COMMUNITY CONSERVED AREAS IN SOUTH ASIA

Understanding Conservation with Livelihood Security Values

India

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ABSTRACT

This report is based on research and analysis undertaken with the objective of deepening the understanding of CCAs in India, primarily to achieve two goals. Firstly, to bring to light the unknown conservation efforts undertaken in India and secondly, to attempt an action plan that would cater to the individual and overall needs of these areas. This report is based on research in nineteen sites across six Indian states, studied over a year. The wealth of knowledge of CCAs available through a decade of research in India provided the lens through which the data, from the nineteen sites, was analysed.

This report attempts to deepen the discussion by (re)defining CCAs and establishing, what appear to be, their core characteristics. The report continues to identify overarching threats and challenges faced by CCAs within the Indian context. The effects that these spaces create within the ecological, cultural and political spheres of the CCAs in question are also documented herein. In recent years, the view that conservation is a purely technocratic activity is changing. This allows for more spaces for community participation in conservation. The report is organised in two parts. It gives a brief analysis of the various laws and policies that have been and can been applied to support and strengthen CCAs. It also takes the reader through some case studies from different parts of India. In conclusion, the report attempts the ambitious task of weaving together the stories of conservation to synthesise the many experiences into a document that can be used to both further the discussion on these spaces and further practice within these such a category pf conservation.

Keywords: India, forest, environment, wildlife, tribe, panchayat, sacred, reserve, regulate, law, north east, case study

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PART II

India – A Status report[1]

Note: *This report is in two parts:*

Part I *draws from the experiences and lessons detailed out in "Pathak, N., Community Conserved Areas in India – An Overview. In Pathak, N. (ed.) 2009 Community Conserved Areas in India – A Directory. Kalpavriksh, Pune" as well as a couple of new case studies carried out in Karnataka, Maharashtra and Arunachal Pradesh (case studies annexed) by Persis Taraporevala, Mashqura Fareedi and Neema Pathak.*

Part II *is an independent report based on a study carried out during this project exclusively in the North Eastern states of India, by Sudipto Chatterjee, Sonali Ghosh, Jayanta Sarma, S.K. Barik, B.K. Tewari and Kulen Chandra Das.*

[1] The analysis in this report has been prepared by Neema Pathak Broome and Persis Taraporevala in 2010. This has largely been adapted from Pathak, N. (ed.) 2009 *Community Conserved Areas in India – A Directory.* Kalpavriksh, Pune, with additional information from the case studies documented under the CCA South Asia project. For more in-depth analysis with case studies from other parts of India please refer to the above publication.

PART I

Community Conserved Areas in India: An Overview

Introduction

This report is based on research and analysis undertaken in India under the project "Community Conserved Areas (CCAs) in South Asia: Towards an Understanding of their Conservation and Livelihood Security Values." The main objectives of this project were to:

- Deepen the understanding of the CCA phenomenon with respect to the types of CCAs in the South Asian region existing, or newly emerging, and their status.
- Analyse these initiatives, distil and discuss lessons learned and policy implications.
- Bring together community representatives, government officials, NGOs, and individual experts to discuss the case studies and lessons, and work out a national and regional plan of action.

The main objective of this one-year long documentation process was to deepen the understanding of CCAs in India, primarily to achieve two goals – bring to light the unknown conservation efforts undertaken in India and work towards an action plan that would cater to the individual and overall needs of these areas. The second objective was not completely fulfilled within the year and efforts to that end were made even as the project drew to an end.

Methodology

Kalpavriksh has already been engaged in a decade-long research and documentation process of CCAs in India. Much of the analysis presented in this report draws from the experience of that documentation (as mentioned in Footnote 1). Glimpses of some of the CCAs that were studied and documented earlier but have been used in the present analysis are presented in Boxes 1-4 below.

A few new case studies were also commissioned under this project, particularly in the North east India. This region was focused as it is one of the 12 hotspots of biological diversity in the world and in the recent times many examples of people's efforts at conserving this now threatened diversity have been emerging. The current project helped to document these efforts which could not be covered earlier because of dearth of resources. This opportunity was also used to look at two more examples from Maharashtra and Karnataka. Table 1 below summarises some of the cases that were documented under the current project.

Table 1: Case studies documented under CCA-SA project (see Annexures I to III for 3 detailed write-ups)

No.	State	Sites						
		1	2	3	4	5	6	7
1.	Arunachal Pradesh	Gumpha (Monastery forest) CCA	Proposed Rhododendron reserve	Thembang Bapu CCA	Land under the Apatani tribe	Land under the Wachoo tribe	Land under the Adi tribe	Land under the Mompa tribe
2.	Assam	CCAs in Karbi Anglong	Goalpara	Marghareta Lekhapani	Chakrashila wildlife sanctuary			
3.	Karnataka	Nagavalli village						
4.	Maharashtra	Baripada village						
5.	Meghalaya	Sacred Forests in Khasi Hills	Sacred Forests in Jaintia Hills	Sacred Forests in Garo Hills				
6.	Sikkim	Dzongu valley						

Case study teams under the current project *(see detailed case studies attached)*

1. Dzongu, Sikkim was conducted by Mashqura Fareedi, member Kalpavriksh, Delhi.
2. The study in the other sites in North east India was coordinated by Sudipto Chatterjee, Winrock India, Delhi. Other members of the team included Sonali Ghosh, District Forest Officer Social Forestry and Wildlife, Kokrajhar, Assam; Jayanta Sarma, Lecturer, Natural Resources Management Department, Girls College, Nagaon, Assam; S.K. Barik and B.K. Tiwari, North Eastern Hill University, Shillong, Meghalaya; Kulen Chandra Das, Girls College, Nagaon, Assam.
3. The study in the states of Karnataka and Maharashtra were carried out by Persis Taraporevala and Neema Pathak, members Kalpavriksh, Pune.

Defining CCAs In India

Considering the huge diversity of initiatives, it has been a big challenge for us to define these dynamic efforts in a few words. After much discussion with a number of individuals working on this subject initially in India as part of the earlier documentation work and subsequently internationally by members IUCN Commissions of WCPA/CEESP Strategic Direction on Governance, Communities, Equity, and Livelihood Rights in Relation to Protected Areas (TILCEPA), the following working definition for CCAs in India has been adopted in "Pathak N. (ed.) 2009 *Community Conserved Areas in India – A Directory*. Kalpavriksh, Pune" is being reproduced here but is open to discussion[2]. It is also important to mention that the communities from the examples presented here do not necessarily self identify as CCAs. Neither is this term legally accepted in India as of now. Informally, however, it is now increasingly being used in policy discussions and documents.

[2] For an internationally accepted definition of CCAs see the Indigenous and Community Conserved Areas web site: www.iccaforum.org

Natural ecosystems (forest/marine/wetlands/grasslands/others), including those with minimum to substantial human influence, containing significant wildlife and biodiversity value, being conserved by communities for cultural, religious, livelihood, or political purposes, using customary laws or other effective means.

By community here we mean, a group of people geographically, culturally and traditionally linked, sharing an interest in and/or interacting with a common natural resource base (ecosystems and species). The term 'community' does not necessarily indicate a homogeneous entity and could include indigenous peoples (*adivasi* communities) and non *adivasi* ecosystem dependent local communities. By conservation we mean maintenance or enhancement of one or more natural ecosystems and/or elements of ecosystems including species. As for the area, CCAs could be operating within well defined and locally understood geographic boundaries or in many cases could operate as a philosophy or a belief system over a larger stretch of land. The latter is mostly seen in case of traditional CCAs or CCAs protecting specific species, e.g. many communities across India would not hunt peacocks and would not let them be harmed within the area that they can exercise any influence or power. Such belief systems may or may not be restricted to any specific sites but have been called CCAs, in this document where they relate to a particular geographical area.

Thus, a site can be defined as a CCA if it fulfils the following criteria:

1. There is an identified **group of people** that can be considered a community (as defined above) who are involved in the effort.
2. The concerned **communities have substantial ethical, livelihood, cultural, economic or spiritual associations with and dependence** on the conserved area.
3. The concerned **communities are the major players or among the major players in decision-making** and implementation of decisions.
4. The concerned communities have established systems (institutions, regulations, processes) for achieving their objective.
5. Irrespective of the objective of the initiative, the efforts lead towards **maintenance or enhancement of one or more natural ecosystems and species** therein.
6. The effort is taking place within a locally **identified boundary.** This boundary will be the one where the concerned communities are able to assert any power, although the belief itself may go beyond the limits of the boundary.

Ownership over land however is not a criterion for the designation of a CCA. Documented case studies in this report and others indicate that most CCAs in India in fact are found in lands owned by the government. The reasons for this are historic, as most forests in India were nationalised by the colonial and post independence governments[3]. Similarly, it is important to note that a **secure tenure** by itself may not necessarily lead a community to conservation; in many cases communities have been able to establish greater tenure security by taking charge and starting to conserve. On the other hand, for the initiative to be sustainable it is important that the communities have the security that their right

[3] Rangarajan, M. 2000 'Nature, Culture and Empires'; 'Conservation'; and 'Towards Preservation'. In Saberwal, V., Rangarajan, M. and Kothari, A. 2000 *People, Parks and Wildlife: Towards Coexistence.* Orient Longman Limited, New Delhi.

to conserve and use would not be impacted by external factors. Baripada village in Maharashtra had an option to claim the forests that they are conserving as their own "community forest" under the Scheduled Tribes and Other Traditional Forest-Dwellers (Recognition of Forest Rights) Act, 2006. However, since they do not see any immediate threat to their right to use and protect these government own forests they refrained from exercising the option for a long time. Eventually, they did realise the possibility of this right providing a long term sustainability to the initiative and have claimed for the right. According to their leader Chaitram Pawar, "as long as our right to use and protect is not questioned by anyone it is better to have a duel custodianship (communities and forest department in this case) as it maintains check and balances against internal and external threats". This however, is not true in all situations. In many cases the threat of resources being alienated is so high that communities would rather have a legal or any other kind of established security over their resources and rights.

The definition and criteria above are to provide a common thread through the many CCAs for them to be better understood through the prism of formal conservation and thereby garner more support for this phenomenon. They are not an attempt to pack in a huge diversity of situations into some limited, constricting parameters. Experience so far indicates that although majority of CCAs do fall within this definition there are local initiatives which may not entirely adhere to it, as has been discussed below.

Gumpha forests, Nagavalli, and Dzongu defy the CCA definition. Gumpha because the forests are owned by and decisions related to the forests are made by Monastery. The role of the community beyond this institution is not clear. However, the conservation efforts by the Monastery have a traditional acceptance by the surrounding community. In Nagavalli a similar role has been taken on by the local school teacher and his team of students. The community has little role in the conservation effort, but the effort has an acceptance from the community. In Dzongu the land belongs to the community and the decisions are largely theirs, however there are no active rules and regulations towards conservation of the area. Some members of the community, however, oppose the destructive development which they believe will be harmful for their people and traditional lands. Whether the initiatives mentioned above can be considered as CCAs or not is open to debate. In this report we have documented these examples despite the ambiguity of their status because they are very much part of community conservation efforts and need to be recognised.

Description – How Extensive are CCAs in India?

India is a country of interesting contrasts. On the one hand it is common to see packs of little boys out on bird hunts with their catapults. Bird hunting is a common activity in many rural and urban areas. On the other hand one also comes across villages which save seeds to feed migratory birds, or zealously guard trees on which birds are nesting. India is probably among the few countries where hundreds of villages support the nesting, roosting, or feeding sites of birds. Not just birds though; India has a rich history of community-based conservation with thousands of small and large areas where traditional forms of conservation exist or new forms of conservation have arisen. The conservation processes followed by these sites are deeply interlinked with the local culture, lifestyles and needs. On the other hand, conservation is viewed as a formal process within government designated PAs where any form of human intervention is normally considered harmful for the ecosystem/species being conserved. This form of conservation has led to various conflicts between local communities that use natural resources and government officials/conservationists who are the propagators or designated managers of these

Table 2: Do all the case studies documented as part of this process fulfil the above criteria?

No.	State	Site	Identified community	Substantial dependence	Communities in decision-making	Established systems	Maintenance and enhancement of ecosystem/species	Identified geographical boundary
1	Arunachal Pradesh	Gumpha forest	Monastery	Religious/cultural	Not known	Yes	Yes	yes
2		Proposed Rhododendron reserve	Yes	Yes	Yes	Yes	Yes	Yes
3		Thembang Bapu CCA	Yes	Yes	Yes	Yes	Yes	Yes
4		Land under the Apatani tribe	Yes	Yes	Yes	Yes	Yes	Yes
5		Land under the Wachoo tribe	Yes	Yes	Yes (could be individuals taking decisions about their land)	Not known	Yes	Yes
7		Land under the Adi tribe	Yes	Yes (sacred mountains)	Not known	Not known	Yes	Yes
10	Assam	CCAs in Karbi Anglong	Yes	Yes	Yes	Yes	Yes	Yes
11		Goalpara	Yes	Yes	Yes	Yes	Yes	Yes
12		Marghareta Lekhapani	Yes	Yes	Yes	Yes	Yes	Yes
13		Chakrashila	Yes	Yes	Handed over to the FD	Not known	Yes	Yes
14	Karnataka	Nagavalli	Yes	Yes	No	No	Yes	No
15	Maharashtra	Baripada	Yes	Yes	Yes	Yes	Yes	Yes
16	Meghalaya	Sacred Forests in Khasi Hills	Yes	Yes	Yes	Yes	Yes	Yes
17		Sacred Forests in Jaintia Hills	Yes	Yes	Yes	Yes	Yes	Yes
18		Sacred Forests in Garo Hills	Yes	Yes	Yes	Yes	Yes	Yes
19	Sikkim	Dzongu	Yes	Yes	Yes	Not know	Not known	Yes

sites. The relatively large network of conservation efforts by local people in India has remained largely unrecognised and hence unexplored for its potential as a successful model of conservation.

Community conservation initiatives are extremely diverse, covering a variety of ecosystems, set up and managed for a range of objectives, and achieving different ecological and social results. It would be futile to try to club this enormous diversity of initiatives into one category, but they do display some essential similarities. In all, it is the community (or communities) that are the most important decision-makers, even though other actors may be taking some part. As the community has crucial links to the area: cultural, spiritual, ecological, economic, and political. In all, whatever the objectives of management may be, conservation is being achieved albeit in varying degrees. Sites that display these features therefore have been clubbed into one concept now well-known in conservation circles: indigenous or community conserved areas (ICCAs)[4]. The diversity of such examples across the country is reflected in the boxes below:

Box 1: CCAs for forest ecosystems

- The Gond tribal community in Mendha-Lekha village of Gadchiroli District, Maharashtra, initiated protection and de facto control over 1800 ha of forest over two decades ago. In the 2009 they used new rights based legislations to claim rights of use and protection over these forests.
- Jardhargaon village in Uttarakhand has regenerated and protected 600-700 ha of forest, and revived several hundred varieties of agricultural crops.
- Van panchayats (local forest councils) like Makku in Uttarakhand are protecting tens of thousands of ha of high-altitude pasture lands and forests.
- Villagers in Shankar Ghola in Assam are protecting forests that contain the highly threatened golden langur.
- Community forestry initiatives in several thousand villages of Odisha have regenerated or protected forests. Elephants are reportedly being sighted there now.
- Areas have been conserved as forest and wildlife reserves in Nagaland by various tribes in dozens of villages, including a people's sanctuary for the endangered Blyth's tragopan in Khonoma village.
- In Tokpa Kabui village of Churachandpur district in Manipur, 600 ha of regenerated village forest have been preserved in the Loktak Lake catchment by the Ronmei tribe.
- With help from the NGO Tarun Bharat Sangh (TBS), several dozen villages in Alwar district have restored the water regime, regenerated forests and, in one case (Bhaonta-Kolyala), declared a lok abhyaranya (people's wildlife sanctuary).

[4] This term has been used for convenience, and incorporates a wide range of terminology used to denote such sites, including biocultural heritage sites, indigenous protected areas, locally managed marine areas, and many more. The term is also not meant to disrespect the legitimate demands of many indigenous peoples to be called "peoples" instead of "communities". It also recognises their homelands as "territories" instead of "areas". This term has been accepted by the IUCN Commissions of WCPA/CEESP Strategic Direction on Governance, Communities, Equity, and Livelihood Rights in Relation to Protected Areas (TILCEPA).

Box 2: CCAs for wetland, coastal and marine habitats

- Uttar Pradesh (UP) is a locus of traditional wetlands conservation. In Amakhera village of Aligarh district, the traditional wetland is used for irrigation and fishing. The wetland hosts a large number of migratory birds, whom villagers are careful not to disturb. Patna Lake in Etah District is home to up to 100,000 water birds in favourable seasons. The lake, declared a wildlife sanctuary in 1991, has been protected for centuries as a sacred pond. Sareli village in Kheri District supports a nesting population of over 1000 openbill storks, considered harbingers of a good monsoon.
- Communities in hundreds of villages across India have protected heronries, e.g., Sareli in UP, Nellapatu in Andhra Pradesh and Chittarangudi in Tamil Nadu. At Kokkare Bellur, Karnataka, villagers offer protection against hunting and untoward treatment, sometimes even foregoing their tamarind yield so that nesting birds are not disturbed. In Tamil Nadu, the 700ha Chittarangudi tank attracts storks, ibises, herons, egrets, cormorants and other migratory birds. Villagers do not allow any hunting or stealing of bird eggs. They do not burst crackers during *Diwali*, and avoid commercial fishing[5]. Local communities are protecting similar tanks throughout coastal and wetland regions of India.
- Fisherfolk in Mangalajodi and other villages at the Chilika lagoon, Odisha, are protecting a large population of waterfowl (once extensively hunted).
- A number of coastal communities are protecting critical coastal wildlife habitats such as mangroves (in Odisha) and sea turtle nesting beaches (in Odisha, Goa and Kerala).

Box 3: CCAs for protection of individual species

- Protection of sea turtle eggs, hatchlings and nesting sites by fisherfolk communities is taking place at Kolavipaalam in Kerala, Galgibag and Morjim in Goa, and Rushikulya and Gokharkuda in Odisha. In 2006 and 2008, over 1,00,000 olive ridley turtles are reported to have nested at Rushikulya.
- Youth clubs from the villages around Loktak Lake (Manipur) have formed the Sangai Protection Forum to conserve the greatly endangered brow-antlered deer, which is endemic to this wetland. They take part in the management of the Keibul Lamjao National Park, which forms the core of the lake.
- The Buddhist Morpa community in Sangti Valley in Arunachal Pradesh has co-existed with the endangered black-necked cranes for generations, viewing them as a harbinger of better rice yields.
- In Khichan village in Rajasthan, the local population provides refuge and food to a wintering population of up to 10,000 demoiselle cranes, ungrudgingly spending up to several hundred thousand rupees annually to feed them grains.
- The *Bishnoi* community in Rajasthan, famous for its self-sacrificing defence of wildlife and trees, continues strong traditions of conservation. In neighbouring Punjab, lands belonging to the Bishnois have been declared as the Abohar Sanctuary in recognition of their wildlife value. At all the *Bishnoi* sites, blackbuck and chinkara are abundant.

[5] Hindu festival of lights to celebrate the victory of good over evil.

- At Buguda village in Ganjam District, Odisha, inhabitants have been protecting blackbuck for centuries. In 2005 Buguda was awarded the Chief Minister's Award for wildlife conservation.
- Andhra Pradesh is rich in nesting sites for water birds. In Veerapuram village, painted storks, pelicans and black-headed ibis have been nesting since time immemorial, at times exceeding 5,000 in numbers. Pedullupalle village of Cuddapah district protects painted storks, white ibises, and cormorants, which have been nesting for over a century. Nellapattu and Vedurapattu, in Nellore district, have been visited by open-billed storks, white ibis, and cranes since ancient times. Villagers in all these villages have zealously looked after these birds and protected them from external threats. Due to its ecological importance, Nellapattu was declared a wildlife sanctuary in 1997.

Box 4: Sacred sites as CCAs

- Sacred groves and landscapes are found throughout India, serving to protect rare and endemic species, as well as critical biodiversity assemblages[6]. Such groves also help meet the religious, cultural, political, economic, health and psychological needs of communities. Local livelihood needs are sometimes met through restricted harvesting of biomass. Sacred forests *(orans)* in the desert regions of Rajasthan are typically managed by the *gram sabhas* (village assemblies). Some are open to limited grazing by livestock. *Orans* are important components in the recharge of aquifers in the desert, where every single drop of water is precious. In most *orans*, particularly in western Rajasthan, the dominant tree, khejari, is worshiped for its immense value, as the tree enriches soil nitrogen, and during drought and famine its bark is mixed with flour for consumption.
- The Khasi Hills of Meghalaya are characterised by pockets of rich biodiversity that have been protected by the Khasi tribe and form the basis of nature worship practices in the area, manifested in the trees, forests, groves and rivers. The Khasi people believe that those who disturb the forest will die, and that sacred animals such as the tiger bring prosperity, happiness and well-being. In fact, the people of Thaianing believe that the destruction of their forest by their forefathers has caused 'good luck' (i.e., the tiger) to leave, leading directly to suffering due to a scarcity of medicinal plants, wood, water and fertile soils. Sacred groves are often quite limited in size, but there are at least 40 of them in Meghalaya (out of a total recorded 79) that range from 50-400 ha, including the well- known Mawphlang sacred grove at 75 ha.
- There are several thousand sacred groves in Maharashtra, some still managed well, others under grave threat. These include the famous Bhimashankar and Ahupe deorai in Bhimashankar Wildlife Sanctuary, Durgubaicha Kila and others between Bhimashankar and Kalsubai Harishchandragad Wildlife Sanctuaries. Ajeevali village in Pune district manages a protected site for both spiritual and commercial reasons.
- Often entire landscapes are considered sacred (e.g. the Rathong Chu/Khangchendzonga valley in Sikkim), helping to conserve many of its elements. The Buddhist community in and around Rathong Chu River have successfully resisted construction of hydroelectric dams on this river form decades.

[6] Patches of forests protected for their religious significance.

In addition to the kind of examples mentioned above there are many communities who have traditionally led lifestyles with a minimal ecological footprint such as the Changpas of Ladakh. Such initiatives and lifestyles, although highly threatened by today's fast changing socio-economic conditions, have been responsible for maintaining biological diversity in many parts of India to a great extent. Given this, it is not surprising that India is among the 12 biodiversity hotspots in the world. In fact, it may be one of the community-conservation-initiative hotspots too.

In these times when India is on a fast track of economic development and globalisation, the community conservation initiatives of the kind mentioned above are crucially supported or complemented by grassroots activism against destructive development. Several large hydroelectric projects, such as those in Bhopalpatnam-Ichhampalli (Maharashtra and Chhattisgarh), Bodhghat (Chhattisgarh), and Rathong Chu (Sikkim), which would have submerged valuable forest ecosystems and wildlife habitats, have been stalled by mass tribal movements. Hundreds of communities across Odisha, Chhattisgarh, Jharkhand and other states are fighting against large and powerful mining companies and industries, and are often brutally killed in the process. Many fisher communities across India are struggling against destructive fishing, including demanding a ban on commercial trawling and fighting for implementation of the coastal regulation zone (CRZ) notification. Their struggle will also help to save coastal and marine ecosystems from destructive development activities.

The diversity of CCAs in India arises from their diverse ecological, social, cultural and political context that they are located in. Figure 1 is an attempt to depict three of the many characteristics of CCAs to show their diversity.

The diversity of ground situation however also makes it difficult to attempt to categorise these in water tight compartments. The following section describes in brief a number of characteristics of CCAs in India, which can be used to understand them as well as categorise them.

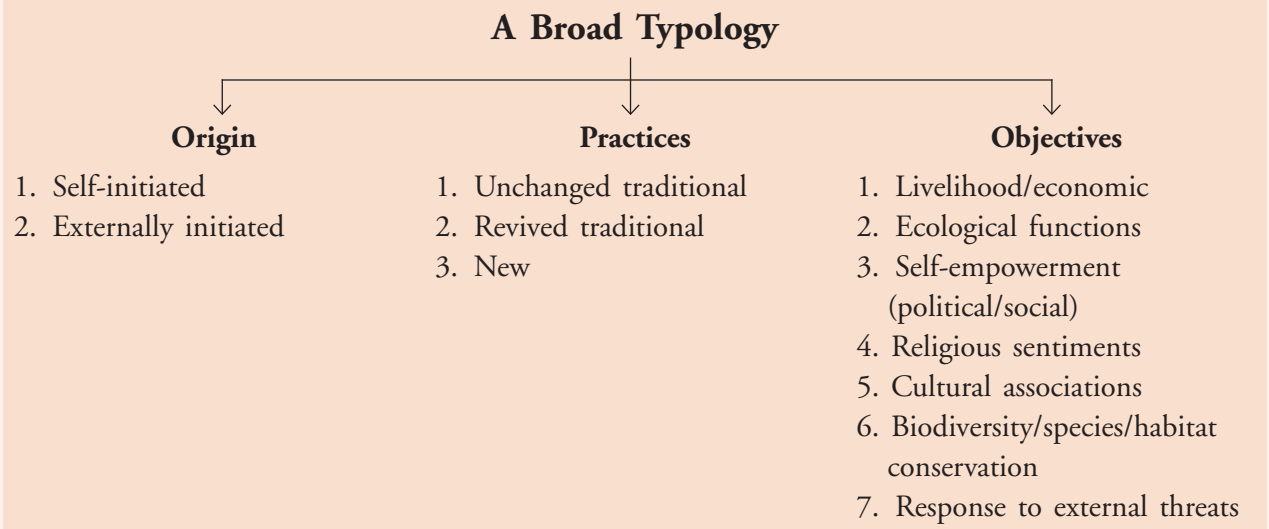
Main Characteristics of CCAs in India

Origin of the initiative

There are many reasons why CCAs are initiated as well as who initiates them. While some CCAs are self initiated, others start because of external interventions but soon take deep roots within the community.

As shown in figure two, unbroken traditions have been included within this category although it is often difficult to trace the exact origin of these initiatives. Those self-initiated efforts which have started in the recent times or where an old practice has been revived in the recent times could be because of a local leader, a group of people (such as women's groups, youth groups, traditional elders groups and so on) or because of discussions that the village as a whole has taken up.

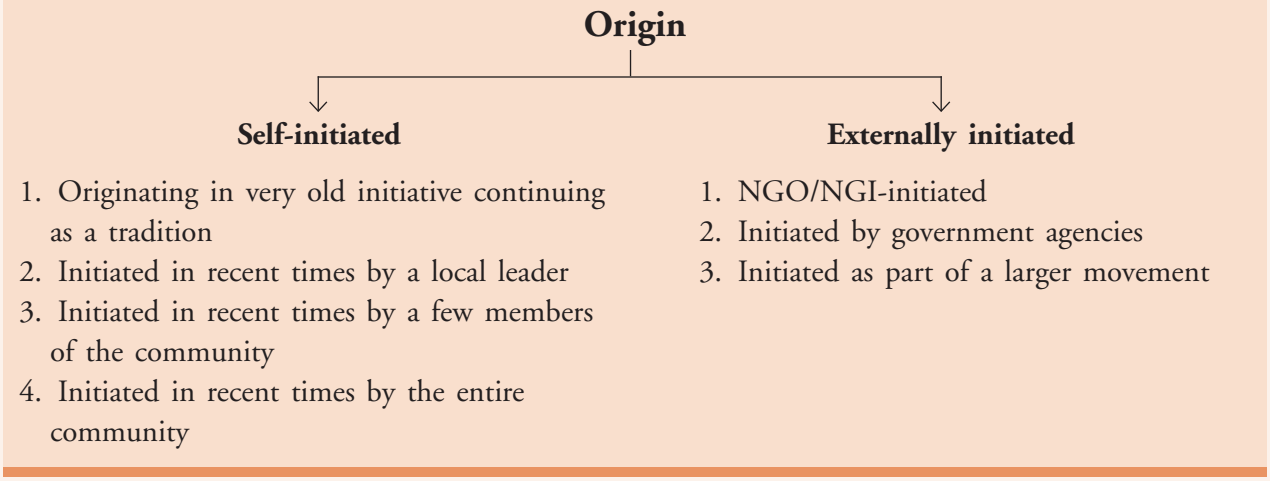
Figure 1: Example of a broad typology based on three of many characteristics.



Externally initiated CCA could be because of the presence of a sensitive government official implementing a government scheme, an NGO initiating a programme, an outside individual who commands great local respect such a doctor, a teacher, a spiritual leader and so on. The difference between CCAs started because of external factors and any other co-management attempt by the government of other agencies is that in the former the outside agents are only a source of initiation, the subsequent processes of governance and management (often slow but sure) are commanded by the local community themselves.

The need for the initiator mostly continues for a much longer time but more in the capacity of an advisor and source of support. As discussed in the subsequent sections, such support is required by the self-initiated CCAs as well. Sometimes the origin may well be a mix of internal and external factors and may be a result of many direct or indirect influences and motivations. Origin itself is

Figure 2: Origin of CCAs



often a result of certain influences, for example the entire village begins to discuss the issues of village self reliance and natural resource management after being inspired by a spiritual leader such as Tukdoji Maharaj in Maharashtra and so on. The influence could also be a radio/ television programme, a neighbouring village which is carrying out similar activities, exchange visits to similar sites and so on.

Dzongu area in Sikkim remains significantly biodiverse today because of the local culture, still rooted in ancient traditions of conservation and religious/spiritual sentiments. Strong cultural identity and association with their area has motivated many young people to save their area from the negative impacts of a hydroelectric dam planned for the area. While in Baripada, conservation processes were initiated by the community after a local NGO and a local leader helped them understand the benefits of conservation of their resources. Baripada therefore is an example of an externally motivated initiative, which is being strongly taken ahead by a highly inspirational leader and the village community.

Objectives or motivations

Communities have a wide range of objectives for which they conserve biodiversity, often the prime objective is not necessarily biodiversity conservation. These include maintenance or enhancement of resources such as in Baripada village in Maharashtra; countering ecological threats (many examples documented from across India although have not been reflected in the case studies part of this report), fighting external developmental threats such as in case of Dzongu in Sikkim; religious sentiments such as the sacred groves of Meghalaya; political reasons like movement towards greater self-rule and equitable benefit sharing as in case of Mendha-Lekha in Gadchiroli, Maharashtra; protecting the biodiversity of the area for example conservation of Golden Langur in Chakrashila; and finally also for economic reasons such as Kolbari-Tokri in Assam.

Practices of governance and management

Different CCAs follow different practices of management and governance depending on a number of local factors. These could include continuation of traditional systems, such as the Kolbari-Tokbi, Malong Kisir, Goalpara and others from Assam and Meghalaya. Conservation efforts of Thembang village of West Kameng district of Arunachal presented in the above mentioned report is an example where traditionally the forests were being protected but the traditional systems have not been very effective in the recent times leading to degradation of the forests. An intervention by WWF-India team re-initiated the effort with new and more effective systems of management adapted by the community in consultation with them. This study could not ascertain whether conservation of Slender Loris was a traditional practice in parts of Karnataka, particularly Nagavalli village, although it is clear that neither is there any practice of Slender Loris hunting nor have the lifestyles till recently have been such that would destroy their habitat. It is not surprising, therefore, to find a healthy population of Slender Loris in this area in close proximity to the villages. In the recent times a local school teacher started an effort to study the species and help its conservation. Although people are aware of the interest in the Loris and do not harm the species, there does not seem to be any proactive local governance or management process related to the Loris. A group of local students does help in research and conservation to the extent possible. The proposed Rhododendron community arboretum within the Thembang, area is an example of a completely new system of management.

Ecosystems and species conserved

CCAs cover a variety of ecosystems from forests, grasslands, wetlands, coastal and marine areas, sacred areas, high-altitude pasturelands or a mixture of two or more. They also directly protect or protect the habitat of a range of species such as birds, antelope, primates and others. Some CCAs may focus on conserving one particular species and not an ecosystem as a whole. While the CCA in Baripada focuses on conserving the forests adjacent to the farmland, Nagavalli in Karnataka focuses on Slender Loris. In Dzongu different kinds of ecosystems ranging from forests to wetlands and rivers have been protected by local communities.

Institutions and/or systems established for conservation

CCAs use a variety of institutions to fulfil their objectives. These range from a single institution for all decisions in a village to multiple institutions established for different purposes Thus they could be *gram sabhas*, women's groups, youth groups, elected groups, etc. It is important to keep in mind that the categorisation is not hard and fast—local variations within each of the categories is encountered from community to community. These committees might be set up by the village, external bodies or a mixture of these two entities. Sometimes conservation happens as a traditional or newly followed practice without any particular institution established for that particular reason. Nagavalli in Karnataka illustrates such situations well. Baripada in Maharashtra is an example where formal and informal institutions function together. The Forest Protection Committee (FPC) under the Joint Forest Management (JFM) Scheme is the institution set up by the Forest Department for taking formal JFM-related decisions. Many other decisions about the development of the village and forest conservation are also made at informal village assemblies. For the implementation of decisions the village establishes sub-groups which have the responsibility

Gram sabha meeting in Mendha-Lekha village in Maharashtra. The gram sabha takes all decisions related to forest conservation as well as village development, following consensus decision making. (Courtesy: Vivek Gour-Broome)

An all women Forest Protection Committee in Dangejhari village in Odisha carries out forest protection activities, including forest patrolling (Coutesy: Ashish Kothari)

of carrying out the activities. These include the justice committee, the water committee and so on. In Dzongu in Sikkim, the protests against the dams are being launched by a group of youth from the community. Not all the people from the community necessarily support the views of this group, however they do command respect from majority of the people. In Thembang in Arunachal, the community and WWF-India were together exploring the possibilities of this area being declared a community reserve under the Wild Life Protection Act (1972). The community however decided against after realising that this could mean excessive interference from the government and established a committee from among themselves with WWF-India playing an advisory role. In Goalpara in Assam, the villagers have constituted a FPC, which has a one year term, while an executive committee implements the rules and regulations. In all the kinds of institutions documented in India however, women play a negligible role in decision-making. Women are not necessarily excluded in all situations but the traditional social set up does not facilitate their participation in decision-making.

Regulating CCAs by the Communities

Experience with hundreds of CCAs across India indicates that there are as many ways of regulating the use of resources within the CCAs as there are CCAs themselves! Although broadly these can be categorised as:

1. CCAs with elaborately worked out rules and regulations (written or oral) and definite systems of monitoring.
2. CCAs where people have a common understanding about what should or should not be done and social taboos and relationships work as monitoring systems.

Within these two categories however there are a range of situations and nature and kind of rules could be very traditional to very new. They are dynamic and often change to suit different locations and situations. Rules range from strict no use of resources to extraction during specific periods or certain amounts and no commercial extraction of resources etc. In some cases the enforcement of these rules is strictly monitored while in others monitoring is not strict. Penalties could include social sanctions, fines, or direct confrontations with the offenders. Not surprisingly, in general situations where livelihoods are highly dependent on the concerned resources and threats to the resources are high, the regulatory systems are more stringent and monitored more strictly. While traditional religious and cultural practices require least amount of monitoring. This is so because of the cultural ethos based on religious beliefs like fear of a wrathful deity who will strike on those who violate the rules.

Rules and regulations for forest protection and use in Bhaonta village at Bhairondev Sanctuary, Arvari, Rajasthan (Courtesy: Ashish Kothari)

While the CCAs of Kolbari Tokbi (Tharveso and Parmesur) in Karbi Anglong, Assam and Dzongu, Sikkim have strict rules related to the use of the

sites, only the CCA in Karbi Anglong has monetary penalties. The Lepchas, the tribe that live and protect Dzongu, do not have any official punishment for breaking the rules of the community because they believe that the local deities will issue the necessary punishment. Goalpara in Assam has protected forests from where regulated use is allowed and a sacred forest within this, from where absolutely no extraction is allowed. While a monetary fine is imposed for the offenders in the former in the latter the offences are negligible for the fear of the deity.

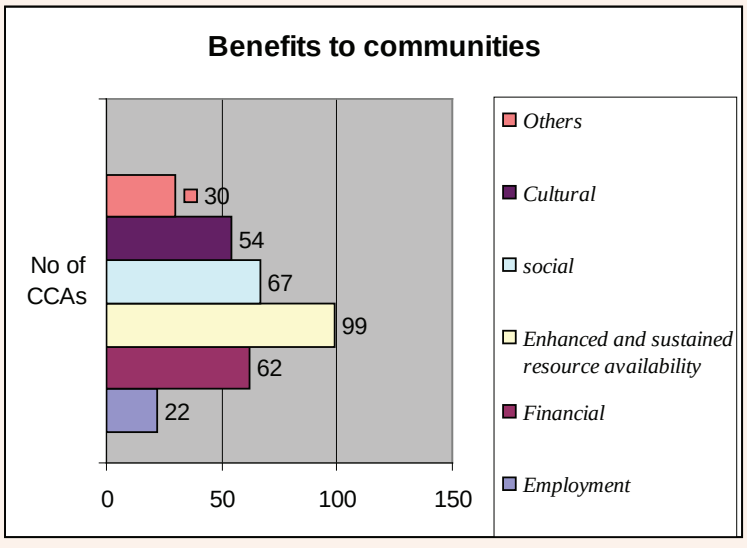
An important lesson that emerges from this observation is that what regulatory system would work best in a given area can only be devised locally with full consultation with the local people. More these regulations are ingrained in the local cultural, religious and economic ethos less the requirement for external monitoring.

Impacts of CCAs

Impacts on the community

Analysis indicates that most communities have benefited from the conservation initiative economically, politically, in terms of developmental inputs, and so on[7]. Benefits envisaged by the communities from the CCAs include, security of long term availability of biomass. Increased financial and employment related benefits for example from the sale of forest produce, eco-tourism, employment opportunities and so on. Benefits could be political in nature, such as a greater negotiating power, great recognition, greater move towards self-governance and so on as initiating conservation often means greater interaction with the people and processes from outside the village and familiarising oneself with governance and capacity building. However, it is difficult to say whether such political empowerment has spread equally within the community. The village of Baripada changed from a desolate village with an overused forest to an economically thriving, socially cohesive and politically strong village after the conservation activities were initiated. Furthermore, the water conservation activities have been so successful that the village now is a source of water for five other villages downstream. Socio-cultural benefits are among the highest as conservation process, reasons and systems are a means for bringing together the community (at least some members if not all). Community cultural activities, discussions, etc. enhance or lead to greater community cohesiveness.

Figure 3: Benefits to communities[8]



[7] Politically this means self-empowerment of the communities, including the power to negotiate terms with government and non-governmental agencies.

[8] Examples with more than one benefit have been mentioned in all relevant benefit fields in Figure 16.

Of the 140 case studies documented in the Directory, 99 had benefited from enhanced and hence sustained availability of resources. 62 had financially benefited from the sale of resources and so on 67 had socially benefited, which meant improved living standard, greater social equity and so on, 52 seem to have culturally benefited greater cohesiveness within the community, revival of abandoned cultural practices and so on, while 22 had managed to garner better employment opportunities.

These benefits however do not come without cost that they must pay. It is now well established that people living closest to conserved areas or protected areas pay the highest price for achieving conservation, willingly or unwillingly[9]. Many times communities consider these costs integral to their efforts while at other times the costs begin to impact the sustainability of the initiative and communities even look for help to counter them. Investment of time and effort for protection, management and planning activities is one of the major costs as most of the communities involved in conservation activities are subsistence farmers, forest produce collectors, fishers and other economically underprivileged people. They must work every day on their farms or forests, wetlands or pastures, or be engaged in daily wage activities, to be able to sustain family incomes. In these situations, giving a certain number of days for conservation activities (including patrolling, meetings, and at times even court cases, etc.) can have a serious impact on the family's income. The situation is more serious for families where there is only one earning member or which is constituted of widows or old men and women. In such circumstances, the requirement to pay certain percentage of their income for conservation activities, crop damage by the increasing number of wild animals in the conserved forests, economic losses due to conservation, (for example if the tamarind crop cannot be harvested because the birds are nesting on the trees) and so on can put pressure on the conserving community. Sometimes conservation efforts are carried out under grave pressure from illegal timber trade, poaching and so on, such communities may even need to put their lives at risk for conservation. The degree of costs paid also varies from CCA to CCA. However, despite the negative impacts above many communities choose to continue with conservation because the benefits received (existing, perceived or potential) seem to outweigh the costs incurred.

Impacts on the wildlife and biodiversity

Ecological studies in CCAs are rare in India. In the absence of such studies, ecological impacts of these initiatives can only be judged based on visual impressions and interactions with local people. For example, in Nagaland state it is in general easy to come across forested areas (over 80 per cent of the state has forest cover) but very difficult to come across signs of birds or mammals. Exceptions to this rule are the community protected areas where one frequently encountered signs of various species and saw and heard many birds, including some extremely threatened species. The Golden Langur population in Chakrashila has increased because of the efforts of the local people.

In villages such as Jardhargaon and Bhaonta-Kolyala (see Box 1 above), wild animals have returned to the conserved Village Forests (VFs) after decades. Many endangered birds such as the spotted pelican and the great Indian bustard as well as animals like the blackbuck survive today because of the protection given to them by the local villagers. Many of the sacred groves as mentioned in the case of Assam and Meghalaya (also mentioned in Box 4 above) are known to have preserved many local species threatened

[9] Leisher, C., van Beukering, P. and Scherl, L.M. 2007 *Nature's Investment Bank: How Marine Protected Areas Contribute to Poverty Reduction*. The Nature Conservancy, Arlington, USA.

elsewhere. All CCAs are conserving habitats which support wild populations in varying degrees and of varying national and global significance. It is important to note that the quality of ecosystems and resources is not merely controlled by the forces within the communities. Several factors beyond the control of the conserving communities have a direct impact on the conserved area, particularly activities of others in the surrounding area.

Villagers in Jadhargaon in Uttarakhand, have protected their forests, revived the wildlife populations and also have revived traditional, organic agricultural practices and crop diversity. (Courtesy: Ashish Kothari)

Threats and Challenges Faced by CCAs

CCAs across the country are faced with numerous internal and external threats. Many of these threats are rooted in the national and global context within which we all exist today. The model of 'development' that our societies, economies and polities are governed by mandates maximum use of resources in minimum time. This is a model where costs and benefits are weighed only in financial terms, directly contradicting the spirit and principles of sustainability or nature conservation. The current model of development believes in absolute preservation of nature in small islands and maximum extraction for human use everywhere else. It is therefore not surprising that the efforts of the communities based in regulated usage along with conservation are viewed with suspicion and scepticism. This prevents them from getting social, administrative and legal recognition. Lack of recognition in turn intensifies the existing internal and external threats or makes it difficult to deal with them.

Livelihoods of Manglajodi villagers in Odisha depended heavily on hunting of birds before they took on conservation of these birds and their habitat and switched to ecotourism instead. (Courtesy: Ashish Kothari)

Some of the internal factors that have an influence on a CCA and can threaten its existence are traditional social inequities, demographic changes (increase in human and livestock populations that lead to over exploitation of grazing lands), reduced availability of resources and high cost of conservation. Often these problems are alterable and can be effectively solved if tackled appropriately.

Internal threats

Internal social inequities, conflicts, political rivalries, and so on exist in some form or the other in most areas including CCAs, however they become a threat to the site when they begin to impact the success of the initiative. Below are given some such factors that have an influence on a CCA and can threaten its existence:

(a) Traditional social inequities:

Communities are often highly stratified with many decisions made by the dominant sections of society (men, large landowners, 'upper' castes) without considering their impacts on the less privileged (women, landless, 'lower' castes). Such disparities in decision-making can create local dissatisfaction and affect the long-term sustainability of the initiative.

(b) Demographic changes:

Human and livestock populations have increased manifold in several areas. Due to this (and a number of other reasons) the habitats have degraded and the total available resource base has shrunk. This leads to conflicts with others as also to over-exploitation of resources that communities are sometimes not able to curb on their own. This is clear from Mendha-Lekha in Maharashtra, which is protecting its forests but increasing pressures have depleted forests in the surrounding areas. This leaves the people no option but to exploit resources from the protected forests of Mendha-Lekha.

(c) Reduced availability of resources:

In some places previously sustainable levels of resource use may now be causing over-exploitation, as a number of extraneous circumstances may have led to the decline in the extent or abundance of these resources. This is the situation, for instance, with traditional hunting of wild animals where the populations of these species have declined due to various factors emanating within and outside the community.

(d) High cost of conservation

Communities sometimes find it difficult to deal with issues such as investment in time and labour, paying salaries for village forest guards, conflicts with other communities, human-wildlife conflicts, dealing with powerful outside offenders, unable to earn livelihoods and so on. If they do not receive support at these critical times then the initiative itself comes under threat. In Jardhargaon, for example, the increased human wildlife conflict is discouraging the people from carrying on with conservation activities, as they have not been able to find any solutions for protecting their forests.

External threats

(a) Lack of legal backing and tenurial security:

There is no comprehensive government policy to support CCAs. Many CCAs are on lands owned by the government, over which the community does not have ownership or recognised access rights. The government can decide to change the land-use or lease the land for any other purpose without consulting or even informing the conserving communities. For example, in the state of Odisha 156.81 ha of reserve and protected forest land was being informally protected by 1500 villagers from Raijharan, Jandijore, Golabandha and Similisahi villages for 15 years. In that very area the state government decided to give coal mining and thermal power plant permission to various companies like Jindal Steel and Power Limited (JSPL) and Monet Power Company among others. Villagers continue to oppose this without much success.

(b) Inappropriate or no government support:

CCAs that contain commercially valuable resources (e.g. timber, fauna, minerals) are often encroached upon or threatened by commercial users, land grabbers, resource traffickers or individual community members.

A lack of support to deal with the above kinds of situations, negative intervention or influence by government agencies or policies, and indifference towards CCAs have been found to be major reasons for discouraging communities in many of the documented CCAs. There are very few CCAs where such support is given to the villagers by the government agencies.

(c) Smuggling and poaching:

Communities like in Shankarghola in Assam the villagers have to be very vigilant against animal poachers and timber smugglers. The situation is particularly difficult in areas where forests support valuable species of flora and fauna such as medicinal plants, mammals, teak and other trees. This puts extreme pressure on the communities.

Women forest protection committee of Dangejhari village in Odisha apprehending outsiders smuggling fuelwood from their protected forests (Courtesy: Neema Pathak)

(d) Attitudes of others:

Attitudes of conservationists and government agencies towards some ecological issues can sometimes be a major stumbling block in resolving some issues related to CCAs. For instance, the official attitude towards shifting cultivation as necessarily harmful in all situations may not be in sync with the perception of the local population. And the imposition of official sanctions flowing from that attitude imposed on the practice would affect local management practices and autonomy.

Shankar Ghola villagers in Assam protecting their forests and the golden langur against all odds (Courtesy: Ashish Kothari)

Other threats

Breakdown of traditional institutions and knowledge:

Traditional institutions and knowledge systems have eroded to a great extent because of a number of reasons, including colonial or centralised administration and politics and the dominance of modern science. This has weakened communities' abilities to manage their own environment. This often makes them dependent on constant external facilitation and inputs. This is evident from a number of examples such as Thembang in Arunachal Pradesh where the weakening traditional practices were revived by the presence of an NGO, still the newer generation often finds itselves disconnected from the conservation efforts.

The education system:

The education system does not emphasise or even acknowledge the value of local natural resources, culture and traditional knowledge. This results in a disconnect between the semi-educated village youth and the village and its life. Little traditional knowledge passes on to the newer generation and their interaction with the surrounding environment ends up becoming indifferent or negative. The youth often find local values irrelevant in the face of changing socio-economic scenarios and severe livelihood pressures.

Changing value systems and aspirations:

Community values, motivations and organisations are constantly faced with contradictory values and influences such as national and international markets along with inherent inequities within them and powerful commercial forces. Intrusions by dominant religions often have serious impacts on local value systems and traditional conservation practices (especially among indigenous/tribal communities). Local institutions have to be very strong to be able to face up to these challenges. Additionally, market forces have deeply penetrated local economies, increasing local material aspirations and individualism, thus further weakening traditional value systems. This is also evident from a number of sites such as Thembang in Arunachal Pradesh.

Global market forces:

Global economic policies and market forces make it difficult for communities to establish and maintain local and decentralised economic systems and markets, affecting their financial sustainability.

The threats mentioned above are inter-related and interdependent, thus they often create vicious circles. Market forces are bringing in ecologically and socially destructive yet economically alluring development projects. In Dzongu for example, the entrance of such projects has resulted in changes in the aspirations and basic concepts of subsistence and need in the community. These changes have caused rifts in the community, which is already confronting the breaking down of its traditional systems. Thus reduced number of people believe in continuing the traditional lifestyles of Dzongu. A lack of support to deal with the above kinds of situations, negative intervention or influence by government agencies or policies, and indifference towards CCAs have been found to be major reasons for discouraging communities in many of the documented CCAs.

There are also various ecological and social limitations of CCAs. These include, inability to resolve human-wildlife conflicts particularly in areas where wildlife populations have increased as a

Hydro-electric project in Dzongu (Courtesy: Mashqura Fareedi)

result of protection, lack of regular monitoring and evaluation systems, lack of baseline information to be able to assess changes over a period of time, not being able to control major forest fires and impacts on the surrounding area, local inequities (particularly lack of direct participation by women in most cases) and the limited capacity of people within the community and of those from outside. Creating successful CCAs is a slow process and where institutions have to work at a pace that the community is comfortable with. Under normal circumstances these would not seem like a limitation of CCAs but in a world that strives for instant gratification, the slow evolutionary process of CCAs is viewed as a disadvantage.

Legal and Policy Spaces for CCAs

As of now there is no law in the country that recognises the CCAs as they are. Although there are spaces within many existing laws which could provide some kind of legal backing, however each of these provision have some pros and cons which may or may not be suitable for CCA situations on ground.

Table 3: Administrative Structure and special Constitutional provisions for tribal areas of the North-East India

It is important to mention here that most states in NE India have special status under the Constitution of India (see table on page 82). Schedule VI contains provisions dealing with the Administration of Tribal Areas in Assam, Meghalaya, Tripura and Mizoram. It protects the traditional and customary rights of the communities in NE India. The Constitution provides for Regional and District Councils for autonomous regions and districts respectively. Therein the Councils have legislative, administrative and financial powers over 40 subjects including forests. Presently NE India has 16 District Councils including three in Assam, three in Meghalaya, three in Mizoram, one in Tripura and one in Manipur. CCAs may or may not be governed by the District Councils.

The Government of India under the Eleventh Five Year Plan (2007-2012), made a separate budgetary provision for supporting conservation initiatives outside officially designated PAs. The Scheme being handled by the Ministry of Forests and Environment at the central level and Wildlife Departments of the Forest Department (FD) at the state level includes supporting CCAs financially or otherwise. The scheme for the first time would support a CCA irrespective of its legal status. The long term impacts of this are yet to unfold but this appears to be one of the best options so far for official financial support to CCAs in India.

A detailed analysis of current legal provisions and how they support CCAs or not is given in the table below.

Table 4: Indian laws and policies relevant to community conserved areas

Act	Provision/s	Strengths	Weaknesses
National Acts			
Indian Forest Act, 1927 (IFA 1927)	This Act provides for the conversion of Reserved Forests into Village Forests by the State Government The concerned communities are then vested the powers of the Forest Department for the management of VFs.	Many communities conserving forest ecosystems could apply for their CCAs to be declared VFs. This could be one of the best legal support for the forest CCAs as this leaves the institutional arrangements, rules and regulations largely to the local communities as long as the objective of effective management and protection is fulfilled.	In its true spirit, this provision has not been implemented anywhere in India in last 80 years. In the two states (Uttarakhand and Karnataka) where some areas have been declared under this category, powers to the communities have been diluted and government retains a strong say in the constitution of the institutions as also in actual management. There seems to be a reluctance in the government sector to hand over real power to local communities. As per the IFA the government retains the power to grant or withdraw the status of VFs, with no clear provision on how and under what conditions such decisions should be taken.

Wild Life Protection Amendment Acts, 1972 as amended in 2003 (WLPA 2003)	Two new categories outside existing PAs, namely, *Community Reserves* and Conservation Reserves, introduced. *Community Reserves* can be declared on privately owned or community lands (the definition of which is not clear). Conservation Reserves can be declared by the government on government owned lands in consultation with the local people.	*Community Reserves* can provide legal support to CCAs on private or community lands. Conservation Reserves for the first time in Indian wildlife conservation history provide a space for consultation with local people before declaration of the reserve and seeks their inputs in the management of the reserve.	Given the language used and the fact that the category Conservation Reserves specifically mentions government lands, it appears that *Community Reserves* allow inclusion of only community owned lands or privately owned lands. Most documented CCAs in India exist on government lands, so may not be eligible to be declared *Community Reserves*. As per the Act, *Community Reserves* cannot be declared in existing Protected Areas (PAs) and existing PAs cannot be converted to CRs without de-notifying them first. The Act also mandates a uniform management institution, which is inappropriate to the very large diversity of management arrangements that communities have developed in CCAs across India. Most communities would not like to declare their CCAs as Conservation Reserves because the category does not recognise existing systems of community management and the overall in-charge remains the Chief Wildlife Warden, with the community's role being largely advisory.
Environmental Protection Act, 1986 (EPA 1986)	Ecosystems and landscapes can be notified Ecologically Sensitive Areas (ESA). This would enable control or restriction of certain identified commercial, industrial and development activities.	Potentially a strong tool to fight against commercial and industrial pressures.	Communities know little about this Act and how it can be used. There are a number of ESA in the country, but none covering CCAs. Its relevance for CCAs has not been really tested on ground yet.

Panchayati Raj (Extension to Scheduled Areas) Act 1996 (PESA 1996)	Mandates decentralisation of governance to rural bodies, like *panchayats* (village councils) and *gram sabhas* (village assemblies) in predominantly tribal ("scheduled" under Constitution) areas. Confers the ownership and decision-making rights over non-timber forest products (NTFP) to local institutions. Mandates consultation with local communities regarding many developmental and other issues relevant for a site.	Considered a revolutionary Act with a strong potential to integrate and enhance conservation and livelihoods needs, help communities to resist destructive forces.	In most states where implemented, its provisions have been diluted in the state adaptations of the Central Act. Additionally, government forests and PAs have been excluded from the jurisdiction of the Act.
Biological Diversity Act, 2002 (BDA 2002)	Mandates creation of Biodiversity Management Committees (BMC) at the village level. BMCs are supposed to engage communities in management, protection and recording of local biological diversity. Provides for the declaration of areas being conserved for agricultural or wildlife biodiversity as Biodiversity Heritage Sites (BHS). This Act includes all elements of biological diversity, domestic and wild and provides for protection of all kinds of ecosystems. The National Biodiversity Authority (NBA) and the State Biodiversity Boards established under the Act are required to consult the local BMCs while taking decisions related to the use of biological resources and knowledge associated with such resources.	The provisions could be used to increase local community participation in wildlife and biodiversity conservation, enhance livelihoods. The provision of BHS could be used to provide legal backing to CCAs, but this will depend on how BHS are defined and interpreted in the Rules or Guidelines for their implementation. BMCs could be strong local institutions for conservation, but again this will depend on what powers they are given under Rules. Some states like Karnataka and Sikkim have gone beyond the national rules, and provided for greater empowerment and responsibilities to communities for conservation and management of biodiversity.	The national BD Rules 2004 fail to empower BMCs to manage, use and conserve natural ecosystems. Their primary function is limited to recording local knowledge, and to help the state and national level boards to grant permission for the use of biological resources and knowledge associated with it, in their areas. The Guidelines for BHS were developed by an Expert committee under the NBA in 2008-2009. The full potential of this conservation category is yet to be made use of. While these Guidelines appear progressive for those CCAs which are on community or private lands, yet they prescribe that the "management structure and utilisation of resources for BHS notified on Government forest areas and other government owned areas will be determined by the concerned departments of the State Government.[10]" Overall too the BHS will depend on State Governments agreeing to notify them.

[10] http://nbaindia.in/content/106/29//bhs.html

Scheduled Tribes and Other Traditional Forest-Dwellers (Recognition of Forest Rights) Act 2006 (FRA 2006)	Recognises and vests several rights to Schedule Tribes and other forest dependent communities, including to forest lands and resources, and to forest management/ protection. Also provides for establishment of Critical Wildlife Habitats with possibilities of either co-existence or relocation. Empowers communities to protect and regulate access to forests they have rights in.	Allows for a greater role and empowerment of *Gram Sabha* (local governing bodies) in determining claims, managing forests it has traditionally conserved, checking processes destructive of forest-dwellers' habitats, and protecting traditional knowledge. Allows for greater livelihood security for forest-dwellers who have been unjustly denied tenure, and mandates that any relocation can only happen by consent. Provides greater possibility of community involvement in government managed PAs. Provides for legal backing of forested CCAs in the form of 'Community Forest Resource' (CFR), under which the local communities can legally protect and manage any forest that they have been traditionally protecting, by establishing suitable institutions, rules and regulations. Provides also a say to communities in the diversion of forest land for 'development' projects, made explicit by a MoEF circular of July 2009 requiring community consent for such projects.	There is lack of clarity on how the CFR provision will be operationalised. Initial experience of communities that have got CFR rights is mixed. No rules have been formulated as of late 2010, on this. The fact that 'encroachments' on forest lands upto December 2005 are eligible for regularization, gives rise to possibilities of misuse by vested interests who will incite fresh encroachments. In some parts of India, CCAs could also be affected by this. Certain development projects and activities (e.g. construction of roads) for the purpose of village development have been excluded from clearances under the Forest Conservation Act. This opens up a potential for misuse at some sites to allow destructive projects in forest areas. This Act has an unclear relationship with existing forest/wildlife laws. In particular, the institutional arrangement for enforcement of community rights and responsibilities is not clear.

Wild Life Protection Amendment Act 2006 (WLPA 2006)	This sets up a National Tiger Conservation Authority, and provides a process for notifying tiger reserves.	Some provisions, e.g. co-existence in buffer areas, could help explore people's participation in wildlife management. Thus far, however, buffer area planning processes for which information is available, e.g. from Maharashtra, are not clearly oriented towards this.	The severe crisis facing the tiger has prompted several knee-jerk reactions such as greatly increasing the number of Tiger Reserves (without necessarily looking at the capacity to effectively manage them, and without any process of local community consultation), focusing on relocation of resident communities, and ignoring possibilities of continuing traditional or recent community conservation initiatives such as at Sariska Tiger Reserve (Rajasthan), Nagarjunasagar-Srisailam Tiger Reserve (Andhra Pradesh) and Biligiri Rangaswamy Temple Sanctuary (Karnataka).
State Acts			
Village Council Act of Nagaland, 1978	Some state level Acts are relevant, e.g. those that mandate Village Councils (the local governance body) to manage wildlife within their jurisdiction. Unlike in rest of India, most land in Nagaland is under community or private ownership.	Under this act, dozens of CCAs are being established and protected in Nagaland. It provides them with a strong legal tool for fighting against commercial and industrial pressures.	

Policies and Action Plans	Provisions	Strengths	Weaknesses
National Forest Policy, 1988 (NFA 1988)	This policy deals with conservation and management of forests, afforestation and with the provisions governing people's access to government owned forests and their products.	This policy for the first time after Indian Independence places greater importance on using local forest resources to meet local people's (especially tribal) needs, and for conservation, rather than for industrial needs. It also stresses the involvement of local people in the management of forests. It was under this policy that the Government Resolution on Joint Forest Management (JFM) was passed in India in 1990. Since then about 22 million ha of forests outside PAs have been brought under JFM. JFM is aimed at regenerating degraded forests with the participation of local communities and sharing the benefits accruing from timber harvests from these areas with the local communities. JFM has been a miserable failure in some states and sites while quite successful in others, depending on the state policies and the methods of implementation, as well as on individual forest officers and local communities. Its biggest weakness is that decision-making remains in the hands of the Forest Department.	The policy had till recently not been translated into law, with the IFA 1927 remaining in place. The Forest Rights Act (see above) could help operationalise some of its key provisions.

National Wildlife Action Plan, 2002-2016 (NWAP)	This plan deals with policy imperatives and strategic actions to conserve wildlife in and outside PAs, to manage these PAs, to prevent illegal trade on endangered species, to ensure people's participation in the conservation of wildlife, to promote ecotourism in PAs, among others.	The plan envisages the involvement of local communities residing in and around PAs in the management of natural resources. Their participation is recognised as an effective tool for the management of PAs. According to this plan, local communities must participate in and benefit from ecotourism developments in wildlife areas. Community initiatives in conservation are also to be supported.	The NWAP does not go the full distance in establishing tenurial security and a share in decision-making of PAs for local communities. The most serious problem, however, is that even its progressive provisions have yet to make a difference, as implementation is seriously lagging. Despite having identified specific time lines for achieving its objectives no move has been made towards its implementation. The legal environment needed to implement the NWAP is also not in place as the Wild Life Protection Act does not envisage participation of people in establishment and creation of PAs (as mentioned above).
Draft National Biodiversity Strategy and Action Plan (NBSAP) 2004	This draft NBSAP recognises community conservation initiatives and stresses on legal, administrative and all other kinds of support for CCAs. NBSAP also stresses on developing guidelines for implementation of Joint Protected Area Management (JPAM).	Contains a number of provisions for supporting CCAs and JPAM.	This draft of NBSAP had not been accepted by the government. Instead, a National Biodiversity Action Plan was brought out in 2009, which only broadly lays out the direction of community participation, omitting the specific actions that could help give backing to CCAs.

A few attempts have been made to bring some CCAs under the WLPA as *Community Reserves* and Conservation Reserves. The experience with those have not been very encouraging so far. In case of Kokkare Bellur in Karnataka, which is a traditional bird protection site, there was an attempt to declare this a community reserve, however the proposal was mooted by the state Forest Department without consulting those involved in conservation. As a result the proposal and declaration were both rejected by the community when the matter came to their notice. In some areas the process of declaring a PA has taken place without realising the existence of the CCA but because of the ecological value of the area. As such declaration does not require exploration of what local systems of management and conservation already exist and officially designated protected areas (national parks and wildlife sanctuaries) are completely exclusionary and alienating, such declarations have been mostly impacted the CCAs negatively. For example bird conservation sites such as Nellapattu in Andhra Pradesh were declared a wildlife sanctuary, which is a category which imposes strict restrictions on the local people. The area is still a sanctuary much to the dissatisfaction of the local people who have traditionally protected the birds. None of the CCAs known to us have so far opted for any of the legal options mentioned above. One big exception is Chakrashila, which was declared a wildlife sanctuary under the Wild Life Protection Act (WLPA), at the

behest of the local community and NGOs. WWF-India started the process of declaration of Thembang in Arunachal as a Community Reserve under the WLPA. But the communities there were unwilling to have a forest officer on the management committee (a requirement under the Act), and therefore rejected the option. There is currently an intention to declare Nagavalli in Karnataka as a Conservation Reserve under the WLPA. However this has not yet been fully discussed with the community. Dzongu area was declared a Lepcha Reserve in the 1960s, to protect the cultural identity of the Lepcha tribe. However this status has not helped them so far in fighting against a hydroelectric dam which is threatening a part of their land. In the recent times there are indications that several forest-based CCAs will utilise the provisions available under the Scheduled Tribes and Other Traditional Forest-Dwellers (Recognition of Forest Rights) Act, 2006. Some CCAs such as Mendha-Lekha and Marda villages in Maharashtra have already got full rights to manage and protect their forests, and several hundred more in Odisha, Gujarat, Maharashtra, and elsewhere are making claims for the same[11].

The Government of India claims that the two new categories under the WLPA of *Community Reserves* and *Conservation Reserves* are an attempt to fulfil obligations under the Convention of Biological Diversity (CBD), Programme of Work on Protected Areas (POWPA). These two categories do not seem to have yet worked well for existing CCAs, yet there are places which have been assigned these categories and the process being followed on ground seem to be more participatory than those of declaration of national parks and sanctuaries. The level of involvement of the people however is still exclusively dependent on the local NGO associated with such efforts.

The Eleventh Five Year Plan mentioned above could also be seen as an attempt to fulfil obligations under the CBD POWPA.

Key Issues, Lessons and Conclusions

Following are some lessons emerging from the analysis of case studies documented under this study as well as other case studies from India. These factors determine the success, failure or efficacy of an initiative.

Security of tenure

In nearly all the cases studied it was found that a sense of belonging or custodianship towards the area, resources or species being conserved is one of the most important factors in the decision of a community to start and carry on conservation efforts. Security of tenure of the land being conserved, or the confidence that they could continue with their initiative irrespective of the legal ownership of the land, is key to a successful community initiative. This sense of belonging or security develops over a period of time through constant consumptive, economic, cultural and religious associations and interaction with these resources. Therefore, continued access to the resource and security of tenure are key to a sense of responsibility towards the resource among local communities. This is not to imply that security of tenure will necessarily lead towards conservation (as explained earlier), but rather that such security would increase the chances of an initiative continuing. On the other hand, the conservation effort itself strengthens a sense of security by increasing the confidence among the communities about exercising their authority over the conserved land and resources. There are many CCAs in India where

[11] Report of the Joint MoEF-MoTA Committee on Forest Rights Act, 2010, http://fracommittee.icfre.org.

people have gained *de facto* control even when they do not have legal rights e.g. Chakrashila Wildlife Sanctuary in Assam, Mendha-Lekha and Baripada in Maharashtra and so on. Conservation efforts have thus given the villagers a confidence about demanding legal security of tenure over the area that they have a strong sense of belonging to, whether or not they own it. With the possibility of bringing these under the Forest Rights Act, as described above, such security would be considerably enhanced.

Site-specific and decentralised management

It is becoming increasingly clear that uniform and straitjacketed models of development and conservation are not sustainable. As is clear from the preceding discussion, community initiatives are decentralised, site-specific and varied in their objectives and approaches. This is in contrast to most government efforts, which have largely been centralised, top-down and working under uniform legal and management prescriptions, not taking site peculiarities into account, though many officials have tried breaking through the mould to design locally adapted initiatives. However, making laws and policies flexible as well as firm and strong against misuse of the flexibility is a tricky question, and will involve serious debates and explorations.

Coordinated action and support

Conservation of resources by communities is a part of livelihood insurance and is linked with other social dynamics. Conservation initiatives can lead to other social reforms in the village, e.g., equity, empowerment, etc. On the other hand other social processes such as efforts towards generating empowerment may lead to initiation of conservation. Conservation, therefore, cannot be seen in isolation from other social, economic and political processes within the community. However, the government and NGOs working in an area do not necessarily operate with this view. Local development and conservation activities are highly compartmentalised, with each government line agency or NGO focusing on its own area of work, sometimes conflicting with or contradicting that of the others. Such uncoordinated action not only spreads available resources thin but also divides the community to achieve their own agenda. There needs to be much greater coordination amongst such agencies.

A landscape approach

The previous point leads us to the fact that areas conserved for biodiversity do not exist in isolation and are impacted by various social and political forces and land-use practices in their surrounds. Allowing resource-intensive activities in the surrounding areas could put more pressure on the biodiversity of the area to be protected. It is extremely important to orient regional planning towards the ecological and cultural dimensions of an area, including community conservation efforts. A community's wish to conserve a certain area needs to be respected and reflected in the regional planning. Some community efforts have very strongly indicated the need for a landscape approach towards conservation. For example, the villages located in the basin of the Arvari river in Alwar district, Rajasthan, have been conserving the catchment forests for over two decades, resulting in the seasonal Arvari river becoming perennial again. These villagers have formed an *'Arvari Sansad'* (Arvari Parliament), which aims to be the primary decision-making body for the entire basin. This is based on the principle that a holistic landscape approach will need to be taken for the conservation and use of the catchment. Members of the *Sansad* believe that decisions made by individual villages are often restricted to the interests of their own villages and may not adequately take care of the eco-region as a whole. Similarly, in Odisha

and Uttarakhand, CCAs are found in clusters and groups, sometimes taking mountain ranges as units. Not having a landscape approach is often what leads to serious conflicts between the settled conserving communities and the mobile communities who may also be traditionally using the conserved resource. As other areas come under various kinds of development processes, mobile communities tend to depend more and more on the conserved resources causing serious competition.

Governance and decision-making

Good governance is increasingly being seen as an important factor in ensuring the success of any conservation effort. An IUCN policy brief states that 'governance is about power, relationships and accountability. It thus has major influence on the achievement of management objectives, the sharing of relevant responsibilities, rights, costs and benefits, and the generation and sustenance of community, political and financial support for wise and sustainable use[12].' International debate has brought up the factors mentioned in the box below as crucial for ensuring 'good' governance.

Box 5: Principles of good governance of protected areas

Governance involves interactions among structures, processes, traditions and knowledge systems that determine how power and responsibility are exercised, how decisions are taken, and how citizens and other stakeholders have their say. It is a concept that applies at all levels in the field of protected areas—site-level, national, regional and global.

Principles of good governance of PAs in general include *legitimacy and voice, accountability, performance, fairness, and direction*. These principles need to be applied keeping in mind the following:

a. Recognition of diverse knowledge systems;
b. Openness, transparency, and accountability in decision making;
c. Inclusive leadership;
d. Mobilising support from diverse interests, from within the community; and
e. Sharing authority and resources and devolving/decentralising decision-making authority and resources where appropriate.

Source: G. Borrini-Feyerabend, A. Kothari and G. Oviedo, *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation.* (Gland, Switzerland and Cambridge, UK, IUCN, 2004).

The CCAs documented so far throw up the following two important sets of factors for good governance and long-term success:

(a) Transparency, Openness and Accountability

A transparent and democratic process of decision-making leads towards a more successful effort and long-term sustainability than situations where decisions are taken by a small minority through non-transparent means. The emphasis on equal representation of all sections of society in information sharing

[12] Source: G. Borrini-Feyerabend, A. Kothari and G. Oviedo, *Indigenous and Local Communities and Protected Areas: Towards Equity and Enhanced Conservation.* (Gland, Switzerland and Cambridge, UK, IUCN, 2004).

and subsequent decision-making is one of the unique features of many successful initiatives. Consensus-based decision-making is used in many CCAs. Besides, utilisation of community funds or funds coming from various external programmes is often a serious source of discontent within a community. Most successful community initiatives, such as Baripada and Mendha-Lekha in Maharashtra, Shankarghola and Chakrashila in Assam and so on, therefore have an open system of accounting, and accounts are regularly disclosed to the village assembly (and not only to a few representatives) and expenditure explained. Where this does not happen, the efforts face hurdles and may break down such as Satara Tukum in Maharashtra.

(b) Constant dialogue and informed decisions

Lack of information and awareness is often cited as a serious limitation by many communities, who seek help from outsiders in increasing their experience and awareness levels. Being equipped with adequate and impartial information is a critical factor in the success of CCAs. In many cases this has been made possible by constant interaction with outsiders and regular discussions within the village.

(c) Role of external intervention

In many CCAs (though definitely not all) villagers have indicated and often demanded that management or conservation should be a joint activity of the communities and the government officials or NGOs. Communities often realise the difficulty of managing natural resources on their own, especially given the internal and external social dynamics and political and commercial pressures. As Devaji Tofa of Mendha-Lekha village in Maharasthra (see Box 1 above) says, 'However autonomous a decision-making process in a village may be, a village in these times cannot be completely independent of the world outside.' Based on the experience of the documented case studies and the analysis under various sections of this overview it appears that the external agencies can play an important role in the following ways:

1. As mentioned above, lack of information is often one of the biggest reasons for oppression, internal weaknesses and faulty local governance. Making information available to the conserving communities on a regular basis that will help them take informed decisions, earn ecologically sensitive livelihoods and, avail of their entitled benefits from available government or other programmes and schemes. Information on laws and policies for their own awareness, is one of the biggest help that villagers often seek.
2. Helping them resolve conflicts when such conflicts cannot be resolved internally or when conflicts are with powerful outsiders.
3. Helping in reducing traditional social inequities (particularly relating to the participation and social status of women and other disprivileged communities), attempting to ensure greater transparencies in local institutions, greater participation from all sections of the community, and so on.
4. Providing financial, technical, ecological, legal and any other support that may be required on a regular basis.
5. Help in establishing regular contact with outside agencies, particularly with the government agencies, to be able to resolve misunderstandings and conflicts.
6. Helping in gaining recognition, appreciation, pride and thus encouragement and support by bringing their efforts to the larger society.

7. Presently even remotely located communities are linked to markets and dependent on them to a varying degree for cash income. However, the markets with which these communities interface are often highly exploitative, and government policies often end up supporting the exploitation. Most communities need help with such interface, whether it is to do with marketing of non-timber forest produce, produce from other ecosystems, developing eco-tourism packages or any.
8. Outside agencies can help communities bring in ecological concerns more squarely into their efforts, helping them to inventorise ecological elements and local knowledge, helping them conduct impact studies, helping them devise systems for effective management of resources and wildlife therein.
9. Remoteness of the area means that there are few other employment opportunities. There is no existing system by which such information can easily reach the villagers. Villagers, therefore, often express a need for outside agencies to help them in exploring employment opportunities, and also guide them towards a sustainable conservation effort.

With best of intentions many outside interventions can lead to disrupting a local system rather than supporting it, a factor that all interventions need to be acutely mindful of.

The national and state policy environments within which CCAs are located have a great influence on their success and failure, these policies can also be counter productive for CCAs. In Kailadevi Sanctuary of Rajasthan, local people had FPCs much before the area was declared a PA. Many years after Kailadevi was declared a PA, the FD began implementing the official ecodevelopment scheme[13]. The existing FPCs were co-opted to be the eco-development committees (EDCs). After half a decade of eco-development the scenario has completely changed. Whereas in the past these FPCs had numerous meetings on village and forest conservation issues, now many months pass before a single meeting takes place, mainly because of unavailability of the forest official, whose presence is mandatory for an EDC meeting. Eco-development also came with funded projects and plans—community participation in conservation is therefore now more to avail the financial and other opportunities rather than a community feeling and/or concern for degrading natural resources as was the case earlier[14].

For any agency interested in a positive intervention in a CCA, it is important to understand that any negotiations at the start of the intervention need to be done at the level of the village or hamlet assembly/community council (involving all adult members, irrespective of caste, class, gender, etc.) or community groups, and not any representative/executive body selected by the intervening agency (although such bodies could be approached to help organise the larger meeting). Any decision-making bodies that are established need to be transparent and acceptable to all in the community. Along with a decision-making body it is important to have an open forum for discussion that will lead towards well-informed decisions by the community. External agencies could play a critical role at these discussion forums and bring in the larger perspectives often not so easily perceived by the villagers. In turn, outsiders could learn from the detailed site-specific information that the local people have.

It is also important to note that CCAs need not only decentralised decision-making systems but also a decentralised support and facilitation system, along with a central (state and national) framework (including legal and policy regimes) that facilitates such a system.

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[13] A Government of India scheme, funded in this case by the Global Environment Facility, meant for diverting human pressures from a PA by providing alternative sources of livelihood.

[14] Das, P. 2007, The Politics of Participatory Conservation – the case of the Kailadevi wildlife sanctuary, Rajasthan. In G. Shahabuddin and M. Rangarajan (eds.), *Making Conservation Work* (New Delhi, Permanent Black, 2007)

(d) Role of the local leader

An external actor can be of great help in the process of forming or improving CCAs. This is true when the external actor supports or assists in the creation of independent local structures and institutions to run the CCA. An external actor should limit it's role to helping local people make informed decisions, and not make decisions on behalf of the local people. In order to do this external bodies can help local communities stay abreast of current information and situations, help build local capacity, help facilitate changes to create more equitable social structures and create management plans for the CCA. The outsider should not disregard existing local structures or impede the growth of new local structures. Such interventions have to be very carefully thought out and implemented. This brings out the importance of local leadership. A local leader, which could be an individual or a group of people, pays a critical role as a motivator. In most successful CCAs such leaders may or may not be clearly visible on the first interaction with the community. It is important to bear in mind that such leaders, working largely for the social cause, cannot be replaced by leadership emerging out of financial, political, and other selfish motives. The latter often tends to happen during implementation of external projects in these sites. Often the hurdle is in creating a second line of leadership with the same quality of overall vision, integrity and willingness to make personal sacrifice.

This can be clearly seen in Baripada, where a strong local leader, with sufficient external support has created a strong society. Here, village is now making various efforts in trying to find a second line of leadership, which seem to be slowly emerging. While in Nagavalli most of the work is undertaken by one non-local leader with a strong external support, whether the initiative will carry on once he moves out is a bit question. On the other hand in the sacred sites of Meghalaya the leadership role is deeply entrenched in the traditional system. Leaders emerge as a tradition, some of whom are good while others may not have the same vision. Communities like in Goalpara have tried to get over this by establishing a process of regular selection of an FPC .

(e) Integration of conservation and livelihoods

In nearly all CCAs, a strong link between conservation and local livelihoods emerges. Local communities necessarily bring in elements of their livelihoods into the equation. In a few cases they may decide to completely forego any direct livelihood benefits (e.g., in the sacred groves). In most cases, however (and given other favourable factors), they will tend to integrate conservation and livelihoods, deriving substantial and subsistence ecological benefits, or considerable direct extractive benefits. This is an important lesson to keep in mind while formulating participatory conservation plans for government-managed PAs.

Having said this, it is important to mention that a continuous monitoring and evaluation of the use of a resource and its impact on the conserved area needs to be an integral part of any conservation effort, particularly when meeting livelihood needs is one of the objectives too. This in itself may be most effective if it is participatory and transparent. An initiative of the Vivekananda Girijan Kalyan Kendra (VGKK) and Ashoka Trust for Research in Ecology and the Environment (ATREE), Bangalore, in Biligiri Rangaswamy Temple Sanctuary in Karnataka has helped the local tribal communities earn higher revenue by value-addition to the NTFP harvested by them. ATREE has also devised a mechanism for monitoring of resource extraction with the help of the local tribals[15].

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[15] **Siddappa Setty, R.,** 2002. Manuals on Sustainable harvest of Non-timber forest products (Gooseberry, Honey, Soapnut, Soapberry and Lichen) for the community and researchers.

If done effectively, conservation can often become a basis for biodiversity-based livelihood options. By developing models of fair trade and encouraging value addition at source, livelihood options can be increased manifold, thus further strengthening conservation efforts. One could hypothesise that if conservation becomes a strong tool for social upliftment, more and more communities would want to become part of the wildlife protection movement, rather than being hostile or indifferent to it as is the case in many PAs today.

(f) Funding

Many successful community initiatives try to avoid receiving huge external funding. Some communities have tried to build up a corpus fund by contributions from within the community and/or through executing fines and punishments. Others have managed to get funds from the local line-agencies. Examples suggest that rather than providing large amounts of external monetary inputs specifically for conservation, it is often more useful to mobilise and re-orient already available resources by helping to pool together the budgets of various line departments. Being relatively independent in financial terms is empowering for a community. Often in government schemes such as Joint Forest Management in India the initial seed money became the most important incentive for the community to participate in conservation activities, but this may not necessarily be effective, particularly in the long run.

This is not to say that communities never need external funding, but to emphasis the importance of the manner in which and time when financial contribution is made to a community. CCAs should be able to receive funds when critically required, and in ways that the communities can themselves manage. Communities could be encouraged to develop annual plans, budgets and assessments reflecting the nature of conservation and development needs and funds required. The need for financial sustainability is the basis for a series of innovative mechanisms now being evolved by governments, NGOs, and donors, such as trust funds and foundations, giving the community institutions to levy local taxes, among others.

(g) Climate change mitigation and CCAs

Whether CCAs can be considered as climate change mitigation measures or not is a question that is being debated in various sectors in India. However, discussions on this with the members of the communities did not result in much. Most communities, found it difficult to relate to the issue. This question therefore could not be explored during this study.

In these times when biological diversity is under grave threat globally and nationally, and economic and development policies are aimed at maximum profit with little regard for nature or natural resources, conservation efforts of local communities gain immense significance. The case studies presented in this report indicate that a few communities in India have been able to resolve some of the dilemmas facing conservation although many still need to be resolved. This is not to say that all local communities everywhere are involved in conservation, but that given the right kind of facilitating environment there is an immense potential for local communities to become the biggest allies in conservation, as indeed many of them have been at various points in history. It is thanks to the efforts of various communities, NGOs and international bodies that CCAs have become a force to reckon with. However, this recognition has not yet translated itself into an actual policy on ground, or into legal, political, or administrative recognition and support. Such a support more than anything else would require a major shift in mind set in accepting local communities knowledge, and systems of

governance and management; in viewing them with trust and as equals. A more coordinated effort to synthesise various laws and policies that could help CCAs, creating site specific and decentralised management plans and facilitating and accepting (where already exist) governance systems which are transparent, open, informed and accountable.

No single agency is capable of saving India's biodiversity including its wildlife. The FD, even if highly motivated, has simply too few resources, manpower and knowledge. Local communities often find themselves helpless in the face of powerful internal and outside forces, while most NGOs are too small to handle the complex and enormous problems that natural habitats face. So the solution is to combine the strengths of each of these and to help each other to tackle weaknesses.

Baripada

(See also Datasheet in Appendix V)

Introduction

Baripada village in Maharashtra, protected forests and verdant fields (Courtesy: Neema Pathak)

Baripada is a village situated in the Sakri block of Dhule district, in north Maharashtra, India. It lies towards the northern tip of the Western Ghats and is situated to southeast of the Satpura range. Adjacent to Baripada, lies 445 ha of dense forest that is protected by the people of Baripada. This is reserved forest land[16].

This is a dry deciduous forestland, with a variety of trees like teak *(Tectona grandis), or saag (Tectona grandis), devakhumba (Leucas cephalotes), palas (Butea monosperma), pangara (Erythrina indica),* ain *(Terminalia tomentosa), kumbha (Careya arborea), moha or mahua (Madhuca indica), neem or kadulimb (Azadirachta indica), karwand (Carissa carandas)* among others. The wildlife includes animals like panther *(Panthera pardus), wolf (Canis lupus)*, black-naped hare *(Lepus nigricollis)*, fox *(Vulpus bengalensis)*, and the Indian monitor lizard *(Varanus bengalensis)*.

[16] "Reserved forest" means the forest declared to be reserved by the State Government under section 20 of the Indian Forest Act, 1927 (16 of 1927);] Chapter 1, 25B of the Wildlife Protection Act, 1972

Baripada is a three hundred ha tribal village inhabited by the Kokna tribe. This is a relatively new village as Koknas from Nasik settled here approximately seventy years ago[17]. There are currently over seven hundred people in the village, living in over a hundred households. They are a scheduled tribe (ST)[18] and speak Kokni and Marathi, their own dialect and the state language respectively. They are also conversant with Hindi. There are no castes or sub-castes within the community.

History

By 1990 the forest cover around Baripada had decreased dramatically due to illegal felling and over utilisation of forest resources by people from Baripada and the surrounding villages. Subsequently the ecology of the village was severely impacted. Land began to turn barren as the underground water tables rapidly diminished. Between the late 1980s and early 1990s a third of the wells had dried up and people had to walk three km to get water.

The meagre livelihood that the Koknas used to eke out from agriculture and forest produce became impossible. Migration to towns and cities in search of jobs became common. Women produced liquor from mahua flowers to supplement the family income. However, this increased availability of liquor combined with a paucity of employment opportunities led to a rise in alcoholism in Baripada.

Disturbed by this spiralling situation, Chaitram Pawar, a local youth decided to help his village become self-sufficient. Under the guidance of Dr. Anand Phatak, a member of a NGO called Vanvasi Kalyan Ashram, Pawar started a process of social transformation in Baripada. After much discussion, the villagers realised that all their well-being was directly dependent on the well-being of the forest. Rules were formulated to protect the forest and improve the social condition of the village. This included a ban on firewood extraction, a ban on all vehicles from entering the forest, assigning a guard to protect the forest, a ban on grazing, a ban on alcohol, compulsory education for all children, fines for breaking the rules and many more (see Appendix I). These rules came into effect by 1991 and were stringently enforced. All offenders, whether they were inhabitants of Baripada or other villages or forest officials, were duly fined for breaking the rules (see Appendix 2). An FPC was formed. It was decided that there would be no permanent members to allow all the people in the village a chance to become representatives in the FPC.

Using the concept of *shramdaan* (voluntary labour) and previous knowledge of water conservation the villagers built small check dams to hold rainwater for longer periods of time and prevent soil erosion.

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[17] Interview with Chaitram Pawar (September 2008)

[18] **Definition of Scheduled tribes:** The Constitution of India, Article 366 (25) defines Scheduled Tribes as "such tribes or tribal communities or part of or groups within such tribes or tribal communities as are deemed under Article 342 to the scheduled Tribes (STs) for the purposes of this Constitution"

Article 342 Scheduled Tribes

(1) The President may with respect to any State or Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes in relation to that State or Union territory, as the case may be.

(2) Parliament may by law include in or exclude from the list of Scheduled Tribes specified in a notification issued under clause (1) any tribe or tribal community or part of or group within any tribe or tribal community, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification. http://indiacode.nic.in/coiweb/welcome.html

They also created a series of water reservoirs. Three large water bodies were created at different heights to conserve water efficiently. Thus extra water from one reservoir would be channelled to the next reservoir and eventually to the soil, rather than evaporating quickly.

In 1998 the FD proposed to support the activities of the village by implementing a Joint Forest Management (JFM) scheme[19]. The money received, a hundred thousand rupees, was used to create a jaggery production unit that would employ 25 people (see Appendix 3).

Current Status

Eighteen years have passed since Baripada started changing. The 445 ha of forestland have regenerated with trees well over 30 feet high and dense undergrowth. The rules, though still applicable, have changed to suit the dynamic needs of the village. Wood can be extracted for some ceremonies with prior permission, cattle can graze on certain grounds, alcohol is no longer banned and many more changes have been made (see Appendix 1).

The water tables have risen phenomenally. Not only is there enough water for the forest and the village but Baripada supplies water to five other villages!

Farming now takes place on 120 ha of irrigated land as opposed to the 15 ha before the rules were made. Previously they could only farm once a year, now there are three cropping rotations annually and this allows them to farm all year round. They grow some varieties of rice, soyabean, jowar, potatoes, onion, chilli and fruits as well. These cash crops are sold to the market. Various other small business activities have also been started. A jaggery unit is also running successfully. Small bee-keeping farms, poultry and lac (a resin) production are some new ventures that the people are experimenting with. Mahua flowers are an important source of income. The flowers bloom annually, and are sold to the market for oil and alcohol production. The flowers are very valuable thus when they bloom, most of the villagers live under their trees to protect the flowers from animals and thieves.

All these activities ensure employment and subsistence to the villagers. Today, almost all the villagers work in Baripada and only a handful seek jobs outside the village. This is quite an achievement from the time when most of the men left home in search of work. In fact, people from nearby villages still leave home to be labourers on construction sites or farms while Baripada is the only village in vicinity where only a minuscule number of men leave home in search of work.

A village meeting in progress in Baripada village in Maharashtra in September 2008 (Courtesy: Neema Pathak)

To achieve all the above, decisions are made in village meetings and specific committees. Membership to

[19]Pathak, N. (ed). *Community Conserved Areas in India – A Directory*. Kalpavriksh, Pune, 2009

these committees is open to all adult members of the village. The main committees in the village are the FPC (*Van Suraksha Samiti*), the health and sanitation committee (*Arogya samiti*) that also looks into education, the electricity generation and conservation committee (*Veej Bachao*) and the conflict resolution committee.

Rules – formulation and implementation

There are two methods of decision making in the village. The first is completely democratic and participatory. Open meetings are regularly conducted where different issues are discussed until the village arrives at a consensus. The second method involves committee members discussing an issue and making a decision on behalf of the villagers. This decision is then taken to the people. According to a local leader – Chaitram Pawar, the decision could be vetoed if the villagers don't agree with it. The first method is predominantly used.

Public announcements about new rules or changes in the rules are made in the village and the weekly markets of the surrounding villages to ensure that people in surrounding areas also have up-to-date information. Beyond this, people are penalised with steep fines if they break the rules. If the fine is not paid, the villagers try to make the offenders understand the situation through dialogue. Under normal conditions such dialogues are usually successful and this method is predominantly used to correct situations. In the past however, when this has failed, the villagers have resorted to physical confrontations as well. In one particular instance, people from a neighbouring village refused to pay the fine and were imprisoned till their village paid it. Social sanction is another method that is used to prevent people from breaking rules. If a person goes against the rules of the village and refuses to apologise for his actions, the individual is socially ostracised from the village. S/he is not invited to gatherings and other villagers refuse to go to the individual's house and ceremonies. This is a powerful tool is this small and highly cohesive village, thus motivating people to respect the rules and regulations of Baripada.

Relationship with the forest department

The unflagging dedication of the community to protect the forest has resulted in a strong relationship between Baripada and the FD, based on respect and admiration. The FD considers Baripada as a model JFM site. In 2008 the FD conducted a workshop in the village for over a thousand people from other villages, in the hope that people would learn from Baripada. The trust in the people of Baripada allows them space to formulate and change rules according to their needs. The FD does not interfere with the rules and methods adopted by the village to protect the forest, even though the land is technically under their jurisdiction.

At one level this is excellent, but this relationship may also be constricting the activities of the village. In 2008 the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act began to be implemented. This could have been used by Baripada to lay claim over the forest they were protecting but they were not keen to do that. The reason for this seemed unclear. This could have been a combination of ignorance of the law and a reluctance to disturb the relationship with the FD. This law could have helped them gain legal backing to their efforts towards forest conservation. Today, the people have no legal right to enforce their rules in the forest they have been protecting. If the FD so chooses, it can completely overrule the work they have taken so long to achieve.

Ecological Effects

Wild vegetable recipes festival in Baripada village, Maharashtra (Courtesy: Neema Pathak)

The last eighteen years of work have had significant effects on the ecology of the area. As was mentioned earlier, the underground water tables have been replenished and provide water for Baripada and five surrounding villages. The forest has regenerated and the botany faculty of a local college has recorded several varieties of trees and plants. From the year 2004 a plant Biodiversity Register (see Appendix IV) was created, documenting plants in fourteen different sites using one hundred metre quadrants. The village is now self sufficient in terms of firewood and other minor forest produce. There has also been a considerable increase in the local wildlife population ever since the forest has regenerated. However no study has been conducted on the matter. The soil conservation efforts in the forest undertaken by the people of Baripada and the FD have reduced the soil runoffs.

Role of Women

Women act predominantly as caretakers and farmers. They are members of various committees, like the FPC and the *Arogya* (health and sanitation) committees. The *Arogya* committee consists entirely of women. It focuses on the health of all the people of Baripada but special emphasis is given to the health of the children and the women. Improved standards of sanitation while cooking, cleaning and living has reduced the spread of diseases in the village. However, the involvement of the women in decisions made outside the realm of this committee is vague and remains to be studied. Education for girls is important and all the young girls are sent to school. As is the case with all the children of Baripada, irrespective of gender, the number of children who will complete their schooling remains to be seen.

One festival in the village is specially designed for women to improve their knowledge of the forest. A cooking festival is held, where women have to cook as many wild edible plants (fruits/vegetables/tubers/leaves) that are not found in their homes or farms. They must also know the nutritional and medicinal value of these plants. The results of this festival are stunning, with over a hundred plates in the competition in 2008. The women found plants that helped calm swellings, cuts, burns, aches, menstrual problems and petty illnesses.

Sociological Effects

The transformation of Baripada has also affected the lives of the people.

One dramatic change in the village has been the reduced dependence on addictive substances. A comparison between the years 1992 and 2006 showed that alcohol consumption has decreased from

80 per cent in 1992 to 20 per cent in 2006; tobacco consumption has decreased from 80 per cent to 40 per cent and smoking cigarettes has decreased from 80 per cent to 30 per cent[20].

Education has become obligatory in the village. Teachers and children are fined if they miss school. Over a hundred children, of both sexes, were being schooled when the Kalpavriksh team visited Baripada in November 2008. Unfortunately the village school only offers primary education, for secondary and higher education the children have to go to towns and cities nearby like Pimpalner, Sakri and Nashik. The children stay in residential schools and return home only for the holidays. In a census conducted in 2006, only 18 people had studied till the 9th grade and even fewer had gone beyond that[21].

Occupational education is very popular in the village. Before any new initiative is started, some of the villagers go to educational institutes to learn the ropes of the business and then apply their findings in Baripada.

Due to the efforts of Dr. Phatak and his colleagues at Vanvasi Kalyan Ashram, the advantages of having small families have become common knowledge. Men voluntarily undertake sterilisation operations after the birth of their second or third child. There is no rule forcing people to do so, but it has become a common practice. This is a huge achievement in a country like India, where a study conducted in 1993 by India's National Family Health Survey stated that only nine per cent of the male population chose sterilisation as a method of birth control[22].

The economy of the village has improved as well and there are many indicators of this improvement. A village once desperately trying to survive now has an abundance of food, a variety of occupations to choose from, improved standards of living and more livestock. People live within their means to ensure the longevity of this newfound prosperity. If someone does need a loan, they prefer to borrow from the community rather than take a bank loan that comes loaded with a hefty interest rate. The money received from the fines, the government awards and the profits of various business ventures is kept in a bank account. The transactions of this account are transparent and anyone from Baripada can access this information.

One new development in the village is the availability of electricity. The *Veej Bachao* (electricity generation and conservation) committee has planned to make electricity available to all the homes in the village. They are working with some institutes in Pune to form a self-contained system where the oil will be made from the seeds of the mahua (*Madhuca indica*) plant and this oil will be used to generate electricity. This system will further strengthen the bonds of the village as everyone including those who sell the seeds and the committee members who manage the process to the householder who gets the electricity will have a stake in the programme.

Strengths

The success of this site is due to a variety of reasons but one powerful advantage this village has is cohesiveness. The whole system works on trust and a desire to improve the community. This can only happen when there is a common underlying ideology of common good; otherwise all the rules, the guards and the fines cannot, in isolation, effect so much change in an area. To safeguard this cohesiveness the

[20] From data collected by the villagers and presented to the researchers in November 2008

[21] From data collected by the villagers and presented to the researchers in November 2008

[22] National Family Health Survey, India (Chapter 5, pg 136)

people of Baripada have kept away from local politics. They do not allow politicians, involved in state or national politics, in their homes because politicians often play favourites in the village to garner votes and end up corrupting and destroying the strong foundation of trust that existed before.

The village also has excellent internal communication skills. People have continuous dialogues before coming to a consensus about a new rule or a dispute. This ability and willingness to listen and understand is essential while forming a strong community.

The people of Baripada also have a strong identity. Thus while they are open to new ideas and thoughts from outside bodies, their core belief in themselves is also strong. Thus they can balance absorbing ideas from external bodies that might help the village while standing up against powerful government authorities and other people who break their rules.

They are innovative and hardworking people, willing to try new ideas if deemed reasonable. This has allowed them to enhance their knowledge. For example, while building water reservoirs and bunds, they not only use their traditional knowledge but also that of resource people from other areas.

The tangible advantages of the village are the large amounts of land and water available. Each family legally owns the land they live on and this has reduced the chances of conflicts within the community. They have gone to great lengths to ensure that there are no absentee landlords or encroachers in the village. When the rules were formulated, there was one landless family, so the villagers cleared some forest land and gave it to the family. Thus all the members of the community are equal and have an equal stake in the betterment of the village and its surroundings.

Weaknesses

There are no major threats to the biodiversity of the area. The threat is related to the future governance of the CCA. It is uncertain whether the current generation of youth will reside in the village and continue with this lifestyle. While the previous generation was not formally educated and were willing to stay in the village, a majority of the current generation under the age of 25 has been formally educated outside the village, causing a few potential problems. Living in towns might alienate them from their village life and get them accustomed to urban lives. In addition to this, the children may want to live in cities as a step towards upward mobility. The people of Baripada have tried to deal with this by:

- Creating occupations within the village for people.
- Annual exercises of *shramdaan*/voluntary labour along with an environmental education camp in the forest with the children to keep them connected to the practices of the village.
- Organising inter-school competitions that require extensive knowledge of the area, thus motivating the children to stay connected with the area.
- Organising sports events to bring the village together.

Leadership is another problem. Currently, Pawar is a strong and understanding leader, however it might be difficult to find another leader like him.

The forestland that they protect, as has been mentioned before, is reserved forest area. Thus the people have no legal rights over it. If any problem were to rise between the FD and the people of Baripada, the FD would have complete legal authority to overrule the wishes of the local community.

The people of Baripada are not up-to-date with changes in state and national laws that could help them in their work. If they had access to this knowledge they could get more substantial backing to their work.

There is a lack of facilities for education and health care in the village. If the village had a school that offered higher education, it would prevent children from having to leave their families at a young age and thus ensure greater cohesiveness in the community in the future as well. The *arogya* committee does a lot of work, but they lack a hospital/clinic in the village.

Unfortunately, compensation for loss of livelihood due to changes in the rules was only given to people living within Baripada. One family who was highly dependent on alcohol production as a means of livelihood was allowed sole rights to fish in one water body to offset the losses caused by the change in the rules. However villagers from outside Baripada who were dependent on the forest and were denied access to it after the formulation of the rules were not compensated for their loss.

Conclusion

The success of Baripada as a CCA is rooted in the core ethics and principles the people value. Their foremost consideration, which is reflected in all their decisions, is the welfare and unity of the community. Unity in a community is often a by-product of a common goal. Once the goal has been achieved, people strive for personal goals rather than collective ones. In Baripada they have taken great care to prevent this from happening. They focus on activities that keep them interdependent and prevent them from drifting away from each other. The structure of development followed by Baripada demands this level of cohesiveness. Thus when they were finalising a method of electricity generation they chose the self-contained method, mentioned above, over solar panels. The panels would only generate electricity, but the method that they have chosen will require inputs from various people in the village, thus strengthening the bonds within the community and creating a direct relationship with the generated electricity.

Furthermore, they have consciously stayed away from funding agencies, unless necessary. Since the area has proved to be a success, people are willing to fund the activities of Baripada. The village, however, has stood by its belief of living within its means. They prefer people donating time and knowledge rather than money. If they need particular machines for projects, they often ask the donors to provide the machine rather than money for it. The idea of remunerating village leaders for their work was rejected because it would take away from the sanctity of the position. It could also make people wonder if the leader genuinely believed in what he said or had vested interests.

As the rules have shown, the people of Baripada are open to evaluating and revaluating their decisions when circumstances change. For instance, during the early 1990s alcoholism was a huge problem in the village and this led to the ban on alcohol. Later however, as the rate of alcoholism dropped by half, they realised that the ban was no longer necessary and reverted the rule. This ability to see situations as they truly are and evolve accordingly is one of the main strengths of the community.

In general, the forest adjoining the village would be considered the CCA. It is this area that has regenerated and been allowed to grow but on further inspection it becomes apparent that the CCA starts in the village itself. During the last eighteen years, Baripada has also regenerated. The changes had started in the individual homes and the collective lifestyle of the village. There is a delicate and intricate relationship between *Jal* (water) *Jungle* (forest) *Jameen* (land) and Jivan (life) and when this relationship is respected changes can be made in the community. This underlying core value is the basis of all the work in Baripada.

This report has been written by Persis Taraporevala based on two field visits, and a case study on Baripada by Millind Thatte in Pathak, N. (ed). *Community Conserved Areas in India – A Directory*. Kalpavriksh, Pune, 2009.

The team that visited Baripada from 27-29 September 2008 consisted of Neema Pathak, Milind Thatte and Persis Taraporevala. The team for the second field trip (6-8 November 2008) consisted of Neema Pathak, Pradeep Chavhan, Michael Lockwood, Graeme Worboys and Persis Taraporevala.

Photographs courtesy: Graeme Worboys and Persis Taraporevala

Appendix I: Rules

The following rules created and adopted by the villager of Baripada were formulated in 1991:

1. Anyone found destroying or taking anything from the forest would be punished as per the rules framed for regulating human and cattle activity in the area.
2. Only the inhabitants of the village were eligible for extracting resources from the forest, if at all.
3. Two elderly people in the village would work as watchmen and report to the FPC. The watchmen would be paid rupees 100 per month and would be changed every year.
4. Each family would pay rupees 3 in cash or 7 kg of grain to generate funds required to pay the watchmen.
5. Any person found removing any plant or animal material without permission would be penalised rupees 151 per headload and rupees 751 if taken out of the forest in any other manner. For cattle grazing in the forest the fine would be rupees 1000.
6. If someone other than the watchmen caught the culprit, then an award of rupees 501 would be given to the person.
7. Farmers whose lands lay next to the protected community forest would have the moral responsibility to report any theft they may encounter.
8. Nobody from within or outside the village would be allowed to enter the forest with a bullock cart for any reason.

Some of the rules have changed since then. For example:

1. The neighbouring villagers are now allowed to extract some resources for social and religious purposes but only if the permission had been sought in advance from Baripada village.
2. For 30 days in a year 50 acres of forestland is given for grazing. The area allocated for grazing is changed every year. Grazing for sheep and goats is not allowed.
3. Villagers are allowed to remove dead/dried wood on social occasions or community gatherings (deaths, weddings, etc). In addition one month during winter (February/March) is a free time again, when only villagers are allowed to remove fuel wood.

Appendix II: Conflicts with offenders of the rules

There have been some conflicts with various people, from the FD, other villages and even within the village, after formulating the rules.

The first run-in with the FD occurred soon after the rules were made. One of the forest guards hired some people to collect firewood. Normally this would have gone unnoticed but since the rules

had been made, the villagers confronted the guard. Embarrassed by the episode he asked for a transfer. This incident, along with the continued dedication to the cause has proved to the FD that the people of Baripada are serious about their commitment to protecting the forest.

The most aggressive run-in with people outside the village occurred when some people stole timber from the forest and refused to pay the fine. They were imprisoned till their families paid the fine.

Appendix III: Jaggery production

The hundred thousand rupees received through the JFM programme was invested in a jaggery (unrefined sugar) production unit. Some of the villagers went to Nasik to study the process and worked on the unit when they returned. The unit employed twenty-five people when it started and currently employs forty individuals from the village.

Appendix IV: Biodiversity Register

Section 22 of the Biological Diversity Rules, 2004 (under the Biological Diversity Act, 2002) states that 'every local body shall constitute a Biodiversity Management Committee (BMCs) within its area of jurisdiction'. The main function of the BMC of the area is preparing a People's Biodiversity Register that contains a detailed report on the biological resources and the knowledge on these resources available. This must be done in consultation with local people.

Appendix V: Datasheet of Baripada

Basic data

Site Name (in local language and in English)	Baripada
Country (include State and Province)	Maharashtra, Dhule District
Area encompassed by the CCA (specify unit of measurement).	425 ha
GIS Coordinates (if available)	Unavailable
Main ecosystem type	Forest (dry deciduous)
Whether it includes sea areas (Yes or no)	No
Whether it includes freshwater (Yes or no)	Yes
Marine (Yes or No)	No
Concerned community (name and approx. number of persons)	Kokna; around 900

Is the community considering itself an indigenous people? (Please note Yes or No; if yes note which people)	Yes. Kokna, a scheduled tribe[23*]
Is the community considering itself a minority? (Please note Yes or No, if yes on the basis of what, e.g. religion, ethnicity)	Yes, ethnic minority.
Is the community permanently settled? (Please note Yes or No; if the community is mobile, does it have a customary transhumance territory?)	Yes
Is the community local per capita income inferior, basically the same or superior to national value? (please note how confident you are about the information)	Not Available
Is the CCA recognised as a protected area by governmental agencies? (Yes or no; if yes, how? If no, is it otherwise recognised?) If yes, legal document? Establishment date?	It is not a protected area (PA) but a Joint Forest Management (JFM) site under a government programme. Legally the forests are Reserved Forests as the JFM programme does not have a legal status
Conflicts with land tenure, natural resource use?	No
What is the main management objective (e.g. livelihood, cultural, spiritual…)	Conservation and consequently livelihood
By definition, a CCA fulfils a management objective. To which IUCN management category[24] do you consider it would best fit (this does not imply that the management objective is consciously pursued by the concerned community, but that it is actually achieved)	Category VI (managed protected area)
Additional qualitative information	

[23] Definition of Schedule Tribes: The Constitution of India, Article 366 (25) defines Schedule Tribes as "such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes (STs) for the purposes of this Constitution".

Article 342 Scheduled Tribes

(1) The President may with respect to any State or Union territory, and where it is a State, after consultation with the Governor thereof, by public notification, specify the tribes or tribal communities or parts of or groups within tribes or tribal communities which shall for the purposes of this Constitution be deemed to be Scheduled Tribes in relation to that State or Union territory, as the case may be.

(2) Parliament may by law include in or exclude from the list of Scheduled Tribes specified in a notification issued under clause (1) any tribe or tribal community or part of or group within any tribe or tribal community, but save as aforesaid a notification issued under the said clause shall not be varied by any subsequent notification.

[24] http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf

Description of biodiversity & resources (ecosystems, species, functions) conserved by the CCA	teak or saag (*Tectona grandis*), devakhumba (*Leucas cephalotes*), palas (*Butea monosperma*), pangara (Erythrina indica), ain (*Terminalia tomentosa*), kumbha (*Careya arborea*), moha or mahua (*Madhuca indica*), neem or kadulimb (*Azadirachta indica*), karwand (*Carissa carandas*), etc. Wild animals found here are panther *(Panthera pardus),* wolf *(Canis lupus)*, black-naped hare *(Lepus nigricollis)*, fox *(Vulpus bengalensis)*, Indian monitor lizard *(Varanus bengalensis)*, etc.
Description of local ethnic groups and languages spoken	Koknas, a Scheduled Tribe[3]. Speak Kokni, Marathi and Hindi. A few speak Gujarati
Broad historical context of the CCA	Started protecting the forest in 1990, became a JFM site in 1998.
Governance structure for the CCA (who takes management decisions, how?)	Mix of methods. Most decisions are made through discussions by the whole village. A few are made by the village committees and then agreed/disagreed by the whole village. First method predominantly used.
Length of time the governance model has been in place	Since 1990
Land and resource ownership in the CCA	CCA is Reserve Forest legal ownership rests with the state government.
Type of land use in the CCA	CCA land is mostly left alone but for one month in the year, and for certain occasions (marriages, weddings, ceremonies...) firewood. Non Forest Timber Produce, like the flowers from Mahua Trees (*Madhuca indica*), is collected seasonally.
Existence of written or oral management plans and specific rules for the use of natural resources in the CCA	There are written rules that have been printed on flex sheets and can be viewed by those who wish to see them. Management plans are made informally, through discussions conducted in the village.
Map and zoning of the CCA (please attach if available and relevant,)	Unavailable
Relevant pictures with captions (please attach if available)	Already sent
Major threats to biodiversity and/or the CCA governance system	No major threat to biodiversity yet; threat to governance would be an uncertainty of whether future generations will live in the village and continue with this form of living. While the previous generation was not formally educated and were willing to stay in the village, a majority of this generation has been formally educated and might go to cities in search of different professions. They have tried to deal with this by: - Creating occupations within the village for people like committees that look into electricity generation, creating marketable goods like gur, oil etc. - Annual exercises of *shramdaan*/voluntary labour to keep the children connected to the practices of the village - Organising school competitions which involve knowledge about the area - Organising sports events to bring the village together.

Local CCA-relevant features, stories, names, rules and practices	Rules: 1. Anyone found destroying or taking anything from the forest would be punished as per the rules framed for regulating human and cattle activity in the area. 2. Only the inhabitants of the village and the neighbouring villagers are allowed to extract some resources for social and religious purposes but only if the permission had been sought in advance from Baripada village. Two elderly people in the village would work as watchmen and report to the FPC. The watchmen would be paid Rs 100 per month and would be changed every year. 3. Any person found removing any plant or animal material without permission would be penalised 4. If someone other than the watchmen caught the culprit, then an award of Rs 501 would be given to the person. 5. Farmers whose lands lay next to the protected community forest would have the moral responsibility to report any theft they may encounter. 6. Nobody from within or outside the village would be allowed to enter the forest with a bullock cart for any reason.
Gender aspect of the CCA (elaborate)	Women seem to play a smaller role in the decision making process as compared to the men, even though they are a part of the decision making committees. Girls are educated, along with boys in schools but not many can pursue education after school.
Climate change attributes (elaborate)	**Still being studied**

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Nagavalli

(see also Datasheet in Appendix IV)

Introduction

Nagavalli is a village situated in Tumkur district, in southeast Karnataka, India. It is 76 kilometres northwest from the state capital Bengaluru. It lies between the coordinates 13°20'24" N, 77°6'0" E[25]. Regular sightings of Slender Loris (*Loris tardigradus malabaricus*) occur within the four sq km of area. The sightings occur in Nagavalli, Lakkenahalli, Sopanahalli, Timmasandra, Pannasandra, Banavara, Bidrekatte, Dommanakuppe, Bellagere and Aranganathpura villages.

Nagavalli is a panchayat head village with 7 villages under its jurisdiction. The population of the panchayat is 5800 people[26]. The major religions are Hinduism and Islam. Kannada is the primary language of the area while twelve per cent of the population also speak Urdu[27].

The terrain consists of dry scrubby grasslands along with agricultural fields and four wetlands in the form of water reservoirs. According to the Biodiversity Register (See Appendix I), the area has 517 types of flowering plants, 28 species of fresh fish, 11 species of toads and frogs, 24 species of reptiles, 144 species of birds, 15 species of mammals, 54 species of butterflies and 59 species of other insects.

History

In 1996, a group of school children saw a small primate sleeping in a clump of bamboo. They informed their teacher, Mr. B.V. Gundappa who realised that this was a rare find. He decided to work proactively towards protecting and conserving the Slender loris found in and around Nagavalli.

Using his two nature groups Wildlife Aware Nature Club (WANC) and *Maduka* (See Appendix III), he sought to study the behavioural patterns and population of this animal.

Slender Loris in the forests of Nagavalli village, Karnataka (Courtesy: Ashish Kothari)

[25] According to Wikimapia: http://stable.toolserver.org/geohack/geohack.php?pagename=Tumkur_district&params=13.34_N_77.1_E_region:IN_type:city

[26] Interview with resident TVN Murthy and Gundappa BV February 2009 (member of WANC)

[27] Interview with resident TVN Murthy and Gundappa BV February 2009 (member of WANC)

In the year 1999, WWF-India conducted a student seminar on wildlife. One of the students from Nagavalli, presented a paper on the Slender loris. This paper documented the behavioural patterns, the ecological importance and economic benefits of the primate. It went on to be part of a national seminar and also sparked a lot of interest in the subject.

In 2001, WANC and some students conducted a small census of the Slender loris population and within 3 hours they saw eight animals. WWF-India uploaded this information on their website and soon local and national media started covering the area.

They also conducted a census for the biodiversity register. This was helped by the detailed inventory of all the reported births, deaths and strange occurrences of Slender loris in the area that Mr. Gundappa has kept.

Slender Loris

Slender loris is a small nocturnal primate found only in India and Srilanka. *Loris tardigradus malabaricus* is a subspecies that is only found in the Western Ghats in southern India. Kaard pappa, literally 'child of the forest', is the local name for the primate. It is listed under Schedule I of the Wildlife Protection Act 1972 and has been declared endangered by the 2004 IUCN Red List. This small primate is approximately 6 to 10 inches long with pencil-thin limbs, a small vestigial tail and large saucer-shaped eyes. It weighs from 100 to 300 gms and is mostly arboreal, feeding on insectivorous animals though it also eats shoots, leaves, flowers, eggs and nestlings. The movements of this primate are slow and stealth, thus they have the ability to move through trees without causing any disturbances. They inhabit tropical rainforest, scrub forest, semi-deciduous forest and swamps. Although they forage alone, these primates sleep in groups of 2-4. They have a lifespan of approximately 15 years where they become sexually mature at ten months and breed twice a year.

Threats

The inhabitants of the village do not directly harm the slender loris. Most of the threats to the slender loris population are consequences of actions that were not meant to directly affect the animals.

Slender loris are nocturnal animals and deaths occasionally occur when the animals cross major roads. The incidents of roadkill increased after the Tumkur – Mysore highway was widened. Habitat loss occurs when the open dry scrubby land in the villages, where the Slender loris reside, is cleared for agricultural purposes. This has reduced the area available for the primate and negatively impacted the population. The electrical wires in the farms have caused fatalities as well and have become one cause for concern. Though no formal studies have been conducted, biomagnifications are also viewed as a possible threat. People are concerned that the rampant use of pesticides may be affecting the health of the primates in the area.

Participation Methods

Most of the activities in the area revolve around studying the Slender loris and disseminating information about the same. The documentation is essentially undertaken by Gundappa through his inventory. In addition to this, a detailed study of the area was conducted when the biodiversity register was created by the members of WANC, *Maduka* and some external resource people. The information gathered through these studies is disseminated through lectures and articles in regional and national media.

A bulk of these activities are organised by the members of WANC. They are trying to get more village participation in the conservation activities. To achieve stronger local participation, Gundappa had proposed to make Nagavalli and the surrounding areas a Community Reserve (See Appendix II). He hopes that this will make people, villagers and government officials alike, more involved in the conservation work. However due to some technical errors in the papers that were filed as a request to convert the area to a conservation reserve, led the request to be rejected.

Strengths

The lifestyle of the village is their strength. They have a history of non-interference and do not hunt or kill the primate for commercial or other purposes.

Maduka, the local wildlife club for students is very active. There are several nature camps, lectures and study tours that take place. The existence of such a committed group that also acts as a platform to talk about and take part in environmental activities is a major strength of the village.

Other than the widening of the Tumkur – Mysore highway, there are not many development projects that pose an immediate threat to the existence of the slender loris.

Constraints

The strength of the village, i.e. the non-interference of the villagers is also its biggest constraint. Most of the inhabitants are not actively involved with the research and conservation efforts of WANC and *Maduka*. The goal of conservation work has been impeded in part by the lack of participation from the community as a whole and in part because there is no clear plan in place.

Current Status

There are no new problems cropping up. The old issues of non-participation and non-interference continue parallel to the lack of direct harm. The attempts to make the area a community reserve are also on hold. Though there is more information available now than there was before.

Conclusion

Nagavalli possesses, within its boundaries, an endemic primate that appears to face a high risk of extinction. The community has a traditional practice of living symbiotically with the Slender loris, which continues to date. However attempts are being made to create a more proactive method of living that helps protect the primate. Thus the focus is to move away from passive non-interference towards active conservation. Most of the programmes have focused on documentation rather than conservation. This strategy aims at inculcating a sense of pride, amongst the villagers, in the hope that this will translate into proactive help from the villagers in conservation efforts. However, all these activities are initiated and carried out by WANC and *Maduka*, and the lack of active community participation leaves open the question of whether this can be termed a CCA.

This report was written by Persis Taraporevala based on information gathered from a field visit to Nagavalli on 24 December 2008, a phone interview with Mr. Gundappa in January 2009, a case study written by Ameen Ahmed in Pathak, N. (ed). *Community Conserved Areas in India – A Directory*. Kalpavriksh, Pune, 2009 and an article by Upadhye, A.S. called 'This village has an unusual friend' from the The Sunday Times of India, Times City (Bangalore). The team that visited Nagavalli included Neema Pathak, Vivek Broome and Persis Taraporevala; a second visit was made on 19-20 February 2009.

Photographs by: Vivek Gour-Broome and Ashish Kothari

Appendix I: Biodiversity Register

Section 22 of the Biological Diversity Rules, 2004 (under the Biological Diversity Act, 2002) states that 'every local body shall constitute a Biodiversity Management Committee (BMC) within its area of jurisdiction'. The main function of the BMC of the area is preparing a People's Biodiversity Register that contains a detailed report on the biological resources and the knowledge on these resources available. This must be done in consultation with local people.

Appendix II: Community Reserve

According to sections 36C and 36D of the Wildlife Protection Act 1972 (amended in 2003) a Community Reserve is a new form of protected area. Only private or community land where a community or an individual has volunteered to conserve wildlife can be declared a community reserve. A Community Reserve Management Committee, consisting of five people nominated by local governmental bodies (Panchayat or *Gram Sabha*) will have the authority to conserve, maintain and manage the reserve.

Appendix III: WANC and Maduka

WANC (Wildlife Aware Nature Club) and *Maduka* are local environmental groups. WANC is situated in the city of Tumkur, about fifteen km from Nagavalli. It started in 1989 and focuses on environmental education for children and wildlife conservation. *Maduka*, which means 'frog' in Kannada is the environmental group in Nagavalli for school children. It is run by Gundappa and actively takes part in study tours and lectures related to wildlife. Both these groups work together on Slender loris protection and documentation.

Appendix IV: Datasheet of Nagavalli

Basic data

Site Name (in local language and in English)	Nagavalli
Country (include State and Province)	Tumkur district, Karnataka, India
Area encompassed by the CCA (specify unit of measurement).	4 sq km
GIS Coordinates (if available)	Unknown
Main ecosystem type	Dry scrubby grasslands along with agricultural fields and four wetlands in the form of water reservoirs.
Whether it includes sea areas (Yes or no)	No
Whether it includes freshwater (Yes or no)	Yes, 4 water tanks
Marine (Yes or No)	No
Concerned community (name and approx. number of persons)	Is a mixed community. Nagavalli panchayat has a population of 5800 people[28].
Is the community considering itself an indigenous people? (Please note Yes or No; if yes note which people)	No
Is the community considering itself a minority? (Please note Yes or No, if yes on the basis of what, e.g. religion, ethnicity)	No
Is the community permanently settled? (Please note Yes or No; if the community is mobile, does it have a customary transhumance territory?)	Yes
Is the community local per capita income inferior, basically the same or superior to national value? (please note how confident you are about the information)	Unknown
Is the CCA recognised as a protected area by governmental agencies? (Yes or no; if yes, how? If no, is it otherwise recognised?) If yes, legal document? Establishment date?	No, but they want to be recognised as a community reserve[29]. A proposal was submitted for the same, however this was rejected because some legal formalities were not completed.
Conflicts with land tenure, natural resource use?	Unknown
What is the main management objective (e.g. livelihood, cultural, spiritual…)	Conservation of Slender loris (*Loris tardigradus*)
By definition, a CCA fulfils a management objective. To which IUCN management category do you consider it would best fit (this does not imply that the management objective is consciously pursued by the concerned community, but that it is actually achieved)	Category IV[30]

[28] Interview with resident TVN Murthy and Gundappa BV February 2009 (member of WANC).

[29] Sections 36C & D of the Wildlife Protection Act, 1972 (amended in 2003)

[30] http://data.iucn.org/dbtw-wpd/edocs/PAPS-016.pdf

Additional qualitative information

Description of biodiversity & resources (ecosystems, species, functions) conserved by the CCA	Conservation work revolves around the Slender loris but according to the Biodiversity register[31] the area has 517 types of flowering plants, 28 species of fresh fish, 11 species of toads and frogs, 24 species of reptiles, 144 species of birds, 15 species of mammals, 54 species of butterflies and 59 species of other insects. If active conservation takes place, most of these species will benefit.
Description of local ethnic groups and languages spoken	It is a village with a strong Hindu and Muslim population. The predominant language is Kannada with 12% of the population speaking Urdu.
Broad historical context of the CCA	Slender loris was discovered here in 1996 and conservation efforts have been going on since then. There is a Nature group called WANC (Wildlife Awareness Nature Club) with 15 members and the local school nature club *Maduka* works on conservation and documentation work.
Governance structure for the CCA (who takes management decisions, how?)	Unknown
Length of time the governance model has been in place	Unknown
Land and resource ownership in the CCA	Farmland is owned by people, grassland is revenue land[32].
Type of land use in the CCA	Farmland
Existence of written or oral management plans and specific rules for the use of natural resources in the CCA	There seems to be no management plan beyond Slender loris conservation and dissemination of information about the primate. This strategy aims to inculcate a sense of pride amongst the villagers about the fact that this species resides in their village. This pride should translate into proactive help from the villagers in conservation efforts. It is unknown if written or oral rules exist.
Map and zoning of the CCA (please attach if available and relevant,)	Available at Nagavalli, will attach later.
Relevant pictures with captions (please attach if available)	Available

[31] Interview with Mr. Gundappa February 2009.

[32] Agricultural land that cannot be used for commercial or residential purposes.

Major threats to biodiversity and/or the CCA governance system	Threats to Slender loris include - Road kill: Widening of the Tumkur-Mysore road has increased the incidents of road kill as the animals are nocturnal and are often run over by cars while they cross the road at night. - Electrical fences: Some of the farms have electrical fencing and this has led to several fatalities. - Biomagnification: Studies have not been conducted but rampant use of pesticides may be affecting the health of the primates in the area. - Habitat loss: due to clearing of land for agricultural purposes
Local CCA-relevant features, stories, names, rules and practices	Mr. B.V. Gundappa, a local school teacher, is the backbone of the documentation activities and attempts at conservation of the Slender Loris. He started an environmental group for the children in the area called *Maduka* and is a member of Wildlife Aware Nature Club (WANC). These two groups have conducted most of the activities related to the primate.
Gender aspect of the CCA (elaborate)	Unknown,
Climate change attributes(elaborate)	Unknown

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DZONGU[33]

(See also Datasheet in Appendix III)

Dzongu is located in Northern Sikkim at an elevation ranging from 800m to 6,000m above sea level. The area has panoramic views of Mount Khanchendzonga (the third highest peak in the world).Dzongu along with its adjoining Khangchendzonga National Park and Biosphere Reserve is part of the Indo Myanmar biodiversity hotspot. It has particularly rich fauna and flora that is endemic to the area with many species of endangered vertebrates and invertebrates. The vegetation in Dzongu spans tropical and subtropical in the lower reaches of the valley to Trans Himalayan categories in the higher altitudinal areas. The area along with the adjoining Protected Areas is considered an important bird habitat area.

Figure 1: Dzongu on the larger map
Source: www.savetheteesta.com

[33] This report was written by *Mashqura Fareedi* based on secondary literature and interviews during her visit to the site in December 2008.

"…Dzongu is bounded to the south-east by Teesta river and north-east by Tholung chu (river) and to the west by rising mountain leading to Khangchendzonga… meaning 'bright auspicious forehead peak' that borders the Khangchendzonga Biosphere Reserve (KBR) at north. A fairly triangular shaped Dzongu landscape covers approximately 78 km2 geographical areas extending between 27°28' – 27°38' N lat. and 88°23' – 88°38' E long. (as judged from Google Earth) along the 700 m to 6000 m amsl altitude. Dzongu further extends from Sheep-Gyer in the east to Sakyong-Pentong village in the west and Kishong Cho Lake in north to Lum village in the south. The area is characterised by diverse snowy mountainous landscape with steep and narrow valleys and gorges with well drained flanking slopes, receiving high rainfall between June and September. Owing to dense forest cover, the area experiences showers almost throughout the year. The area represents three climatic zones viz. sub-tropical, temperate and alpine. Further, the area may be divided into two parts, viz. Upper Dzongu… and the Lower Dzongu… Dzongu is the abode of majority of Lepchas [21]; however, as per 2004 official list of voters, it has a total population of approximately 4513 persons (ca. 10% of total Lepcha population of Sikkim), spreads over 38 villages."

Source: http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2567294

THE LEPCHAS and DZONGU

'Lepcha' is an exonym (a name given by person/s outside of the tribe) that is used most commonly to denote this tribe which is spread over India (Sikkim and the Darjeeling hills), Nepal and south western Bhutan. Lepchas are indigenous to the hills of Sikkim and Darjeeling. They refer to themselves as *mutanchi rongkup* which means 'children of the snowy peak or children of the gods'. They were hunters and gatherers and lived complete nomadic lives till mid-nineteenth century when they began practicing settled agriculture. They are originally animists. The influence of Buddhism has grown since the eighteenth century. In recent times, many Lepchas have been seen to be inclined towards Christianity, though often the original shamanistic beliefs and practices are mixed with those of the new religion.

Lepchas believe that they were created to protect and worship the Kanchendzonga. In the foothills of the mighty mountain they believe is a hidden paradise, the Mayel yang from which every Lepcha originated and is destined to go back to in his/her afterlife.

The Lepcha people are the only residents of Dzongu. For an ordinary Lepcha, Dzongu is a pilgrimage place of superior importance. It is an area to which every Lepcha traces his/her lineage and ancestry. The Lepcha history and culture is intricately woven into its natural environment: the mountains, rivers, lakes and forests, especially those of Dzongu. Almost every part of Dzongu has a legend behind it. The river Teesta, its tributaries, each hill and rock comes alive with a story that makes it seem like it always was like a human life form but has only now decided to keep silent. The elders narrate these legends believing that there are deities that reside in the rivers, forests, springs, lakes or hills and that they still exist to guide and protect every member of the tribe and would avenge any harm to nature or to the tribe if it ever occurred.

Dzongu was declared a Lepcha Reserve in the 1960s when Sikkim was still a kingdom ruled by Chogyal Palden Thondup Namgyal. Outsiders, even from within Sikkim require a permit to enter Dzongu. It is perhaps the only place which contains the last relics of the Lepcha identity: including traditional houses, bamboo bridges ("made from long sections of split bamboo, a ingenious feat of

grass root engineering"), the *bongthing* (the Lepcha shaman) and the *mun* (the female counterpart of the same) - bridges between the human, the natural and the supernatural worlds- revered monasteries, trees, lakes, hot springs, forests, caves, hills, mountains and the rivers worshiped and propitiated regularly through elaborate ceremonies[34].

The belief in ancient traditions and concepts along with the 'new' knowledge that 'development' brings finds an interesting mix within the Lepcha lifestyle of today. Since the 1980s after A.R. Foning's book 'Lepcha: My Vanishing Tribe', the word "vanishing" has become inseparable with descriptions of the tribe. Aware of their dwindling identity, Lepchas from across the Himalayan countries, especially India, Bhutan and Nepal have become more and more vociferous about the need to protect their ethnicity and culture. This need is reiterated especially in face of the fact that despite being the indigenous people to the Sikkim and Darjeeling, they have been rendered as minorities in both.

STATUS OF DZONGU and THE LEPCHAS

In addition to Dzongu being declared a Reserve for the Lepchas, the Lepchas were acknowledged to be Sikkim's "original indigenous inhabitants" by a Supreme Court verdict on 10 February 1993. The State Government also granted the Lepchas the status of a Primitive Tribal Group in November 2006.

LIVELIHOOD

CULTIVATED LAND in Hectares (Census 1996-97)

Paddy	102.5
Cardamom	1339.36
Dry field	1219.60
Inc. Pvt. Forest	11
Barren Land	28.60
Khasmal	3438.89
Reserved Forest	160.71
Gowchara	1425.11

Major cultivation:

Cardamom (produce from which has drastically decreased over the past few years seriously affecting the economic well being of majority of the Lepchas within Dzongu).

Other cultivation:

Rice, wheat, pulses, ginger, potato, oranges, maize, millet, phaper and vegetables.

Animal livestock:

Cattle, goats, pigs, poultry, yak and sheep (in areas like Sakyong Pentung) and horses (in Hee Gyathang).

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[34] Pema Wangchuk in http://www.questhimalaya.com/placesofinterest/north-sikkim-dzongu.htm (As downloaded on 11 December 2008)

SACRED SPACES WITHIN DZONGU

Sacred spaces include lakes, forest areas, hills, rivers, caves and may also include agricultural plots or individual trees or rocks (See Map I below).[35]

Map I: **Dzongu Ecotourism map,** *Source: Mr. Ugen Lepcha, MLAs, Dzongu.*

[35] Note: the map does not clearly specify what a particular 'sacred space' is. It does point out the rivers, lakes, forests, lakes, monasteries or caves, etc. but does not label them as 'sacred' separately. This, being a map for ecotourism, focuses on these components from a tourism perspective only.

Each sacred space has a legend attached to it like the aboriginal 'Dreaming'[36]. These legends are stories that are intrinsically linked to the identity of the Lepchas and characterise their perception towards nature and its components. The necessity to preserve the sanctity of a sacred space leads to conservation of the same.

A Sacred Lake in Dzongu Valley, Sikkim (Courtesy: Mashqura Fareedi)

The specific sites mentioned below have not been selected on the basis of any criteria but have been chosen for documentation mainly because of the easy access and availability of information through village elders in the limited time and resources available. There are of course innumerable sacred sites within Dzongu, some of which have been documented extensively; all of which point to the intricate link between the Lepcha identity and his surrounding natural environment, efforts to protect and preserve which are driven by not only the fear of irreparable ecological damage to the fragile ecosystem but also by an ever increasing fear of losing their identity with it forever.

I. Tung Kyong Doh: The sacred lake of Tung Kyong

The lake is situated at Hee Gyathang village of Lower Dzongu. The legend attached to the lake was narrated by Mr. Choden Lepcha, a local elder (See Appendix I).

PROTECTION OF THE SACRED SITE

A particular clan of the Lepchas who are believed to be descendants of Hee Yong Ming Moo, Thinggockmu's second son (see legend associated with the lake), still exist in the village of Gyathang where the lake is. They worship and protect the lake. The *pooja* of the lake takes place on the fifteenth day of the seventh month of the Tibetan calendar[37]. The lake and the fish within are revered by all Lepchas. It is believed to be a place for wish fulfillment. The increase in the population of the fish symbolises the potential increase of the clan itself.

The various clans within the Lepcha tribe have their origins linked to legend like the above. And almost all of the legends include nature and its components as active players. For example, the origins of Aramputso and Arampanchat clan, one of the largest Lepcha clans, is linked to the Rongyong River, the Runglee kyong water fall and stream in the Ting Bung village of Upper Dzongu. Protection of these rivers, streams etc. are therefore the responsibility of the respective clan.

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[36] See http://en.wikipedia.org/wiki/Dreamtime

[37] As told by Mr. Choden Lepcha. The use of the Tibetan calendar denotes the Tibetan influence.

II. Sacred Areas within Lindong Gram Panchayat[38]

Apart from *Tung Kyong Doh* which gives an idea of the sacredness of one particular natural resource (in this case a lake), the legend attached, the protection mechanisms and the lineage drawn from it, it is important to understand the same concepts expanding to include an entire landscape itself. Therefore some description of the Lingdong Gram Panchayat is given below[39].

Although all the Lepchas revere Mt. Kanchendzonga in general as sacred, every village worships the hill it resides in, in particular. Lingdong is a Gram Panchayat in Lower Dzongu. It consists of about six such hills.

Hills and Sacred Groves: *Lingi Chu*, which is the most important for this village with *Tung Deh* (who/which is considered *Lingi Chu*'s 'wife'), followed by *Sandkardzong* and *Rinkendzong*.

Kanchenbrung tung da is a sacred grove: its forests and rocks are revered and worshiped by the locals.

Holy Lakes and water sources: The holy lakes like *Sa Thong deh* and *Ta Ung deh* are revered and worshiped by the villagers.

Mayel Ney, another sacred spot, is a perennial water source, which is quite surprising, the elders say, because the area otherwise is dry.

Known habitat: *Rangbol* within the forest is a habitat for the jungle bee (species unknown).

PENALTY ON DEFILEMENT OR DEGRADATION OF SACRED SPACE

In the event of any defilement of a sacred space, there is no organised mechanism to charge penalty or issue a punishment. It is mostly believed that the local deities (of the respective lake, forest, spring or field) will issue the retribution. Locals cite numerous examples of people falling sick because they polluted a lake or damaged a sacred tree.

The process of collectively drawing a set of rules and regulations to protect the sacred sites has not taken place presumably because the faith in supernatural retribution is so strong.

Note: It would be erroneous to consider these sites in exclusivity. The sites that are mentioned above and the others existing within Dzongu are only symbols of a deeper fabric of relationships that this ancient tribe shares with nature. This, of course, is fast changing and protection and reverence in time, may unfortunately be severed from this fabric and restrict itself to a few protected areas.

The change in the tribe's relationship with nature and its components is part of the larger and longer process of 'development' or globalisation which has, through various means disassociated the individual from nature. From a living entity that is revered and is in constant need of propitiation (an aspect that has been characteristic of most Eastern and Oriental cultures), Nature is now perceived in its components that can be used as "resource" for economic benefits. This attitude is reflected at various levels ranging from national policy to individual lifestyle. Therefore, it is no wonder that when faced with a decision to 'use' these 'resources' for 'development', a particular tribe, in this case the Lepchas, is fragmented in its views depending upon what value Nature still holds for each individual as compared to the needs for material progress that exploitation of the same would otherwise bring.

[38] A Gram Panchayat (mainly a village) is the lowest unit of the local institutional structure in the rural areas as per the Indian Constitution.

[39] As told by Mr. Lazang Lepcha and Mr. Norgay Lepcha, elders from the Lingdong Gram

MAJOR THREATS

There are about 29 mega hydel projects coming up within the small and fragile state of Sikkim. The river Teesta, which is a turbulent river, drops from an elevation of 5,280 m. to about 230 m. over a distance of 175 km, ideal for generation of hydropower[40]. But the scientific logic behind the number of projects planned is questionable, especially considering that the area is geologically very fragile and that the glaciers feeding the river will soon be dry[41]. Apprehensions against the projects, being expressed from all quarters including local citizens, civil society and the scientific community, are also based on the fact that they would change the ecology of the region irreparably as the river Teesta would be reduced to a trickle in some parts, forest and agricultural areas will be submerged and the blasting conducted during dam construction would lead to frequent landslides. The Environmental Impact Assessment Reports, necessary under law to obtain environmental clearance, are shoddy and lack even in factual clarity[42]. The result of the blasting are already being felt especially in the areas of Stage V (already under construction) of the project, in the vicinity of Dzongu, where houses and land have started to disintegrate and slip.

WITHIN DZONGU

Two of these large hydropower projects, the Panang/Panan hydel project on the Rongyong chu and the Teesta IV on the Teesta, are proposed within the Lepcha Reserve of Dzongu. A large component of Teesta Stage III also falls within the Dzongu Reserve.

The Rangyong, Ringpi, Lingzya and Rukel projects (shown in the map above) were scrapped by the State Government in June 2008on the grounds of both local protests and lack of fulfillment of formalities on behalf of the project proponents[43].

A section of the Lepchas within Dzongu organised themselves as Affected Citizens of Teesta (ACT) are now strategising to pressurise the Government to also scrap the Panan Project on the Rongyong Kyong and the Teesta Stage IV.

These projects have severe impact on not only the ecology of the region but also the cultural and democratic identity of the Lepchas who consider Dzongu their last bastion[44]. The Lepchas also feel that the influx of labour from the plains will reduce them to a minority even within the Reserve. There are also serious health concerns that are raised not only because of the ecological impact of the dams but also because of the labour migration.

Unfortunately for the Lepchas, as so for majority of the communities within India, the social, cultural and ecological costs of a 'developmental project' are highly subsidised while clearing the project.

That is why the members of ACT have held an ongoing relay hunger strike in Gangtok, the capital of Sikkim, and have completed over 500 days of their *Satyagraha* to preserve Dzongu[45].

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[40] www.actsikkim.com

[41] Sikkim falls within seismic zone IV and thus is extremely earthquake prone. Almost every village of Dzongu has notice boards put up by the Government on community preparedness for earthquakes.

[42] See for example article on the EIA report of Teesta Stage III. http://www.businessstandard.in/india/storypage.php?autono=311143

[43] *Sikkim scraps four mega hydel projects on eco concerns:* http://www.thehindubusinessline.in/2008/06/17/stories/2008061751272100.htm

[44] ACT gives a list of 12 monasteries that will be affected by the projects.

[45] *Satyagraha* is a concept propagated by Gandhi ji. It refers to the power of the truth coupled with non violence can be a force greater than that of any other force. He also called it the 'soul force' or 'love force' that changes 'the other' by vindication of the truth through one's own suffering and pain.

Watch monks pray to bring enlightenment to the policy makers:
http://ibnlive.in.com/videos/45230/buddhist-monks-pray-for-sikkims-sake.html

Watch CNN IBN report on the hydropower projects impact on the Kanchendzonga National Park as being representative of the classic environment versus development debate.
http://ibnlive.in.com/videos/45441/.html

SOME LOCAL REACTIONS

Not all residents of Dzongu oppose the hydropower projects. For most of these Lepchas, who till now were mostly reliant on cardamom as their main source of livelihood (which is now failing), to oppose the Government would mean inviting unfavourable implications, including family members losing Government jobs. Some locals also feel that to be compensated financially for the lands which anyways do not yield any economic benefits (land in Sikkim cannot be bought by a non-Sikkimese) is an easy way of earning money. Not much has been documented on arguments in favour of the dams in this Report. They exist within Dzongu itself and the tension between the ones in favour and the ones against is palpable even to an outsider. Individuals opposing the dams report unfair means being used to influence public opinion including the use of force and finance. But this situation is not new in Sikkim and adjoining hills, which has a history (even recent) of public opinion being influenced, not so much by awareness and information that strengthens and refines individual awareness and decision, but through subtle dictatorship which is founded on the manipulation of class insecurity and is asserted through coercive mob pressure.

Within Dzongu, the locals who oppose the dams are aware of the damage that the projects are going to cause, they also still believe in the lineage and the history that Dzongu holds for them and feel the need to preserve that.

Lingdong (sacred landscape mentioned above) is one of the villages which stands in opposition to the hydropower projects, especially Stage IV of the project which is said to wipe out almost the entire Gram Panchayat (GP). People within the GP are united in opposing the land acquisition that is being carried out through the District Collector's office. Even while this researcher was there, Mr. Norgay, Gram Panchayat member of Lingdong GP showed a letter that had arrived from the DC's office that summoned the villagers whose lands are to be acquired for the project.

> *"Local perspectives on the hydropower projects change because people are innocent; there is a great dearth of awareness and opinion is mainly manipulated by the Government through strategies like compensation and muscle power."*
>
> -Tsering, Lingdong GP

> *"I will not leave my land till I die. This land has been bestowed to us by our ancestors. Our deities of the forests, the streams and lakes reside here and we live in their shelter. If this perishes, the Lepcha will perish. If we sell our lands, we will write off our own doom".*
>
> -Norgay Lepcha, Lingdong GP

GOVERNMENT RESPONSE

'The Chief Minister (Mr. Pawan Chamling) said on 7 March 2008: *"I want this on record and maintain that we will go ahead with all the power projects in Dzongu. These projects will not be called off because we refuse to compromise with any initiative we know to be for the development of the people of this land and state. We will complete these projects and make Sikkim the top revenue-earning state in the country. A few anti-development people cannot deter our vision; we will not allow development to be held hostage by them."* His comment in lieu of any official publishing of a fair and transparent review of the projects shows that his promises to the Lepchas and the people of Sikkim about sustainable development are hollow.' Source: www.savetheteesta.com

Unheard Voices of Protest in Sikkim

Vibha Arora

Economic and Political Weekly August 25, 2007

For the Lepchas, the implementation of the Teesta hydel project and the loss of Dzongu (the ancient Lepcha reserve) may result in ethnocide, the disappearance of their cultural heritage that is rooted to their ancestral connections and performance of rituals connected to the land, forests, mountains, lakes, and nature, in general. Dzongu and the sacred peaks of Mt Khangchendzonga are considered a 'mayellyang' (a celestial paradise) in Lepcha cosmology and revered by all Lepchas. The historic Tholung monastery safeguarding Sikkim's nationalist treasures and sacred texts is also located in this endangered reserve and has survived many earthquakes over the last few years. It is a very sacred site associated with Lhatsun Chenpo, one of the patron saints of Sikkim.

The river Teesta is not merely a source of water, but the very lifeline of Sikkim. Sikkimese folklore is aflush with myths and stories about how civilisation and humans settled along the course of the river and the Lepchas skillfully constructed cane-bridges across this river. According to an ancient Lepcha myth, an infuriated Teesta caused a deluge when he lost the race to his lover, the sacred river Rangit. In this ancient myth, the rest of Sikkim was flooded and all life perished in that great deluge. On August 8, the Lepchas annually worship Mount Tendong, as this mountain offered sanctuary to human, animal, and other living creatures during the deluge caused by the river Teesta. During these prayers, gods and the spirits of the land are propitiated to ensure the fertility of the land, maintain the environmental balance, and ensure peace and harmony in Sikkim, the Darjeeling Hills and the entire world. This myth of deluge has a renewed ecological relevance in the current context of objections raised to the implementation of the Teesta hydel project in north Bengal and Sikkim. This myth encodes an environmental wisdom that has sustained the Lepchas in this shifting precarious landscape for centuries…

CONCLUSION

Communities across the globe have been worshiping and conserving Nature and its various components since ancient times. But this act of conservation was an intricate part of the everyday lifestyle and world view of the communities. The belief in the need to conserve was substantiated by other aspects of an individual or community's life including social relations, religion, economics, trade etc. As time has passed,

this equation between Nature and human has changed drastically and so has the understanding and need to conserve. Today, conservation ironically derives its importance from humanity's new realisation of the mostly utilitarian significance of nature in it's otherwise disconnected existence with the latter. It is primarily a western concept that is based on the essential dichotomy between human and nature. Therefore, the need to conserve is essentially an action 'to be done' 'from the outside', the dichotomy between the human and nature still exists.

On the other hand most tribal cultures view nature not as an externality, but a manifestation of life in general of which they are a part. Thus, their social, cultural and religious beliefs and practices are based on the inherent belief in nature and its 'living presence' in all its aspects like trees, rivers, mountains, birds and other animals etc; all of these hold a sacred significance in the tribal's life and is manifested in the tribal's folk lores, legends, religious beliefs and practices, healing methods etc. 'Conservation' of these aspects of nature, therefore, is largely a subtle but inbuilt by-product of these beliefs and practices.

In the event of increasing pressure on natural resources followed by the 'development' practices of the globalised era, the everyday practices of the tribal which were otherwise fairly in harmony with the natural systems of degradation and regeneration, have become polarized into either 'conservationist' in nature or 'degrading'.

The modern day tribal whose lifestyle, belief and culture is already marginalised from the mainstream western 'development' processes be it in education, health, livelihoods and sometimes even religion, is left with no choice but to adjust his/her orientation to the 'modern' definitions and perspectives, especially of conservation[46]. Therefore practices which were otherwise only a part of a 'whole' culture that were relatively congruent to sustainable lifestyle are segregated from the 'whole' and studied or analysed in its exclusivity, typical of western methods of analyses. Therefore the concepts of sacred groves, forests, rivers etc. are increasingly being seen as fascinating 'tools' towards conservation being 'offered' by traditional tribal cultures.

Such an approach allows the modern day 'conservationist' to sit in judgment over an ancient culture and decide the 'good' and 'bad' in it. The concepts of sacredness and conservation are only a part of an entire belief system that is still in many ways regarded as 'unscientific' and also 'superstitious'. If these cultures are to be truly conserved, they would have to be done in totality with respect and reverence for even those aspects which modern day 'science' cannot/has not been able to validate.

The above analysis is not bereft of the understanding that the tribal may no longer be one in the modern day scenario. This process of losing identity (the one that is reflected in one's life, religion, politics, economics, etc.) has been long and gradual. It owes itself to factors intrinsic within the tribal community as well as external. But to be part of a country which consciously decided to ignore the diversity and inexplicability of the tribal culture and over-ride them with a uniform development paradigm riding largely on western 'scientific' knowledge, the tribals of the country had no choice but to be victims of circumstance and lent themselves to a slow process of disconnecting from their own beliefs and practices.

But the cultures exist, especially in parts where the 'medusa haired' pathways of 'development' have not reached. The people there of course wait for a metaled road, a television or maybe still electricity, all of which are the 'boons' of modern civilisation. What they probably do not foresee is that, these 'gifts' also carry a price with them. But in the present day context, the need to rise above externally defined poverty is so high that the 'price' seems only too little to sacrifice.

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[46] This viewpoint is based solely on personal observations.

Our perceptions towards tribal communities are mostly coloured and determined by our own view points of reality. Where our romantic view of the tribal as conservers of the forest was mostly to do with our romanticizing the 'simple', 'close to nature' life when we became more and more conscious and guilty of our consumeristic lifestyles and what it was doing to Mother Earth, movements such as the *Narmada Bachao Andolan*, the fish workers movement and the Chipko Andolan widened this view to also include the material livelihood aspect to the incentives behind community conservation. In lauding these efforts by the community, we also attempt to create for them a permanent identity, turning a blind eye to the fact that communities are dynamic and so is their reality, their perceptions towards natural resources and their motives for conservation or even exploitation.

> *Lepchas as the guardians of the sacred grove are gaining ground in the current context of their cultural revival in the regional ethnopolitics. Such a politicisation of indigenous knowledge and sacred landscapes is discernible… in development contexts such as implementation of hydel projects in Sikkim (India) and Canada. Ideas of indigenous conservation cannot be divorced from the context of peoples' material practices, their ethnic aspirations and relations with the state. Any state policy aiming to revive community conservation needs to recognise the cultural politics materially expressed and ritualised in the sacred grove.*
>
> Source: Arora, Vibha, Conservation and Society, Vol. 4, No. 1, 2006

Thus the unwillingness to call Dzongu a CCA. It is uncertain if the efforts to conserve by a fraction of this population will last another decade. One does not know if the rest of the community can be questioned as lacking in conservationist intention just because some of them do not have the luxury or the information to decide whether or not to give away their lands for the power projects. One also do not know if left up to the Lepchas, the Biosphere Reserve, the national park and the Lepcha Reserve itself will not have any 'developmental' activities that are ecologically destructive.

What I am only sure of is the decision of a group of Lepchas to now portray themselves as 'primordial environmentalists' to protect the landscape that is the only haven to save their otherwise "vanishing" identity[47]. But I refrain from calling them 'environmentalists' or 'conservationists' as these terms are not inclusive of a tribe's ever varying, ever so dynamic existence. But I do see a value to documenting the Lepcha transition because it has reached a stage where all cultures and lifestyles that have so far supported or are congruent with conservation and which have so far lived in harmony with Nature will eventually reach: in direct confrontation with the demands of present day 'development'.

I see a value to lend support to the Lepcha struggle against the hydropower dams mainly because it is a way by which a tribe's relationship with nature and its own sustainable lifestyles can be revisited and reinvented. After all it is in these lost cultures which were much in harmony with nature than we have been or ever will be, lie the answers to the present impasse that 'development' as of today has reached.

It is in this context that the games of bargain are being played in modern day Dzongu. Dzongu, with its scenic landscape rising above the esoteric Teesta is rich with its forests, lakes, hills and rivers[48].

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[47] Arora, Vibha, 'Conservation and Society', Vol. 4, No. 1, 2006

[48] The word "vanishing" was used by A. R. Foning in his book 'Lepcha, my Vanishing Tribe' 1987. Meaning "confined to and understandable by only an enlightened inner circle" as per Word Web.

But what gives it life are the Lepchas. The Lepcha life which is intricately connected to the Mt. Khangchendzonga, the Teesta, the forests, the birds and the wildlife that makes the entire landscape breathe into existence for a newcomer.

This report was written by Mashqura Fareedi based on information gathered from a field visit to Dzongu in November and December 2008.

Photographs by: Mashqura Fareedi

LOCAL ORGANISATIONS

ORGANISATION / GROUP		FOCUS		CONTACT DETAILS	
1.	Affected Citizens of the Teesta (ACT)	1.	Struggle against the hydropower projects.	2.	Mr. Tseten Lepcha, e-mail: golden_hope@hotmail.com
3.	Mutanchi Lom Aal Shezum (MLAS)	1. 2. 3	Health Education Livelihoods (Ecotourism and Self Help Groups)	3 4	Mr. Dawa Lepcha, e-mail: someray2000@yahoo.com Mr. Ugen Lepcha, e=mail: upl_2002@hotmail.com, mlasngo@gmail.com

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1. Mr. Tseten Lepcha
2. Mr. Dawa Lepcha
3. Mr. Pema Lepcha
4. Ms. Mayalmit Lepcha and family
5. Mr. Ugen Lepcha
6. Mr. Choden Lepcha
7. Mr. Norgay Lepcha
8. Mr. Lhazang Lepcha
9. Mr. Tsering Lepcha
10. Mr. Loden Lepcha and family

Additional information:

On Sikkim's biological diversity:
http://www.questhimalaya.com/moreabout/sikkim-biodiversity.htm
http://www.sikenvis.nic.in/docs/checklist/RARE%20AND%20ENDANGERED%20FAUNA%20OF%20SIKKIM.pdf
http://www.sikenvis.nic.in/docs/checklist/Endangered%20Species.pdf
http://www.wii.gov.in/nwdc/threatened_plants_sikkim.pdf

On Dzongu

http://www.questhimalaya.com/placesofinterest/north-sikkim-dzongu.htm

On Lepchas and ethnomedicine:

http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2567294

On the Lepcha struggle against the hydropower projects:

www.actsikkim.com
www.savetheteesta.com

Newsreports on the anti dam struggle:

'Debating Development with Gandhigiri in Sikkim' by Vibha Arora
('*Now!*', Sikkim, July 1, 2008)
'Dammed in' by Neeraj Vagholikar (The Hindu, December 23, 2007)
(http://www.hindu.com/mag/2007/12/23/stories/2007122350030200.htm)
'Teesta's Tears' by Dionne Bunsha
(http://www.hinduonnet.com/fline/fl2512/stories/20080620251209500.htm)
'Plumbing the Teesta' by Neeraj Vagholikar (The Statesman, November 19, 2007)
'*Satyagraha* for The Teesta' by Neeraj Vagholikar (Tehelka, 29 September 2007)

Appendix I

Legend of the Tung Kyong lake as narrated by Mr. Choden Lepcha

Thinggockmu, a monkey like God lived in a place called Tungprumrul. He and a priest called Lickkumzergen met at Gyathang. They came to know of a goddess called Nyu Kyongbu in the Tung Kyong duh (the holy lake). They uncovered her from the earth in the lake. The goddess was extremely flustered by this act.

The priest advised Thinggockmu to marry the goddess. After testing his own prowess, the God decided to win over Nyu Kyongbu. When she challenged him to an exhibition of power, he threw a plate shaped rock up the hill. The rock landed in Gockmukung, a place above which now is the Hee Gyathang monastery. This rock still exists and the place is revered. When Thinggockmu asked Nyu Kyongbu to demonstrate her powers, she let loose her hair and dropped lice into the lake which later became fish called Dengnuelick.

Appendix II

SACRED BELIEFS (examples) of the Lepchas:

1. Deforestation can cause generations to perish.
2. Birds are used to predict cropping patterns, rainfall, existence of root tubers, ominous news etc.
3. Snakes and snake habitats are worshiped.
4. Natural objects including stones etc. should not be displaced from their natural surroundings like a forest or a stream. It brings ill health.
5. Forest fires portend famine and therefore should be prevented.
6. Separate religious prayer ceremonies for the worship of forests, grain, to propitiate hail and prevention of sickness.

Appendix III: Datasheet for Dzongu

Basic data

Site Name (in local language and in English)	Dzongu
Country (include State and Province)	Sikkim, India
Area encompassed by the CCA (specify unit of measurement).	78 km2
GIS Coordinates (if available)	
Main ecosystem type	The area represents three climatic zones viz. sub-tropical, temperate and alpine.
Whether it includes sea areas (Yes or no)	No
Whether it includes freshwater (Yes or no)	Yes
Marine (Yes or No)	No
Concerned community (name and approx. number of persons)	The Lepcha community: population of 4513 as per the 2004 census.
Is the community considering itself an indigenous people? (Please note Yes or No; if yes note which people)	Yes, the Lepchas.
Is the community considering itself a minority? (Please note Yes or No, if yes on the basis of what, e.g. religion, ethnicity)	Yes, in terms of ethnicity and religion.
Is the community permanently settled? (Please note Yes or No; if the community is mobile, does it have a customary transhumance territory?)	Yes.
Is the community local per capita income inferior, basically the same or superior to national value? (please note how confident you are about the information)	
Is the CCA recognised as a protected area by governmental agencies? (Yes or no; if yes, how? If no, is it otherwise recognised?) If yes, legal document? Establishment date?	Lepcha Reserve
Conflicts with land tenure, natural resource use?	
What is the main management objective (e.g. livelihood, cultural, spiritual…)	Cultural, spiritual and against development projects.
By definition, a CCA fulfils a management objective. To which IUCN management category[49] do you consider it would best fit (this does not imply that the management objective is consciously pursued by the concerned community, but that it is actually achieved)	Protected Landscape also including Natural Monuments.

Additional qualitative information

Description of biodiversity & resources (ecosystems, species, functions) conserved by the CCA	Dzongu along with its adjoining Khangchendzonga National Park and Biosphere Reserve is part of the Indo Myanmar biodiversity hotspot. It has particularly rich fauna and flora that is endemic to the area with many species of endangered vertebrates and invertebrates. The vegetation in Dzongu spans tropical and subtropical in the lower reaches of the valley to Trans Himalayan categories in the higher altitudinal areas. The area along with the adjoining Protected Area is considered an important bird habitat area.

[49] Please see http://www.iucn.org/themes/wcpa/wpc2003/pdfs/outputs/pascat/pascatrev_info3.pdf

Description of local ethnic groups and languages spoken	Lepchas speaking Lepcha, Nepali and English.
Broad historical context of the CCA	Dzongu was declared a Lepcha Reserve in the 1960s when Sikkim was still a kingdom ruled by Chogyal Palden Thondup Namgyal. The Lepcha people are the only residents of Dzongu. For an ordinary Lepcha, Dzongu is a pilgrimage place of high importance. It is an area to which every Lepcha traces his/her lineage and ancestry to. The Lepcha history and culture is intricately woven into its natural environment: the mountains, rivers, lakes and forests, especially those of Dzongu. Outsiders, even from within Sikkim require a permit to enter Dzongu. It is perhaps the only place which contains the last relics of the Lepcha identity.
Governance structure for the CCA (who takes management decisions, how?)	No formal management systems.
Length of time the governance model has been in place	
Land and resource ownership in the CCA	Individual and community
Type of land use in the CCA	Protected areas like the national park and the Biosphere Reserve, agricultural land, sacred groves and other traditionally protected areas.
Existence of written or oral management plans and specific rules for the use of natural resources in the CCA	Oral, traditional
Map and zoning of the CCA (please attach if available and relevant,)	Attached, in the Report
Relevant pictures with captions (please attach if available)	Attached, in the Report
Major threats to biodiversity and/or the CCA governance system	Mega development projects
Local CCA-relevant features, stories, names, rules and practices	Attached, in the Report
Gender aspect of the CCA (elaborate)	
Climate change attributes(elaborate)	

PART II

Community Conserved Areas in North East India: Some observations from Assam, Meghalaya and Arunachal Pradesh

Sudipto Chatterjee[1], Sonali Ghosh[2], Jayanta Sarma[3], S.K Barik[4], B.K Tewari[4] and Kulen Chandra Das[3]

An introduction to Community Conserved Forests of North East India

A very broad definition of Community Conserved Areas (CCAs), includes ecosystems where local communities have ownership, a stake or are empowered enough to influence decisions that impact the resources on which their livelihood depends. Forest CCAs are spread across North East (NE) India, and vary in ownership, size, management regime and the rationale for their protection. The nature of threats these forests are subject to are similar to any other forests. They are reported to be at different stages of degradation- from pristine and relatively undisturbed to a point of degradation beyond which restoration is difficult. These could be age old under traditional forms of governance or recently established with a new set of institutions for their management. While waning of traditional faiths, belief and values have played a significant role in their decimation, there have also been parallel incidences of consolidation, re-sanctification and declaration of new CCAs in the region. Situations also exist where under compelling circumstances, community owned forests have been willingly handed over by local communities themselves to the government in the wider interests of conservation.

A Community Conserved Area Meeting (Courtesy: Sudipto Chatterjee)

Traditional and customary rights of local communities in NE India are protected through the Sixth Schedule of the Indian Constitution under which, autonomous Regional and District

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Councils have been constituted. These councils have legislative, administrative and financial powers over 40 subjects including forests. Presently NE India has 16 district councils, including three in Assam, three in Meghalaya, three in Mizoram, one in Tripura and one in Manipur. Other forms of governance of CCAs include the traditional village councils of Arunachal Pradesh, Durbar (Siemienship) in Meghalaya, Pippon system in North Sikkim amongst others. Table 1 provides a brief on the administrative provisions under the Indian Constitution for NE India.

Table 1: Constitutional provision for tribal areas of North East India (Tripathi & Barik 2004)

State	Constitutional Provision	CCA Sites
Arunachal Pradesh	Article 371H	No autonomous councils but the state has elective village councils and Anchal Samitis (*Panchayats*)
Assam	Schedule VI read with Article 371B (for tribal areas in the said Schedule only)	Karbi Anglong, North Cachar Hills, Bodoland, Rabha-Hasong, Tiwa, Mishing
Manipur	Article 371C	Ukhrul, Tamenglong-Senapati, Sadar Hills
Mizoram	Schedule VI Read with Article 371G	Mara, Lai, Chakma
Nagaland	Article 371A	No autonomous councils but each village has a village council
Tripura	Schedule VI	Tripura Tribal Areas Autonomous District Council, Khumulwang

The case studies undertaken in the present study constitute a preliminary compilation of baseline information on the CCAs of NE India with support from IUCN Netherlands and Kalpavriksh, Pune. While community forests in Nagaland (see Pathak, 2009) and forests of reverence in Sikkim (Higgins and Chatterjee, 2005) is provided elsewhere (see Mashqura 2009), this paper focuses on the CCAs of Assam, Meghalaya and Arunachal Pradesh (Map 1). The case studies make an attempt to cover a diversity of situations in these three states.

Community Conserved Areas of Assam

It is difficult to find large CCAs in Assam due to the implementation of imperial forestry by the British. As early as 1875, large tracts of forests were brought under the Department of Forests. With practically very little documentation of Community Conserved Forests (also refer to Malhotra et al. 2001), under the present IUCN South Asia initiative an initial effort was made to report on the known clusters of CCAs in Assam (See Map 1). These include:

1.1 Karbi Anglong

1.2 Goalpara

1.3 Margherita Lekhapani areas of Margherita subdivision of Tinsukia district

1.4 Chakrashila Wildlife Sanctuary, Kokrazhar, Bodo Territorial Council, Assam

A documentation of these CCAs have been possible through secondary sources, experiences of the authors in the past, field visits undertaken by the authors, and the contributions of the participants

of the workshop on *Community Conserved Areas of North East India-Challenges and Opportunities* held during 7-9 May 2009, at Nagaon Assam, by Kalpavriksh and Winrock International India.

1.1 Karbi Anglong

Karbi Anglong and the North Cachar are the two hill districts of Assam which enjoy autonomous status under the provisions of the Sixth Schedule of the Indian Constitution. Before independence, Karbi Anglong district was known as Mikir Hills and was parts of Sibsagar district and Nowgaon district. The Governor General of Assam declared the Mikir Hills and North Cachar Hills along with other hill areas as backward tracts under section 52(A)(2) of Government of India Act of 1919. On the basis of the recommendations of the Government of India Act 1935, these areas were described as 'Excluded Areas' or 'Partially Excluded Areas' and the Governor was empowered to make regulations.

After Independence, the Constituent Assembly appointed the North East Frontier (Assam) Tribal and Excluded Areas Subcommittee under the Chairmanship of Dr. Gopinath Bordoloi. This Subcommittee formulated the Sixth Schedule of the Indian Constitution to provide autonomy to the scheduled tribes for administration. In 1951, autonomy was awarded to the united Mikir and North Cachar Hills district (N.C. Hills). In 1970 N.C. Hills was created as a separate district.

The Mikir Hills was renamed as Karbi Anglong in 1976 (Mikir is the name given to the Karbis by the non-Karbis). The word *anglong* means 'home'; hence, Karbi Anglong means the home of the Karbis. However, along with the Karbis live the Bodos, Dimasas, Assamese, Lalungs, Garos and other tribal communities. In 1970 when Meghalaya was formed both the regions were given the option of joining the state, however both the councils decided to remain with Assam (Bhuyan 2006).

The Karbi Anglong district is bounded on the north by Nagaon and Golaghat districts, on the south by the North Cachar Hills, on the East by the Golaghat and the states of Nagaland and Meghalaya on the West. Karbi Anglong has a total geographical area of 10.332 sq km and a total population of 3.79 lakhs according to 1971 census which increased to 8.13 lakhs in 2001. The reserved forests of Karbi Anglong are managed by the Karbi Anglong Autonomous District Councils through three territorial divisions (Karbi Anglong West, Diphu and Hamren). Unclassed state forests are managed by the district council administration.

Scanty published information exists on the community conserved areas in Karbi Anglong, however, some of the working plans may provide some insights. These include- the Working Plan of the forest of the Goalpara Division, Western circle Assam for the period 1929-30 to 1938-39 (compiled by N.L. Bor 1931), Second Working Plan for the Goalpara Forest Division, Eastern Bengal and Assam (compiled by Peree 1908) and the Working Plan of Eastern Circle during 1931-32 to 1940-41 (compiled by N.L. Bor 1931).

Some of the relevant Acts and regulations passed by the Karbi Anglong District Councils include Mikir Hills (Land and Revenue) Act, 1953 enacted for management of land and assessment and collection of land revenue within the jurisdiction of the council. Also passed was the The Mikir Hills District (Jhumming) Regulation Act, 1954, which prohibits the shifting of villages from the present sites without the prior permission of the Executive Committee of the District Council. This regulation is noted for fixation of the village boundaries in the hills. The Mikir Hills District (Forest) Act, 1957 is the most important for the management of the reserved forests proposed by the district councils.

A general scenario of the CCAs in Hamren is presented in Table 3

Sl No	Name of the cluster Community	forest(ha)	Sacred grove(ha)	Total Area (Ha) of the village
1	Socheng	98	24	516
2	Chinthong	75	5	1249
3	Langsomepi	46	65	407
4	Linchika	110	21	1100
5	Rongcheck	782	11	2654
6	Amri	26	8	712
7	Long-e-luboi	28	19	377
8	Rumphum	1200	-	1633
9	Tirkim	48	32	462
10	Ronghidi	1050	8	1685
11	Tikka	46	8	536
12	Borgaon	156	25	786
13	Jirkinding	208	-	790
14	Rongpongbong	130	-	543
15	Umsowai	120	-	543
16	Rongjangphomg	20	-	197
17	Kungripi	10	-	155
	TOTAL	**4153**	**226**	**14345**

Source: Karbi Anglong Community Resource Management Society

An attempt was made as part of this study to document the CCAs of Kolbari Tokbi in Karbi Anglong district.

(i) The CCAs of village Kolbari Tokbi - Tharveso and Parmusor

The village Kolbari Tokbi is situated at a distance of 45 km from Hamren, the headquarter of Hamren Sub-division of Karbi Anglong district. The village is inhabited by 21 households with a population of about 150; all belong to the Karbi tribal group. The village has two sacred groves, namely Tharveso (meaning 'small mango') and Parmusor, having a total area of around 100 ha. Originally the village was situated about two km away from its present location; possibly to avail the facility of the newly constructed road, the people moved to the present location.

The people worship various Gods and mainly the Hemphu, the early Karbi man. They believe in evil spirits. At the heart of Tharveso, there is a mango tree, which they worship. The Lankaidang stream flowing through the grove is reserved. Violation of rules necessitates a ritual. The people promise to offer *puja* (prayer) in that case and make some kind of *topla* (some leafs of sacred trees with paddy are put in to a small bamboo pipe) and hang it either on the wall or on the roof, inside their house. Sacrifice of chicken and goats are a part of the ritual.

At the CCA of the Parmusor the deity is bigger than the Tharveso. The area is also bigger and located from the village at a distance. Faith in these practices is irrespective of the level of literacy and status. Various pujas are celebrated round the year of which Sarak *puja* is the biggest, and, organized once in every fifteen years. In this *puja* they offer pigs, chickens, goats, etc. The jaws of the pigs are retained in the house of the Gaonbura (village elder) and are discarded next time when the *puja* is repeated. Apart from this Sarak *puja* (Sakerai), they observe *Peng arnem* (*puja*) and Rong *arnem* once in a year. Contiguous to the sacred forests, an additional village forest of almost 25 hectares is preserved. Until two years back it was under complete management of the community with a set of rules and regulations, however, the villagers consented to the FD in the Agari Rangeto to undertake plantations for which financial support was provided. The village framed a committee to look after the plantation, weeding, etc. The villagers earn Indian rupees 40 per day as wages. A support of rupees 15,000 during the past two years by the Department and the prospects of earning revenue from them and the mature plantations have made them work closely with the FD officials. This is a huge savings on their personal expenditure which would have otherwise been incurred on maintaining and managing the CCA. It is very interesting to observe that while the institutional arrangement resembles a Joint Forest Management

Committee, there is no representation of the FD in the committee.

Determined to protect and conserve the CCA, even if the financial support of the FD is withdrawn, the committee has drawn stringent rules for its management which includes ostracising a violator of rules and denying him or her a share in the revenue earned from the CCA. The floral diversity of the forests is considered of high significance and specially connected to the rituals attached with the grove. They value the medicinal plants in the groves unavailable in plantations. Village members who have migrated to far off destinations like Delhi, Guwahati, Diphu also come at the time of the pujas and celebrations, which is a strong indication of peoples attachment to the CCA. Younger generations look forward to economic benefit from the forest, such as from lac culture, etc.

(ii) The CCA of Malong Kisir

Malong Kisir village is a remote village in the Chingthong Development Block of the Karbi Anglong district. It is situated at a distance of 75 km from the headquarters of the Hamren Sub-division. The almost 70 year old settlement is inhabited by 35 households having an approximate population of 400. An approximate 100 ha CCA in the village is located in the adjacent hill which serves as a catchment to the stream, the only source of drinking water and fish for consumption. The pond in the CCA serves as a source of water during the lean winter season. However, commuting across the hills remains a constraint.

While the Public Health Department could not promptly respond to the villagers request to provide them with the infrastructure to access water from the CCA, support provided by the International Foundation for Agriculture and Development (IFAD) sponsored project implemented by the Karbi-Anglong Community Resource Management Society (KACRMS) resolved the crisis. Construction of storage tanks at the source and placing a pipeline using the gradient of the slope to bring the water to the storage tank, constructed at the village, now ensure availability of water round the year. This has been an incentive strong enough for the villagers to protect the forest and enrich the same with plantations with native species. The Society collects a fee of rupees5 from each household for managing and maintaining the water supply.

1.2 The CCAs of Goalpara

The CCAs of Goalpara are managed by the Rabhas, one of the major plains tribes of Assam who live mainly in the Lower Brahmaputra Valley of Assam. This area is administered by the Rabha - Hajong Autonomous Council. There are a number of villages of Rabha community in Bodohapur Panchayat of Balijana Development block of Golapara, situated near the Assam -Meghalaya border region. The Southern part of the region is hilly terrain merged with the plateau of Meghalaya and the northern part comprises extensive valleys criss-crossed by river Bolbala and a number of streams flowing down from the southern hills. The cluster of villages viz. Bodahapur, Baldjana, Hatigown and Rongsai provide a unique example of watershed conservation based on indigenous knowledge system. Sacred spaces in the villages are repositories of floral diversity.

The villages have two common resources, namely, a pond and a forest. The villagers consider these as their most important assets. People of the village consider the pond as a resource because it provides fish, water for agriculture and water and fodder for livestock. Generally they fish only once in a year and the sale proceeds are deposited in the General Fund of the village.

The '*Ban Suraksa Samiti*', a committee of the villagers, manages the forest. The term of the committee is one year. The executive committee implements the written rules and regulations. This practice is almost 20 years old. People can collect fuelwood without the permission of the committee for their own use. But, if they need some timber for construction or other purposes, they need to give an application addressing the President and Secretary of the committee specifying the quantity of the timber (verbal prayer in the meeting is also permissible). The violators of the rules and regulations are punished by the committee by imposing a fine upto rupees 500.

It is worth observing that no silviculture is practised and weeding is done by all the villagers once in year. There is a sacred space in the village, called '*Baidam*'. This area has a temple, with thick vegetation cover. People are not allowed to visit this place without taking bath and have to wear fresh clothing. Nobody is allowed to cut the trees in this area. On two occasions they offer *puja* in the temple, i.e., at the time of new harvesting and before sowing of seeds.

Baidams: CCAs in Goalpara (Courtesy: Jayanta Sarma)

1.3 The CCAs Margherita

Margherita is a civil sub-division of Tinsukia district of Assam. The tropical and subtropical forest patches are under the administration of the Digboi and Domdoma forest division. The region is inhabited by tribal groups like Singhpho, Tai Phake, Tai Khamyang, and Tangsa.

The Singphos are a hilly tribe of Mongoloid origin believed to have migrated in several groups from Singra-Boom in Tibet. One group went to China, another to Burma (now Myanmar), and the rest moved to India and settled in the hilly region. Singphows in China are known as 'Jingphow' and 'Singphaw or 'Kachin' in Myanmar. The Tai Phakes migrated to Assam from Houkong valley in the year 1775. Initially they wandered but around 1850 the Tai Phake people settled down in 'Nong tao' (Nong-Pong, Tao-algae). Tai Phake people are strict followers of Himayana sect of Buddhism. In each village they establish a Buddha Vihar where Buddha images made of brass are installed and regular prayers are offered by monks (known as Chow Moun) and the villagers.

The Khamyangs, who are popularly known as Noras are a section of the Great Thai or Tai-stock. They had their independent principality in Mungkong upto the end of the 18th Century. These people are also popularly known as the Shyams. Linguistically, the Khamyangs belong to a Tai-speaking group and they are Buddhist of Teravada School.

The term Tangsa is derived from 'Tang' (high land) and 'Cha' or 'Sa' (son) meaning sons of high land. All these tribal groups having their own traditional conservation ethics with prominent practices of sacred space, sacred trees and animals. They have also maintained floral cover in their homestead areas with different species combinations.

Moreover, they have maintained the vegetation in the village areas on the basis of their traditional knowledge of village landscape management. In all these practices community participation is mandatory and everything is organised under the leadership of village head. Map 2 shows the cluster of CCAs located at Margherita. Table 2 provides baseline information on some of the Margherita villages inhabited by the Singpho, Taiphake, and Tangsa Naga.

Table 2: Villages with CCAs surveyed in Margherita

Sl No	Name of the villages	Tribal group living in the village	Information from Census records of 2001		Major land use Categories	Forest
			No of household	Total population		
1	Enthem	Singpho	58	354	Homestead, Agricultural field, private forest (settlement is linear along the road)	Patches of privately owned forest exist with each homestead
2	Nigam	Tai Phake	8	47	Do	Do
3	Kumsai	Singpho	106	617	Do	Do
4	Kharngko	Tangsa Naga	94	498	Houses are clustered in centre of the village, Nearest to it are the private forests and after that paddy fields are located.	Patches of privately owned forest exist in a cluster where each of the family's areas are demarcated

A brief description of the conservation practices and CCAs managed by the Singphows, Tai-Phakes and Tangsas is given in the paragraphs that follow.

Conservation practices of the Singpho

Singpho means 'man'. It is believed that the Singphos embraced Buddhism in the year 1892 after the Rajguru (prophet) of Burmese King visited the Singpho inhabited area in and around 1890-92. They are considered identical in race with the Kakus or Kakhyens of Burma whose chief habitat was on the great eastern branch of the Irrawadi which extended far south touching on the north and eastern border of China. With the break-up of the Northern Shan Kingdom in Burma they marched up to an area lying between Upper Assam and Bhamoo (Mackenzie A., 1884). "The homeland of the Singphos according to their own tradition was in the Hukang Valley, a vast tract lying towards the North-East of the *Patkai* ranges (Baruah, 1977). According to Singpho history around 800-700 BCE the people migrated from Mongolia and settled for few hundred years in Tibet. After that around 100 BCE they came through river Tsangpo and settled in the present North East India (Ningkhee, 2009).

It is difficult to define the CCAs of the Singphos as a unit from an organisational perspective, but in spatial context there is a defined frame of a village. Generally the villages are near perennial water sources (like river, not on the bank but near it), the highland are occupied by cluster of houses in north-south of south-north direction with homesteads which sprawl over a large area and the surrounding low lying areas are paddy fields. A *Mareng* (village) is known by its place name as well as by the clan-name of the founder. The place name usually refers to natural setting or different natural feature associated with the area.

The population of the Singphos have come down drastically from 70,000 (Ningkhee, 2009) to a mere 20,000. Consumption of tea as beverage (*phalap*) is a tradition among the Singphos. In the ancient period they collected it from the forest, later on started to plant it in their homestead. They collect the tender leaf carefully and process it through their indigenous method (still practised). Every Singpho family has its own forest land either along with the homestead areas or near the agricultural field. They protect these patches out of their traditional belief that the forest spirit shelters there and that the welfare of the family and the village is connected with it. However, it is also a storehouse of material required to support their day to day activities. Therefore, there is great floral diversity in it. According to residents of the villages visited during the field trip, there are 13 Singpho villages in the area with such forest areas, as per the following table:

Name of the villages	Approximate area under forest (in acres)
Enthong	5
Mungong	9
Enthem	10
Ulup	½
Pangna	1
Bahbari	1
Ketetong	5
Duarmara	1
Kumsaikong	6
Hasak	1
Pangsun	1
Namdang	1
Bias	4

The Singphos believe in a great number of spirits hovering all around, whom they term as Nats. Many of these are associated with nature which not only reveals their beliefs and dependency on nature but also their respect for nature.

Some of the important traditions are:

- Fun Nat: It is believed that a spirit resides in trees.
- Bum Nat: He is believed to be owner of the hills, but he is commonly considered as the guardian of fields.
- Matāitu: Matāitu is considered as the lord of forest and as such it has to be approached for approval of clearing the forest.
- Field ceremonies: Singpho according to their tradition organise some rituals for protection of their crops, these are the common field ceremonies they have. The Spirits of Ca' Nat (Spirit of water), Matāi Nat (spirit of forest) and Cithúng Nat (spirit of earth) are believed to be connected to good harvest.

Widespread vegetation cover and traditional lifestyle of the Singpho people nurture a range of crops and other plants in their village landscape. Till date they have cultivated five different local rice varieties, endemic to this area. Some of the important varieties are Miyatong and Pikhisngkhou.

In their homestead forest areas a wide variety of plant species are found. Some of the important vascular plant species found in the areas are ***Bansum, Hullock (Terminalia myriocarpa), Hulong (Dipterocarpus macrocarpas), Mekai (Phobele cooperiana), Nahar (Mesua feria), Simul (Bombax malabaricum), Barhamthuri (Talauma hogdsnii), Takau (Livistona jenaikinsian)***, etc. Some of these are endemic to the area and are endangered. There are several species of Kawa (bamboo) found in the area, mainly Jati, Bhaluka, Bijuli, Kako etc. Moreover, thatch, elephant grass and reeds are also found in the marshy areas near to the agricultural field and in the grazing land.

Elephant, Tiger, Leopard, Wild Pigs, Bear, Barking Deer and Spotted Deer are commonly found wildlife of the area.

Conservation practices of Tangsa Naga

Tangsa Naga mainly inhabit the northern part of ***Dihing River*** in the ***Tirap Frontier*** of ***Patkai ranges***. In Tangsa villages, houses are found clustered on the central highland areas with large homestead areas. Near to this large patches of forest are found, which is with individual family's ownership and there is clear demarcation of boundary of each of the family's possessions. In the surrounds, paddy fields are located.

CCAs of Singpho tribes along with their traditional tea gardens (Courtesy: Sudipto Chatterjee)

Tangsa Naga life is also associated with forest; they depend on the forest for building material, food and medicinal plants. Usually large patches of forest are found in every Tangsa village, where small patches are with individual family's ownership.

In Kharangko village, it was observed that about 23 acres of forests are being conserved. The people say that the stake in the patch of forest is limited only to 14 households of the village. Individual areas in the patch are demarcated and one can collect timber, fuelwood and other necessities from his/her own plot only. But, interestingly, as far as the wild edible vegetables and *sags* (herbs) are concerned, the whole patch of forest is open for each and every one of the village. It is noteworthy that they have tradition of performing some rituals before harvesting, in the honour of the forest goddess; these are performed in the forest only.

Conservation practices of Tai Phake

Tai Phake is one of the indigenous ethnic groups of Assam; they are living mainly in few villages of Tinsukia and Dibrugarh districts of Assam. At present they have only around 2000 population only. A written historical document reveals that way back in 1775 they had migrated to Assam. The word *'Phake'* stands for '*Pha*'- rock wall and *'Ke'* - old. There was Phake kingdom across the *Patkai* in *Hukong* Valley. They left their own land due to a political crisis, economic and natural instability in the area and migrated to this part of the country. Tai Phake villages were settled in the present location between 1830 to 1950 (Gohain, 2009) Tai Phakes are Buddhist by religion. So, in the present social life there is significant influence of Buddhist Philosophy, reflected in their different festivals.

Tai Phake also maintain a forest area in their homestead. This is the source of wild edible vegetables, building material, ingredients of traditional herbal medicines, and material for different rituals. Floristic diversity is very common in such forest patches. Most commonly they have collected vegetables and herbs like *Khangkha, Palap Maoun, Kan Jang, Nam Hom, Panag, Panit,* etc. for day-to-day consumption from such area. The Nigam village visited during the field trip has around 3 acres of such forest area which are located in the homestead of different families.

In spite of the strong conservation practices the forest cover is declining in the Margherita area and this is possibly due to the emergence of the nascent small tea gardens. To earn good cash by developing tea gardens may not pose any problem. But, the most dangerous part of the game is that, with this new attitude of becoming fledgling entrepreneurs, some inimical forces may enter the area. "It is very ridiculous that our own people are being lured by the outside forces in the name of so called development. A rat race, among the new generation, has already begun, after easy money and they are becoming malevolent toward the forest, which gives us so much" - says an elderly person when asked what he thinks are the important causes of depletion of the forest cover in the area.

1.4 Community Conserved Areas in Lower Assam Bodoland Territorial

Council Kakoijana reserve forest is located in Bongaigaon district and is administered under Aie Valley forest Division. The Reserve- exemplifies a case where communities have willingly handed over the management to the state forest department in the larger interest of the Golden langur (Trachypithecus geei). The forest is surrounded by 22 odd villages with

Golden Langur in Kakoijana Community Conserved Forest, Assam (Courtesy: Raju Das)

different ethnic communities such as Garos, Rabhas, Adivasis, Bodos and Muslims forming the majority in individual villages.

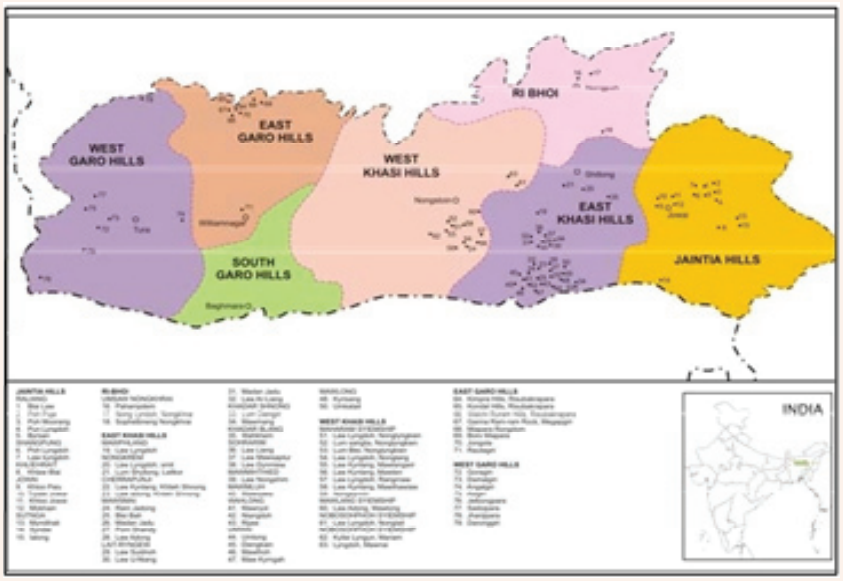
A small initiative by a local NGO and the support through training and motivation prompted the communities to protect the forest patch for conservation of the Golden langur whose population had reduced to a mere 100. Forced to live on the ground due to loss of canopy cover, today, the conservation of this langur is a success story in Assam. Golden langur is a highly endemic and endangered leaf-eating monkey that is naturally distributed only between the rivers Sankosh and Manas in western Assam. It is much revered among the Hindu tribals who consider it to be a direct descendant of god Hanuman. Over the years the population has fragmented to 2 distinct sub-populations and rough estimates indicate less than 5000 Golden langurs in the fragmented forests of India.

Chakrashila also harbours a set of sacred mountains 'Dan duphur' that are worshiped during the April festivals. The term Chakrashila is also loosely derived from the word 'Sikrisikla' which means butterfly in Bodo language. Within the township of Kokrajhar, Gendrabil is a small patch of Sal (*Shorea robusta*) forest that has been well preserved by the local community since 2001. The Bodo tribals of two villages Boro Gendrabil North and Boro Gendrabil South have been able to successfully prevent any illegal felling of trees of this Reserve Forest and as a result 3 troupes of Golden langur are residing in this area.

The Community Conserved Areas of Meghalaya

In Meghalaya 69.5 per cent of the geographic area is under forest cover, which is around 15,584 sq. km (FSI, 2001). Of this, area under reserved and protected forests managed by state FD is 12,124 sq km. The rest are managed by the Autonomous District Councils, village durbars and other traditional institutions and private owners. Autonomous District Councils control 96 per cent of the community owned forests. (State of Environment, 2005). As mentioned earlier, the ownership rights over land and resources are further protected by the Sixth Schedule of the Indian Constitution, hence, the Act and rules formed by the Central and state governments are not applicable to these forests. The district council Acts however are weakly enforced. The State of Environment Report 2005 of Meghalaya highlights the over-exploitation of the clan owned forests.

Based on the ownership pattern and management control and the tribe that preserves them, these forests are known by different names. The *Law Kyntang* are the sacred forests, *Law Adong* are forests from which resources are drawn but with concessions, and *Law Shanon* cater to all needs of fuelwood. A detailed description of the land tenure system is provided in Gurden, 1975. The community lands are family, clan, lineage owned.



Sacred groves documented by North East Hill University, Shillong, Meghalaya. (Tewari et. al. 1999)

Amongst the community forests the best documented are the sacred forests which are named differently. The sacred forests *Law Kyntang*, Law Niam and *Law Lyngdoh* in the Khasi Hills are known as *Khloo Blai* in Jaintia Hills and *Asheng Khoshi* in Garo Hills (Tiwari et al, 1999) The distribution of such forests are shown in Map 1. The East Garo Hills however remains a gap area.

A. Traditional Classification of *Law Adong* is as follows (Mohanty et. al 2006):

1. *Ka Khlaw Nongkynrih*

This forest is protected and reserved only for community service needs. It is from this forest that trees are cut and felled for construction of schools, youth clubhouses, footbridges, and similar projects. It can also be used in emergency cases.

2. *Ka Khlaw Adong Kseh-Mawngap*

This forest is used only for timber for construction of houses and for other community-based constructions.

3. *Ka Khlaw-Adong Wah-Lwai*

Only selected species of trees are permitted to be cut from this forest and then only in extreme situations (i.e. if there are no full grown trees available in any of the above named forests that can be felled for construction of a house). The Hima, only after careful examination and consideration, will decide whether trees may be used in these situations.

4. *Ka Khlaw-Kor Um Kharai-Masi*

This forest is kept apart as the catchments area for spring water and serves as the source of water supply for the Hima. The entire zone is restricted to human and cattle entry.

5. *Ka Khlaw Dymmiew-Blah*

The trees in this forest are completely protected and cannot be felled for any purposes. Only full grown grasses, small wild trees and weed on the outer ring of the forest are permitted for harvest and use.

6. *Ka Khlaw Adong Wah-Sein Iong*

In this forest trees can be felled only for making coffins and the preparation of the cremating ground. Only five out of the sixteen villages are given access to fell trees and only for above purposes. Additionally the villages are responsible for conservation and protection. Each village has to be normal permission from the Hima before felling any trees.

7. *Ka Khlaw Adong-Kyiem:* Only grasses are permitted to be harvested from this forest.
8. *Ka Khlaw Adong Shnong Jathang*: This forest is located in Jatnag village, which has been given the role to protect and conserve it. The residents of the village enjoy only the right to cut trees for cremation purposes and only with the permission from the village headman.

Regulations on Access and Use of Khlaw Adong

1. No trees can be uprooted or cut from the protected forests. Any person found in violation is liable for punishment and penalty.
2. Every resident of the Hima is responsible for protecting the forest, and can take necessary action against anyone breaking the law.

3. It is illegal to set the forest on fire and culprits will be severely punished.
4. It is illegal to use the lands located on the fringes of the protected forests for any type of cultivation or to cut any tree from such areas.

The full grown grasses inside the protected forests cannot be cut without the prior permission of the Chief and ministers.

Community Conserved Areas of Arunachal Pradesh

CCAs are spread across the state of Arunachal Pradesh but remain practically undocumented. In Western Arunachal Pradesh community conserved forests are under the ownership of the monasteries, called Gumpha forests (Higgins and Chatterjee, 2006),. In Central Arunachal Pradesh are the community forests of the Apatanis, globally known for their paddy and fish cultivation. They conserve the forests which are sources of water that feed their paddy fields making them one of the most productive agro-ecosystems of the world. (Ramakrishnan, 1997). Like other tribal communities Apatanis, too are apprehensive of mapping their community -managed forests. The forest surrounding village Hong, one of the largest villages in the location exemplifies one of the best managed forests.

The Apatani valley also has age old pine forests. The distribution of *Pinus wallichiana* in these groves are a botanical curiosity as the tree does not occur in the neighbouring valleys of similar altitude. The Apatanis believe that they brought the tree species along with them when they immigrated from a country north of the Kamala and Subansiri rivers (Sastry ARK personal communication and Chatterjee et al 2000).

Very little is known about the forests managed by the Wanchoo tribals known for platform burials in the forests near Khonsa and Longling at the border of Arunachal Pradesh with Nagaland.

The Adi tribal community in upper Siang district rever the Mouling, Gangging and the Marrang peaks presently now within the boundaries of the Mouling National Park (See Map). The forests of Mouling are relatively intact and pristine with little evidences of disturbance possibly due to sacredness attached to these peaks.

The Monpa tribal community in Dirrang block of West Kameng district of Arunachal Pradesh has set up a CCA in 29 ha of the forest area. The CCA institution was established in 2006 as a registered society after procuring a no objection certificate from the Department of Forests and Environment, Government of Arunachal Pradesh. WWF-India played a key role in setting up the CCA. Thembang Bapu CCA was set up a time when the possibility of establishing *Community Reserves* was being at explored as in Article 36 C of the amended Wild Life Protection Act, 1972 by WWF-India.

Apprehensive of the provisions of the act, the community opted to set up a CCA for a duration of ten years with its own set of rules and by laws. Sir Dorabjee Tata Trust (SDTT), Mumbai, provided further financial support to strengthen the management and functioning of the CCA.

Western Arunachal Pradesh is also extremely rich in Rhododendrons, a genera presently threatened because of its excessive usage as fuel wood. The Monpa community from village Sakpret in the Tawang district is all set to achieve another milestone. Under the conservation initiative of Winrock International India, the community has set up a 8 ha natural Rhododendron arboretum with support from the Department of Science and Technology Government of India. The Rhododendron arboretum in addition to in situ conservation would also serve as a permanent sample plot to initiate the much needed scientific studies on the ecology of the Rhododendrons. A network of such community managed arboretums would serve as new category of CCAs of the Monpas.

Concluding remarks

NE India is not a homogenous entity but a mosaic of diverse ecological, social and physiological landscapes. CCAs of NE India need deeper understanding; they need to be mapped and documented. The people's traditional knowledge and wisdom attached to these needs to be recognised and acknowledged. Rationale for the conservation of the CCAs and the management practices needs intensive analysis and attention to conservation (Chatterjee, 2008).

A thorough situation analysis with respect to nature of ownership of the CCAs, level and intensity of threats, present institutional mechanism and the capacity to manage resources is an immediate requirement. Apprehensions of local communities that mapping and documentation of community forests might endanger their ownership rights is a concern. The fact that little success has been achieved in declaring *Community Reserves* in N E India as per the amended Wildlife Protection Act, 1972, is a pointer in this direction. In some locations like Karbi Anglong there is willingness to work closely with the government to initiate innovative approaches to protect their forests and thereby also secure livelihoods, as exemplified by a rhododendron arboretum by the Monpas in Western Arunachal Pradesh.

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