Protecting Community Rights over Traditional Knowledge

Implications of customary laws and practices

Key findings and recommendations 2005-2009

KEY FINDINGS & RECOMMENDATIONS

CASE STUDIES

OBJECTIVES AND METHODOLOGY

OBJECTIVES:

Since January 2005, this action-research project has focused on developing alternative tools to protect traditional knowledge which are rooted in local customary laws rather than based on existing Intellectual Property standards. Existing IPRs (eg. patents, copyrights) are largely unsuitable for protecting rights over traditional knowledge because they provide commercial incentives, whereas traditional innovations are driven primarily by subsistence needs. Survival from nature requires continual access to new knowledge and innovations – ie. collective rather than exclusive rights. To sustain biodiversity-based lifestyles, communities need to maintain control over their knowledge and related bio-resources and prevent others from unfairly exploiting or appropriating them, while taking advantage of market opportunities themselves. Many communities are facing increasing threats to their resource rights due to the spread of western IPRs (eg. patents and PBRs), often through Free Trade Agreements. IPRs can confer rights over community resources to others (eg. if they are mis-granted or granted too easily) and do not require consent or benefit-sharing when community resources are used by others . Limiting rights to use, sell or exchange a bioresource can be a serious problem if your livelihood depends on it.

The project explored customary laws, values and practices relating to TK and biodiversity with indigenous and local communities in Peru, Panama, India, China and Kenya; and developed local tools for protecting TK and biocultural systems. It sought to inform national and international policy on TK and ABS, and to facilitate local implementation of global policy (eg. the CBD). The community level work was complemented by policy and literature reviews, and discussion with other stakeholders.

METHODOLOGY:

The research was conducted in areas of important biodiversity, and focused on both medicinal plants and agro-biodiversity knowledge systems in different ecosystems (mountain, dryland, semi-arid and coastal forests). It involved diverse communities ranging from quite traditional to more mixed/integrated: Mijikenda and Maasai, Kenya; Quechua, Andes, Peru; Kuna and Embera-Wounaan, Panama; Lepchas and Limbus, E. Himalayas, India; Yanadi Tribals, Andhra Pradesh, India; Adhivasi, Chattisgarh, India; and Zhuang and Yao, Guangxi, S.W. China. The following key issues were explored:

- The status and trends in traditional knowledge and bio-resources, through baseline surveys.
- Customary worldviews, values and rules relating to TK;
- How knowledge is transmitted and renewed;
- Concepts of knowledge ownership and custodianship;
- Rules for access to TK and benefit-sharing.
- Customary authorities and decision-making.
- Implications for external access to TK and benefit-sharing;
- Design of local tools to protect TK based on customary laws and practices

The approach was both participatory, to strengthen local capacity and institutions through the process; and rigorous, to ensure credible findings. The research involved different stakeholders: elders, youth, healers and farmers (men and women). The issues were explored in multi-stakeholder and single actor groups – from small family groups to community and supra-community meetings to share and validate the results. Customary approaches were combined with 'modern' participatory and scientific approaches. Indigenous and community authorities were closely involved at every stage, ensuring adherence to local customary laws. The project applied the Code of Ethics of the International Society of Ethnobiology, 2006 (http://ise.arts.ubc.ca/global_coalition/ethics.php.)

CONCEPTUAL FRAMEWORK:

The concept of '*Collective biocultural heritage*' provided the guiding framework for the project, which linked the different studies. Policy-makers tend to focus narrowly on protecting only the intellectual component of knowledge systems – while for communities it does not make sense to protect knowledge and not the resource with which it is used. In the indigenous worldview, intangible knowledge and tangible resources cannot be separated. The concept of CBCH reflects this holistic worldview where TK, biodiversity, land, cultural values and customary laws are closely inter-linked and interdependent. And our research found that these are indeed the key elements that

sustain TK in practice. The concept has allowed a better understanding of the conditions and trends affecting TK, and of the responses needed to effectively protect TK from loss as well as alienation. Thus, many of the tools developed have focused on protecting rights to biocultural systems as a whole, not just TK. As the study found, TK and traditional varieties are being lost fast, and protection from loss is often as or more important for communities than protection of rights.

We defined 'Collective biocultural heritage' as follows: "Knowledge, innovations and practices of indigenous and local communities that are collectively held and inextricably linked to traditional resources and territories, local economies, the diversity of genes, species and ecosystems, cultural and spiritual values, and customary laws shapes within the socio-ecological context of communities".

WHY PROTECT COMMUNITY RIGHTS OVER TK AND BIOCULTURAL HERITAGE?

Traditional knowledge owes its existence to indigenous and local communities who have developed it over generations – they have de facto rights over it. Apart from the moral imperative of ensuring that these rights are respected, other important reasons are as follows:

i) To implement CBD Articles 8(j) and 10 (c): The Convention on Biodiversity article 8(j) recognises the importance of "the knowledge, innovations and practices of indigenous and local communities" for the conservation and sustainable use of biodiversity. It requires Parties to "respect, preserve and maintain" them, "promote their wider application with the approval and involvement" of communities and "encourage equitable sharing of benefits from their use". The rights of communities over their knowledge are implicit in these three clauses, and need to be recognised for their effective implementation. Furthermore, CBD article 10 (c) requires Parties to "protect and encourage customary use" – this depends on continued use of TK by communities, and hence on protecting their rights over it.

ii) To generate incentives for conservation: The CBD requires Parties to adopt incentives for biodiversity conservation. The 2002 World Summit on Sustainable Development's Plan of Implementation stressed the need for local benefits and incentives. Much research has shown the importance of local benefits and incentives in promoting conservation (eg. the Millennium Ecosystem Assessment, 2005). Secure rights over TK and related resources are needed to enable communities to generate benefits, and can themselves act as incentives for sustainable management.

iii) For adaptation to climate change: TK forms part of adaptive management systems which continually adapt local bio-resources, knowledge and practices to environmental change. Such adaptive systems are vital for adaptation to climate change, not only by TK-holders but by farmers worldwide. Documented TK is no longer evolving to address new challenges. But TK systems *in situ* are fast disappearing as community land is taken over (for industrial farming, forestry concessions, biofuels, conservation etc.), and as cultural values and customary laws are eroded. This calls for protection of community rights over their biocultural heritage as a whole – TK, bio-resources, culture and land.

WHY USE CUSTOMARY LAWS FOR TK PROTECTION?

Indigenous and local communities have their own customary laws and values which set out their rights and responsibilities relating to TK. These are designed to ensure TK meets community needs and is maintained for future generations. Customary laws evolve to address new challenges and are vital for the way of life of indigenous peoples and their customary use of resources to continue. Yet, as this project found, customary laws and institutions have been weakened and eroded by various factors, including extension of government authorities and natural resource laws, and alienation of community land. Hence, responses are urgently needed which recognise and strengthen customary laws and authorities.

KEY FINDINGS

STATUS AND TRENDS IN TK, CUSTOMARY LAWS AND BIODIVERSITY

Traditional knowledge is in decline in many of the study areas, with the younger generation having little interest in learning it and observing customary laws. Loss of ancestral land and sacred sites is a key factor in this – eg. the Mijikenda have lost many of their kaya forests, while the Yanadi are no longer allowed free access to their sacred forests. Erosion of cultural values and customary laws due to the spread of western culture, markets and governments to rural areas, are also key factors. Some Mijikenda customary laws have been lost or modified, or are selectively recognised. In China, customary laws have been lost altogether, but some customary values and cultural preferences remain (amongst elders). Where communities have gained territorial rights – eg. the Kuna in Panama and Quechua in Peru, TK systems and customary laws have been strengthened.

A number of studies also found a rapid decline in biodiversity over the last 10-20 years:

- Traditional rice varieties and use of TK have significantly declined in the Himalayas region. Although the Lepcha and Limbu have not so far accepted modern varieties, the depletion is due to the availability of cheaper rice products in the market, and smaller and fragmented land-holdings.
- In Guangxi, SW China, modern high yielding varieties have replaced many traditional crops such as maize, largely due to the limited size of landholdings and the need to increase yields.
- In the Peruvian Andes, potato varieties have also declined over the last 20 years, but are seeing a significant revival in the Potato Park – an indigenous Community Conserved Area.
- In Chittoor District, Andhra Pradesh, India, a number of medicinal plant species, and related conservation values of communities, are on the verge of extinction.

WHAT ARE CUSTOMARY LAWS?

Customary 'laws' include customary worldviews, principles or values, rules and codes of conduct, and established practices. They are enforced by community institutions, and can have sanctions attached. They are derived from natural resource use – some practices and beliefs acquire the force of law. They are locally recognised, orally held, adaptable and evolving. Customary laws tend not to be recognised in formal courts, particularly if they conflict with formal law, because they are orally held and considered inferior. To improve recognition, customary legal structures/systems need to be strengthened, respected and better understood. In addition, elements of customary law may need to be written down - the challenge is to capture the essence of oral customary laws whilst ensuring they can still evolve freely.

CUSTOMARY WORLDVIEWS AND VALUES RELATING TO TK/BIODIVERSITY

Many indigenous and local communities share the same distinct worldviews:

- *Holistic worldview:* everything is inter-connected, inter-dependent and complex. Man is part of nature. TK and bio-resources (intangible and tangible) are inextricably linked. They are also interconnected and interdependent on landscapes, cultural and spiritual values and customary laws. Together these make up the 'Collective biocultural heritage' of a community or peoples.
- *Spiritual beliefs:* everything (land, soil, biodiversity, forests etc) has a spirit or god, which is respected and feared. If nature is exploited it will hit back with poor harvests, disease etc.

Many communities also share similar customary values which guide all aspects of life:

- Reciprocity: equal exchange in society and with nature
- Equilibrium: balance/harmony in society and in nature
- Duality: everything has a complementary opposite; traditional & western systems can be used.

CONCEPTS OF OWNERSHIP – COLLECTIVE HERITAGE

Knowledge and bio-resources are developed collectively and cumulatively. They are believed to come from God, so individuals cannot claim rights (even over individual knowledge). They are openly shared within and between villages - this provides access to different knowledge and varieties, and maintains purity of seed. Even where customary laws have been lost (e.g. China), sharing values are still evident. Furthermore, land is often held collectively, so the natural resources on the land and related knowledge are also collectively held. Collective values also arise from communal activities and labour sharing (eg. in agriculture). Customary decision making is

often collective. Even where customary authorities have been weakened, many important decisions are still made collectively. This means that decisions about access (or Prior Informed Consent) should be made collectively by neighbouring communities, and benefits should be shared amongst them, to support TK systems and avoid conflicts amongst communities.

HOW KNOWLEDGE IS TRANSMITTED AND RENEWED – INTERLINKED BIOCULTURAL SYSTEMS

The studies identified the following key drivers of TK transmission and renewal:

- Collective activities at communal and family level (eg. NTFP collection, agriculture, festivals)
- Use of diverse biological resources, both wild and domesticated
- Communal access to sacred areas for healing, rituals etc (eg. forests, mountains)
- Cultural and spiritual values and worldviews that underpin traditional lifestyles
- Customary laws that require TK transmission and customary use/practices

These drivers correspond with the concept of 'Collective biocultural heritage' – collective management, biodiversity, landscapes, cultural and spiritual values and customary laws. Knowledge is used with biodiversity and embedded in traditional varieties developed by communities – the two cannot be separated. Spiritual values and livelihoods are tied up with the landscape (e.g. mountain gods). Cultural values or preferences play a direct role in sustaining traditional varieties and biodiversity; while the restoration of lost traditional varieties in Peru and China has revived associated knowledge and practices. Some studies also found that the customary practice of Reciprocity enhances biodiversity. In the Andean Potato Park, a reciprocal access agreement with the International Potato Centre has brought 400 new potato varieties, while 100 more have been acquired through reciprocal exchanges with communities outside the park.

CUSTOMARY RULES FOR ACCESS AND BENEFIT-SHARING

The studies identified three categories of TK each with different rules attached:

1. *Communal Knowledge*, such as agricultural practices, seeds and everyday health knowledge: access to this body of knowledge must be freely open to all. This means that third parties should also ensure open access to the knowledge they receive and derived products.
2. *Specialised Knowledge*, usually medicinal, is restricted to family, clan or kin, and holders of this knowledge must ensure its proper use for community healthcare. This means that third parties should recognise individual as well as collective rights; and address community health needs (eg. by developing drugs to treat community illnesses).
3. *Sacred Knowledge*, is held by elders and healers, and must be kept secret.

Equitable Benefit-Sharing should be based on the principle of reciprocity or equal exchange. When they share their knowledge and resources, communities expect to receive these in return. However, while they have shared much of their knowledge and bio- resources with outsiders they have received little in return, and are often denied access to genetic resources held ex situ, even if collected from their lands.

In the Potato Park, benefits (seeds and funds) from a reciprocal agreement with the International Potato Centre are distributed amongst the six communities (over 5,000 people). They are shared with families according to their participation in Park activities, and to the customary principles of reciprocity, equilibrium and duality. They are also shared with those in need (eg. orphans, widows) as per the principle of Solidarity; and with communities outside the park to maximise equity and horizontal benefits.

DEVELOPING LOCAL TOOLS FOR PROTECTING 'COLLECTIVE BIOCULTURAL HERITAGE'

Effective protection of TK and biocultural systems often requires a range of local tools, including non-legal, eg. collective resource management, community registers/databases, value addition; and legal tools, eg. collective land rights, access and benefit-sharing protocols, and use of 'soft' IPRs such as collective trademarks. The concept of CBCH is useful to guide the development of responses in diverse contexts – but the particular tools need to be adapted to the local situation. In China for example, customary laws have disappeared, but sharing practices are being strengthened (eg. through farmer seed fairs) and new local NRM rules are emerging from farmers' organisations. Strengthening TK systems for community food and nutrition (ie. subsistence) should take priority over market-based tools that can undermine cultural incentives, but this may be difficult where communities have lost their land and rights to use bio-resources. In the Yanadi and Mijikenda context, since re-gaining rights over forests is very difficult, work is focusing largely on developing community registers, marketing and value addition, to generate incentives for sustaining TK.

RECOMMENDATIONS FOR TK POLICY AND THE INTERNATIONAL ABS REGIME

The customary use of biological resources by indigenous and local communities plays an important role in biodiversity conservation and sustainable use, as recognised by CBD article 10(c) which states that Parties shall "protect and encourage" such use. It also plays a key role in maintaining traditional knowledge, innovations and practices (as required by article 8(j)). Policy on TK protection and ABS should therefore support customary use by communities in order to be effective, and to be fair and equitable, given the role of communities in developing, conserving and providing genetic resources. This in turn means recognising the customary laws and values of communities which underpin customary use. Studies in China, India, Kenya, Panama and Peru, involving 11 ethnic groups and over 60 communities, have identified a number of ***common customary values and practices***, which provide a good basis for developing national and international policy on TK and ABS:

A holistic worldview, where:

- TK and Bio-resources are intrinsically linked and inter-dependent– they are used, developed and conserved together. This means recognising the rights of communities not only over TK, but over related bio-resources.
- TK and Bio-resources are closely inter-linked with and inter-dependent on Landscapes, Spiritual beliefs, Cultural values and Customary laws. These are the key elements that sustain TK, which means that community rights over each element should be recognised.

Values of Reciprocity, Equilibrium and Duality, which guide all aspects of life, should be applied to third party access to TK and bio-resources and benefit-sharing:

- Reciprocity means equal exchange in society and in nature. This means that access should be reciprocal – communities should receive knowledge and bio-genetic resources in equal measure in return for access provided. Access and benefit-sharing should be conditional on respect for nature.
- Equilibrium means balance in nature and society - respect for nature and social equity in ABS
- Duality means use of complementary systems – ie. western science and law can be used alongside traditional systems.

Collective custodianship of knowledge, which means that PIC and benefit-sharing should also be collective, involving a whole ethnic group or group of communities. Communal knowledge and resources, and any innovations derived, should be shared openly by all, including third parties, since they are vital for survival in often harsh environments. Specialised TK (eg. medicinal) is held by healers and elders but must be used to address community needs. Sacred knowledge must be kept secret.

TK and related biodiversity are being lost fast due to loss of ancestral land, lack of access to sacred sites, erosion of cultural values, and weakening of customary laws and authorities. This calls for policy and legal responses which protect community rights over 'biocultural systems' as a whole, on which the continued existence of TK systems depends - ie. biodiversity, landscapes, cultural and spiritual values and customary laws. Such an approach is also needed for adaptation to climate change – documented TK is no longer adapting knowledge and bio-resources to address new challenges. For governments and external agencies, this means not only protecting the rights of indigenous and local communities over their TK, but also protecting:

- *Customary rights over bio-resources:* recognising the rights of communities to traditional varieties developed and improved by them, and to bio-genetic resources related to TK.
- *Land rights:* ensuring the collective rights of indigenous communities to their ancestral lands and sacred sites (eg. forests, mountains) are legally recognised;
- *Cultural values:* ensuring development policies, plans and programmes (eg. education, health) are culturally sensitive and support traditional values, laws and practices;
- *Customary laws and authorities:* allowing these to internally govern communities, and regulate the external use of community knowledge and related bio-resources.

RECOMMENDATIONS FOR THE INTERNATIONAL ABS REGIME

Developing a legally binding instrument: The third objective on Access and Benefit-Sharing underpins the CBD and the realisation of the other two objectives on biodiversity conservation and sustainable use. Thus, the fate of the CBD as a whole depends on the development of an effective and fair ABS Regime. Fifteen years since the CBD entered into force, countries and communities of origin have received few benefits, partly because user countries are not legally required to share them.

Recognising community rights over TK: The International Regime should include all traditional knowledge used to identify genetic resources with potential properties, because it adds value to genetic resources even if the knowledge is not used in the final product. It should include general traditional knowledge relating to biological resources and ecosystem management since this knowledge promotes genetic diversity, as well as more specific knowledge relating to genetic resources (as recommended by the Expert Group on TK in Hyderabad, UNEP/CBD/WG-ABS/8/2). Traditional farmers have for millennia selectively bred plants and animals to improve their genetic characteristics.

Clarifying 'state sovereignty': The CBD recognises state sovereignty over natural resources. The 'state' is not confined to governments but also includes other state actors- notably indigenous and local communities that have customary rights over the bio-genetic resources they have historically managed and conserved, long before the formation of nation states. The CBD recognises the role of community knowledge and customary use in biodiversity conservation and sustainable use. However, many countries rich in biodiversity do not recognise community rights, or leave them unclear. This not only hinders equitable benefit-sharing but may also deter users of genetic resources.

Recognising customary rights over genetic resources: Most traditional knowledge is associated with biological and genetic resources, which are often used together with TK. At community level, traditional knowledge and genetic resources are used, conserved and exchanged together. Many experts at the Hyderabad meeting agreed that TK and genetic resources are inseparable; and that 'most traditional knowledge is intrinsically linked to genetic resources' (UNEP/CBD/WG-ABS/8/2). Thus, the International Regime should require community PIC and benefit-sharing for access to bio-genetic resources associated with TK. Given its intrinsic links with genetic resources, traditional knowledge should be addressed throughout the international regime, and not restricted to a single chapter.

Recognising customary rights over landraces: Indigenous and local communities have developed an enormous diversity of landraces using their own knowledge – traditional varieties of plants and animals. Traditional knowledge is embedded in these varieties – or traditional innovations. The International Regime should consider establishing a list of traditional varieties of crops and livestock for which community PIC is required, indicating which communities hold customary rights over them, and including their semi-domesticated and wild relatives which are under community stewardship.

Recognising customary authorities and laws for PIC: The IR should ensure that access to TK and associated bio-genetic resources is subject to the PIC of indigenous and local community authorities, based on their customary laws and procedures. In some cases, community authorities have been weakened, and are thus not immediately obvious, but they are still deciding on many issues. Efforts should be made to identity such customary authorities so that they can provide PIC and be strengthened through the process (to support CBD article 10(c)).

Promoting reciprocal access to genetic resources: While many bio-genetic resources have been collected from communities, are available *ex situ* and are used widely in food and farming, communities have received little in return. Furthermore, communities are often denied access to the resources held *ex situ*. They have lost many traditional varieties and need access to restore diversity to cope with climate change. Thus, the *International Regime* should require users and *ex situ* collectors to provide reciprocal access to knowledge, technology and bio-genetic resources to communities, in return for access provided by communities.

Recognising rights over ex situ TK: PIC and benefit-sharing with communities should be required for knowledge which has already been shared by communities, and is put to a different use than that for which it was originally shared - particularly commercial use. Much TK has already been documented and excluding this knowledge restricts the potential for benefit-sharing and generating local conservation incentives.

Strengthening community participation: CBD Parties should allow indigenous and local communities to participate actively in the negotiation of the International Regime, recognising their critical role in biodiversity conservation and sustainable use.

CHINA CASE STUDY – PARTICIPATORY MAIZE BREEDING & PROTECTION OF FARMERS' RIGHTS

Dr. Yiching Song and Jingsong Li, Centre for Chinese Agricultural Policy (CCAP)

Objectives and context: Through a participatory maize breeding project in Guangxi, Yunnan and Guizhou provinces of Southwest China, the study aims to understand the customary laws and practices relevant for access, use and benefit sharing of maize landraces and traditional knowledge (TK). It aims to inform the development of national policies and laws, including the recognition of customary laws, the plant variety protection laws and ABS laws being developed by the State Environmental Protection Administration (SEPA) and IPR office, coordinated by the Ministry of Agriculture (MOA) and Chinese Academy of Agricultural Sciences. We carried out participatory plant breeding (PPB) projects in 13 villages in Guangxi, 2 villages in Yunnan and 3 villages in Guizhou. Most of the people in these communities are 'minority' nationalities, which have their own language and customs. These local communities with multi-ethnic origins have rich genetic resources (GRs), TK and cultural heritage. They live in Karst remote mountain areas, with limited water and arable land and harsh natural conditions. The area of southwest China is a center of maize biodiversity, the origin of maize cultivation in China, and waxy maize worldwide, and has plenty of traditional medicinal plants in the mountain areas.

Interlinked TK systems and Collective biocultural heritage: In Guangxi province the total maize germplasm collection has around 2,700 entries of which more than 1,700 are landraces from the region; there is a 1896 maize landrace collection in Yunan comprising about 38% of waxy maize landraces in China; while the collection in Guizhou is about 1200. Besides and including these formally collected GRs, lots of landraces are still cultivated and maintained by farmers. These are the results of local people's selection, domestication, cultivation and diffusion through their TK systems for thousand of years. There are close connections among the cultures of more than 20 groups of 'minority' people dwelling in this region, their TK and rich local GRs. They conserve their GRs with special uses, which are instructed by their customs and TK systems. For instance, with the rapid adoption on hybrid varieties, some people still like waxy maize, which is used as quality food or for making maize wine in festivals and weddings. Farmers and local communities usually consider GRs & TK as common property and feel proud to share with others. However, cultural and spiritual values for maintaining TK and biodiversity are becoming weak and vulnerable. More and more young villagers are 'modernized', and migrating out for off-farm job opportunities. TK, together with GRs, have been disappearing in local communities over the last few decades.

Key threats to TK and GRs: The genetic base for maize breeding in China has been dramatically reduced in the last 30 years. Biodiversity loss is one of the new challenges for China to ensure future food security. In the national legal system, TK protection and enhancement are not included. In the study area, landraces in farmers' field are disappearing as a result of the spread of modern varieties with high yield. The main threats to GRs & TK are limited cultivated land, the unstable and unclear land rights (a new national policy has commercialized land and legalized farmers' land transfer), administrative institutional interventions on TK systems and customary laws, farmers' migration for off-farm jobs, and increasing commercialization and globalization of GRs & TK products (which bring IPR tensions and ABS issues to be considered). With farmers migrating out, transferring GRs & TK to new generations becomes difficult. More and more farmers, especially young people, have shown little interest in farming activities. A recent study in SW China by CCAP shows that the average age of farming labor is about 50 years old and 76% are women. At the same time, the income structure has changed significantly. The same research revealed that the proportion of non-farming income has grown from about 15% in 1995 to about 45% in 2007, while traditional staple crop income has decreased from about 35% in 1995 to only 15% in 2007.

In view of farmers' current inferior socio-economic status and increasing involvement in market competition, the protection of farmers' rights and interests for equal benefit-sharing and sustainable livelihood is a key concern that requires greater attention from policy makers. Without compensating measures and appropriate protecting policies/laws, there will be exploitation of farmers' rights and interests, and deterioration in their TK and genetic resources.

Innovative tools for GRs & TK protection: Given the above threats, the project has encouraged community registration of GRs (incl. crops, medicinal plants and vegetables) and TK since 2005, in order to rebuild farmers' awareness towards protecting, using and sharing their resources and knowledge. Farmers' awareness on ABS and IPR issues has also been strengthened through PPB activities, especially community seed production of PPB varieties. On maize germplasm maintenance and utilization, four-step activities have been carried out at both the community level and institutional level in SW China: 1) registration and conservation of landraces and related TK, through community seed banks and local registers; 2) evaluation and characterization of landraces by farmers and formal breeders on farm and on station; 3) utilization and improvement through community seed production of PPB varieties, farmers' seed selection and conservation; and 4) adding value and marketing of local GRs & TK through farmer seed and diversity fairs, niche markets for local products and organic farming.

The PPB project has created a platform for farmers and formal breeders, as well as the mutual trust, by working together and sharing their resources and knowledge. After recognizing the ABS issues that emerged around PPB varieties, initial agreements around community seed production have been drafted and implemented by PPB stakeholders since 2006. To a certain extent, the PPB platform makes IPR and ABS related discussion and negotiation more feasible and less sensitive. The PPB project has also adopted a Community Supporting Agriculture (CSA) approach and collaborated with two organic restaurants in Guangxi. This linkage has provided opportunities for local communities to sell their locally specific products directly to restaurants and at same time consumers can visit producing farmers for mutual understanding and trust building. Through this connection, GRs & TK can be continually transferred and shared among farmers and consumers.

Key lessons and recommendations: After more than 9 years of work in SW China, we realize that, in the remote mountain areas, it is necessary to combine GRs & TK protection with poverty alleviation, biodiversity enhancement and farmer empowerment. Both national and local governments need to support benefit-sharing with farmers from their GRs & TK. Our suggestions focus on the following two aspects:

- Enhancing farmers' awareness and capacity for GR & TK protection, through activities such as community-based registration and recognition, training for farmers and strengthening farmer groups and organizations. Special concern should be given to women as the main cultivators and TK keepers in China now.
- Providing incentives from activities like PPB for conserving GRs & TK for both farmers and breeders and other stakeholders. Some good mechanisms practiced in the project could be scaled out and institutionalized through government policy support. For example, setting up pre-contracts among PPB participants in community seed production, adding value to local specialised products/resources, funding farmer groups and cooperatives for organic farming and niche organic market, and formally recognizing and rewarding farmers and formal breeders' contribution to conserving and improving landraces in situ and ex situ. Collaborative approaches such as PPB are crucial for protecting GR/TK and can bridge agrobiodiversity conservation with rural development by focusing not so much on crops, but on farmers, their TK, skills and adaptive management practices.

To contact the authors, please write to songyc.ccap@igsnrr.ac.cn and maolee2000@yahoo.com.cn

INDIA CASE STUDY – PROTECTING LEPCHA & LIMBUS FARMERS' RIGHTS

Ruchi Pant, Ecoserve

Objectives: This case study in Sikkim state and Kalimpong area of Darjeeling Gorkha Hills Council (DGHC), West Bengal, in the Eastern Himalayan region in India, entailed participatory action-research with Lepcha and Limbu communities, focusing on farming systems and traditional rice varieties. Together with a local NGO (the Centre for Mountain Dynamics), village and Panchayat leaders, and women self-help groups, it explored the potential of customary laws and practices in the protection of community rights over traditional knowledge and genetic resources; and identify elements for developing a sui generis mechanism. It also aimed to sensitize the communities on emerging trends in policies/ laws, and promote the recognition of customary laws at national and international levels.

Context: The study was conducted in 5 villages of Kalimpong Sub-division (Pudung, Khadalay, Lower Icchey, Dungra and Dalapchand), and 2 villages of Sikkim (Menrongong and Namchebung). The Eastern Himalayan belt is a global biodiversity 'hotspot' and centre of origin for a number of crops, fruits and vegetables, including rice, with an estimated 600 traditional rice varieties. The study region shares borders with Nepal, Bhutan and China (Tibet). The Lepchas, the original inhabitants of the region and the Limbus, who migrated from Nepal are listed as scheduled tribes under the Constitution of India. The region is now inhabited by many other ethnic communities of Tibetan and Nepalese origin. Lepchas were mainly hunter-gatherers and are now mainly subsistence farmers growing paddy, maize, millets and broom grass, and cardamom, ginger and oranges in some parts. Lepchas have learnt paddy cultivation from the Limbu farmers who brought their own seeds and traditional practices of cultivation. They have traditional knowledge related to all areas of life – food, medicines, housing, crafts, integrated pest management, forest and water resources.

Challenges and opportunities for protection of Collective biocultural heritage: Over the past decade there has been a decline in traditional rice varieties of the region, and in the use of traditional knowledge. Although the Lepcha and Limbu farmers have not so far accepted modern varieties, the depletion of traditional varieties is due to cheaper rice based products available in the market, and smaller and fragmented land-holdings. The aspirations of younger generation are changing with the penetration of markets, some want to grow commercial crops such as flowers. Nevertheless, with continued use of biological resources, new uses of plants are still being discovered (eg. wild amla fruit leaves are used to pack cut flowers). Despite this, a new trend is evident in the region amongst both the Lepchas and Limbus, which is a search for their own identities and serious efforts are being made by the older generation and adults towards revival of their language and cultural practices. This would promote demand for traditional products and knowledge, thereby supporting conservation. Constant usage and transmission of knowledge from one generation to another following customary practices and principles can safeguard farmer's knowledge and seeds. Cultural values to a great extent are still strong and there is a possibility of increasing demand for traditional products in the market. These products have the potential to qualify for international certificates and labels such as organic and fair trade.

To address the lack of awareness about the value of TK, bio-resources and the potential threat of biopiracy, training programmes were provided for different stakeholders such as farmers, elected local government bodies, women self help groups and local officials. In addition, these different players were taken for exposure visits to a site in the same state where a progressive farmer is conserving 500 traditional rice varieties and also experimenting the new technique of SRI for increasing the yields from traditional varieties. Through films and other material, farmers were sensitized to the threats of biopiracy and the implications of the national and international laws pertaining to plant varieties protection, seeds and intellectual property rights. Government agencies may have databases of the traditional rice varieties of this region, but the common farmer does not have access to these. Participatory documentation of the range of rice varieties known to the local people in Peoples' Biodiversity Registers was a useful tool for protecting local knowledge pertaining to bio-genetic resources.

Customary laws and practices: Research in the study villages revealed that customary laws include customary principles and values. These usually do not apply to external actors, but since customary law is dynamic and evolves over time, there is potential for expanding their jurisdiction to others. The Lepcha and Limbu are largely subsistence farmers practicing traditional agriculture using own inputs and exercising full control and choice

over what to grow and how. Farmers in the region continue to practice collective farming, hence some decisions regarding seeds and water distribution and disputes relating to these are influenced by the traditional institution, the samaj. Collective farming starts from planning for the varieties to be planted, preparation of the terrace fields, clearing of terrace walls, raising bunds, mulching, transplanting of paddy seedlings, weeding, harvesting and winnowing. Since these farmers continue to grow traditional varieties of rice, they rely on self-saved seeds or local seeds available through the traditional practice of seed exchanges in the village. The availability of diverse varieties of crops such as pulses, millets, oilseeds, cereals and vegetables, in addition to providing self-reliance, forms the basis of health and nutrition security. The choice of variety for a particular season depends on the environment, availability of labour, family needs and the option of growing an additional crop for intercropping.

Though all practices elicit compliance, only some have the force of law and are enforced by community institutions. People have a strong belief in supernatural powers and many customary and conservation practices owe their compliance to the fear thereof. The entire Himalayan belt is considered Dev bhoomi, the land of the Gods. The following principles also hold good in Sikkim and Kalimpong:

Principle of reciprocity: Seeds are exchanged to maintain purity, in the same proportion. This enables the conservation of rice diversity in the region. Farmers exchange seeds of different varieties and try to rotate the variety grown every 2-3 years. This custom, dastur, of reciprocity is visible in all walks of life. The process of pooling labour is called khetla. When others reciprocate their services, it is perma khelna. Free sharing of seeds and knowledge also takes place between neighbouring communities, including in different countries.

Principle of duality: This principle is inherent in the principle of reciprocity. Local people believe that an individual serves a dual function in a society: as an individual and as a part of a collective. Some actions are undertaken to fulfil one's own needs, others to contribute to his or her role as a part of a collective.

Principle of equilibrium: The communities believe that they derive their knowledge and resources from the supernatural powers and the cosmic world. For instance, the Lepchas believe that the mountain gods bless them with seeds and rain for growing crops. The gods give innumerable cosmic and natural indications related to the timing and volume of rain. The Lepchas show their appreciation by way of a series of rituals.

Collective biocultural heritage: In traditional Lepcha and Limbu communities, TK is very closely linked to the biological resources found in the region and vice versa. The diversity of rice varietiesis inextricably linked to the different socio-cultural and religious aspects of life, eg. rice is used for important occasions like weddings and new year's day. Land tenure and rights of access to forests, water, soil, and other natural resources are well-defined and understood by community members. The needs of the community were hitherto largely met within the landscape by sharing and exchanges within the community. In spite of water and forests being nationalized in most parts of India and local/ indigenous communities being alienated from control of these resources, communities do have access by way of privileges and concessions, especially in areas where government machinery is unable to reach. By way of customary norms, taboos and practices, communities continue to conserve the resources at landscape level.

Lessons and recommendations: Customary seed exchange, seed-networks and seed banks protect TK and the resource against permanent loss. Customary principles can accord positive or affirmative protection to farmers' TK, but cannot protect it from misappropriation because they encourage free sharing and exchange of knowledge and resources. Customary laws have limited jurisdiction – so defensive protection also requires formal legal and other non-legal mechanisms.

Despite several constitutional and statutory provisions granting recognition to customary laws and practices (including TK), sectoral laws, policies and schemes do not provide adequate space thereto, and precedence shows that the higher judicial bodies do not recognize customary rights and laws. The Biodiversity Act overlooks the right of the community, as it does not accord any role to it in deciding access to TK and GRs. The proposed seed legislation requires all farmers' varieties to be registered. This will dissuade farmers from saving traditional varieties, leading to erosion of knowledge and genetic diversity.

Despite a plethora of international IPR laws, few protect knowledge in public domain. Laws favouring industry are effectively enforced while those safeguarding community interests are very weakly implemented and often non-binding (eg. Bonn guidelines, Declaration on Indigenous Peoples Rights). There is no participation of the TK holders in the law making processes in India or even at international levels. This requires sensitization in other stakeholders too.

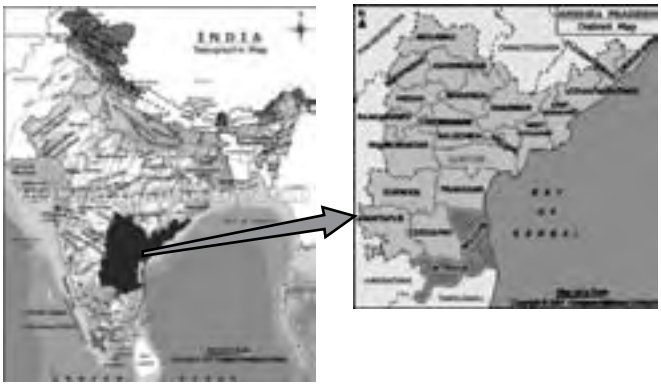
Creation of rural business hubs and information kiosks could promote market linkages for TK products. Incentives should be provided to communities to document their TK using Biodiversity registers. The National Gene Fund should support setting up of community based in-situ conservation farms.

Transborder cooperation is essential for protection of TK that transcends national boundaries.

To contact the author, please write to ruchi_kumaono4@yahoo.co.in

INDIA CASE STUDY – PROTECTING YANADI HEALERS' RIGHTS

Dr. S. Vedavathy, Herbal Folklore Research Centre, Tirupati



Objectives: The India case study with the Yanadi community of Chittoor and Nellore districts of Andhra Pradesh aims to: 1) enable them to gain recognition of their customary rights over Traditional Health Knowledge (THK) related to medicinal plants and 2) safeguard the THK and free access to bioresources needed for its practice. The three year study helped the communities realize the importance of their THK, and the policy threats and opportunities facing it, develop community-controlled biodiversity registers and form an association of Yanadi healers to assert their rights as health providers and resource protectors.

Context: The Yanadis are recognized as a Scheduled Tribe under the Constitution of India. Through their reliance on forests they have developed extensive knowledge of bio-resources, medicinal and aromatic plants and wild foods, including unique remedies for snake bite, paralysis, skin diseases etc. The Yanadis have been relocated to isolated hamlets away from the forests, where they are marginalized, living as farm labourers, supplemented with minor NTFP collection. The rich traditional knowledge of the tribe is on the verge of extinction due to lack of recognition. The codified systems (Ayurveda, Siddha, Unani) in India have recognition and patronage, but Yanadi THK is not recognized by policy makers and is branded as the superstitious knowledge of illiterates, making the tribes afraid to come out openly asserting their expertise.

Interlinked systems of Collective biocultural heritage: The traditional health knowledge of the Yanadi is closely linked to the availability of bioresources. Medicinal plants for healthcare are derived by continuous access to and observation of natural resource. Knowledge generation and maintenance is dependent on their traditional lifestyle, culture and heritage. Medicinal knowledge is acquired and transmitted through rituals in sacred forests. Plants for specialized cures are harvested wild through special rituals and it is believed that their cultivation will remove their potency. Hence maintenance of knowledge systems depends on access to sacred forest flora. Ceremonial visits are traditionally made to the forest to show respect to nature and diseased ancestors, worship health goddesses and give reverence to the plants that keep them healthy. In the past entire families used to go to the forest for medicinal plant collection and the head used to educate his family members about the therapeutic properties of the plants. That way knowledge generation and transmission continued unabated.

Customary laws and practices: Forest bio-resources and related knowledge are considered to be the common property of the community. The communities use these resources for food and medicine in a sustainable way, with self-imposed limitations on forest clearance, restrictions on hunting certain species, protection of sacred groves/ plants and rotational use of some rich biodiversity areas. These are clear examples of stewardship and customary rights over their 'collective biocultural heritage'. The yanadi culture includes principles of common property (or heritage), reciprocity (collective sharing) and harmony (symbiotic relationship). These principles are threatened due to the change in the lifestyle and resultant struggle to maintain them. The THK used for primary healthcare (every day) is shared among the community. There is reciprocity and harmony in sharing of natural resources both for food and medicine. Even in medicinal Plant collection, clear customary principles are followed to maintain reciprocity and harmony. The healers have certain norms wherein they give health treatment freely to whoever seeks it for first aid/ casualty. Only for chronic illness the healer expects monetary benefit.

Specialised traditional health knowledge about poisonous (eg. snake bite, scorpion sting) is kept secret and is divulged only to the kith, and kin and sometimes to an interested disciple of the healer from the community. The healers possess the symptomatic diagnostic techniques and structured syllabus (oral) for the treatments they give to the patient. It is not sufficient to become a healer by getting knowledge about the use of the medicinal plants. The disciple should undergo rigorous training including on the ethos (a healer should not drink with the patient, have sex and steal from the patient) and customary practices to follow. It is not easy to get access to their healing practices since it is complex and needs training by a reputed healer.

Key threats to TK and opportunities for protection: The forest protection laws prevent free access to the tribes for collection of herbs from the forest. While the tribals who once nurtured the forest can be fined for collecting medicinal plants, smugglers and multinational companies are let in freely to tap the rich bioresource. Access to forests is given to all sections of people besides the tribes. This is undermining the tribals and making them aliens on their own land. The Scheduled Tribe Recognition of Forest Rights Act 2006 came into force in 2008, but does not seem very useful. The Andhra Pradesh government is considering issuance of ownership rights to tribals provided they have records of cultivating the forest land for the past 10 years. Most of the Yanadis especially THK holders may not get rights since they were evicted from forest lands decades back. The Girijan (Tribal) Cooperative Corporation set up by the government of Andhra Pradesh is buying produce from all people and in no way gives importance / recognition to TK holders. The Forest Rights Act seeks to grant community rights to traditional knowledge of forest biodiversity; however it could be at odds with customary practices, as it seems to follow a pro-IPR approach of documentation, commodification and patenting of TK.

Yanadi TK is on the verge of extinction - the youth are not interested in learning it and the status of elders is weakening due to extension of government authorities. Through participatory research the study made the Yanadis gain awareness regarding the value of their THK and the resources linked to its survival. However, the sensitization programs involving the policy makers and academics on the norms and rights of Yanadis over their collective Biocultural Heritage did not have any outstanding impact. Most of them felt that the codified systems are sufficient to look after the health of all including the tribes. Moreover, they felt that the traditional knowledge holders are illiterate and may have difficulty in understanding modern medicine.

The Indian Constitution declares that the state shall promote with special care the economic interests of Scheduled Tribes and protect them from social injustice and all forms of exploitation. It guarantees tribal people many freedoms- freedom of expression (art 19(1) (a)); freedom to practice a profession of one's preference (art 19 (1) (g)); and freedom to reside and settle in any part of India (art 19 (1) (e)). The Panchayat Raj Act (Extension to Scheduled Areas) 1996 empowers the Grama sabha (village organization) to safeguard traditions, cultural identity and community resources and prevent alienation of land in scheduled areas, and endows it with ownership of minor forest produce.

Lessons for TK protection and ABS: The Yanadis feel that priority should be given to formal recognition of their THK and exclusive rights to use the bioresources needed for sustaining their knowledge/ practices. The community biodiversity registers and the association of the yanadi healers didn't evince much interest from them since they are fighting for survival (the people are poor daily wage earners). Only the restitution of free access to ancestral forests and recognition and protection of Yanadi TK can bring it back from the verge of extinction. Legal protection should be collective – it should not restrict the customary transmission of THK within the community and create conflicts between communities or THK holders leading to disintegration of customary laws and practices built around THK. The protection and recognition should be undertaken in a manner conducive to social and economic welfare of the entire community. Moreover, the commercial use of THK (validated medicines) should be subject to equitable sharing of benefits (equity is central to general IP law). About 200 medicinal plants collected from the area have been developed into modern medicines but no indigenous person has been rewarded or recognized so far. Traditional communities (Grama sabha) should be directly involved in decision making about the protection, use and commercial exploitation of their THK, using customary decision-making processes and laws as far as possible.

To contact the author, please write to vedavathy2006@yahoo.co.in

KENYA CASE STUDY – PROTECTING MAASAI AND MIJIKENDA HEALERS' RIGHTS

Doris Mutta, Kenya Forestry Research Institute (KEFRI) and Peter Munyi, International Centre of Insect Physiology and Ecology (ICIPE)

Objectives/focus of the case study: The Kenya case study was prompted by the fact that, despite the existence of global frameworks for the protection of traditional knowledge (TK) none have so far examined the customary laws and practices at the community level that may be useful in this protection. The study focused on knowledge systems regarding medicinal plants as obviously, such knowledge systems involve TK. The goal of the study is to provide a basis for informing relevant organs and processes at national (Kenyan) and international levels in the formulation of laws and policies related to the recognition and protection of Collective biocultural heritage (CBCH) of indigenous and local communities. The study was conducted among the Mijikenda at the Kenya Coast, and the Maasai in the Rift Valley of Kenya. The two sites were chosen owing to their social, cultural and ecological diversity.

Context: The Mijikenda are a Bantu-speaking people consisting of nine sub-communities, that are linguistically and culturally closely related. The Mijikenda settled at the Kenya Coast in the 16th Century (Spear 1978) or earlier (Morton 1977; Willis 1996), after emigrating from the North. On reaching the Kenya coast, they formed tribal groups that settled in fortified forest villages, the kaya (Spear, 1978; Willis, 1996). Kaya literally means 'home'. Each sub-community group formed a closely-knit society controlled by a council of elders, ngambi, misspelled as Kambi by Spear (1978), and re-named as atumia alalo, subsequently. The kaya settlements are found in the current Kwale, Kilifi, Mombasa and Malindi Districts all of the Coast Province, established in the 'ancient coastal forest' of eastern Africa, with a rich botanical diversity.

The Maasai, named after their Maa speech, are among the few ethnic groups who have traversed the East African region. In Kenya the Maasai inhabit from northwestern Kenya in the rift Valley, to as far south as near Lake Victoria (Azevedo 1993). They are pastoral people, herding cattle, sheep and goats.). A very small percentage has turned to cultivation, either to supplement their milk and meat diet with maize, or in an ambitious commercial proposition to supply a local brewery with barley. But according to Maasai mystical beliefs land tilling is not allowed. This belief stems from their traditional religion and their attitude towards cattle, that Engai (the sky) sent down to the Maasai all cattle and any other pursuit than a pastoral one, is regarded as demeaning to themselves and as insulting to Engai. Thus Maasai tradition outlaws cultivation as unacceptable, probably because cattle are associated with grass and grass with the ground (Fedders & Salvadori 1979). No Maasai traditionally, was allowed to break the ground, the source of grass, not even for burying the dead or to excavate water.

Interlinked TK systems/Collective biocultural heritage: Both the Maasai and Mijikenda TK is dependent on spiritual values, access to sacred sites and use of biodiversity. Communal/family access to forests for ceremonies and worship is key for transmission of knowledge, and privatization of land has been a major hindrance to this. The Maasai consider hills as sacred and this is where formal induction to traditional healing takes place. The Mijikenda revere sacred forests and the sea and manage both through rules which ensure sustainable use, according to the customary principle of Equilibrium. Similarly, the Maasai have a system of sustainable pastoralism and consider trees as sacred and it is taboo to cut down a medicinal tree. In both cases, general health knowledge is communal and freely accessible, while specialized healers' knowledge is hereditary and shared only with those who will put it to good use. A rating process is traditionally used to assess the personal conduct of the apprentice.

Status and threats to TK systems: The Mijikenda TK systems and customary laws are being eroded. Since colonial times, the Mijikenda have lost much of their kaya land and sacred forests to development and conservation initiatives. The movement of western populations and governing systems to rural areas have also weakened traditional ngambi governance and led to intermingling and intermarriages. Some customary laws have been lost or modified, or are selectively recognized according to a person's need. Others are still recognized particularly where state law is inadequate (eg. for conflict resolution). Knowledge sharing was based on trust, but the introduction of capitalism has eroded this practice, and resource ownership has tended to shift from communal to private. Some healers are already practicing commercially – hence individual as well as collective TK rights need to be recognized. The Masaai TK and customary laws are threatened by similar pressures – a shift towards western lifestyles, weakening of customary authorities, privatization of communal land and significant loss of land. Healing services are slowly evolving from communal welfare to commercial endeavors as the Maasai sink deeper into poverty.

At the national level, customary law is subordinated to the written law in the laws of Kenya, and only applies as a guide, that is, the courts are not bound to apply it. The communities face threats to their knowledge and resource rights – including cases of biopiracy by Europeans. These have contributed to free access to TK and resources by

third parties, with no systems in place to govern access, PIC and benefit sharing.

Innovative tools for TK protection: The establishment of Traditional Knowledge Registers as a form of TK protection was also piloted among the Mijikenda with the view to enhance communal ownership rights of access and reduce erosion of biocultural heritage. A few community members were trained on basic computer skills and database use. The process of documentation revealed an enhanced appreciation of the existence of their biocultural heritage and that while the market value of the biocultural resources is relatively profitable, the local communities lack the capacity and mechanisms for harnessing commensurate economic benefits. It was therefore recommended that capacity building in formal recording and value adding should be an important component of the TK protection strategy. The findings of the studies have also contributed to the ongoing national policy process on traditional knowledge, genetic resources and traditional cultural expressions.

Key lessons and recommendations

- There is need for legal recognition, institutionalization and empowerment of the local communities in the management of resources. This institutionalization process should include remuneration of those members of the community involved in the management of biological resources.
- Customary laws should be integrated into Kenya's legal system more than they presently are. Provisions herein should include securing ownership of biological resources for the communities.
- Capacity building on management of biological resources of communities should be enhanced. This should include reconciling the values placed on biological resources by local communities with other values and practise such as biological research and ecotourism.
- As the national policy processes on traditional medicine, traditional knowledge, genetic resources and folklore advance, there is need for systems for defining ownership and responsibility under law in a culturally sensitive and appropriate fashion, without leading to an erosion of confidence and security for communities.
- In view of policy developments at global level, there is urgent need for strong ABS regulations to ensure PIC for access to biocultural heritage and equitable sharing of benefits in a timely fashion. In this context consideration to amend the Environmental Management and Coordination (Conservation of Biological Diversity and Resources, Access to Genetic Resources and Benefit Sharing) Regulations, 2006 should be made.
- At the international level, it is important that the ongoing negotiations for a legally binding regime on ABS draws on empirical evidence and lessons drawn from studies such as these, and experiences learned from implementing national legislations should be taken into account.

References

Azevedo, M. (ed). 1993. Kenya: The land, the people and the nation. Carolina Academic Press, Durham.

Fedders, A. & C. Salvadori. 1979. Peoples and Cultures of Kenya. TRANSAFRICA, Nairobi

Morton, R.F. 1977. New Evidence Regarding the Shungwaya Myth of the Mijikenda Origins. International Journal of African Historical Studies 10 (4): 628 - 643.

Spear, T. 1978. The kaya Complex. Nairobi: Kenya Literature Bureau.

Willis J. 1996. The Northern kayas of the Mijikenda: a Gazetteer, and a Historical Reassessment. Azania XXXI

To contact the authors, please write to doris_mutta@yahoo.com and pmunyi@icipe.org

PANAMA CASE STUDY – KUNA AND EMBERA-WOUNAAN MEDICINAL KNOWLEDGE & ACCESS PROTOCOLS

Heraclio Herera, Fundación Dobbo Yala

Objectives: The study aimed to enhance the protection of the rights of Panama's Kuna and Embera-Wounaan communities over their medicinal plant knowledge, by exploring: TK ownership and transmission, customary laws for use of TK and customary authorities and decision-making. The participatory approach entailed discussion groups with traditional authorities, forming Societies of Traditional Kuna and Embera-Wounaan Doctors, analysing their understanding of TK, environment, natural resources and biodiversity, consulting government institutions, and offering recommendations to the indigenous congresses (governments) for establishing customary laws and visitation protocols in the communities.

Context: The study took place in two different areas rich in biodiversity and TK: The Kuna territory, legally established on the Atlantic islands and coast of Panama, one of the last remaining areas with 80% natural forest cover; and the Embera and Wounaan communities in riverside and inland areas of Darién province, with high forest cover. Part of the Emberá and Wounaan population occupy ancestral territories which have only very recently gained legal recognition, and therefore their territories, culture, TK and traditional ways of life have been constantly challenged. The Kuna, Emberá and Wounaan are farmers, fishermen and hunters.

Interlinked TK systems/Collective biocultural heritage: The TK of the Kuna, Embera and Wounaan consists of a complex system of knowledge based on their intimate relationship with nature, and forms part of their culture and therefore is the basis for customary laws. According to their holistic worldview, traditional medicine is an integral science, where bio-physical, socio-cultural and environmental-spiritual elements interact. Social, cultural and spiritual values play an important role in ensuring the conservation of the forest, sacred places, biodiversity and culture itself. The full range of traditional knowledge and related natural resources and biodiversity represent the Collective biocultural heritage of the Kuna and Embera-Wounaan indigenous peoples.

Key threats to TK: The main challenge to indigenous rights is the invasion of their territories by loggers, hunters, cattle farmers, migrants and tourism companies. The Kuna, who have had legal land title and a Kuna Congress since 1972, have minor invasion problems at their borders caused by people washing for gold, loggers and hunters. This threat is stronger in the lands of the Embera and Wounaan that have only just gained legal recognition. This forested land was considered to have no use or social function and therefore is threatened by migrants searching for new land to deforest for cattle and agriculture. The agrarian reform law supports these threats in considering land as not viable for property titles if it does not serve a social function, ie. if it is not being worked cultivated, occupied by cattle, etc.). In several cases, disputes with non-indigenous peasants have reduced the land and with this traditional knowledge about biodiversity. In the case of the Kuna, the challenges to TK and biodiversity come mainly from development plans in education, health and tourism that are not in compliance with the customary vision and norms. However, even amongst the Kuna, many younger people have lost interest in TK and TK holders are often marginalised. Dual systems of religion (Christian and indigenous) have also weakened traditional beliefs and practices. In addition, there are concerns over increasing bioprospecting and unauthorised use of traditional medicine in the absence of adequate policy and legal protection.

Customary laws and practices: Customary laws are based on TK of bio-resources. Therefore, the use and exploitation of these resources is based on respect for nature, in the request for permission from the plant spirits for cutting them, in not performing massive removal of soil, in not disturbing sacred places that may cause hatred, epidemics and disease. These laws are maintained by specialized people who are versed in traditional culture and medicine and ensure that the population complies with them. However, current generations of youth that are acquiring western education and lack cultural knowledge do not accept traditional knowledge and tend to deforest and destroy ecosystems.

Four categories of customary law that relate to biodiversity/TK were identified:

1. Beliefs or 'Cosmovision': This is the set of knowledge that relates to the origin of the earth and natural resources, both the material and spiritual worlds. TK is based on the worldview that the land maintains man, and land, soil and territory with their diverse components are works of god, each one has a spirit.
2. Values or principles: Set of social, cultural and spiritual values which places man as an inherent and equal part to all living surroundings; and also establishes principles for inter-personal relations.
3. Codes of conduct or ethics: norms established for biodiversity users, like hunters, collectors, healers, relating to conservation of sacred sites, and responsibilities of traditional healers.
4. Practices and customary laws: set of rules of practice for use of the earth and its resources.

The principles that guide all aspects of life in Kuna, Embera and Wounaan communities are: reciprocity, harmony (or equilibrium), equity, duality and solidarity (or 'brotherhood'). These are fundamental in guiding customary laws and traditional practices. Specific Customary laws exist for: 1) Use, transmission and protection of TK; 2) Exploitation and sustainable use of biological resources; 3) Use and management of ecosystems and non-renewable resources, 4) Ritual and ceremonial practices in traditional medicine. Customary laws establish requirements and procedures for learning, and for protection against bad medicinal practices, theft of knowledge and special use of language for the names of plants, animals and specific knowledge. Customary laws and practices for the use of biological resources establish rules and sanctions in cases of over-exploitation, indiscriminate hunting and ecosystem destruction.

Clear customary laws exist in the Kuna communities for these matters. For the Embera and Wounaan, customary laws also exist but the loss of these is more accelerated since they only recently got a defined territory and their socio-cultural relations are more intimate with non-indigenous farmers, but they try to conserve their traditional laws. In general customary laws are practiced by those with specialized cultural training such as doctors, traditional leaders, traditional specialist or some other branch of cultural knowledge. The youth, with western education and professionals do not know of these laws or know very little about them.

TK of traditional medicine and biodiversity are considered collective property of the Kuna, Embera and Wounaan, even though the accumulation of experience is individual. The Kuna, Embera and Wounaan have jurisdiction over certain areas for use of natural resources, and the borders are respected by traditional authorities of each community. Users of one community must request permission to access the resources of neighbouring communities. The code of ethics for transmission and use of medicinal TK ensures that TK is given to people who demonstrate interest in conservation, practice their specialization correctly, are disciplined and show good conduct. A secret code or language is used to maintain secrecy. The primary interest is as a service to humanity and not an economic interest. Benefit-sharing must also be collective, since TK belongs to God, and therefore individuals cannot claim rights over TK. The distribution of benefits is performed in an equal manner and according to the experience of each person or specialist.

Innovative tools & policy responses: A Visiting Protocol for Research on biodiversity in Indigenous Territories and Code of Ethics were developed to regulate access, protect the intellectual property of indigenous peoples and ensure equitable benefit-sharing, based on customary laws. The protocol sets out the process for Prior Informed Consent and the nformation required. An external researcher should present a proposal to the Kuna General Congress which submits it to a technical committee for initial evaluation and discusses it with the authorities of its 49 communities. If accepted, the researcher then has to obtain permission from the specific community. If approved, the researcher can approach a knowledge holder who can also agree or deny access. The protocol was largely based on research with the Kuna, and the results were discussed with the Embera-Wounaan. As their process and requirements for visitors are similar, it was decided that a general community protocol should be developed as the framework for all indigenous peoples in Panama. Discussions were held with national authorities to modify the Law 20 on Protection of Indigenous Collective Intellectual Rights over Culture and Traditional Knowledge to include protection of TK related to biodiversity. The project also helped the Embera and Wounaan communities obtain a collective property title through a new law of December 2008, Law 72.

Key lessons and recommendations: Systems of TK of BRs/GRs are based on practices where geographical borders are not defined, nor are timeframes, and the predominant concept is collective use and benefit, with reciprocity; rather than individual economic benefit. Generally, external policies and programs contradict their worldview and customary laws, because they define geographical borders, timeframes, and their focus is individual and commercial. Therefore it is necessary to create laws that protect customary laws and practices within indigenous territories and ensure that development programs and plans are based on these.

The development of TK protection systems should start with the systematic cataloguing of TK and traditional laws in order to form part of the indigenous territorial laws as in the case of the Kuna. Such research should be done with the close involvement of traditional authorities at every stage to ensure that the results are taken up more widely. Then, these laws must be recognized by States for cultural cohabitation.

Protection of TK related to biodiversity should go hand in hand with the protection of indigenous collective territories. Lack of legal recognition of indigenous lands and territories erodes and extinguishes TK. Collective territory in Panama allows indigenous authorities to be formally established to implement their own customary laws. There is a duality of government in some indigenous communities – eg. Embera Wounaan – which weakens unity before the Panama government. Thus there is a need to re-structure some indigenous communities to protect their TK, and to appraise the new Embera-Wounaan authorities of the importance of protecting TK.

To contact the author, please write to heraclioherrera@hotmail.com

PERU CASE STUDY – CUSTOMARY LAW IN THE POTATO PARK & PROTECTION OF INDIGENOUS NAMES

Alejandro Argumedo, Asociación ANDES

Objectives and Approach: This case study aims to: 1) Identify Quechua customary laws that govern access to and benefit sharing (ABS) of traditional resources and knowledge according to the holistic concept of "Collective biocultural heritage"; and 2) Apply these norms in equitable ABS models with the aim of asserting the rights of indigenous peoples over their Collective biocultural heritage at local, national and international levels. The study used the participatory methodology of ANDES, involving collaboration between ANDES staff and indigenous researchers from the Potato Park. The following steps were followed: 1: Examine traditional practices of administering cultural and biological resources. 2: Determine Andean principles that underpin these practices. 3: Identify customary laws that regulate these practices and affirm Andean principles. 4: Generate local norms for protection of cultural and biological resources that are derivatives of and compatible with identified customary laws. 5: Harmonize local norms for BS and TK protection with national and internationally proposed normative frameworks. 6: Use this framework based on customary law as the basis to establish an Intercommunity Agreement for ABS among the Potato Park communities. 7: Develop strategies for protection of indígenous names and symbols of the Q´ero nation. 8: Develop legal proposals to strengthen Quechua customary laws and the rights of indigenous communities over their TK.

Context: The case study was conducted in the Potato Park in Pisaq, Cusco, in the Sacred Valley of the Incas, which is between 3,400 and 4,500 metres high and comprises 25 million hectares and the titled territories of six communities. It contains a large number of domesticated and wild potato varieties, the highest number of wild potatoes in the world. The area has been describred as a micro centre for the potato, with more than 2,000 varieties. Here, Asociación ANDES has been implementing a type of NRM based on the concept of Indigenous Biocultural Heritage Areas. The study on the protection of indigenous names was conducted with five Q'ero communities in Paucartambo, Cusco.

Interlinked TK systems/Collective biocultural heritage: One of the first outcomes of the research was the definition of the concept of Collective Biocultural Heritage, which was the starting point for a new approach to access to biodiversity and genetic resources, and associated TK, and fair and equitable benefit-sharing (BS) (see sheet 2). This concept constitutes a paradigm shift and a challenge to policy and law makers for biodiversity conservation, ABS and TK. It proposes that, in order to conserve bodiversity and the dynamic involved in the intergenerational transmission of knowledge, innovations and practices, políticy and legal frameworks should recognise that biological resources cannot be separated from traditional knowledge or the landscape which provide the physical space for customary use of biodiversity and free sharing of knowlege and resources.

Key threats to TK: The current system of intellectual property protection (eg. patents), designed to promote commercial and scientific innovation offers little scope for protecting the traditional knowledge and resources of indigenous peoples. In Peru where indigenous peoples have developed an enormous body of traditional knowledge to equip their societies for survival in complex Andean mountain ecosystems, this lack of protection leaves them highly vulnerable to outside individuals or institutions who could monopolize control over their traditional resources through patents or plant breeder's rights. Since 1992, the international community through the Convention on Biological Diversity has promised "benefit sharing" with indigenous peoples in return for access to their rich biocultural heritage. However, current ABS regimes actually encourage biopiracy by facilitating access to resources collected from communities and held ex situ. They also discourage customary forms of knowledge and germplasm exchange by focusing on western commercial contracts.

The terms of the Free Trade Agreement with the US and the ongoing negotiations with the EU have radically changed the position of Peru regarding protection of traditional knowledge and the fight against biopiracy, through new laws and modifications to existing laws (e.g. eliminating the obligation to give evidence of the origin of GRs and associated knowledge for patent applications and promoting large scale agriculture investment). This could seriously damage the biocultural heritage of indigenous communities and peoples and the means of subsistence of poor campesinos; among other things, affecting the seed systems of Andean farmers and causing the disappearance of native varieties.

Innovative tools and responses for TK protection & ABS:

- **Community response in the Potato Park:** For centuries, customary law of Quechua communities has adapted to new challenges and opportunities to maintain the cultural and biological diversity of the Andes. But can customary law adapt to the new, ever greater threats of today? The commitment indigenous communities have shown during this Case Study to face these threats and the viability of customary laws to guide ABS systems suggests that it can. To create a community response for protecting community rights over TK, the identified customary laws were used to generate local norms to govern ABS.
- **Research on customary laws:** A number of traditional practices for administering cultural and biological resources were examined including distribution of seeds, inheritance of land, and transmission of knowledge at the individual, communal, regional, and generational levels. Careful scrutiny of these and other practices with community members combined with a literature review of Andean worldview and society, led to the identification of three Andean principles—Reciprocity, Equilibrium, and Duality—that underpin the practices of administering traditional resources. The customary laws identified that motivate these practices and uphold the Andean principles included those that govern ownership, decision-making, access, and benefit sharing.
- **Intercommunity agreement on benefit sharing:** Customary laws and principles identified were then harmonized with elements of the Traditional Resource Rights model to create a legal framework for BS, which was used to draft an Intercommunity Agreement among the six Potato Park communities for access to and equitable sharing of benefits from the use of community ´Biocultural Heritage', including benefits resulting from the Repatriation Agreement between the Potato Park and the International Potato Center (CIP). Thus, the intercommunity agreement is an internal control protocol for the use of their TK and equitable BS – a 'Biocultural Protocol'. It is controlled by their own community authorities and provides the necessary basis for establishing the protection mechanisms being developed in the framework of WIPO's IGC and the CBD.
- **Building a legal framework for strengthening commununity rights at local level:** Collaboration between ANDES and the Government of Cusco enabled the promotion of two Regional Ordenances – one for the protection of native potatoes from transgenic contaminaton (010-2007- CR/GRC.CUSCO) and the other to combat biopiracy (048 - 2008 CR/GRC.CUSCO). These provide a defense for the rights of communities in the face of the new framework proposed by the Free Trade Agreement with the US.
- **Protection of indigenous names:** A study identified the urgent need to potect the Q'ero name, given its evident misuse. Proposals were elaborated for the protection of indigenous names in Peru and the protection of the Q´ero name, anticipating the negotiation of a free trade agreement with the EU where the issue of intellectual property will also be central, particularly with respect to geografical indications.

Key lessons and recommendations: The privatization of biological resources and related knowledge presents a great threat for the Potato Park. Tools for Equitable Benefit Sharing and Traditional Knowledge Protection such as the Intercommunity Agreement on BS, local TK registries, collective trademarks, and denominations of origin, are local attempts to respond to this threat, but may fall short without a local to international policy environment that creates a healthy relationship between local societies and nation-states. Therefore, decision-makers need to define national and international policy and legal frameworks for protection of TK based on the concept of Collective biocultural heritage.

The Peru Case study has shown that customary laws of indigenous peoples can provide the fodder for legal frameworks to assert the rights of indigenous peoples over their Collective biocultural heritage. Moreover, the Andean principles that underpin these customary laws provide for justice, equity and sustainability; and offer a way forward toward meeting the Millennium Development Goals. Now that the international community is establishing ABS regimes and mechanisms for traditional knowledge protection, the inclusion and influence of the Andean worldview in ongoing policy processes has never before been more crucial for safeguarding the rich knowledge base of indigenous peoples. At the same time, an effective way to protect knowledge and rights over resources is by strengthening governance at local level and indigenous legal systems. Evidence of this is the intercommunity agreement signed by the communities of the Potato Park, which can serve as a guide for the implementation of local sui generis systems based on customary laws of communities, with a broader focus on all the benefits derived from the direct or indirect use of biocultural heritage.

To contact the author, please write to ipbn@web.net

A Participatory Action-Research Project of:

IIED, Asociación ANDES (Peru), Fundación Dobbo Yala (Panama), Ecoserve (India), Herbal and Folklore Research Centre (India), Centre for Chinese Agricultural Policy (China), International Centre of Insect Physiology and Ecology (Kenya), Kenya Forestry Research Institute

For more information, please contact:

Krystyna Swiderska
International Institute for Environment and Development (IIED)
3 Endsleigh Street, London WC1H 0DD
Email: krystyna.swiderska@iied.org
Website: www.iied.org

We are grateful for funding from IDRC (Canada) and The Christensen Fund

iied

International Institute for Environment and Development

Centre for Indigenous Farming Systems
Bhopal, India

(H F R C)
Herbal Folklore Research Centre

Asociación ANDES

SEFRI icipe

Ecoserve

KEFRI