Protecting Community Rights over Traditional knowledge: Implications of Customary Laws & Practices

Research Partners' Workshop in Panama, 19-23 November 2007

Organised by Fundacion Dobbo Yala and IIED,
Kuna Territory, Community of Wichub Wala/ Porvenir

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1. Workshop Objectives & Participants

This five day workshop brought together researchers and indigenous organisations involved in the project 'Protecting community rights over traditional knowledge'. The project entails case studies with indigenous communities in India, China, Peru, Panama and Kenya, to explore and develop appropriate tools for protecting community rights to knowledge and genetic resources. The aims of the workshop were to share action- research findings and methods since the last partners meeting in 2005, identify common findings for policy-makers and local communities, and plan next steps.

Participants:

- *Research coordinators*: Ruchi Pant (Ecoserve, India), Jacob Nellithanam (Centre for Indigenous Farming Systems, India), Yiching Song (Centre for Chinese Agriculture Policy, China), Alejandro Argumedo (ANDES, Peru), Heraclio Herrera and Aresio Valiente (FDY, Panama), Krystyna Swiderska and Khanh Than-Tranh (IIED)
- *Participants from Panama study*: Rafael Harris (Kuna Culture Congress), Gilberto Arias (Kuna leader), Crispin Paneso (community leader), Leovigildo Doviaza (Embera-Wounaan leader, Darien), Rogelio Cansari (Embera govt advisor), Adrianna Tocamo (Embera leader), Eligio Alvarado (Director, FDY)

2. SHARING RESEARCH FINDINGS AND METHODS

2.1 Collective Bio-cultural Heritage as the conceptual framework for action-research

At the previous partners' workshop in Cusco in 2005, it was agreed that the concept of 'Collective Biocultural Heritage' (BCH) should provide the common framework for our research. Collective Biocultural Heritage was defined as: "Knowledge, innovations and practices of indigenous and local communities which are collectively held and are inextricably linked to: traditional resources and territories; local economies; the diversity of genes, varieties, species and ecosystems; cultural and spiritual values; and customary laws shaped within the socio-ecological context of communities". This concept responds to the fact that policy and laws are focusing narrowly on protecting TK without also recognising community rights to the web of elements that sustain TK. It also reflects the holistic indigenous worldview where tangible and intangible elements cannot be separated.

The Cusco workshop identified three key Andean customary law principles: Equilibrium (balance and harmony in nature and society); Duality (everything has an opposite that complements it, including individual and collective) and Reciprocity (what is received has to be returned in equal measure). These are widely shared by the other study communities. In addition, the principle of Solidarity or Brotherhood (eg. helping those in need) has emerged in a number of case studies.

The concept of BCH has been useful for action-research in a number ways:

1.*For research/analysis of TK systems at community level*. In the Eastern Himalayan study, a focus on customary laws was not sufficient. The concept of BCH was more

useful for research in the field because things are so inter-connected. Customary principles are very different for traditional rice varieties and commercial crops if one looks only at these principles, so it is better to look at a wider set of elements and how they interact. Furthermore, the study found no customary laws as such related to traditional knowledge protection. "Law" is a very limiting notion because it is a western construct. It is important to also look at the spiritual values linked to bio-resources/TK (eg. belief in supernatural powers); and at practices/norms which are not bound by law (eg. exchange/sharing). Exchange practices are not limited to seeds and agricultural labour but apply also to other things, eg. agricultural equipment.

In the China study, the concept of BCH and customary law has been useful for research at community level, but at policy level they need to work more within the existing 'system' ie. the ABS framework. In the Peruvian study, the concept has been very useful as it allows customary laws to be viewed in a social and ecological context. If we focus only on 'laws' we enter into a western dynamic – indigenous laws are not structured, so it is better to talk about 'legal systems', or 'sistema juridico', which means a system which is accepted by society/the public. Similarly, in the Kenya/Mijikenda case[1], the concept has been very useful for appreciating the holistic nature and interconnectedness of many natural/biological, cultural, social and economic resources, and recognising their collective ownership.

2. For developing local tools to protect TK:

- Community registers: In Peru, the BCH concept is being used to develop fields for the community register database, which include sub-fields for each component of BCH – GRs, culture, traditional knowledge, landscape. The register seeks to strengthen all the dimensions of BCH and reflects the linkages between them. Community BCH registers are also being developed in the China, Eastern Himalayas and Kenya cases.
- Indigenous 'Branding': The BCH concept has been used for branding local products from the Andean Potato Park, using a collective trademark. Geographical Indicators could be used to protect indigenous names (which are linked to language, culture and TK) from being exploited commercially, by combining them with certificates of origin of GRs/TK. Such tools are needed to link culture/TK and economy.
- Inter-Community Agreement for benefit-sharing in Peru: BCH and Andean customary law principles are being used to guide the development of an ICA for equitable benefit-sharing between the 6 communities of the Potato Park. This will be linked to the agreement between the Potato Park and the International Potato Centre for repatriation of potato varieties. The benefits to be shared have been derived from BCH, and the use of customary principles in the agreement means that the benefits returned will contribute to strengthening BCH. The return of lost varieties will also bring with it associated knowledge, cultural practices and beliefs (eg. recipes, rituals etc), and is being used to teach children about their lost culture.
- Kuna access protocol: Use of the BCH concept and starting from cultural principles has helped them develop a community protocol for external access to TK related to biodiversity, based on the community vision. The protocol is likely to be adopted by the Kuna Congress as it is based on Kuna/indigenous values.

[1] Comments received from Doris Mutta, KEFRI, co-coordinator of the Kenya study, unable to attend the workshop.

3. For communication with policy makers, NGOs and local communities.
BCH reflects the general understanding of communities, eg. of Adivasi communities in Chattisgarh/India, and is useful for communicating the community view of genetic resources as heritage to share. We need to strategically promote this framework of community heritage into the mainstream, as opposed to the CBD's concept of national sovereignty over genetic resources - the CIP-Potato Park agreement has started to do this.

- In the India/E. Himalayas area, there are opportunities for using BCH to inform policy at the local level - legal scholars are looking for a new concept, an inter-cultural approach to law; and the Darjeeling Hill Council has the power to develop its own laws. There is a real need to promote understanding of BCH amongst India's national policy makers, but this is much more difficult (although there are opportunities in the national Constitution).
- The India/ Chattisgarh study is using the concept to inform NGOs and indigenous networks, and it is useful to support efforts to stop Bt rice cultivation.
- In Panama, BCH and customary law principles will be included in framing the objectives of the access protocol to present the indigenous vision. Use of BCH has also facilitated the research process, as it made the local healers understand the study much more easily than if it was just presented in terms of the CBD or IPRs, and is a flexible concept – it strengthened interaction between the research team and the villagers.
- Similarly, the BCH concept is very appealing to indigenous communities in Kenya, and has made them realise the breadth of wealth they have and have continued lost, eg. music, instruments, folklore, burial ornaments (stored in many museums), which are widely utilised with very little benefit to them.

4. As the overall Framework/ Vision to guide action-research

- BCH provides a holistic vision for TK protection, which also seeks to protect and strengthen the interlinked components of TK systems such as culture and economy. For example, in the Potato Park a community register database of cultural expressions is also being developed.
- Among the Mijikenda, the management of BCH, traditions and customary laws were originally more intimately connected – the BCH concept contributes to healing the divide brought about by modernisation, religion, education and marginalisation of traditional institutions.
- The BCH vision seeks to maintain free flow of resources between communities over large areas (eg. in the Andes). Similarly in the Himalayas, maintaining free flow is important because knowledge is shared over wide areas, eg. through songs brought by wives from neighbouring countries (Nepal, Bhutan and China).

BCH is an evolving concept, not set in stone. ANDES is exploring the use of complex theory as an analytical tool to better reflect and understand the linkages between the different components of BCH. TK systems are complex systems, where many different elements interact. ANDES is also using BCH to organise their ideas so that they reflect indigenous perspectives – BCH is more useful than using pure ecology/biology or western concepts as it better reflects reality. The China study found it useful to refer to the diagram of the Potato Park showing the interacting Spiritual, Material and Landscape components, and internal and external contexts (see

Cusco workshop report). We need to see if we can improve the BCH concept – both theoretically and as a practical tool - based on our action-research.

2.2 Customary Laws and Landscapes: Developing a Management Plan for an Indigenous Biocultural Heritage Area (Alejandro Argumedo, ANDES/Peru)

Customary laws are complex systems: most customary laws come from nature itself – the environment shapes livelihoods and cultural and spiritual identity. Social organisation is structured around the management of biocultural resources; and TK is the result of long and continuous use of biocultural resources. Communities have acquired a broad knowledge base of the behaviour of complex ecosystems. Most customary rules and principles have root in the use or 'practice' of natural resources – long and continuous use of NRs in a locality evolved into customary practices. When customary practice from long use obtain the force of law, it becomes customary law. But customary law is totally different to the concept of law in the western world. Derived from 'natural law' customary laws include complex processes of socio-political organisation which are not captured in western law, and express the interaction of different elements (material, worldview and spiritual). The study of customary law needs to consider these interaction processes and the socio-economic and political processes that shape livelihoods. Thus it is about complex systems, and complex systems theory may be useful to understand them, requiring an interdisciplinary approach.

The methodology ANDES is using focuses on linking epistemologies (eg. bridging TK and western science); complex systems; and using an interdisciplinary approach, based on the BCH conceptual framework. They are doing research on customary laws and landscapes to develop a park management plan. The meanings and rules linked to principles of Reciprocity, Equilibrium and Duality are being explored in relation to landscape management, sacred sites, 'wilderness' areas, common property resources and agriculture. Decision-making practices and socio-ecological networks are also being explored. This learning and action process is developing a 'Life Plan' or 'Plan de Vida' for sustainable administration of Collective Biocultural Heritage of the indigenous communities, according to their cosmovision, traditional knowledge and practices, for the improvement of quality of life. It brings together landscape management and protection of culture – ie. BCH. The Plan seeks the customary application of norms and institutions for conservation and sustainable use and fairness, and protection of farmers' rights (including in relation to access to genetic resources and benefit-sharing from the use of associated traditional knowledge).

Lessons learned:

- Customary principles and laws have been useful to develop tools for the administration and protection of BCH. A key challenge is how to move from an oral to a written paradigm without loosing adaptability.
- Treating customary laws as complex systems helps to identify critical situations that require urgent interventions.
- It is important to link economy with culture (eg. through G.Is) – the potato itself is culture (eg. certain varieties are planted on the edges of fields as 'guardians'); and to count on a common conceptual framework based on a particular worldview.

2.3 Development of Community Access Protocols by the Kuna (Heraclio Herrera and Aresio Valiente, Panama)

All Kuna social cohesion is based on the customary principles of Equilibrium, Reciprocity and Brotherhood, so they have had to work on TK protection based on those concepts. First they spoke to the indigenous authorities who wanted the focus to be on medicinal plants and knowledge, as plants are like part of our family. They asked participants: what does TK mean for you? Where does it come from? Who owns TK and medicinal plants? The information they got includes laws that exist but are not written down.

According to Kuna custom, if anyone wants to do research in the community, they need permission from the community authority – they are now writing down such requirements as a protocol. They also formed an association of healers of several communities as that is how they meet usually. Once the Protocol is adopted by the Kuna Congress, they will use it to get the Law 20 revised. The protocol is also the model the Embera are using – they want to change Law 20 to reflect the access protocols of all the indigenous communities in Panama.

The Law 20 (2000) on intellectual property protects indigenous cultural expressions. What have been the impacts of Law 20 in terms of benefits? Eight indigenous designs/art have been registered, including mola (textile weaving), and basket making from palm etc. Four companies/private entities have asked permission to use these and negotiate royalties, of which one case is advancing with 12% royalties being negotiated. The Law 20 requires PIC of indigenous congresses, but it does not cover biodiversity.

The findings of the study on basic principles for ABS and TK and the access protocol were published as a booklet, and included in the National Environment Decree – in a section on access to genetic resources and TK of indigenous communities, which requires PIC of communities. The Decree also requires a national commission of medicinal knowledge to be set up (it is not fully operational), and establishes a register and certificate of origin system. But is only a Decree, not a law. The access protocol will be available in English in January 2008.

2.4 Inter-community Agreement on Benefit-Sharing: Customary laws and equity in a Quechua farming community (Alejandro Argumedo, Peru)

How to use customary principles for development of a BS agreement? In the Potato Park the 6 communities have joined their territories to form a bigger land area (in most communities in Peru, communal lands and institutions are being destructured). Through the agreement with the International Potato Centre (CIP), 540 potato varieties have been returned to the Potato Park. The ICA aims to ensure that the potatoes from the CIP agreement and other benefits are shared equitably amongst the communities. A social network already exists in the community that promotes equitable benefit-sharing (eg. wealthier people hold fiestas which share/redistribute resources). The ICA is being developed in Quechua to strengthen linguistic rights, and existing social norms are being used to guide the agreement, as opposed to external contracts and western norms. The ICA agreement for equitable benefit-sharing also

refers to elements of international instruments that support its objectives – eg. the CBD, FAO provisions on farmers' rights and ILO Convention 169.

The ICA aims to share benefits from the CIP agreement amongst the 5000 people from the 6 communities. What benefits should be included? Economic or research/capacity building? How should different benefits be shared? A communal fund has been set up for the funds returned/generated by the community from the CIP agreement and other communal economic activities (eg. eco-tourism, and a traditional restaurant). How should benefits be shared amongst different groups? There are people involved in community economic groups, others that contribute to generating benefits as they contribute to conservation; and others that don't contribute directly but are members of the community. Different communities have different existing modes for EBS, which all need to be taken into account. ANDES is working with CIP to develop maps of genetic resource flows to see the added value at landscape level and impacts on *in situ* conservation. Although 500 varieties will be distributed amongst 5000 people, the varieties will spread beyond 500 people through reciprocity/open access (and no patents are allowed on the varieties).

A key objective of the ICA is to prevent conflicts amongst the communities when benefits start flowing back – hence they developed it first, but there is now a need to also develop an access protocol. A key lesson learned has been that writing down customary laws is like 'putting them in the fridge' - they stay 'frozen' as opposed to being adaptable to changing needs. It is very difficult to translate what is meant to be oral to a written form as it looses its richness and beauty of expression, and its whole meaning can be lost when translated.

2.5 Participatory Plant Breeding, Landraces and ABS in China (Yiching Song)

The original PPB project's overall goal is to link the two seed- systems (the farmer informal system and the government's formal system) through PPB/PVS for crop improvement, biodiversity enhancement and farmer empowerment. The Guangxi PPB initiative started with and focuses on maize varieties. To date, four new PPB maize varieties have been generated in this collaborative, multi-stakeholder driven action research process. In addition, some other valuable local genetic resources were identified and "taken" from the villages and farmers, for scientific use, and for conservation purposes. During the PPB process, more than 80 germplasms have been exchanged between farmers and scientists.

Unfortunately, according to the current *Regulation on Protecting New Plant Varieties*, there is no policy or legal recognition for such products that have been jointly developed and, as a result, there are neither formal protection nor incentive mechanisms in place to support this kind of innovation. If the new PPB varieties developed so far or other new varieties emerging from the collected germplasm were to get state registration, they will not belong to local communities or farmers any longer, but become solely professional breeder developed varieties. If farmers would want to obtain the seeds, they will have to go to the market, despite the fact that the genetic material was collected from their own fields and that farmers have actively participated in the whole breeding process.

This is the true story of Guinuo 2006[2], one of the PPB maize varieties. In spite of the fact that its parents come from two local communities – Du'an and Yishan, farmers from those areas need to pay the same price as others to obtain the seeds. Right now, there is no opportunity for farmers to have ownership or even joint ownership of a new plant variety. Definitely, there is a gap between the existing regulation and the PPB activities in the field. Policies and laws are lagging behind innovative practices "in the field". Today, with the support from the ongoing PPB project, local communities have the opportunity to make an agreement with other PPB stakeholders on practicing seed production of Guinuo 2006, which can bring, in the context of the Chinese government's liberalization of the seed market, much more market profits than before. Farmers' awareness concerning the proper recognition, and fair access and benefit sharing issues related to genetic resources (not only crops, but also including medicinal plants and other local genetic resources and TK), is increasing when realizing the cultural and market values of their seeds.

In the context of the PPB research initiative in Guangxi, some efforts have been tried for making an agreement on benefit sharing among all PPB stakeholders, i.e., farmers, local extensionists, and breeders from scientific research institutes. They all agree that they should share part of the recognition and benefits (including potential commercial profits), but they have different points of views on how exactly to define these shares, based on their previous and future contributions, such as providing genetic material, energy, time, skill and knowledge, etc. So far, no concrete proposal for benefit sharing has emerged, and discussions and negotiations have reached a difficult point. There remains a strong desire from all sides to put an agreement into practice in the coming period, as a (pioneering) example of an effective ABS mechanism grounded in reality.

Our experience and the emerging issues have shown that more research and actions are needed for exploring appropriate mechanisms, regulations and laws to ensure fair access and benefit sharing of genetic resources and related traditional knowledge in the rapidly changing context in China. As researchers, we are interested to explore how to practice the PIC[3] mechanism within the CBD regime in China, and to find out in which ways farmers' rights and communities' rights can be well recognized and respected by the government and the society –key elements of the CBD to which China has signed on (CBD Article 8 (j) 2004). As a 'common good', most of the genetic resources and traditional knowledge collectively belong to the community, not individual farmers (Yan 2006). However, in China, the community as a unit has undergone some major changes, mainly because of a series of political and economic events, such as revolutions around 'land' in the 1950s and 1980s. Nowadays, farmers are living more individually, are reorganizing relationships among themselves, and developing new links with the "outside" world (which, due to new means of communication is becoming better known). This raises the questions of what "community" means in practice, and who represents or could represent the "community" when making agreement on ABS, among farmers and with outsiders?

Based on the previous research in Guangxi, we have noticed that farmers are very interested in and supportive of the creation of "platforms" to manage their own

[2] So far, Guinuo 2006, as a kind of waxy maize, is the most valuable PPB variety on the market.
[3] PIC: Prior Informed Consent. This term was first used in CBD, and it means that if outsiders of the community want to use its genetic resource or traditional knowledge, they need to get the permission from the community before they take action.

resources and knowledge: these kinds of "platforms" are like new expressions of farmer organization, constructed and experimented with "from below." Our future research is interested to exploring in more depth the ways in which farmers will be eager to join together and act collectively in terms of protecting their own resources and knowledge, and how farmer organizations can obtain the formal recognition and political status from the central government, when taking into account their GR&TK related IPR and ABS issues.

2.6 Traditional rice varieties in Chattisgarh, Central India (Jacob Nellithanam)

Food availability is low which means that rice diversity is very important. Public research institutes and the government have promoted technology and science in agriculture, so TK systems have been weakened in recent years. But there are still some areas where communities are growing traditional rice varieties. Dr Richaria collected 20,000 rice varieties (landraces) which are held by Raipur university and gaining access to them is an important issue. But gaining repatriation of rice varieties from the research centre is not easy as the system promotes the flow of genetic resources the other way – from communities to the public and private sectors. The CBD does not make much provision for in situ conservation of agricultural genetic resources. There are now less varieties in situ due to genetic erosion although there is no erosion in the areas where Jacob is working due to awareness of the need for conservation.

The CBD, National Biodiversity Act and National Biodiversity Authority regulatory and institutional framework promote control of genetic resources for the benefit of elites. The NBA has the power to decide over access to genetic resources, which means they would have given Syngenta access to genetic resources when they approached Raipur university because they work according to the principle of the sovereign right of states over natural resources. Communities have no say in decisions to be made on the BCH of the people. The CBD/national law does not deal with agrobiodiversity, and the law on Plant breeders and farmers' rights just creates monopoly rights.

Bt rice brings the threat of GM pollution, which will be very difficult to remove due to seed exchange between communities, and will limit the capacity of communities to deal with climate change. Jacob and others managed to get the government to burn the Bt trial areas from advancing in the state. The concept of BCH will be used to argue for stalling potential contamination from biotechnology/GM companies. Public Litigation cases can also help through the Supreme Court. One positive development has been an organic system from Madagascar which can improve the productivity of local traditional rice varieties, through agronomic practices (seed spacing etc). This new system has also brought opportunities for interaction with policy makers.

The US-India FTA links the Indian agriculture system very closely with the US system and US companies. The US-India Knowledge Initiative in Agriculture will give the US access to India's genetic resources, and in return India will get biotechnology. This bilateral agreement is not subject to the Biodiversity Act and is a serious threat to India's BCH. Almost 100,000 farmers in India have committed suicide in recent years due to chemical agriculture eg. hybrids and Bt cotton.

In some areas, the response has been to conserve rice varieties – eg. the study area in Bastar is largely indigenous and there are 5000 rice varieties in this area alone. Darohar ('heritage'), a local NGO, has been working with a group of indigenous and non-indigenous farmers. As part of the study, they tried to see if there were any customary laws, but only found principles which are followed as a practice – eg. reciprocity and sharing.

The study area is a secondary centre of origin of rice diversity, and centre of origin for indica rice, so it could become a community conserved area for agro-biodiversity. Outside studies (eg. World Bank) state that as there is high poverty in the area, rice diversity is linked to poverty. But rice diversity has great market potential –eg. they have many varieties of scented rice - how to tap this economic potential?

Discussion:

- If the Supreme Court rules against a GM contamination case brought before it this will set a bad precedent so it may be best to use other avenues in the 1st instance. In Peru, they have managed to get the Cusco government to pass a State Order to ban GMOs. They argued that GMOs would affect tourism because potato is culture and if GM crops are planted the area won't be seen as 'pure' nature - GMOs will have an impact on traditional agriculture and culture. But in Chattisgarh this would be very difficult due to the biofuel threat and vested interests.
- It would also be very difficult for the indigenous communities to develop their own access protocol because of the local conflicts (rebel fighting), and it would not be much use as many genetic resources have already been collected. But technically it would be possible to do this under PESA (the Panchayat Extension to Scheduled Areas Act). The best approach may be to start with opportunities at international level (CBD etc) to set up an area for *in situ* conservation of rice diversity.

2.7 Kuna TK Systems/ Beliefs (Gilberto Arias, Kuna Leader, and Rafael Harris)

'Iborgu' visited the communities and told them to build a communal house and organise themselves. Different groups did different tasks, eg. planting crops, and through exchanges between the groups they met all their needs and there was no poverty – this system is still maintained today. Iborgu also brought traditional knowledge. Then the 'neles' arrived to continue the teachings of Iborgu. One of the neles told them that the earth is their mother; plants are alive - they talk to each other and breathe; and materials underground cannot be extracted (eg. gold) because they are part of mother nature (it would be like raping her). Trees are very important as they provide water, food for animals, medicinal plants, canoes etc. Taking trees is like performing an operation on the earth. God said it is forbidden to take trees because they belong to God.

Indigenous people use many different plants for medicines which prevent aging and keep them healthy. But TK is being weakened very much today and the remaining TK holders are dying – partly because of western education they have started to loose TK. The book on Kuna Laws – called 'our path' – is used to recover and protect TK and there is work in different schools to teach bilingual and inter-cultural education. The Kunas need to strengthen medicinal knowledge in order to strengthen their spiritual

values. Medicinal knowledge is transmitted to committed people only, through a process of apprenticeship which shapes a person ethically over months. Traditionally, potatoes and rice are also medicinal, not just for nutrition. The Kuna use coconuts for barter (eg. with boats from Colombia). A Kuna high yielding coconut variety is being cultivated commercially in Colombia (but with no benefits to the Kuna).

Embera perspective on threats to TK (Leovigildo Doviaza): There are some healers that sell TK for very little – the community authority should control this. There are many projects researching them and their knowledge but they don't leave anything for the community. If the principles of Duality and Equilibrium are to apply, indigenous people need training so that they can be involved in natural product discovery.

2.8 Legal and non-legal tools for TK Protection – Ruchi Pant, E. Himalaya study, India

What does 'Protection' of TK mean? The western notion is protection against misappropriation- ie. the need to acknowledge and reward the provider. But in agrarian societies 'protection' is against loss eg. due to non-usage. The State and communities have different perspectives on GRs and TK. Biopiracy is a state concern but is not really a concern for local farmers - for them, free sharing is the priority.

International agreements have been trying to explore the potential of customary law in the protection of TK and GRs. The Darjeeling Gorkha Hill Council has special semi-autonomous status and can develop its own law, which provides an opportunity for incorporating BCH. Can customary laws protect TK? The principle of free sharing suggests that customary law is not useful. Though all practices elicit compliance only a few have the force of 'law'. There is a strong belief in supernatural powers, eg. that seeds and rain come from mountain gods, and principles of reciprocity, duality, harmony and solidarity are evident. But there is also complexity due to different religions, migrants etc.

National laws eg. on Farmers rights and the Seed Bill, do not prevent the loss of GRs and don't recognise BCH – this is a major problem. Women do 80% of farming and if their participation was increased, there would be more possibility of increasing recognition of BCH in national law. There is now a discussion on bringing local Biodiversity Management Committees and Joint Forest Management into village panchayats. While many panchayats are weak and politicised, and the government is not doing much to strengthen them, they can be strengthened with NGO support, which may provide an opportunity for more decentralised decision-making. Although BMCs only play an advisory role, they still offer an opportunity to strengthen community role in decision-making.

Non-legal mechanisms include People's Biodiversity Registers, community seed banks, and the national digital library to safeguard TK. Madhav Gadgil is helping the study with PBRs, and the communities have chosen to focus on fodder species since land is limited for fodder, fodder availability is reducing and it is needed for organic farming. Peoples' Biodiversity registers are also being used in India to develop resource maps for seeing how rural employment can be generated. They could be promoted as Peoples' 'Biocultural' Registers, which also include associated cultural

and landscape dimensions of BCH. Non-legal mechanisms also include adding value and links to domestic markets eg. using branding; links to premium markets (eg. organic); and education modules on TK. The Lepchas are producing traditional music on cassettes.

In conclusion, legal pluralism is needed to protect multiple/diverse knowledge systems. Legal pluralism means recognition of both statutory and customary laws – the Indian constitution recognises legal pluralism, but in practice the judiciary does not if there is a conflict – that is why both legal and non-legal measures are needed to protect TK.

Discussion:

- The customary practice of sharing is important for protecting TK because it strengthens the commons.
- The purpose of customary law is mainly to enrich knowledge systems; but the goal of IPRs is protection for commercial ends – so neither is sufficient, and ABS is also needed to ensure fair benefit-sharing.
- In the Kuna experience, education (eg. history, language) is very important for protection of BCH, because it strengthens identity
- In Panama, decisions of the Kuna Congress on matters recognised by national law (eg. Ley 20) apply outside the indigenous territory as well as within it.

2.9 The Indigenous Congress system and national law in Panama (Aresio Valiente)

The colonial state suppressed the Kunas, so the Kunas fought the state in the 1920s and won the war, and were able to insert some provisions in the Constitution and Peace Treaty that followed. Then the Kunas started to prepare themselves professionally, which helped them understand wider society, and the military government at the time supported the Kuna education etc (as it was made up of lower-middle classes). In 1972, the Constitution established many new rights for indigenous communities to develop laws. In 1979 they got the 1st indigenous governor for Kuna Yala, and the Congress was then set up, along with technical commissions in different areas. But the decision-makers are the elders/wise men, not the technical commissions.

The Fundamental Kuna Law is not recognised by the government but the Kuna have managed to get bits of it inserted into national law (on health, education and environment). The State has not ratified ILO 169 but they have managed to get some of its elements included in national law bit by bit. Each Kuna legal proposal takes two years because it goes to communities for consultation and is approved by in the Congress by consensus – the leaders of each community have to vote. The Kuna Congress and laws are modelled on the Kuna model of decision-making because it looks for consensus. They are now going to present a proposal to modify Law 20 to include a biodiversity element. Indigenous representatives in government – ie. MPs - are elected by political parties, and there are 6 indigenous MPs which is approximately proportional to the indigenous population. The Commission on Indigenous Issues in the parliament gives indigenous peoples more power in the Parliament.

The Kuna Culture Congress advises the Kuna General Congress on cultural issues, TK etc, but the State deals with the Kuna Congress. The Congress has an office in Panama city and actively engages in international policy eg. the UN Declaration process. The Congress is the main tool which has enabled the Kunas to leverage power. It is now starting to develop plans as well as laws – eg. for tourism – and has its own direct dealings with donors. It is self-financing, through local taxes levied on companies which operate on their lands. To deal with external threats (eg. pressure for commercial development on Kuna land), there is a need to strengthen the Kuna Congress – institutionally (funding, technicians); and culturally through the congress and initiatives to strengthen Kuna identity.

Discussion: In India many indigenous/tribal MPs serve the political parties as opposed to indigenous peoples' needs. The Kuna MPs on the other hand prioritise indigenous needs above political party interests because cultural identity is strong. Organisation and gains in power may be easier in a small country like Panama where the indigenous population is relatively large (10%).

2.10 Identifying Common Findings /Methodological Challenges for TK protection

1. Analysis of complexity: TK systems are very complex, as they are influenced by different interacting elements, and by external conditions and changes (eg. economic development), which affect their 'internal' dynamics.
2. Protecting TK requires the use of markets, databases, strengthening NRM systems/commons – not just policy and law. Linking TK/BCH and economy (eg. through value addition) is critical to generate incentives for conserving it.
3. TK, GRs and BCH are community 'commons' and need to be treated as such – international policy & law (eg. on ABS and IPRs) need to be changed to support the commons and sharing within and between communities, as these processes created diversity. ABS is geared to promoting flow of GRs from communities to research institutions and companies, rather than sharing of GRs with/amongst communities.
4. Even in communities where cultural values are less strong (in China), the core idea of customary law is *sharing* (ie. this is common to all the studies). At the same time, there are many culturally diverse communities (eg. in India) which need to be taken into account (but have not been involved in the project).
5. We need to strongly critique 'ABS' - it has not worked as countries and communities have received few benefits. For centuries, explorers, botanists etc have been taking GRs from communities which openly share resources, and since 1992, the CBD facilitates this because GRs flow one way only. Reciprocity means that genetic resources also need to flow back to communities to complete the circle.
6. A key step towards protecting TK in any context is to strengthen representative local institutions at community level, but different types of institutions are needed in different contexts – eg. traditional congress in Panama, and farmers' organisations in China.
7. The best use of customary laws is to develop local tools and practical mechanisms to protect TK – that strengthen customary laws in practice – because customary laws are associated with practices and are dynamic, so their true nature/form is kept.

8. TK is often linked to spiritual values which shape customary laws/values. It is important to emphasise the holistic nature of the themes – nature, culture, spirituality and law.
9. There is also a need to get formal/western systems to recognise the validity/importance of TK systems - eg. the role of traditional healers in healthcare, and of farmers in plant breeding.

There are very different levels of recognition of indigenous peoples' rights and institutions in different countries – eg. strong recognition in Panama, and very limited in India, where the state does not even recognise the existence of 'indigenous' peoples, only tribal peoples (thus, although India signed up to the UN Declaration on Indigenous Peoples' Rights, this means very little). Therefore, strong international law is needed so that countries comply with and implement indigenous peoples' rights (eg. in Panama, the government revised its IPR law to remove some elements to protect TK). In addition, local institutions could be linked through a global network which supports/strengthens those with weaker rights etc; and the rich discussions in international fora such as this workshop could also be shared with local institutions – eg. through newsletters for healers.

3. THEMES OF COMMON INTEREST

The following issues were identified as important emerging areas of common interest for information exchange and future work and collaboration:

3.1. TK Registers/ databases - How to develop fields based on BCH?

Many of the studies are developing community registers – eg. PBRs of rice and fodder in the Eastern Himalayas; and in the 4 communities of the China Study, community registers for Genetic Resources and TK have been established. In some cases (Peru, China and Kenya), these are being developed as computerised databases. To reflect and support the concept of BCH, database models are needed where sub-fields can be added, and they may need to be structured like a circle or a web. They should bring together customary laws and different systems of classification for different elements (eg. classification of landscapes from different perspectives). This is very difficult, so in the Peru case they decided to focus the database only on potatoes. Fields include associated environmental, ecological, political, economic and cultural aspects, such as songs, designs and social processes, all of which had to be included in preparing a database of BCH.

We need to develop the overall conceptual basis for a BCH register, that can be locally adapted – so that we can build the architecture (identify fields etc) for a database. This should be a relational database that allows any traditional knowledge information to be inputted so that it automatically appears in the right field. Sub-fields on BCH are needed – eg. if a variety is called 'king's rice' that is already a cultural dimension. We need someone to work out how best to organise existing knowledge/ information (epistomology) – ie. to work on the classification and construction of biocultural heritage applied to landscape management, medicinal plants, plant genetic resources for food and agriculture etc, using for example genealogy as taxonomy. In the Peru study, they need to know how to structure the information on potatoes and on how potatoes relate to other factors. Along with databases, planning software associated to BCH can then be used for computer modelling based on the data to help

understand/analyse complexity. The database can thus serve as a planning tool for landscape management as well as a tool for protection and promotion of TK. An inter-disciplinary approach is needed to apply complexity theory to BCH registers. Users of the database will be local communities first and foremost, but also policy makers and scientists – and inputs are needed from different sectors to develop it.

For a BCH register, with each entry/resource, sub-fields could be included on the related cultural values and practices, landscape dimensions etc. Use of complexity theory means also including associated scientific knowledge, policy context, and all elements that help to prevent the loss of the resource/knowledge. A conceptual framework could be developed through an understanding of systems around important resources, eg. potatoes, and then through understanding the links between different systems. How do the elements of BCH interact? The community view can provide the starting point and then science/other disciplines can be used to further understand the linkages (eg. between knowledge, resources, landscapes, customary laws etc). Registers can thus be based on complexity theory and TK systems.

3.2. Protection of Indigenous names, G.Is and Certificate of Origin

Indigenous names reflect a place and a culture. Many are already used by western companies for branding commercial products (eg. 'tuareg' bags). We could examine the use of trademarks/GIs and certificate of origin to protect indigenous names and explore the possibility of creating a new tool that combines these that would link 'creative economy' with 'solidarity economy', using BCH as the guiding concept. G.Is can be used to protect traditional varieties from a particular area as well as traditional production processes. In China, farmers need to start using defensive protection such as G.Is otherwise they will get 'swallowed up' by larger economic actors. Using a GI to protect a traditional variety name could prevent others (eg. CIMMYT) from giving a seed its own name. At the same time, it was pointed out that the added value is already present in traditional varieties and using an IPR framework raises concerns for some (even though these are 'soft' IPRs). Using the BCH concept as the basis for such market instruments can help to maintain the traditional value framework. Certificate of Origin are already in place in some countries eg. India, where they have been used to protect community rights in a national case. But many genetic resources held ex situ do not have 'passport data'.

3.3. BCH and Adaptation to Climate Change

Climate change requires a larger gene pool for adaptation. The speed of change calls for the re-introduction of seeds and strengthening ex situ and in situ gene flows, eg. through the CIP repatriation agreement. It is said that poor farmers will be the worst affected, but small/diverse farmers are the ones that can adapt. We also need to emphasise the role of TK systems and BCH in adaptation – and of 'agrobiodiversity' in its broadest sense, including wild resources and medicinal plants that also form part of local food systems. ANDES are doing a study on how traditional practices have helped the communities to adapt to climate change.

Adaptation to climate change requires strengthening BCH, because:

- Traditional knowledge and innovation processes create and sustain biodiversity, and include strategies for adaptation and coping with stress in marginal environments (eg. indigenous communities in the Andaman Islands predicted the Asian Tsunami).

- Traditional varieties provide the key to adaptation – eg. in India wheat production has been affected by the rise in temperature, but traditional varieties have much higher stress resistance.
- Landscapes need to be linked so that communities can strengthen seed networks and gene flows. Maintaining gene flows over larger areas means that land rights need to be secured.
- Exchanges of resources and TK between communities are cultural processes; and spiritual values sustain cultural practices (eg. for seed exchange).

It is well established that modern varieties like hybrids are less adaptable than traditional varieties because they are less in tune with the local ecosystem. Yet some environmentalists are advocating the GM route to speed up adaptation to rapid climate change. There is a need to look at mitigation as well as adaptation, ie. how to reduce the impacts of agriculture on climate change – this also means strengthening local markets, access to land, BCH etc.

3.4. How can we encourage more GR 'repatriation' agreements?
A case study of the CIP-Potato Park agreement is being prepared which could be used to share the experience with other CGIAR and ex situ centres. The Head of the CIP is very supportive of the CIP-PP agreement. ANDES plan to measure genetic diversity about 4 years after repatriation and show that there is higher or equal diversity than in a gene bank, at lower cost than maintaining a gene bank. Private gene banks have the largest collections of seeds - Syngenta for example has said it would be willing to return the seeds that it is no longer using. Similar arrangements could be explored for medicinal plants and wild foods, eg. with Kew Gardens Millennium Seed Bank. Missouri Botanic Gardens have collected many plant samples from Panama and collaborate closely with Monsanto.

3.5. Engaging with FAO Treaty on PGR, Rome. The FAO Treaty deals with ABS/TK relating to crops, for about 32 species listed in the Annex, which are mainly commercial seeds - ie. access to CG centres. The CBD ABS framework/regime deals with other crops not listed in the Annex, medicinal & wild plants. The need for complementarity was established in the Nairobi Final Act (CBD COP5, 2000). But farmers' rights issues are also on the FAO Treaty agenda, and Brazil recently proposed to address TK in the FAO Treaty (which is legally binding).