livelihoods and wellbeing. They are assessed using a simple scoring system. They can also be used to help communities develop a landscape management plan.

Biocultural heritage and market innovations: Results of the SIFOR project

Krystyna Swiderska, IIED (UK)

The SIFOR project (Smallholder Innovation for Resilience) is a 5-year EC-funded project which aims to strengthen innovation systems for food security in the face of climate change, through participatory action research with indigenous mountain communities in China, Peru, India and coastal/dryland communities in Kenya. Rural communities need enhanced capacity for innovation to cope with growing climatic variability. The project focuses on biocultural heritage-based innovations, which arise from interaction between the components of biocultural heritage or between traditional knowledge and science. Biocultural heritage is composed of traditional knowledge, biodiversity, landscapes, cultural and spiritual values, all of which are inter-linked and inter-dependent, in the indigenous holistic worldview and in practice. Biocultural heritage provides a framework for sustainable development which is rooted in distinct cultural identities and production landscapes.

The SIFOR project has identified several effective technological, market and institutional biocultural innovations. Market biocultural innovations, i.e. new biocultural products/services and market linkages, are important to enhance economic incentives for sustainably managed landscapes and ensure the long term economic viability and sustainability of such landscapes. They are also important to create culturally appropriate economic incentives which do not undermine cultural incentives for conservation.

The market innovations developed by the Potato Park communities in Peru, collaboration with NGO ANDES, seek to add value to the links between biodiversity and culture:

- Micro-enterprises/economic collectives for biocultural products (especially for women), based on Andean principles — teas, shampoos, creams, crafts, and eco-tourism, the highest and growing source of income.
- Collective Potato Park trademark (informal) — rules are based on customary laws; has increased revenues and social cohesion for landscape management.³
- Culinary sanctuary: restaurant and courses on potato biocultural systems, cuisine and food politics.
- Revival of barter for exchange of goods and services based on reciprocity.
- 10% of revenues from products/services with the Potato Park trademark are invested in a communal fund, and the funds are redistributed to support biocultural heritage and poverty alleviation at the end of each year, according to an inter-community benefit-sharing agreement based on customary laws.⁴

³ Argumedo, A. (2013). Collective trademarks and biocultural heritage: Towards new indications of distinction for indigenous peoples in the Potato Park, Peru. <http://pubs.iied.org/16528IIED>

⁴ ANDES et al (2011). Community Biocultural Protocols: Building Mechanisms for Access and Benefit Sharing Among the Communities of the Potato Park Based on Quechua Customary Norms (Summary Report). <http://pubs.iied.org/G03168>

A SIFOR survey in the Potato Park (5 communities, 61 households) found that household incomes have nearly doubled (83% increase) since 2003, especially since 2008 (the micro-enterprises were established between 2002 and 2006), while potato diversity has more than doubled.⁵ The Potato Park was not able to formally register its trademark to gain legal intellectual property rights protection due to significant bureaucratic hurdles. ANDES and IIED are therefore developing a new biocultural heritage indication labelling scheme designed to be easily accessible for indigenous peoples and local communities.

In Guangxi, China, community supported agriculture facilitated by CCAP and the NGO 'Farmers' Friend' has linked villages to urban markets for ecological food through restaurants and farmers' markets in provincial cities. A SIFOR survey (covering 344 households in 18 villages) found that community supported agriculture has tripled the farm incomes of participating households since the price of organic rice is 3-4 times higher; and young people are returning to villages.⁶ Alongside participatory plant breeding, community supported agriculture has also strengthened social capital, leading to new women's groups and farmers' cooperative; and has revived several heritage varieties that had become extinct locally, as well as agroecological practices (integrated pest management, inter-cropping), and led to further innovations by communities. Community supported agriculture provides crucial incentives for participatory plant breeding; and both these successful innovations are being scaled up to the Stone Village in Yunnan, where impacts on livelihoods and biodiversity are emerging after just three years.

Innovative local institutions for biocultural landscapes

Dr Ronnie Vernooy, Bioversity International (Italy)

Why has the Stone Village survived for so long? Over time people repeatedly tried to destroy and plunder it — it seems that strong local organisation of villagers has been instrumental in safeguarding the Stone Village.

What do we expect innovative biocultural landscape institutions to contribute to? From the definition of 'biocultural landscape' developed by IIED and partners⁷, we can distil the following major functions: 1) recognise and respect indigenous and traditional knowledge, innovations, practices and customary laws; 2) contribute to collective management of the natural resource base through conservation and sustainable use of agricultural, forest and aquatic biodiversity, air, water and land; and 3) support innovation and livelihood development (reduction of poverty, food security). The second function has two major components, conservation and sustainable use, which could be looked at separately. Different types of local institutions have been established for different purposes, as per the following typology:

- Farming-focused: farmer field schools, farming learning groups etc.; rural cooperatives.
- Business-focused (income generation): Community supported agriculture in many countries.
- Community development focused: e.g. Women's self-help groups.
- Seed focused: Community seed banks and seed businesses.
- Natural resource-focused (conservation and management): Community natural resource management/user groups.

⁵ ANDES (Peru) (2016). Resilient farming systems in times of uncertainty: Biocultural innovations in the Potato Park, Peru <http://pubs.iied.org/14663IIED>

⁶ Song Y. et al (2016). Smallholder farming systems in Southwest China: Exploring key trends and innovations for resilience. <http://pubs.iied.org/14664IIED>

⁷ See: www.bioculturalheritage.org

A review of global examples of effective local institutions suggests that there can be co-existence of multiple and mutually supportive institutions, working side by side or in a kind of nested order; that institutions can evolve over time; that research and development and policy advocacy can be important supporting forces; and that women in many cases are at the forefront of local institutions. What is important is that local institutions are shaped to address what communities want — there is no single model.

Discussion: It is also important that the development of local institutions is done through a bottom-up participatory process to ensure they are lasting and legitimate at local level. Experience (e.g. in coastal Kenya) shows that local organisations established as part of donor-driven projects often do not last after the projects end. It is also important to involve all the communities in the landscape — including upland and lowland communities — to ensure watersheds are sustainably managed and conflicts are minimised.

Building community resilience in Laos PDR

Provash Mondal, Oxfam (Laos)

Oxfam is supporting projects to strengthen disaster/emergency preparedness in communities in Vientiane Province of Laos PDR.

Discussion: Disaster preparedness projects could include a focus on ecosystem and landscape management — intact forests and mangroves for example can reduce the impacts of extreme events, while community seed banks are important to enable recovery.

Day 2: Friday 20 May 2016

Session 3: Innovative policies for biocultural heritage stewardship

Indigenous and Community Conserved Territories and Areas (ICCAs)

Dr Terence Hay-Edie, UNDP-GEF Small Grants Programme

ICCAs are found in all continents, span all types of ecosystems and cultures, have thousands of local names and are extremely diverse. They are successful examples of collective decision-making about nature; the oldest form of “conservation” on earth, closely related to peoples’ livelihoods, culture and identity. The power to take and enforce decisions rests with functioning governance institution (decision making structures, customary rules). All ICCAs have three main characteristics: a natural area/territory, a community, and decisions and practices that lead to conservation, sustainable use and restoration. They all relate to some type of “commons”, for example land, water and natural resources, that are governed collectively. In some countries, they are included in official protected area systems; in others they are a sacred site in a larger landscape; or in buffer zones and corridors.

Distilled advice on ways to recognise and support ICCAs:

- Community integrity and strength are essential to any ICCA
- Friends and allies from civil society can and do play crucial supporting roles
- National governments have international obligations vis-à-vis ICCAs — and international organisations, instruments and projects can help them fulfil such obligations
- Governments have a variety of avenues to officially recognise collective subjects possessing collective rights and responsibilities (and respect customary institutions, which should evolve at their own pace)
- At best, they should recognise ICCAs as coherent land, water and natural resource units governed by self-defined indigenous peoples or local communities (legal subjects) under a common title (property or right of use) that is inalienable, indivisible, and established in perpetuity
- Free, prior and informed consent should be obtained in all matters regarding ICCAs
- Under appropriate conditions, and provided they maintain their own governance institutions, ICCAs can benefit from being officially recognised as protected areas, and
- ICCAs that have been incorporated into official protected area systems without the free, prior and informed consent of the concerned communities should be recognised as ICCAs and provided respect and support, as appropriate; positive collaboration should be sought between the relevant protected area authorities and communities.

The relationship between ICCAs and protected areas is complex, and different cases are possible:

ICCAs can be tucked within protected areas (e.g. ceremonial grounds incorporated within in a transboundary protected area among Niger, Burkina Faso and Benin); or there can be many ICCAs overlapping with a protected area (e.g. Mount Kalatungan National Park in the Philippines); or ICCAs can actually include protected areas (e.g. Kushkizar Wetland, a Ramsar site in the territory of the Kuchi, a Qashqai sub-tribe in Iran).

What kind of support has proven helpful for ICCAs?

- Support to enforce rules and provide fair and coherent judgement and sanctions for violators

- Capacity development to respond to threats and manage conflicts
- Opportunities for joint learning and advocacy (e.g. exchange visits, networking, federations)
- Social recognition for ICCAs (e.g. through praise, awards, media coverage)
- Financial incentives, but only with caution and safeguards to maintain and strengthen community independence and integrity, and
- Promotion of good governance at all levels (e.g. legitimacy, transparency, accountability).

GEF SGP OP6 (Operational Programme) on Community Landscape and Seascape Conservation (2015-2018) states that: “SGP will identify important ecosystems and use a landscape and seascape approach for their protection and sustainable use, implementing a multi-focal approach involving communities in buffer zones and corridors thus providing connectivity for complex landscape mosaics”.

The Global ICCA Support Initiative, supported by The Christensen Fund and SGP, includes: Work package 1: Small grants (\$50,000) in 20 target countries: provides direct support to community-based demonstration and action in support of ICCAs, including for: local capacity building support to communities, community-based organisations and indigenous peoples on sound ICCA stewardship; dissemination and national level customisation of community-friendly ICCA toolkits and approaches for the recognition of ICCAs at national level (i.e. translation to local languages and field testing); and replicating good practices for the co-management of protected landscapes including ICCAs, building on the COMPACT initiative (Community Management of Protected Areas for Conservation; developed by SGP from 2000-2013). Five SGP OP6 regional launch initiatives were held in 2015 — Asia, Latin America, Anglophone and Francophone Africa, and Southeast Asia.

Support to ICCAs is central to SGP OP6’s core focus, and it has received additional co-financing of \$16.3 million from German BMUB for implementing the CBD Aichi 2020 targets. ICCA Global Support Initiative has a typology of support for three target categories of ICCAs:

1. Defined ICCAs: Improve recognition, foster respect, address emerging issues (i.e. adaptation to climate change)
2. Disrupted ICCAs: Revival of traditional knowledge, healing processes, community defence mechanism, support for next generation/youth, and
3. Desired ICCAs: Organise communities, mapping of boundaries, develop and utilise new laws.

ICCAs fall under the CBD category of “other effective area-based conservation measures”. The ICCA Consortium (www.iccaconsortium.org) is rooted in the movements that promote equity in conservation, and international policy recognition of ICCAs. It was created in 2008 and legally established in Switzerland in 2010 as a global, member-based association:

- Mission: To promote the appropriate recognition of ICCAs, and appropriate support to them
- Members: Indigenous peoples and local community federations, organisations and supporting NGOs (76 worldwide)
- Honorary members: About 170 worldwide
- Partners: UNDP GEF SGP, IUCN Global Protected Areas Programme, CBD Secretariat, UNEP-World Conservation Monitoring Centre, the Christensen Fund, GIZ
- Semi-volunteer personnel: About 24 people based in 20 countries; it has no dedicated offices, but works with and through members.

Discussion: It seems that ICCAs are a bit different to biocultural heritage territories as these focus specifically on agrobiodiversity conservation and climate change adaptation. The two fundamental goals of biocultural territories are biodiversity conservation and endogenous development. The latter is important to ensure that government recognition does not result in any external control and imposition

of western concepts. Biocultural heritage territories are: “Land use mosaics encompassing indigenous and traditional land tenure, production and exchange systems, cultural identity, community organisation and simultaneous goals of endogenous development and biodiversity conservation”.⁸

Stewardship of biocultural landscapes through UNESCO designations: World Heritage Sites, Biosphere Reserves and Global Geoparks

Hans Dencker Thulstrup, UNESCO Beijing (China)

UNESCO serves as the secretariat for three significant mechanisms for designating sites of global importance:

1. Natural, cultural and mixed World Heritage properties under the 1972 World Heritage Convention
2. Biosphere Reserves recognised within the World Network of Biosphere Reserves of the UNESCO Man and the Biosphere (MAB) Programme, and
3. Global Geoparks under the UNESCO International Geoscience and Geoparks Programme.

UNESCO-designated sites comprise: 667 Biosphere Reserves; 120 Global Geoparks; 802 cultural World Heritage properties (including cultural landscapes), 197 natural World Heritage properties, and 32 mixed World Heritage properties based on both cultural and natural criteria. They include a high representation of mountain ecosystems. All are about people, their cultures and their relationship with nature — from different and evolving perspectives. There has been significant recent progress in engaging with indigenous peoples and local communities.

A UNESCO designation — whether Biosphere Reserve, Global Geopark or World Heritage Site — confers global recognition through a national nomination procedure on local biocultural realities. A UNESCO designation is not time-bound. It represents in principle a permanent commitment to protect and the unique features of a given landscape and its population. Long-term protection of the values for which a given landscape is recognised is only possible if local management is sustainable — for which local community leadership and engagement is essential.

From a local community or indigenous peoples’ perspective, a global UNESCO designation represents a compromise because it requires the imposition of globally applicable, external concepts on the local reality (zonation, management plan, national-level approval, review and submission). Ensuring recognition of indigenous cosmology and the association between community and landscape in the nomination dossier requires effort, and is dependent on local–national relationships, policies and practices. Thus, for communities, designation represents a risk as well as an opportunity. UNESCO designated sites can be managed according to traditional / indigenous practices — there are a number of examples of this. UNESCO does not decide which sites should be nominated for designation (member states do), or should be designated (intergovernmental bodies composed of member state representatives do). The national context plays a key role in setting the scope for community leadership.

The World Heritage Convention is unique in that it covers both natural and cultural heritage of “Outstanding Universal Value”. It defines the kind of natural or cultural sites that can be considered for inscription on the World Heritage list, and sets out the duties of state parties in identifying potential sites and their role in protecting and preserving them. World Heritage Cultural Landscapes were added as a category under the Convention in 1992 to recognise outstanding examples of the ‘combined works of nature and humankind’. They provide a new opportunity to inscribe sites that embody the interactions between humans and nature, and contain diverse tangible and intangible values. This is an important milestone for World Heritage, allowing for recognition of indigenous peoples’ values related to the landscape, and bringing a better balance to the World Heritage list.

⁸ Argumedo A and Swiderska K (2014). Biocultural Heritage Territories. IIED Flyer. <http://pubs.iied.org/G03843>

In 2007, the World Heritage Committee added “Communities” as the “fifth C” in its strategic objectives, complementing credibility, conservation, capacity-building and communication. The World Heritage Convention’s Strategic Action Plan 2012-2022” calls for the World Heritage Convention to “contribute to the sustainable development of the world’s communities and cultures”; while the 2015 Revised Operational Guidelines include reference to the United Nations Declaration on the Rights of Indigenous Peoples. State parties are “encouraged to prepare nominations with the widest possible participation of stakeholders and to demonstrate, as appropriate, that the free, prior and informed consent of indigenous peoples has been obtained”.

The Honghe Hani Rice Terraces are an exceptional reflection of a resilient land management system that optimises social and environmental resources, demonstrates an extraordinary harmony between people and their environment in spiritual, ecological and visual terms, and is based on a spiritual respect for nature and respect for both the individual and the community.

The Man and Biosphere Reserve, launched in 1971, was a ground-breaking concept at the time. It combines the natural and social sciences, economics and education to improve human livelihoods and the equitable sharing of benefits, and to safeguard natural and managed ecosystems. It promotes innovative approaches to economic development that are socially and culturally appropriate, and environmentally sustainable. Its three functions are: i) developmental: improvement of human well-being which is socio-culturally and ecologically sustainable; ii) conservation: restoration and rehabilitation of ecosystems and conservation of biological and cultural diversity; and iii) logistical: provide room for research, monitoring, education and information exchange in a world network. MABs are essentially natural science based but are now more integrated.

Shinan Dadohae Biosphere Reserve: Approximately 1000 islands in southwest Korea — sustainably managed through:

- Economic development realised through a cultural and economic system that will be reconciled with the continuum of various marine and island ecosystems
- Adaptive use of ocean, tidal-flat and island ecosystem with traditional environmentally sound technologies passed down through generations
- Revitalisation of traditional practices to create sustainable new technologies and social organisations, and
- Development of local industry of natural products and ecotourism.

Culture supports the motivation for local conservation and development, for example through:

- Seafood and related cuisine, utilised in accordance with traditional practices stressing the linkage between traditional practice and the environment
- Ecotourism combined with food culture, local food products, medicinal plants, flowers and forest products
- Study and re-invigoration of traditional/indigenous knowledge as contributor to sustainability, and
- Increasing application of local Biosphere Reserve labelling.

UNESCO Global Geoparks are not just about geology; they reflect communities’ Earth heritage in traditions, local tales, songs, craft, indigenous knowledge and land use techniques, in local dialect and architecture to build inclusive sustainable regional development strategies. Many geoparks are former mining areas and are in tectonically active areas. They are not just about community participation but about building community ownership, empowerment and sense of pride.

GIAHS policies and implementation in China: Opportunities and challenges

Zongwen Zhang, *Bioversity International-China (China)*

Agricultural heritage systems are made up of a mosaic of land use systems, landscapes and livelihoods, born of indigenous and local peoples' experiences and adaptation to unique environments with important agrobiodiversity. These systems are underpinned by local knowledge systems embedded in cultural traditions. In 2002, the FAO started an initiative for the dynamic conservation of Globally Important Agricultural Heritage Systems (GIAHS). The GIAHS initiative promotes public understanding, awareness, and national and international recognition of agricultural heritage systems.

- At international level, they are managed by the GIAHS Committee under the FAO which is responsible for identification, selection and recognition of GIAHS.
- At national level, GIAHS is about capacity building in policy, regulatory and incentive mechanisms and using them as sustainability bench mark systems.
- At local level, GIAHS are about empowerment of local communities and technical assistance, promoting traditional knowledge and enhancing the viability of these systems through economic incentives (labelling, payment for ecosystem services, agro-tourism, and so on).

There are 36 GIAHS sites in 15 countries. China has increasingly realised the importance of biological and cultural diversity in its ecological civilisation strategy and green social transition, and has supported multi-functional landscapes through initiatives such as the FAO's GIAHS. China has 11 GIAHS including two in Yunnan, and 62 NIAHS (Nationally Important Agricultural Heritage Systems), managed by the Ministry of Agriculture.

- Local benefits of GIAHS: Preservation of traditional ecological knowledge, traditions and cultural identity, food security, income generation, soil quality and fertility, long term yields, natural resource and biodiversity conservation — all contributing to sustainable livelihoods.
- Global benefits of GIAHS: Conserving globally significant biodiversity; ecosystem diversity; social stability; cultural diversity; arrested deforestation and land degradation/desertification — all contributing to environmental protection and ecosystem services.

Bioversity has a project in China, Tunisia and the Philippines: "Underpinning the resiliency of agricultural heritage systems and rewarding smallholders, family farmers and indigenous communities". The project is implemented in collaboration with: Center for Natural and Cultural Heritage, CAS, China; Department of Agriculture/Department of Environment and Natural Resources, Philippines; Gafsa Association of Tunisia; the World Agricultural Heritage Foundation; and the Economics of Ecosystems and Biodiversity global initiative. It is funded by IFAD and the CGIAR Research Program on Water Land and Ecosystems. The objectives of the project are to:

- Assess, research and document the foundation of the ecological and socio-economic resiliencies of agricultural heritage systems
- Create a network of in-situ conservation of agro-biodiversity harboured in GIAHS sites with geo-referenced mapping to contribute to the Aichi Targets
- Capacity building of local and national stakeholders in conserving and managing their GIAHS sites, and
- Dissemination and promotion of GIAHS knowledge systems and best practices.

Initial achievements: Two workshops were organised in Italy and China, which defined the concepts, framework, methodologies and work plan. Data collection through surveys is being carried out by all partners in the selected sites. SEPLS indicators developed in the International Partnership of the Satoyama Initiative (IPSI) will be applied in assessment of resilience of GIAHS sites. The resilience of GIAHS depends on:

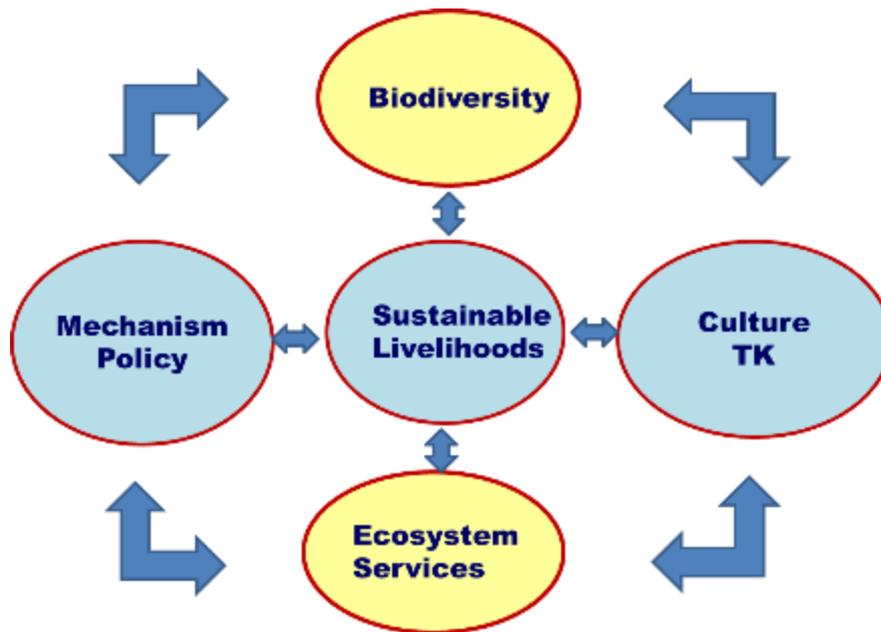


Diagram showing factors affecting resilience of GIAHS. Source: Zongwen Zhang / Bioversity International-China

In the Rice-Fish system in Qingtian, Zhejiang, local government, CAS and Zhejiang University work together to protect the system. The emerging findings indicate a decline in agrobiodiversity:

- Rice varieties: 28 traditional rice varieties have disappeared from Qingtian rice-fish culture system; there are mainly four traditional rice varieties currently used.
- Fish varieties: The population size of fish originally raised in Qingtian is dramatically shrinking, and has completely disappeared in some villages. Instead, there are more and more newly bred varieties.
- Other agricultural biodiversity: remains almost the same.

Mechanisms and policies include product labelling, for example rice as 'Green Food', and tourism; and a National plan, strategy and legislation involving:

- Chinese Central Government: Administrative measures on GIAHS/NIAHS in China. Guidelines for NIAHS proposals and action plan.
- Local government: Protection plan; administrative measures; standards.
- Policies on compensation from communities, enterprises, and local and central governments.

Challenges and Opportunities:

- Lack of labour; and changing lifestyles/culture
- Way of development
- Influence of new technologies promoted by local government
- Climate change and adaptation
- Benefit sharing: People are asking for compensation — companies make a lot of money from tourism related to GIAHS, but how much do communities get?

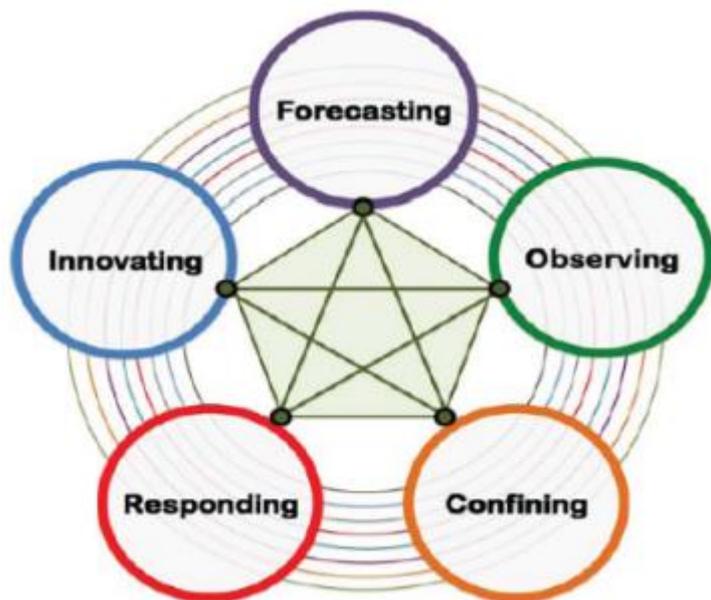
Discussion: Hani terraces are designated by both UNESCO and GIAHS — they are becoming very commercial, and this is hampering their ability to achieve agrobiodiversity conservation goals. Culture is an objective of GIAHS on paper but it is not prioritised in practice. GIAHS in China are more enterprise-

led than community-led — they need to focus more on cultural and ecological aspects to be effective in conserving agrobiodiversity. A related problem is modern youth education, which leads to the loss of traditional knowledge. GIAHS should focus more on building traditional institutions and revitalising traditional technologies.

Mountain Futures Initiative (MFI)

Jianchu Xu, ICRAF and Kunming Institute of Botany (KIB) (China)

Confucius: “Consider the past and you shall know the future” (around 500 BC). Tourism has undermined culture in World Heritage Sites such as Lijiang town. Mountains are rich in resources including minerals — two-thirds of mineral resources are in mountains — but mining can destroy ecosystems. Mountains can be hell (disasters, poverty) or heaven (e.g. natural beauty). The International Council for Science–International Social Science Council have conducted visioning converging towards a single strategic framework and architecture for mountains (‘confining’ is how to anticipate, avoid and manage disruptive global environmental change).



Source: Jianchu Xu / ICRAF-China

The Mountain Futures Conference: Nurturing Seeds for Change in the Anthropocene, was held 1-4 March 2016 in Kunming, China. Its vision was: Mountain ecosystems in Africa, Asia and Latin America sustain healthy, resilient communities while providing a host of ecosystem services of importance to local, national and global actors. Goals:

- To improve the livelihoods of mountain communities by supporting their efforts to articulate and achieve their own visions for the future
- To maintain, restore, and sustainably manage mountain landscapes and the ecosystem services they provide, and
- To foster innovation, knowledge exchange and co-learning across mountain regions.

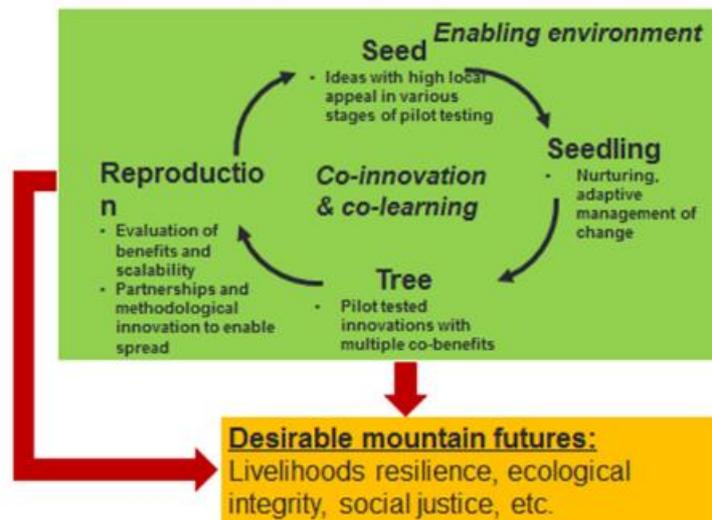
Strategy: Identification, dissemination and adaptation of ‘seeds of innovation’. Seeds are initiatives that exist, at least in prototype form, but are not currently dominant in our world. For example, social

initiatives, local institutional innovations, new technologies, planning tools, social movements, innovative ways of thinking or doing, pathways to socio-ecological transformation.

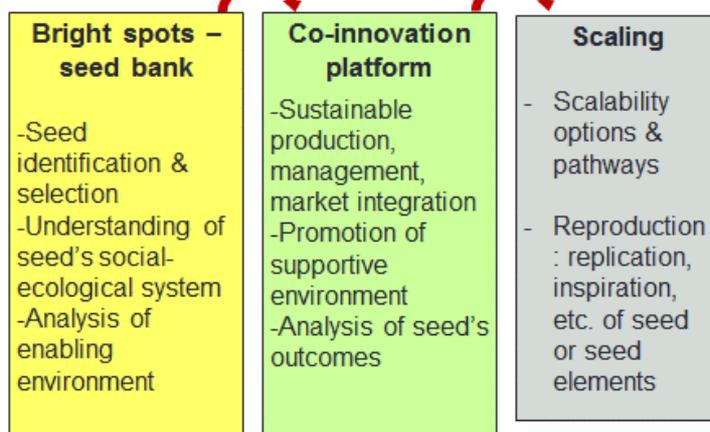
Seed cycle, leading to desirable mountain futures:

- Seed: prototype initiative (social, technological, economic, environmental)
- Seedling: seed growth, testing, adaptation
- Tree: well-implemented and sustainable initiative
- Reproduction: scaling up or out, replication, or inspiration outside the seed's location
- Enabling environment: verification of local demand and suitable climatic conditions; establishment of fertile social and institutional conditions
- Co-innovation & co-learning: iterative multi-stakeholder process of knowledge co-creation.

Life Cycle of Seeds



Seed Incubator Strategy



Excerpts from the presentation. Source: Jianchu Xu / ICRAF-China

The strategy is to use a trans-disciplinary approach where ‘seeds’ are understood in all their dimensions (technical, social, economic) and analysed within their socio-ecological context. It involves multi-stakeholder processes of co-innovation and co-learning among researchers, practitioners, authorities and beneficiaries. The process is inclusive of a plurality of knowledge systems, values and visions for desirable mountain futures.

Example of a ‘seed’: African Highlands Initiative: Fostering innovation through support to institutional strengthening and innovation:

- Landscape-scale approaches to soil and water conservation and pest management through collective action
- Negotiation support to reconcile competing values (trade-offs) within and between scales
- Facilitating equitable access to products and services
- Enhancing responsiveness of service providers to community needs
- Integrating technological innovation with savings and credit associations.

Discussion: The main threats to mountains are climate change, intensive monocultures, mining and upland infrastructure development and deforestation. But climate change is also an opportunity for mountain farmers because before no-one listened to them.

The Mountain Forum

Dr Sam Kanyambwa, Executive Director, ARCOS (Uganda)

ARCOS is a regional conservation organisation established in 1995 focusing on Albertine Rift region (from the northern end of Lake Albert to the southern Lake Tanganyika as core region), the Great Lakes region and African Mountains. Its mission is to: “Enhance biodiversity conservation and sustainable management of natural resources through the promotion of collaborative conservation action for nature and people”. ARCOS supports nature-based community enterprises through conservation agreements. These provide support for community business and in return communities commit to engage in sustainable environmental practices (agroforestry, water management, tree planting, monitoring and information sharing activities, and so on) The nature-based community enterprises focus on sustainable agriculture, bee-keeping, coffee certification and sustainable carving, in Rwanda and Burundi.

Culture is often forgotten but is very important for ownership by communities. ARCOS is part of a global project “Sustainable Mountain Development for Global Change – SMD4GC”, supported by the Swiss Agency for Development and Cooperation. The project has two main pillars: policy dialogue, and knowledge management to support actions (in Africa, this includes Small Grants for Community Based Organisations to implement sustainable mountain development actions). It includes the ARCOS portal and support to the ARCOS Mountain Research Network. ARCOS is facilitating the Africa Dialogue on Sustainable Mountain Development: the Africa Regional Mountains Forum debated on mountain issues, including climate change.⁹

The 16th World Mountain Forum (‘Mountains for our Future’), is being organised by ARCOS and hosted by Uganda on 17-20 October 2016 and will focus in particular on the role of mountains in the SDGs and Paris Agreement. Key themes are: climate change, livelihoods, ecosystem services and sustainable mountain agriculture. The previous World Mountain Forum was held in Cusco, Peru in 2014. There is no specific clause on mountains in the Paris Agreement, but mountains are part of ecosystems so they are included. The high level segment with 15 Ministers including Peru and Nepal, will give rise to a draft resolution on mountains.

⁹ The Africa Regional Mountains Forum was established during the Africa Mountains Forum (October 2014).

The Mountain Partnership was established by the UN at the 2002 World Summit in South Africa and includes 15 government members in Africa. It has a global secretariat hosted by the FAO in Rome. The Africa Mountain Partnership Champions Committee was established in 2013 by African Mountain Partnership members and is composed of 8 members from government, civil society and private sector. ARCOS hosts the Africa secretariat.

Discussion: What space is there for indigenous peoples to participate in the World Mountain Forum, and to speak, along with high level representatives? The opening ceremony has slots for community representatives to speak.

Session 4: Climate change and mountain EbA and CBA collaboration for adaptation

Climate change and South-South cooperation: EbA and CBA linkages for adaptation

Dr. Jian Liu, Director, UNEP International Ecosystem Management Partnership, Beijing (China)

This UNEP Centre is based in Beijing but works in all developing countries — Asia-Pacific, Africa, Latin America and the Caribbean. For example, it works on wildlife conservation in Kenya, with the Kenya Wildlife Service; and on South-South capacity building for ecosystem management. Sustainable development discourse has shifted its focus from ‘balancing’ the economic, social and environmental dimensions since 1970s, to “integrating” the three dimensions into one entity, since 2012 and the SDGs. This synergy has informed the conceptual framework for China’s new South-South Cooperation Programme on Climate Change. In May 2014, UNEP signed an agreement with the Chinese government for South-South cooperation; and at COP21 it held an event on South-South cooperation and climate change — South-South cooperation is a key response to climate change.



Dr Jian Liu, Head of UNEP-China, giving his presentation at the workshop, Lijiang. Source: CCAP

The new programme has started a scoping study and gap analysis on needs for South-South cooperation. The GEF has provided \$5 million for the fund and the Chinese government has matched this. They are focusing on EbA and a community of practice portal; technology transfer for ecosystem restoration; and the African EbA for food security initiative conference. The priorities for the new fund will be climate adaptation, ecosystems and livelihoods, and the links between the three.

Mountain EbA

Essey Daniel, Environmental Policy Implementation, UNEP (Kenya)

What is EbA? "Ecosystem-based Adaptation is the use of biodiversity and ecosystem services as part of an overall adaptation strategy to help people to adapt to the adverse effects of climate change".

EbA integrates and builds on a multitude of approaches. How does EbA differ from other approaches? Conservation projects protect nature from climate change but are not always driven by a concern for people; community-based adaptation (CBA) addresses climate change with people but not necessarily using nature; and Community-Based Natural Resource Management projects work for nature and people but often do not address the impacts of climate change. EbA focuses on all three: climate change adaptation, ecosystems/biodiversity and socio-economic benefits/development.

UNEP is involved in many EbA and adaptation initiatives across the world, in 20 countries. The EbA in Mountains Programme is a global partnership jointly implemented by UNEP, UNDP and IUCN, with funding from BMUB to strengthen the capacity of countries that are particularly vulnerable to climate change impacts. It aims to build ecosystem resilience and promote EbA options; and to reduce the vulnerability of communities with particular emphasis on mountain ecosystems.

Programme activities – Peru, Uganda and Nepal:

1. Development of methodologies and tools for EbA decision-making to assess resilience
2. Application of methodologies and tools at pilot sites (fragile mountain ecosystems with significant vulnerability to climate change, and a multitude of communities and economic activities depending on direct inputs from the Ecosystem)
3. "No regret" measures and capacity building
4. Make the case for EbA to guide national policies and investments
5. Knowledge sharing.

How to make the case for EbA:

- Use cost benefit analysis methods for ecosystem services (for adaptation) to show policy makers that EbA is cost-effective and better than other approaches. Various cost benefit analyses have been done on EbA and under the most realistic scenarios, investing \$1 in adaptation generates between \$1.45 and \$3.03 of wealth accruing to the communities.
- Use a bottom-up approach to policy integration; hybrid approaches, e.g. mix EbA with structural engineering; and long term results of adaptation projects.

Results of the programme: Conservation farming and livestock management e.g. vicuna study to commercialise the fibre; forest/ecosystem restoration; sustainable water use and management; land rehabilitation and integrated soil nutrient management; capacity enhancement; policy mainstreaming with Nationally Determined Contributions. Lessons learnt:

- Community economic incentive schemes were important in making the case for EbA at local level
- Identifying EbA measures that produce new or enhanced ecosystem goods and services, can provide an alternative source of financing and enhance the sustainability of implemented measures

- The ECOTRUST payments for ecosystem services facility in Uganda provided learning on how EbA measures can be used to bundle watershed and carbon services into credits for sale
- Payments for ecosystem services provide a relevant model for EbA financing
- Incentive schemes for EbA should form part of a broader approach to adaptation planning and implementation.

What next:

- Mainstream EbA into national adaptation, biodiversity and sustainable development policies
- Develop innovative funding for EbA
- Promote knowledge exchange and the development of practical tools and guidance for implementing EbA
- Undertake systematic monitoring and evaluation to assess the strengths and weaknesses of EbA activities
- Show governments pilot sites to promote ownership.

The challenge that mountain ecosystems face globally is too large for only one institution or organisation to tackle. It requires an integrated approach and partnerships between institutions, governments and communities.

Discussion: UNDP GEF SGP has been part of the Mountain EbA project. Biocultural heritage and traditional knowledge is missing in a lot of the discussion and writing on climate change — 80% of INDCs do not have any reference to indigenous peoples and biocultural heritage. UNDP SGP is trying to get these aspects better addressed. There is a need to support South-South cooperation between communities to ensure adaptation builds on traditional knowledge and biocultural heritage. Indigenous knowledge is a very important component for adaptation — it is recognised in the Paris Agreement.

Climate change planning and implementation in China: Agriculture and biodiversity aspects

Yinlong Xu, Chinese Academy of Agricultural Science (CAAS) (China)

The IPCC shows that regardless of mitigation efforts, greenhouse gas emissions will still increase; therefore adaptation is needed. Precipitation has decreased in China, especially in the northeast and southwest belt. Climate change impacts on the agricultural environment in two ways: by changing the atmospheric environment; and through the greenhouse effect/warming. Greenhouse gases in the atmosphere are affecting crops, leading to increased diseases. Because of warming, the concentration of O₃ (ozone) and pollutants at ground level has increased, and the atmospheric environments for crop growth is worsened. The depth and fertility of black soil in northeast China has declined and land salinisation has increased. Warming and elevated CO₂ (carbon dioxide) concentrations have also led to changes in soil biota.

There has also been increased drought and decreased water for agriculture. Drought in southeast China in 2011 affected an area of crops of more than 6.7 million hectares by the end of May.

There have been changes in the distribution and structure of agro-ecosystems and seasons — flowering and maturing dates have advanced, for example for winter wheat in Henan province. The growing season has been prolonged in northeast China. Because of lags in natural enemies relative to pests, there can be heavy outbreaks of pests. Climate change has changed the distribution of crops. High temperature and multiple cropping areas have moved northwards; and cold-tolerant cropping has moved to higher altitudes and latitudes. Grassland degradation in Inner Mongolia has been enhanced due to climate warming and drying, which has resulted in a general shift of grazing areas south-eastwards. There has been a northward shift in crop disease and pest outbreak, and the damage is

enhanced due to winter warming. The planting of drought-resistant water-saving crops has increased; short maturing crops are used for post-disaster; and crop varieties resistant to diseases and pests have increased. Extreme precipitation has increased soil erosion and risk of desertification, and measures are needed to prevent desertification.

All these factors have negative impacts on agrobiodiversity due to degradation and loss of habitat; changes in distribution and phenology; impacts on animal reproduction; faster species extinction; and outbreaks of diseases and pests. The protection of agricultural biodiversity should be further strengthened. China has produced a 3rd national assessment report on climate change. Climate change is threatening food security in China and exacerbating poverty in rural and ecologically vulnerable regions. Monocultures and genetic uniformity make crops more susceptible to disease. Suggestions:

- Re-evaluate the indigenous species for resilience to climate change
- Build community seed banks and expand the storage of crop varieties
- Diversify crop planting, and
- Conduct more research on climate change and agricultural biodiversity.

Medicinal plants conservation and community development in Ludian, Yunnan, China

Yang Lixin, KIB - Center for Biodiversity and Indigenous Knowledge (China)

This project is one of six Allachy-funded community-based projects on conservation of Himalayan medicinal plants (which also includes projects in Sikkim, Nepal, India, Pakistan). Ludian is a Naxi village in Lijiang, northwest Yunnan. The project aims to explore and demonstrate community-based in situ conservation of medicinal plants; and to benefit local people, by focusing on: ethnobotany, community organisation building, traditional knowledge, home-gardens and marketing. Activities in Ludian:

1. Conducted an inventory of medicinal plant diversity, identifying a total of 366 species, of which 5 species are critically endangered and 24 are endangered.
2. Established the Ludian Medicinal Plants Conservation and Development Association to provide a platform for peoples' participation - a community conservation organisation with features of self-management, self-service, and self-development.
3. Naxi traditional knowledge: Organised four farmer to farmer training workshops involving more than 120 participants; this re-established self-confidence of traditional herbal doctors; re-built respect to village herbal doctors in the local community; and further strengthened their conservation enthusiasm and promoted traditional medicine knowledge renaissance as well as enhanced cultural identity.
4. Development of home garden for medicinal plants:
 - At the beginning of the project, there were only two herbal home gardens with traditional Naxi herbal doctors in the site village, with a collection of 63 species of medicinal plants. By May 2009, the number of home gardens expanded to 29, and two "wild cultivation" sites (medicinal plants planted within natural vegetation).
 - The number of medicinal plants increased to 98 species. Most plants in the home gardens were transplanted from the wild. Market demand has been an important factor influencing the choice of species to cultivate in home gardens. Home gardens play a demonstration role for medical plant conservation at household level.
5. Regional exchange on medicinal plant conservation: In 2007, the project organised a China/India/UK Dialogue on Conservation of Himalayan Medicinal Plants, and between 2005 and

2009 project team members participated in other regional workshop in Nepal, Indian and Bhutan to exchange information and experience on medicinal plant conservation in mountain environments.

Discussion: Medicinal plants are a crucial aspect for sustainable development in mountains — KIB have developed a comprehensive approach.



Ronnie Vernoy (Biodiversity International), Gabriel Quijandria (Vice Minister for Sustainable Development, Peru), and Carlos Loret de Mola (Environment Ministry, Peru). Source: CCAP

Roundtable discussion: From practice to policy to practice — Proposal for a biocultural heritage landscape designation

The roundtable included high level participants from UNDP-SGP, UNEP-China, UNESCO, the Satoyama Initiative, the government of Peru, ANDES (Peru), KIB (China), and the Third World Network. The panel discussed two key questions, with input from workshop participants:

1. How can the various designations/initiatives collaborate in the development of a biocultural heritage designation that supports indigenous-led holistic landscape approaches? Is such a designation necessary?
2. Would it help to develop a common set of indicators, which can be used by landscape initiatives promoting biocultural heritage and indigenous-led holistic landscape approaches?

1. Development of a biocultural heritage designation:

Yoke Ling (Third World Network): There is so much commonality between all the different community-managed landscape initiatives that having a common designation on biocultural heritage would help link them to policy makers. The concept of 'biocultural heritage' would capture all the different initiatives.

Gabriel Quijandria (Vice Minister for Sustainable Development, Peru): There are many different landscape approaches, but we all have a common objective — to build community managed landscapes that are locally owned and sustainable. This may be difficult and take time but it is worth trying. We need to take advantage of all this work, engage national governments, build such landscapes from the bottom up, and get governments to recognise them.

Hans Dencker Thulstrup (UNESCO): What kind of mechanism do we want — an inter-governmental instrument? Perhaps not. In order to launch something new that does not duplicate what is already going on and lead to multiple initiatives competing, we need to have a very clear idea of how this fits with (or differs from) existing landscape designations.

Ronnie Vernooy (Bioversity International): There is no need to argue over language; rather we should explore how to bring these different landscape initiatives together.

Sam Kanyamibwa (ARCOS): I can see the relevance of the question; we need some mechanisms to collaborate, such a biocultural heritage group or network.

Jian Liu (Head of UNEP-China): What is this new term ‘biocultural heritage’?

Alejandro Argumedo (ANDES): Biocultural heritage is a concept which is evolving and is increasingly found in the literature; there is more and more evidence of the close links between nature and culture. Biocultural heritage landscapes can be more focused on indigenous peoples and traditional societies which have conceptual frameworks where spiritual values are the main feature of how communities organise the landscape. All the existing designations focus on this but also miss some parts — so biocultural heritage provides a common framework that can be used for better collaboration with indigenous peoples.

Krystyna Swiderska (IIED): The term ‘biocultural heritage’ has been in use since the 1980s in the indigenous rights community, but is probably less known by the mainstream conservation community. It was defined by ANDES, IIED, CCAP and other partners in 2005, as inter-linked traditional knowledge, biodiversity, landscapes, cultural and spiritual values and customary laws.¹⁰ The concept reflects the holistic indigenous worldview and was developed in response to the separation of rights over traditional knowledge and genetic resources by CBD Parties, and their tendency to assert rights over all genetic resources, including those developed and sustained by indigenous and local communities. Research by IIED and partners in 11 different ethnic group in 5 countries (Peru, China, India, Panama and Kenya), showed that the components of biocultural heritage are indeed inter-dependent for their maintenance.¹¹

Delfin Ganapin (Head of UNDP-SGP): SGP is supportive of the biocultural heritage terminology because it has emerged from indigenous/local people; local people are fed up of being represented by others. ICCAs are now covered under “other effective means” that is recognised by the CBD; and the SDGs provide another opportunity. We need to promote biocultural heritage and then we can work towards designation. Many INDCs forgot to mention indigenous peoples. We also need to collaborate on how to build capacity of indigenous peoples to participate directly. We have limited time as we are losing the communities very fast.

Terence Hay-Eddie (UNDP): It is important to avoid duplication of effort – e.g. ICCAs already provide a mechanism for recognition of biocultural landscapes; and formal designations are not always that useful, e.g. a study showed that they are sometimes used by different actors to further their own political interests.

¹⁰ Full definition of ‘biocultural heritage’: “Knowledge, innovations and practices of indigenous people and local communities that are collectively held and inextricably linked to traditional resources and territories, the diversity of genes, species and ecosystems, cultural and spiritual values, and customary laws shaped within the socio-ecological context of communities”. See IIED and ANDES (2005). Research Planning Workshop in Cusco, Peru. <http://pubs.iied.org/G01090/>

¹¹ Swiderska et al (2006). Protecting community rights over traditional knowledge: Implications of customary laws and practices. Interim Report. <http://pubs.iied.org/14591IIED/>

Krystyna Swiderska (IIED): It is difficult to avoid some degree of government control and imposition of western concepts when ICCAs are formally recognised by governments. Biocultural heritage territories/landscapes explicitly focus on 'endogenous development' as a core objective, to ensure they remain truly community-led. They specifically focus on in situ conservation of agrobiodiversity and sustaining co-evolutionary processes for climate change adaptation.

Jian Liu (UNEP): EbA is essentially top down in the way it was promoted. Channels to promote new themes like biocultural heritage/territories and get political and financial support: go via the CBD and COPs and then the GEF Secretariat has to consider it as a priority to fund it. We need to make the case to IPBES, and use that to carry messages to governments.

Essey Daniel (UNEP-Nairobi): Supports the development of a new designation for biocultural heritage territories/landscapes.

Terence Hay-Eddie (UNDP): IPBES is probably the best forum to promote understanding of biocultural heritage. The IPCC has also been grappling with traditional knowledge issues; the GEF is not ready to really support traditional knowledge/biocultural heritage yet. Aichi Target 18 own traditional knowledge is not funded by the GEF.

Carlos Loret de Mola (Ministry of Environment, Peru): We are losing traditional knowledge fast at a high cost as we will have to invest a lot in future to re-invent these technologies.

Yoke Ling (Third World Network): The importance of the biocultural territories approach is its focus on cultural and spiritual values, which are still present in traditional communities. IPBES have a mandate to include traditional knowledge in its assessments, but is struggling with this, hence there is an opportunity to engage.

2. Promoting understanding and mainstreaming biocultural heritage:

There is still a lack of awareness of the concept of biocultural heritage. Communicating biocultural heritage is not easy — this may need to be done differently for different target countries/audiences. Some suggestions:

- Put together a list of communications materials on biocultural heritage which show the benefits of biocultural heritage for conservation and adaptation to climate change
- Produce a book on biocultural landscapes in Bioversity's series on Agrobiodiversity
- Prepare awareness raising materials, e.g. presenting 100 cases of biocultural landscapes, as evidence of the impacts of the approach (e.g. for conservation)
- Facilitate South-South exchange to promote understanding of biocultural heritage and scaling-up biocultural landscapes, since most biocultural heritage is found in Southern countries.

All community-led landscape initiatives focus on how to integrate traditional knowledge of indigenous communities in the development process. But some policy-makers are not convinced – we need to make them understand why biocultural heritage is important and how it supports the 'conventional development process', and is not contradictory to development. There is a huge role for science (natural and social) — we need evidence to show these approaches work in changing the trends in communities, including economics and cost-benefit analysis, to show to Ministries of Finance that we are not anti-development.

3. Developing a common set of indicators for biocultural heritage landscapes

Yoke Ling (Third World Network): Top down indicators are a problem for community development, but there are many local indicators.

Alejandro Argumedo (ANDES): CBD is developing indicators; we need a set of indicators on biocultural heritage to measure/monitor how communities are being supported.

Kasuhiko Seriu (Satoyama): It is important to develop a common set of indicators on biocultural heritage — by publishing indicators, we will help to promote indigenous-led landscape management; and it would help indigenous and local communities to promote understanding of biocultural heritage and better management by others. The biocultural heritage indicators could be based on the Satoyama SEPLS indicators.

Essey Daniel (UNEP): Perhaps we need safeguards rather than indicators.

Delfin Ganapin (UNDP): In the Philippines, we developed a lot of safeguards; the problem is that unless you have an insurance system that makes violators pay, the safeguards will be violated. Indicators are needed to see if the safeguards have been applied. If we can get an indicator on biocultural heritage into the SDGs, we can get governments to prioritise biocultural heritage — there are lots of opportunities to feed into the process.

Sam Kanyambwa (ARCOS): There is an effort underway to develop sustainable mountain development indicators. The biocultural heritage indicators could be presented at the World Mountain Forum.

Next steps:

1. Develop a broad set of bottom-up biocultural heritage indicators that communities can use to establish biocultural landscapes, e.g. through the INMIP network.
2. Continue to foster exchange and collaboration between different community-managed landscape initiatives. This could be facilitated through: an email list for information sharing; a Facebook page or portal that can be easily expanded; and/or an 'open-ended task force', which includes indigenous peoples. A concept note could be developed to define the objectives of the group and explain how this initiative brings added value and complements existing initiatives.
3. Work together to promote South-South exchange for scaling out and up biocultural heritage landscapes, building on successful cases.
4. Promote awareness and mainstreaming of the biocultural heritage concept in policy processes, through IPBES, the CBD and the COPs, and compile cases and evidence of the biocultural territories/landscapes approach, including:
 - A compilation of 100 cases of biocultural landscapes, providing evidence that they work
 - A book on biocultural landscapes in Bioversity's series on Agrobiodiversity: submit proposal explaining rationale; include a section on lessons for policy makers
 - Use the biocultural heritage website to promote different cases and news/events
 - Organise joint side events
 - Promote biocultural heritage as an important adaptation mechanism, e.g. at the World Mountain Forum High Level Panel, and at UNEP-China's event on South-South exchange at COP 22.

Workshop summary and conclusions

Dr Yiching Song (CCAP, China)

This workshop brought together multiple stakeholders and perspectives from different levels — policy, scientific and local community — to address mountain community sustainable development for climate change, poverty alleviation/the SDGs, and CBD Aichi Targets:

- International level: UNDP, UNEP, UNESCO, FAO/GIAHS, MFI.
- National: Peru and China — Ministry of Environment and Agriculture.
- Local: Potato Park, Stone Village, Hanni rice terraces, Ludian medicinal plants, Yunnan, and Africa. Indigenous networks from multiple countries: INMIP, ARCOS.

The workshop was a great success in terms of exchange between diverse actors and sectors, working towards supportive institutions, policy and action for adaptation.

Some reflections and highlights:

- Indigenous communities: The Potato Park is a good case with an integrated bio-cultural system, conceptual framework and actions, which is being scaled out to the Stone Village in Yunnan. It is also being scaled out to other INMIP network members; it is an approach that works and could be scaled up to CGIAR, FAO, Satoyama etc. The UNDP SGP cases are also good — we need such cases and networks for scaling out and up.
- Scientists: Biocultural landscapes (including ecosystem services, biodiversity, forest, soil etc) are threatened by rapid economic and climate changes. Supportive policy institutions and tools are needed to combine scientific knowledge and traditional knowledge to support community-led development and adaptation. Culture and ecological values need to be added into existing science-led approaches.
- For all our Chinese stakeholders from multiple aspects/levels. Collaboration is needed:
 - North-South and South-South, between scientific knowledge and traditional knowledge, EbA and CBA
 - Tools development, e.g. Stone Village case — tools for biodiversity conservation, participatory plant breeding
 - Cases/models: e.g. Guangxi case (ecological farming, consumer supported agriculture, participatory guarantee systems), Ludian case (scientific knowledge and traditional knowledge and farmer organisation building), scaling out and up, and linking to other initiatives.
 - Opportunities include China's ecological civilisation policy; ecological farming (Xiangcou and green mountains and clear water by Xi Dada); our rich GIAHS, strong cultural heritage, long farming culture, and accumulated knowledge and resilience.
- For policy making institutes: Collaboration is key: we have a diversity of approaches/initiatives, but also a lot in common — we need more collaboration at different levels and across levels and aspects, e.g. between different ministries. We do need a common set of indicators on biocultural heritage, e.g. to ensure initiatives are rewarding for communities.

Annex 1: List of Participants

Policy Dialogue and South-South Exchange Workshop

No.	Name	Profession / Job	Affiliation	Country
1	Linxiu Zhang	Researcher	Center for Chinese Agricultural Policy, CAS	China
2	Yiching Song	Researcher	Center for Chinese Agricultural Policy, CAS	China
3	Yanyan Zhang	Researcher / Coordinator	Center for Chinese Agricultural Policy, CAS	China
4	Yongping Yang	Head and Researcher	Kunming Institute of Botany, CAS	China
5	Hua Huang	Researcher in Lijiang station	Kunming Institute of Botany, CAS	China
6	Jian Liu	PhD, Director	Institute of Geographic Sciences and Natural Resources Research, CAS	China
7	Shihuang Zhang	Chief Scientist	Institute of Crop Sciences of CAAS	China
8	Qi Zhao	Professor	Capital Normal University	China
9	Yinlong Xu	Researcher	Institute of Environment and Sustainable Development in Agriculture, CAAS	China
10	Zongwen Zhang	Researcher	CAAS, Bioversity International-China	China
11	Dayuan Xue	Chief Scientist	Minzu University of China	China
12	Guanqi Li	Coordinator	Farmers' Seed Network (China)	China
13	Yunyue Wang	Professor	Yunnan Agricultural University	China
14	Shengji Pei	Professor	Kunming Institute of Botany, CAS	China
15	Jianchu Xu	PhD and ICRAF-China Representative	Kunming Institute of Botany, CAS	China
16	Kun Xu		Kunming Institute of Botany, CAS	China
17	Lixin Yang	PhD	Kunming Institute of Botany, CAS	China
18	Yuan Liu	PhD, PDR Leader	Manager-Agriculture and Poverty Reduction Policy, Oxfam Hong Kong	China
19	Hanying Li	China Outreach Coordinator	IUCN Commission on Education and Communication	China
20	Yi Liu	National Coordinator	United Nations Development Programme in China	China
21	Biao Yang		Conservation International China	China
22	Wansu Xu		Conservation International China	China
23	Provash Mondal	Project Officer	Oxfam -Lao PDR	Laos
24	Hans Dencker Thulstrup	Programme Specialist for Natural Sciences	UNESCO office in Beijing	China
25	Yoke Ling Chee	Director	Third World Network	Malaysia
26	Krystyna Swiderska	Principal Researcher	SIFOR, Agroecology Team, Natural Resources Group, IIED	UK
27	Lila Buckley	Senior Researcher	China Team, Natural Resources Group, IIED	UK
28	Beth Downe	Senior Coordinator	SIFOR, Agroecology Team, Natural Resources Group, IIED	UK

29	Delfin Ganapin	Global Manager	GEF Small Grants Program (SGP), UNDP	USA
30	Terence Hay-Edie	Program Adviser	GEF Small Grants Program (SGP), UNDP	Thailand
31	Essey Daniel	Associate Programme Officer	Climate Change Adaptation Unit (CCAU), UNEP, DEPI	Kenya
32	Sam Kanyamibwa	Executive Director	Albertine Rift Conservation Society (ARCOS)	UK
33	Katerina Yushenko	National Coordinator	UNDP Global Environment Facility Small Grants Programme	Kazakhstan
34	Carlos Loret de Mola	Senior Advisor	The Ministry of Environment	Peru
35	Gabriel Quijandria	Vice Minister	Vice Minister for Sustainable Development	Peru
36	Alejandro Argumedo	Leader	Asociación ANDES	Peru
37	Ronnie Vernooy	Senior Policy Researcher	Bioversity International	Italy
38	Kazuhiko Seriu	Programme Associate	International Satoyama Initiative	Japan
39	Yohsuke Amano		International Satoyama Initiative	Japan

INMIP Farmer Exchange

No.	Name	Profession / Job	Affiliation	Country
1	Yichao Liu	Farmer	Shanxi	China
2	Jun Liu	Farmer	Shanxi	China
3	Yugui Wei	The cooperative President	Nonglv Village in Guangxi	China
4	Huapei Xu	The cooperative President	Chentang Village in Guangxi	China
5	Jian Wang		Guangxi Biodiversity Research and Conservation Association	China
6	Wenchao Teng	Farmer	Kunlin Village in Guangxi	China
7	Qingsheng Chen		Guangxi Farmers' Friend	China
8	Anfu Qin		Guangxi Farmers' Friend	China
9	Yi Deng		Health & Environmental Research Center in Lijiang	China
10	Yucheng Wu		Health & Environmental Research Center in Lijiang	China
11	Zhengwei Liu	Farmer	Boduoluo Village in Lijiang	China
12	Xiaogang Yu	China Prize winner '15	Green Watershed	China
13	Min Sun	China Prize winner '15	Green Watershed	China
14	Baorong Yang	Farmer	Youmi Village in Lijiang	China
15	Zhashi Yang	Farmer	Youmi Village in Lijiang	China
16	Wenchuan Mu	Village head	Stone Village in Lijiang	China
17	Shaozhong He		Baoshan Town in Lijiang	China
18	Feng He		Baoshan Town in Lijiang	China

19	Irene Song		Center for Chinese Agricultural Policy, CAS	China
20	Hua Huang		Kunming Institute of Botany, CAS	China
21	Milin Tian		China Zigen Rural Education & Development Association	China
22	Haimei Liang		China Zigen Rural Education & Development Association	China
23	Qing Yang	Photographer		China
24	Yulin Gao	Photographer		China
25	Xuegao Li	Photographer		China
26	Jixian He		Wumu Village, Lijiang	China
27	Zhihao He		Wumu Village, Lijiang	China
28	Man Bahadur Gurung		Conservation Area Management Unit, Sikles	Nepal
29	Hitman Gurung	CAMC Prize winner '14	Kidasha Country Office	Nepal
30	Tammy Stenner	Education/Communications Coordinator	Asociación ANDES	Peru
31	Jessica Reilly	Facilitator	Asociación ANDES	Peru
32	Ricardo Pacco Chipa	Leader	Potato Park, Cusco	Peru
33	Jessica Villacorte	Farmer	Potato Park, Cusco	Peru
34	Aniceto Ccoyo Ccoyo	Farmer	Potato Park, Cusco	Peru
35	Akylbek Kasymov	Facilitator, translator Kyrgyz	Bishkek and Naryn Province	Kyrgyzstan
36	Nadira Degembaeva	Pastoralist	Naryn Province	Kyrgyzstan
37	Askarsho Zevarshoev	Facilitator, translator Tajik	Badakhshan	Tajikistan
38	Navruzбек Kirgizov	Farmer, wheat grower	Shugnan district, Badakhshan	Tajikistan
39	Jaune Evans		Tamalpais Trust	US
40	Jonathon Landeck	Managing Director	New Field Foundation	US

The workshop on “Landscape approaches for mountain community sustainable development in a time of climate change: Policy consultation and South-South exchange” brought together different stakeholders from China, Peru, the Albertine Rift region in Africa and UN agencies. It explored the role of different community-led landscape approaches in agrobiodiversity conservation, climate resilience and achieving the Sustainable Development Goals, with a particular focus on mountains.

The Center for Chinese Agricultural Policy (China), Asociación ANDES (Peru), IIED and UNDP-GEF Small Grants Programme worked together to organise the workshop in Lijiang and the Stone Village, China, on 19-22 May 2016. This report presents the results.



Event Materials

Food and Agriculture

Keywords:
Smallholder Innovation for Resilience (SIFOR), traditional knowledge, biocultural heritage, climate change adaptation, South-South collaboration



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