

PROTECTED AREAS, COMMUNITY BASED CONSERVATION AND DECENTRALISATION

Lessons from India

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EXECUTIVE SUMMARY

Decentralisation of political and administrative power is a global phenomenon, with various countries at various stages of devolving decision-making functions to local governments. This appears to have varying impacts on the conservation and management of natural resources, but the relationship is not well-studied. This study attempts to look at these links in the context of community-based and participatory conservation in India.

Broadly, two kinds of decentralisation are relevant for our enquiry:

1. Informal, people-initiated moves to gain control over decision-making and implementing. This is often achieved through site specific institutions and systems;
2. Formal legal or policy measures by governments, to devolve powers.

Specifically, this report asks the following questions:

1. Does decentralisation in general, or one or both of these modes of decentralisation in particular, enhance or hinder conservation?
2. How do these two forms of decentralisation relate to conservation and to each other?
3. How do these two forms of decentralisation relate to protected areas (here including community conserved areas or CCAs)?
4. What are the lessons that can be learnt from diverse initiatives at conservation using decentralised models of decision-making? Are changes needed in the way in which both informal and formal decentralisation is taking place, to enhance conservation effectiveness and sustainability?

Case studies of community conserved areas and participatory conservation by government agencies in three states of India (Nagaland, Orissa, and Maharashtra), lead to the following key lessons and conclusions:

1. It is important to look at three different kinds of decentralization (political, administrative, legal), both in their formal and informal modes.
2. In general, it appears that decentralization creates the conditions for more robust conservation and sustainable management of natural resources. However, this is not necessary, and also depends on a number of other factors.
3. Decentralised management at all the sites studied seems to have improved the status of natural ecosystems and wildlife (based on visual information and local testimonies), but barring one site, there are no systematic studies to scientifically establish this. Such studies are urgently needed.
4. In turn, the community based conservation initiatives seem to have promoted stronger decentralization, by further empowering local institutions and people. In some cases, local mobilization in other (e.g. development, empowerment) arenas has helped in conservation; in others, local mobilization in conservation has helped in decentralized efforts at livelihood improvement and more sustainable developmental inputs. Provision of information has been a critical source of greater local empowerment. Strength has also been obtained in some cases due to conserving communities getting together on a common front.

5. In some cases previously disprivileged sections such as women and 'lower' castes, have gained greater equity through the conservation initiative. But this is not the case across the board, and equity issues remain a critical gap in many instances.
6. There is a clear link at all the sites, between conservation and livelihoods. The conservation initiative, where decentralized or sensitive to local concerns, has usually led to improvement or strengthening of natural resource based livelihoods of local people. This may not, however, be equally spread across the relevant communities.
7. Security of tenure of the land/resources being conserved, or the confidence that the community could continue with its initiative irrespective of the legal ownership of the land, is key to a successful decentralized initiative. Where ownership or control was clearly established, conservation seemed more secure; in turn, community mobilization to conserve resources had at times increased the tenurial security over the land/resources being conserved. In cases of continued tenurial insecurity, conservation was on a more tenuous footing.
8. At all the sites, it was clear that an individual or a group of individuals from within the community played an extremely important role in motivating the community, carrying out important tasks and guiding the entire initiative. Such leaders often pay a substantial personal price for their role. Passing on of leadership could be a crucial issue for these initiatives.
9. In this regard, the role of a well-established local institution (or institutions) was found to be crucial. Where the initiative was dependent on an individual, continuity problems could be felt sooner or later. Where there was an institution, set up by or with the consent and central involvement of the local community, such continuity was more assured. Such institutions were also crucial as the interface between the community and outside agencies.
10. The role of outside agencies or persons appeared to be crucial in all cases, including those where the effort was completely self-initiated. This role could be as a catalyst, as a facilitating link with the outside world, as an intervener in conflict situations, or for providing crucial policy/technical/information inputs. The study found a diversity of such outside agencies, both from within and outside government.
11. The national and state policy environment within which these initiatives are located have a great influence on their success and failure. In most cases, such an environment was inadequate, and could in fact be a hurdle to long-term security of the conservation effort. There is a great and urgent need for changes in state and national policies and laws, to further facilitate community based and participatory conservation.

Chapter 1

INDIA: A BACKGROUND¹

India is the seventh largest country in the world with an area of 32,87,263 sq km, extending from 8° 4' to 37° 6' N and 68° 7' to 97° 25' E. It has a land frontier of 15,200 km and a coastline, including that of the islands, amounting to 7516 km. The countries bordering India are the People's Republic of China to the north and north-east, Myanmar and Bangladesh to the north-east and east, Nepal and Bhutan to the north, Pakistan to the west and Afghanistan to the north-west. The southern peninsula extends into the tropical waters of the Indian Ocean with the Bay of Bengal lying to the east and the Arabian Sea to the west. Sri Lanka, in the Indian Ocean, also borders India. The country lies completely in the northern hemisphere and the Tropic of Cancer more or less divides the country into two equal halves.

Even though parts of the country lie in what can be described as temperate latitudes, India is predominantly a tropical country. It is composed of three major units or earth features, which differ in their physical and geological characters. They are:

- a. The Peninsula, i.e. the Deccan plateau south of the Vindhyas;
- b. The Himalaya mountains, also referred to as the Extra-Peninsula, which borders India to the north and east; and;
- c. The Indo-Gangetic Plains, lying between the other two divisions and extends from the Indus valley in the west to the Brahmaputra valley in the east.

Five other distinct but smaller divisions can be distinguished: the deserts of Rajasthan, the islands in the Indian ocean and the Arabian sea, the long coastal stretch, the rivers, and the major lakes.

The combined population of 28 states and 7 Union Territories of India on March 1, 2001 was 1027 million (102.7 crores). Although the decadal growth rate declined by 2.5%, from 23.9% during 1981-91 to 21.3% during 1991-2001, the population of India increased by 181 million during the last decade.

72% of the population lives in rural areas and is directly dependent on terrestrial and aquatic resources for its food, health, shelter and diverse livelihood systems. This includes forest-dwellers, tribal communities, small and marginal farmers, shifting cultivators, pastoralists, fisherfolk and artisans (these are not mutually exclusive categories). Out of 580,000 villages in India, gathering from forests and other commons remains an important source of income and subsistence in about 200,000 villages.

The Indian nation consists of one of the most diverse people in the world, having 4635 identifiable communities with differences in biological traits, dress, language, forms of worship, occupation, food habits and kinship patterns.

58.4% of the country's total workers and 73.3% of the workers in rural areas (listed as cultivators and agricultural labourers), remain dependent on the primary sector, including agriculture, animal husbandry, forestry, fisheries, and related occupations and livelihoods. With 28% of the population now living in urban areas, significant sections of the population

¹ Excerpted from TPCG and Kalpavriksh (2005). *Securing India's Future: Final Technical Report of the National Biodiversity Strategy and Action Plan*. Prepared by the NBSAP Technical and Policy Core Group. Kalpavriksh, Delhi/Pune.

have also moved into the secondary and tertiary sectors, into urban and industrial settlements and livelihoods, and this number is rising, albeit slowly. The country today therefore displays the largest possible range of economic pursuits and livelihoods, ranging from ancient hunter-gatherers and nomadic pastoralists, to the modern computer professional and space scientist.

More than two-thirds of India's rural population is directly dependent on various combinations of private and common pool lands and waters for a very wide diversity of agricultural, agro-pastoral and fisheries-related (including coastal and inland) livelihood systems. These include ecosystem-based variations of settled agriculture, shifting cultivation, nomadic and non-nomadic pastoralism, and various combinations of agriculture and pastoralism. This percentage has remained almost unchanged in the last 80 years, as employment generation in the secondary and tertiary sectors of the economy is unable to absorb even the additional urban labour force (Saxena 2001a).

Despite this scenario, tenurial security over land for small and marginal farmers, particularly for farmers in so-called 'marginal' lands (like mountains, marshlands, coasts, arid and semi-arid areas), and access to common lands for gathering, pasture, shifting cultivation and pastoralism is declining rapidly with changing land policies in the context of nationalisation, privatisation, and globalization.

Chapter 2

CONSERVATION AND DECENTRALISATION: AN INTRODUCTION

Focus of the Inquiry

Decentralisation of political and administrative power, to grassroots levels, is now a global phenomena. A number of countries are opting to devolve power to sub-national levels, often only to provincial or state government levels, but also increasingly to rural and urban communities. Communities too are increasingly vocal and mobilised, demanding decentralisation of the decision-making processes. The resulting measures by governments could be in the form of revitalising or recognising traditional institutions of decentralised decision-making, or creating new institutional forms for the purpose. Even where governments may not have undertaken such measures, in many countries communities are taking over *de facto* control.

Such a move has significant implications for the way natural resources are managed, including on the conservation of wildlife and biodiversity. It is therefore important to understand the relationship between decentralisation and conservation, as it is playing itself out both on the ground, and at policy levels.

Broadly, two kinds of decentralisation are relevant for our enquiry:

3. Informal, people-initiated moves to gain control over decision-making and implementing. This is often achieved through site specific institutions and systems;
4. Formal legal or policy measures by governments, to devolve powers.

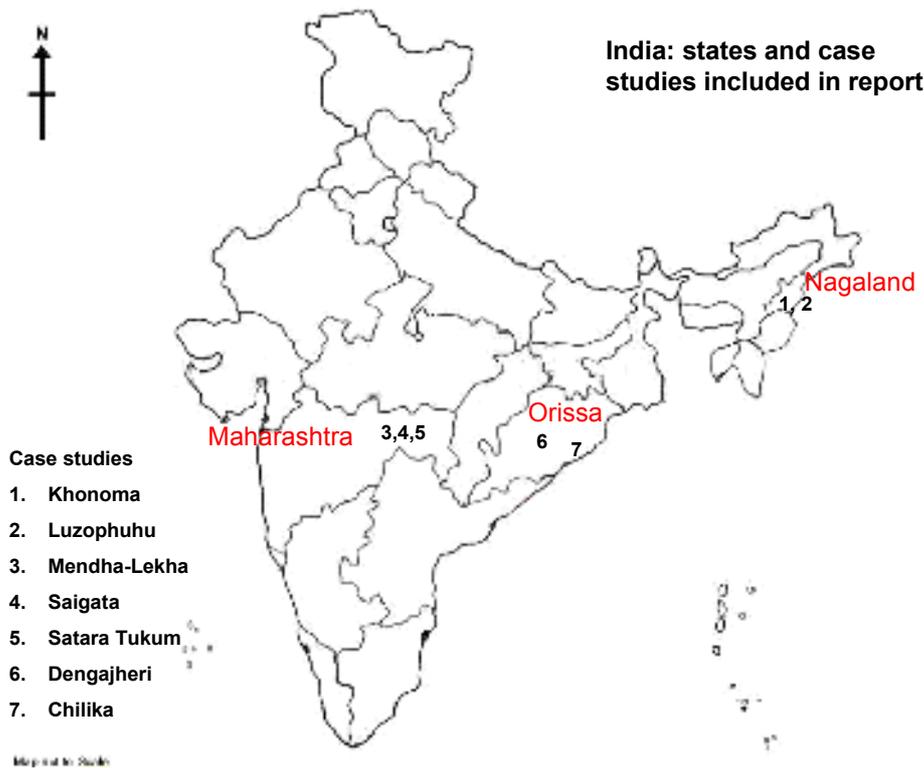
The two above may overlap, but very often they run parallel. For the purposes of our enquiry, we would focus on how these two modes of decentralisation relate to each other, to centralised forms of decision-making, and to biodiversity conservation initiatives.

Specifically, this report asks the following questions:

5. Does decentralisation in general, or one or both of these modes of decentralisation in particular, enhance or hinder conservation?
6. How do these two forms of decentralisation relate to conservation and to each other?
7. How do these two forms of decentralisation relate to protected areas (here including community conserved areas or CCAs)?
8. What are the lessons that can be learnt from diverse initiatives at conservation using decentralised models of decision-making? Are changes needed in the way in which both informal and formal decentralisation is taking place, to enhance conservation effectiveness and sustainability?

These questions are asked in the context of case studies from three states of India:

Maharashtra, Orissa, and Nagaland (see map). Culturally, these are very diverse states. Many of the case studies are based in areas with significant or predominantly tribal populations, though some like Chilika in Orissa, are predominantly non-tribal.



The Ground Context

India has ancient traditions of community-based governance of natural resources (TPCG and Kalpavriksh 2005). Available evidence suggests that for the better part of history, India's local communities were in day-to-day control over their natural surrounds. This did not necessarily mean that they owned all the land and resources. Often the ownership was vested in rulers, but these rulers would rarely interfere in the actual management of the land or resources. A bewildering array of social and political institutions at the level of individual or clustered settlements governed such management, with rulers only coming into the picture at times of war, or major natural disaster, or when requiring goods and services from the countryside. It was over these centuries or millennia of community-based management, that diverse forms of land/water use (including sacred spaces and landscapes) emerged.

While some of early India's rulers may have undoubtedly had a significant impact on such decentralised management, the greatest systematic and widespread impact was only felt during the colonial period. The British government in India attempted to consolidate its control through actual management of common lands (including forests and wetlands). The policy instruments by which this was done are briefly dealt with below. What is critical to note here is that such moves had a devastating impact on traditional community based institutions, customary laws, and management regimes. This centralisation of management has continued well after independence in 1947, leaving a majority of village communities that no longer have the capacity or institutions to manage common lands on their own.

It is in this context of institutional decline, that the re-emergence of community based natural resource management gains enormous significance. Across India, communities tired of

waiting for governments to deliver on their promises, or unwilling to bear the exploitation, alienation, and harassment that came with state take-over of resources, have been reviving their institutions or creating new ones. In this study we examine some such initiatives. But these are only a tiny fraction of the range and breadth of community based conservation and natural resource management efforts that are now spread across India. Some are continuations of the past (almost in the same mould as they always were), some are modifications from the past, and some are entirely new institutions or management regimes.

This ‘informal’ decentralisation, for the most part not backed up by statutory authority or governmental sanction, has interesting repercussions for conservation. Undoubtedly there would be many areas in which continuation or revival of community revival would have led to ecological loss, as it would be accompanied by selling off resources for short-term gains by the community as a whole or more often by some of its more powerful individuals. This is the case with forests in north-eastern India, for instance (Tripathi 2003; TPCG and Kalpavriksh 2005). However, in many other areas the renewed decentralisation of resource management has actually improved conservation prospects. It has led to more transparent governance, greater ability to monitor what is happening to the resource, greater collective ability to manage it on traditional knowledge or scientific basis, and more incentives for conservation as benefits are realised by the community.

The Policy Context

The last decade or so have seen significant political changes taking place in India. In 1992, the Indian Parliament approved the 73rd and 74th amendments to the Constitution, providing for a much greater administrative and political role for village institutions (*panchayats*)², urban citizen institutions, and district level bodies. In 1996, these changes were extended to Scheduled Areas, parts of some states that have a predominantly *adivasi* (indigenous or tribal) population³. In the latter case in particular, there were explicit provisions regarding the control and management of natural resources.

While the constitutional sanction of decentralised governance is new, its roots are historically deep-rooted (as mentioned above). Village level decision-making bodies have existed since ancient times, in various forms: full village councils consisting of all adults, representative bodies of either the whole settlement or of castes within it (e.g. ‘caste *Panchayats*’), larger level councils for coordination and arbitration amongst a number of settlements, and so on. These largely functioned on the basis of customary, mostly unwritten, law and practice. An attempt was made during colonial times to formalise some kind of decentralised governance for villages (Jha 1999), following the recommendations of a Royal Commission on Decentralisation, through a series of resolutions and acts in the early part of the 20th century. District boards and village panchayats were formalised, to facilitate the administration of various tasks including development processes. However, these institutions were reportedly not very effective in bringing about true decentralisation, oriented as they were towards the needs of colonial rule; indeed it is observed that they were nowhere near what existed in customary terms since ancient times (Singh et al. 1997). After independence, a number of expert commissions recommended further clarification of the functions of these bodies, as also their inclusion in the political process (which they had not till now been part of). Starting

² A traditional institution of governance at village levels, usually a body of 5 or more persons (traditionally, almost always men) chosen by the village council.

³ Today such scheduled areas extend to 10 states: Andhra Pradesh, Bihar, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Orissa, and Rajasthan.

with a few states, *panchayats* across India became subject to elections. Apparently this trend was subdued by various factors during the 1960s and 1970s, but regained momentum thereafter, culminating in the constitutional amendments mentioned above. Now, virtually across India, *panchayats* (or equivalent bodies in some tribal areas) are elected on a regular basis, are therefore connected to the national political process, and are also supposed to be much more in control of local matters of development, administration, law and order, and financial management.⁴

Interestingly, this trend towards political and administrative decentralisation seems to be running contrary to what is happening in the field of wildlife and biodiversity conservation. Indian conservation policy and practice, since independence (and before that in colonial times), has been characterised by highly centralised concentration of power. The colonial practice of taking ownership and management of common property resources, including forests, pastures, wetlands, and coastal areas, has continued after independence in 1947. While earlier the prime motivation for such take-over (especially of forests) was commercial exploitation, more recently it has become conservation or sustainable management. The Wild Life Act 1972 (WLPA) and the Forest Conservation Act 1980 (FCA) attempted to put a stop to the rampant destruction of natural ecosystems and wildlife populations, through centralisation of powers in the hands of either the union government or state governments. These laws had a significant positive impact, in reducing the massive diversion of forests by state governments (as the FCA required central government's approval for any such diversion), and the destruction of wildlife species and habitats (through the provisions of the WLPA).

However, these laws also continued the colonial trend of rendering control over natural resources into the hands of centralised bureaucracies, further removing any vestiges of management and control that local communities may have had. This impact has been most visible in the case of national parks and wildlife sanctuaries (corresponding to IUCN protected area categories 2 and 4, respectively) set up under the WLPA. The vision of those who promulgated the WLPA, and implemented its provisions, was essentially exclusionary, considering local people (many of whose communities were residents or users of these areas well before they were declared protected areas) as ignorant resource users at best, and enemies of wildlife at worst. Almost totally neglected were traditions of conservation and community management of resources, and ethical and spiritual beliefs that sustained many ecosystems and wildlife species (though it would be a mistake to romanticise these as being universal or always effective). Also neglected, and in some cases actually dismantled, were community level institutions of resource management and conservation⁵.

Most important, from the point of view of our enquiry here, these and other relevant policy/legal measures ran parallel or in contradiction to the trends regarding political decentralisation. *Panchayats*, *gram sabhas*, and other village level institutions were provided virtually no powers or role in the WLPA, the FCA, or other related pronouncements. Even a

⁴ It is a different matter, but significant, that both in concept and implementation, many states have not progressed very much in actual on-ground decentralisation.

⁵ There are a number of studies or anecdotal accounts of this. Ramnath, for instance, found that restraints on fishing were discarded in a central Indian tribal belt, after one of the areas they traditionally dependent on was declared a protected area and access was denied to them. ...instead of careful, day-long fishing operations that used plant poisons, the tribal people started using chemicals that could kill fish faster so they could quickly finish the operation before getting caught (Ramnath, 1997). In Chitrangudi wetland of Tamil Nadu, it was found that traditional conservation-oriented management by the community broke down when the area was declared a wildlife sanctuary and management taken over by the Forest Department (Bhushan, In press).

relatively progressive Forest Policy 1988, which overturned the earlier policy by explicitly putting the ecological and social functions of forests above the commercial ones, did not have specific operative clauses on the role of decentralised institutions of decision-making. Only in 2002-3, some rather weak provisions for such involvement were brought in, through new laws and policy statements. The Wild Life (Protection) Amendment Act 2002 suggested a role for villagers in Sanctuary Advisory Committees, included two new categories of protected areas (Community Reserves and Conservation Reserves) with community involvement, but retained its overall exclusionary and centralised focus⁶. The Biological Diversity Act 2002 also proposed the creation of biodiversity management committees at local levels, but in its Rules 2004, provided for extremely restricted functions for such committees⁷. The National Wildlife Action Plan 2002 suggested a number of measures to involve citizens in conservation, but as an action plan has so far not had major policy, legal, or practical impact in this direction.

The contrasting regimes of political decentralisation and wildlife/forest/biodiversity conservation, have been made considerably more conflictual by government pronouncements following recent judgements of the Indian Supreme Court. In an ongoing case relating to forests (the by now very well-known Godavarman case, which has spawned dozens of forest-related judgements and orders in the last few years), the Court directed that no further removal of timber, grasses, etc, should be “ordered” from national parks and sanctuaries. Though this order was related to a particular instance of surreptitious moves by a state government to resume timber felling inside parks and sanctuaries, the central Ministry of Environment and Forests, and the Court’s own Centrally Empowered Committee (set up to look into and advise the Court re. issues of forest law violation), directed all state governments to negate all rights inside all such protected areas! In effect, this would divest 3.5 to 4 million people living inside these areas, or otherwise dependent on their resources, of all rights to resources. The ultimate effect would only be forcible displacement of these people, many of whom belong to the country’s most sensitive indigenous communities. *At no stage in the proceedings of the Court regarding this matter, have the powers of the panchayats and other village institutions, been referred to, much less respected.*

The final twist to the already convoluted relationship between decentralisation and conservation policies, has come even as this report is being finalised. The central government is finalising an Act that would provide considerable rights to forest lands and resources, to adivasis or indigenous people who are listed as Scheduled Tribes (a classification for tribal peoples that is mandated in the Constitution of India). The proposed Act’s main objective is to undo the “historical injustice” done to such communities, when forests were taken over by the state; and to provide a long-term stake to them not only to meet their livelihood needs but also conserve forests and wildlife. Considerable controversy has erupted in India on this, with some wildlifers strongly opposed to the Bill, others cautiously welcoming it but asking for greater conservation provisions, and yet others rejoicing over finally achieving a long-standing demand of tribal communities. It is clearly premature for this proposed Act to be analysed from the point of view of the case studies carried out for this project, but we mention it here to point to possible further ramifications in the tortured relationship between decentralisation and conservation.

⁶ Kalpavriksh 2003.

⁷ Kalpavriksh 2005.

Finally, it is important to note that whereas the central (or national) policy regimes are characterised by contradictory pulls between decentralisation and conservation policies, in some states this is not necessarily the case. As our following case study on Nagaland will show, this state has had the progressive position of encouraging, or at least allowing to continue, both political and natural resource decision-making in the hands of local communities. In other words, traditional institutional structures of governance that managed both the political affairs of the village, as also its natural resources (for the most part owned by the community or clans and individuals within it), have been allowed to continue. This is, however, not a very common phenomenon in India; most states appeared to have blindly followed the national government model of centralised resource control and management.

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3.1 NAGALAND**CASE STUDY 1: KHONOMA, KOHIMA⁸****BACKGROUND**

Khonoma village, located about 20km from the state capital, Kohima. The village, referred to as Khwunoria (named after a local plant, *Glouthera fragrantissima*), is estimated to be around 700 years old and is spread over an area of 123sq km. The total population of the village is about 3000 settled in 600 households. Khonoma is famous for its forests and agriculture, including some of the oldest terraced cultivation in the region. The terrain of the village is hilly, ranging from gentle slopes to steep and rugged hillsides. The hills are covered with lush and biodiverse forestland, rich in various species of flora and fauna. The state bird, Blyth's tragopan (*Tragopan Blythii*), a pheasant now nationally endangered, is found here in abundance.

Khonoma village is inhabited by the Angami tribe, which has historically famous for its great warriors. Khonoma warriors provided protection to other smaller villages. The village is recorded to have resisted the advancing British rule in the region from 1830s to 1880. Christianity was introduced in the village in 1890, and today most of the villagers are of this faith.

The village and the surrounding forests are rich in agricultural and wild diversity. Preliminary ecological studies done so far record use of about 250 plant species, including over 70 for medicinal purposes, 84 kinds of wild fruits, 116 kinds of wild vegetables, 9 varieties of mushrooms, 5 kinds of natural dyes. Local people have recorded about 204 species of trees, nearly 45 varieties of orchids, 11 varieties of cane, and 19 varieties of bamboo. Villagers also record 25 types of snakes, 6 kinds of lizards, 11 kinds of amphibians, 196 kinds of birds (of which English names for 87 have been identified, including the Grey-billed or Blyth's Tragopan, a threatened bird mentioned in the red data book of IUCN). 72 kinds of wild animals have also been reported by the local people, however English and scientific names for all have not been recorded yet. These include Tiger, Leopard, Serow, Sloth Bear, Himalayan Black Bear and Otter.⁹

⁸ This case study has been compiled based on information sent by Tsilie Sakhrie, a social worker from Khonoma village; information collected during a field trip to Khonoma village by Ashish Kothari, Neema Pathak, and Shantha Bhushan of Kalpavriksh, in February 2005; Kothari, A. (2005). *The Khonoma Magic: A Nagaland Village Leads the Way*. Hindu Survey of Environment 2005; and Environment Impact Assessment Report, Khonoma Tourism Development Board, November 2004.

⁹ Environmental Society Of Nagaland (2002), *Birds Of Nagaland* (Unpublished); Ahmed, M.F. (2004), *Biodiversity of Khonoma Nature Conservation and Tragopan Sanctuary*, Nagaland. Aranyak and KNCTS. In Environment Impact Assessment Report with reference to Eco-development, Natural Resource management and Social Capital for the village community of Khonoma, Nagaland (2004), Khonoma Tourism Development Board.

Paddy and other crop cultivation is the major source of income for the villagers. They depend on the forest for their wide variety of medicinal plants (e.g. ginseng), more than 80 species of wild foods and grasses.

TOWARDS COMMUNITY CONSERVATION

Wildlife hunting is a way of life with the Naga tribes, and a large number of birds and animals are killed every year, including the endangered Tragopans. In 1993, 300 Tragopans were reported to be killed for their meat. This magnitude of killing concerned the more ecological sensitive people of the village and they launched a crusade against hunting. These included some villagers and some who belonged to the village but now resided and were employed outside.

In 1998, the Khonoma Village Council declared its intention to notify about 2000 hectares (20 sq.km) as a Khonoma Nature Conservation and Tragopan Sanctuary (KNCTS). This was motivated by some of the village elders, notably Tsilie Sakhrie, who in the 1980s had been a contractor dealing with the Forest Department. During this time he had been having discussions with forest officer T. Angami, who motivated him to consider dedicating a part of the village forests to wildlife conservation. In the 1980s, Tsilie proposed that the village do something to this effect, but could not achieve a consensus. In 1995, when he became a member of the Village Council, and concerned with high number of birds being killed every year, Tsilie again broached the subject. A number of villagers were opposed to the idea, since hunting was so much a part of their culture. However, over the next 3 years, through extensive discussions in the village, the majority was convinced. The Sanctuary's foundation stone was laid in December 1998; it was also decided to ban hunting in the entire village, not only the Sanctuary area.

Not content with simple declaration of the sanctuary, the village set up a KNCTS Trust, with a formal set of rules and regulations. Office bearers were chosen from amongst the villagers; Tsilie was chosen the Chief Managing Director. Rules were laid down for the management of the Sanctuary, including penalties for violations ranging from Rs. 300 to 3000 depending on the seriousness of the violation. The village youth were requested to carry out monitoring, and to levy fines, which they could then use for their own village-based activities. Villagers also selected some youth members to be the wardens for the sanctuary, to periodically check on the sanctuary. As the concept of a sanctuary was new to the villagers, they decided to seek help from the government, NGOs and other institutions in order to seek technical and academic support for protecting their sanctuary.

NGOs such as the Centre for Environment Education (CCE), North-east regional cell, assisted in spreading awareness about the conservation of Tragopans. A six-member team of KNCTS was given an orientation about the sanctuary. A number of environmental awareness expeditions were organised for village members. The importance of having a village map, land records, survey of flora and fauna were explained to the villagers. Community members visited Chakrashila Wildlife Sanctuary¹⁰ in Assam to share experiences with other similar efforts and visited Kaziranga National Park to understand the issues related to Protected Area management. NGOs like EQUATIONS (based in Bangalore) have helped the local Khonoma Tourism Development Board to carry out an Environment Impact Assessment of tourism, in

¹⁰ A Wildlife Sanctuary in Assam, declared for conservation of the Golden Langur at the behest of the local people.

case the village goes in for much larger visitor influx. Another NGO, Aranyak (based in Guwahati) has helped the villagers conduct a survey of fauna and flora in KNCTS.

IMPACTS OF THE INITIATIVE

The area included in the KNCTS is of outstanding value, from a biodiversity, water security, and aesthetic point of view. On the map it is about 20 sq. km, but if the contours are accounted for, the area may be 70 sq.km, comprising exquisite broad-leaved forests and dwarf bamboo grasslands. It is part of the Dzuku valley, which, though not many people would know this, was immortalised by Vikram Seth in his poem “The Elephant and the Tragopan”. The poem is about how the wild animals of the valley try to stop a proposed dam that would drown out their valley, reflecting an actual movement by NGOs in Nagaland against such a proposal in the 1990s. The idea of the dam has been replaced by a pipeline proposal, to take water from here to Kohima, a project that would hopefully have little ecological impact.

Dzuku is home to a healthy population of the severely endangered state bird, the Blyth’s tragopan (a pheasant). For this and other reasons, the Bombay Natural History Society considers it one of India’s Important Bird Areas. Dzuku and surrounding forests also contain considerable other wildlife, including Himalayan black bear, over 40 species of orchids apart from hundreds of other plant species, the endemic Dzuku lily, Serow, Sambar, Leopard, and so on. Till recently, all these species had dwindled alarmingly due to hunting and habitat pressures. Villagers assert that they are now again increasing due to their conservation efforts; in fact crop damage by wild pigs has become a menace! The hunting ban seems to be highly effective; less than 10 violations have been reported in the last few years.

Tsilie and others are now proposing an extension of the sanctuary to neighbouring forests that are currently seen as a ‘buffer zone’. Currently no hunting or extraction of timber is allowed in the buffer. If accepted by the Council, the area (on map) would increase to over 3000 hectares (30 sq.km), on the ground over 10,000 hectares (100 sq.km). And Tsilie in his capacity as the President of the Western Angami Public Organisation (an institution that contains the entire western Angami tribal population) is already discussing with the Southern Angami Public Organisation to declare their areas also protected. Work could also be done to convince Naga tribes in adjoining Manipur, since the Khonoma citizens have relations extending into those villages. If successful, the entire Dzuku and Japfu area could be declared a community protected area, extending to perhaps several hundred square kilometres.

A Social Transformation

Conservation is only one of the elements of social transformation at Khonoma. Visitors to the village will be confronted with a bewildering number of activities and processes that its residents seem to be engaged in. Some of these are new, some age-old. Khonoma may well be the only village in India that has a global citizenry with an active self-identity; every year, 1st September is celebrated as the village’s ‘birthday’, with Khonomaians from far and wide coming to the village to celebrate, or carrying out celebrations where-ever they are. There are even Khonoma Students Unions in Kolkata, Mumbai and Delhi!

Given its historic past, Khonoma also plays host to many tourists; it is on the tourist circuit of those who visit Kohima. Some years back the Government of India recognised the potential of the village to organise itself, and granted it a substantial Green Village fund through the

Tourism Department of the state government. The money is being used to provide basic civic amenities and hygiene measures, reinforce community infrastructure, and prepare the village to receive and show visitors its past and present.

Khonoma is also well-known in agricultural circles, for its sophisticated cultivation techniques. In shifting cultivation, farmers use Alder (*Alnus nepalensis*) trees interspersed with the crops. These trees return nitrogen to the soil, thereby helping the land to rapidly regain fertility when farmers abandon it to move onto the next plot. The village overlooks a wide valley that has been converted into terraced fields, made with such precision that apparently their productivity has remained stable over centuries. According to the villagers, Khonoma is also home to over 60 varieties of rice, and a diversity of millets, maize, Job's tears, citrus fruits, and other crops (grown without using chemical pesticides or fertilizers). All this has made the village a model for emulation in many other parts of Nagaland through the efforts of the unique inter-departmental Nagaland Empowerment of People and Economic Development (NEPED) programme. This is especially useful where shifting cultivation has become unsustainable due to shorter cycles of leaving the land fallow after cultivation.

Amongst the factors that makes all this tick, is the strong and clear ownership of land and natural resources within the village boundaries. Such ownership provides a strong stake in working out sustainable modes of land management. But this would not be enough in itself (for such ownership could also result in individuals destroying their lands), were it not coupled with very strong social and political organisations. The village is divided into 3 hamlets (*khels*), each with several clans, each clan comprised of several families. The clan itself is a decision-making unit, and selects members to represent itself to larger village level bodies. These include the Village Council (overall responsible for all affairs), the Village Development Board (recipients of government funds for developmental purposes), and the *ruffono*, a recent innovation to bring all village institutions under a common umbrella. Traditional institutions such as decision-making by the *gaon burras* (village elders) have been integrated into the Village Council's decision-making. The youth are part of either a Students Union or a Youth Association, the women are members of the Khonoma Women's Organisation. In addition, all villagers are part of an age group. Such groups are formed by boys and girls in the age group 12 to 15, and carry out social activities like construction of rest houses and village paths, and formation of singing and dancing groups. The bond lasts a lifetime; members stick together till they are into their 60s and 70s!

Khonoma's success is also dependent on the links its citizens have with the outside world. Many of its one-time residents are now in government service.

There are, of course, blemishes aplenty. Women obviously do command a great deal of respect, and reportedly are very influential at the house-hold level, or through their own committee, but they do not occupy formal positions in most of the decisive institutions such as the Village Council. Villagers although have stopped hunting in their own village, they still occasionally hunt outside...though apparently this too is on the decline. The capacity to handle tourists seems rather limited, and there is a worry that a large-scale influx could be counter-productive...hence the importance of the tourism EIA mentioned above. Ironically, the ban on hunting has created the problem of crop damage by wild pigs and other wildlife, for which the village is contemplating selective lifting of the ban...but residents are worried about whether this may have other negative consequences. An increasing tendency to plant cash crops in the *jhum* (shifting cultivation) and terraced fields, is reportedly leading to loss of agricultural biodiversity. Documentation of the area's biodiversity is rather minimal, a start

having only recently been made by the biologist Firoz Ahmed of Aranyak in association with some of the village youth. Marvelling at the level of traditional knowledge, Firoz reports that of the 20 species of frogs and toads he found in Khonoma, 14 were already reported by villagers!

CONCLUSIONS

Khonoma's conservation initiative is all the more noteworthy if one looks at the enormous decline of wildlife across Nagaland in the last few decades. Hunting has been rampant, according to one resident perhaps fueled by the jump in fire-arms availability since truce was declared between the Nagas and the Indian army in the early 1980s. The tribes here eat virtually everything, and though this may not have earlier damaged wildlife populations due to limited hunting technologies, it had of late assumed severely destructive proportions. Khonoma's effort assumes even greater significance because it is only one of dozens of similar initiatives across Nagaland. Many settlements in Phek and Kohima districts, have displayed notice boards warning would-be hunters with severe penalties, declaring community forest reserves with stringent restrictions on resource use, and so on. Slowly but surely, wild animals are making a come-back, a phenomenon that even a decade back seemed virtually impossible. (See other case studies on Nagaland in this volume for details)

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NAGALAND

CASE STUDY 2: LUZOPHUHU VILLAGE, PHEK¹¹

BACKGROUND

Nagaland state of India, is occupied by about 15 different tribal communities. Each of these communities is culturally distinct from the other and occupy different parts of the state. Nearly 90% of land is under community ownership. About 85% of the state is still under forest cover. Originally hunter-gatherers, these communities have intricate land use system, with land distributed between shifting cultivation (communal ownership of land), settled agriculture (private land ownership), and forest reserves (could be family, clan or community owned) to meet food, fruit, fuel, timber and other requirements. Wild meat is an integral part of tribal culture here. Most families own guns and go hunting regularly. Increasing population and heavy dependence on timber and forest produce for livelihood is also impacting the quality of forests. A combined effect of degrading forests and a high rate of hunting have led to a quick decline in wildlife populations, particularly, wild animals. Towards late 1980s and early 1990s some realisation about the degraded state of forests began to hit people. Drying up of water resources, declining availability of wild vegetables, declining population of wild animals, were among some of the reasons that created debates among many tribal communities.

Phek district is largely occupied by Chakhesang tribe. All the 80 Chakesang villages in the district are members of Chakhesang Public Organisation (CPO)¹². In Phek district, the idea about preservation of wild life was reinforced during the annual meeting in 1999. After much discussion the CPO general session adopted resolutions on:

1. Ban on buying pork (staple food along with rice) from outside the district. This was done with the intention of saving money and local economy.
2. Seasonal ban on hunting all across the district between 1st February to 31st June (mating season) in the entire Chakhesang area.
3. Ban on fishing with explosives.
4. Ban on indiscriminate burning for forests.

Till 2005, 23 villages had adopted the resolution for declaring inviolate wildlife reserves. In addition, all 80 villages in the district have accepted the seasonal restriction on hunting and prevention of indiscriminate forest fires. The Village Council (VC)¹³ penalises the offenders in case of violations. Of the fines imposed 50% goes to the informant and 50% to the village body. If the VC fails to check these incidents within their jurisdiction then the CPO penalises the VC for violations. The penalty could include reduction in the village development funds, as the CPO has a say in how the district level funds should be distributed to respective villages.

TOWARDS COMMUNITY CONSERVATION

The resolutions of the CPO about seasonal hunting and declaration of wildlife reserves inspired about 23 villages to declare inviolate zones for wildlife. Luzophuhu village, along with Chizami, Runguzu, and Kikuma were among some such villages.

Luzophuhu village is located about 16km from Phek District Headquarters. The Village Council of Luzophuhu decided to declare an area of about 500 ha as a Village Forest Reserve. The main objective of protecting this forest area, located at the highest point of the village, was to preserve

¹¹ This case study has been compiled based on a two day trip to the village by Neema Pathak and Ashish Kothari of Kalpavriksh, Pune; M.F. Ahmed of Aranyak; and Joy Das Gupta and Bibhab Talukdar of ATREE, Guwahati in February 2005. Contact: Kalpavriksh, Apt. No.5, Shri Dutta Krupa, 908 Deccan Gymkhana, Pune 411004, Maharashtra. E-mail: natrails@vsnl.com

¹² Composed of the village council members, VDB members and Youth Association members of all Chakhesang villages in Phek district.

¹³ The first unit of decision making in Nagaland. A VC is an attempt at amalgamating the traditional decision-making systems in Nagaland and Panchayati Raj Institutions of the Government of India.

water source of the village. Villagers felt that clear felling for *jhum* was gradually reducing the availability of water in the source and hence decided to forbid *jhum* in this area. To avoid serious economic impact of forgoing *jhum* they decided to use this area for raising commercial plantations instead. Raising plantations, they believe, would ensure water security as well as provide economic benefits to the people. In the forest reserve all other kinds of uses are allowed. Hunting is also allowed except between January and June.

Inspired by the CPO resolution, the youth group in Luzophuhu discussed the possibility of declaring an area as an inviolate Wildlife Reserve. The VC decided to declare 250ha as a Wildlife Reserve in 1990. Wildlife Reserve is a much stricter category than the Forest Reserve, where no hunting or any other forest use is allowed. According to the youth club members this patch of forests was selected because of its closeness to the village and hence easier to protect and also because they believe that this patch is a breeding ground for the deer.

The land under forest reserve as well as wildlife reserve was originally used for *jhum* cultivation. The forest reserve had an incentive of growing commercial plantations, however, the area under wildlife reserve came with no incentive. According to the youth club members some villagers strongly opposed it but had to eventually scum to the pressure from the VC and the youth organisations. Impacts of this declaration on the people is not known. In Luzophuhu village, the protected area is directly under the supervision of the VC, while the responsibility of imposing rules and extracting fines lies with the youth organisation. 50% of the fine levied goes to the informant while the other 50% goes to the Student's Union. Depending upon the violations the fines range between Rs100 – 200. Till the year 2005, three to four cases of violations had been recorded.

In addition, the village has also banned fishing and use of explosives in a 2-km stretch of Lanye River near the village. The primary reason for this protection is the fact that the villagers no more have a supply of healthy and big fish when the VIPs visit the village. The fish in this stretch are only caught when VIPs visit or for very special occasion and never for commercial purposes.

IMPACTS OF THE INITIATIVE

Exactly how the initiative has impacted the wildlife or ecology of the area is not clear at this stage in the absence of any studies. However, the area still supports a population of threatened species, such as, Mrs. Hume's Barredback Pheasant (*Syrnaticus humiae*), and Kaleej Pheasant (*Lophura leucomelana*), among others. Some other birds recorded from the area include, Ashy Bulbul, Orange bellied Chloropsis, Grey hooded warbler, Whiskered yuhina, Greenbacked tit, Chestnut Thrush, Silver-eared mesia, and Bluethroated barbet.

CONCLUSION

The village council and the student's union members expressed a desire to be supported for their efforts. This support could come as financial help to pay some wardens for forest protection or capacity building for the village youth to take on the ecological monitoring of the protected areas. So far there has been little links between the protection activities and possibilities of generating livelihoods. There is a proposal submitted by the CPO to the Chief Minister to declare Phek district as a tourism zone. Villagers hope that some amount of tourism will boost their economy.

CONTACTS

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3.2 MAHARASHTRA

CASE STUDY 1: MENDHA-LEKHA VILLAGE, GADCHIROLI¹⁴

BACKGROUND

Gadchiroli District of Maharashtra State in India, along with areas in the surrounding districts and states, is a region famous for both its bio-diverse, dry deciduous forests as well as for its tribal communities. The District is more than 700,000 hectares in area. Approximately 80% is under forest cover, a figure that is the highest in the state and is among the highest in India.

Mendha-Lekha is located 30km from the District Head Quarters and is spread over two small and closely situated *tolas* (hamlets). The total area of the village is estimated at 1900 hectares. Nearly 80% of this area is forested. There are approximately 400 people, largely without any class and caste hierarchies. The entire population is composed of the Gond tribe, which has ruled and inhabited the surrounding forests since time immemorial. The livelihood of the villagers is heavily dependent on subsistence farming and on the forests, which provides a range of food, fuel, timber and fodder. The average landholding is five acres. The major source of income is from the collection of Non Timber Forest Produce (NTFP), and daily wages from work as labour with government and private agencies.

As per Rodgers and Panwar the area falls in the bio-geographic zone of Central Plateau. Forest type is the subgroup Southern tropical Dry deciduous forests (5A/C3) of Dry deciduous forests, with patches dominated with teak and bamboo. The local sub-types of forests found here include, Teak forests with dense Bamboo, Teak forests with scanty or no Bamboo, Mixed forests with dense Bamboo, Mixed forests with scanty or no Bamboo. Main species of bamboo is *Veddur (Dendrocalamus strictus)* while *Katranji (Bambusa arundinacea)* is also found along the major streams and riverbanks.

A total of 125 species of plants, 25 of mammals, 82 of birds, and 20 of reptiles have been recorded from the forests so far. Villagers report presence of *gaur* (Indian bison), *chital* (spotted deer) and wild dogs in the past, none of which have been sighted for last three decades. Animals like monkeys and langurs are used in traditional medicines. Wolf, leopard, sloth bear, tiger and peafowl are the endangered wild animal species in the forests of Gadchiroli District on the whole. Another highly endangered species found in these forests is the Central Indian giant squirrel. The range of the sub species found here is restricted only to certain parts of Central India. Leopards are common while tiger sightings are few and far between.

TOWARDS COMMUNITY CONSERVATION

In the late 1970s the Indian Government proposed an ambitious hydroelectric project in the adjoining Madhya Pradesh State. For the economically poor tribals of the region, the project not only meant displacement from their traditional homes and possible social disruption but

¹⁴ This has been adapted from: Neema Pathak and Vivek Gour-Broome (2001). *Tribal Self-Rule and Natural Resource Management: Community Based Conservation at Mendha-Lekha, Maharashtra, India*. Kalpavriksh, Pune and International Institute of Environment and Development, London. The information taken from this book has been updated based on a visit to the village in October 2004 by Neema Pathak, Ashish Kothari and Bansuri Taneja of Kalpavriksh.

also destruction of large stretches of forests on which their livelihood and culture heavily depended. As well, it was claimed that the majority of the benefits to be derived from the power generated would go to industry and other elite sectors of society. This awareness led to a strong tribal opposition to the project, and many Non-Governmental Organizations (NGOs) helped the local people mobilize and organize public rallies and agitation against the dams. In 1985, after prolonged and determined tribal resistance, the government shelved the project. The anti-dam struggle emphasized and strengthened the determination of tribal people to take decisions at a local level for activities directly affecting their lives. It gave root to a strong movement towards self-rule in the region, based on the revival of tribal cultural identity, and greater control over land and resources. Mendha was one of the villages where this process gained momentum. Individuals who had been engaged in the anti-dam movement, upon their return to Mendha continued to advocate for greater village self-rule and collective responsibility. Discussions ensued over a period of four to five years centered on key village issues such as creating equal status for women, reducing alcoholism, creating greater personal responsibility, and establishing means to protect and regulate the use of the surrounding forests. The discussions led to many positive social, cultural and environmental changes, including the development of a forest protection and management system in the village. Prior to 1950 the forests in the region were controlled and managed by local tribals as common property, and their overall charge rested with the tribal landlords. A strong system of community management governing the use of the common lands existed. However, it is not clear what the health of these forests was, or the status of forest management in the area surrounding the village of Mendha. In 1950, following independence, the Indian government abolished the tribal system and all lands were vested with the government and subject to the Indian Forest Act (IFA) of 1927. Forest areas occupied by settlements continued to be privately owned, whereas all other wasteland, common property land, etc. came under state ownership. The national Forest Department assumed management responsibilities for the forested land. The customary rights over common property that people had enjoyed for generations were not accepted, and the region was declared Protected Forests (PF).¹⁵ Under pressure from the local population, an inquiry into local people's rights was undertaken in 1953 and completed two years later. The report recommended that the customary rights be legalized in the form of an Act. There was also a recommendation to form customary zones for villages to meet their daily requirements, which was subsequently accepted and implemented. However, because of the inaccessibility of the forests in the District, officials did not visit many villages. Many questions and criticism were raised about how the customary zones were assessed and demarcated. Demarcation was not made physically on the ground, and villagers were not informed about the zones. Management and use of the government forests was then established with detailed instructions and rules. These instructions envisaged that the forests would be managed on a scientific basis by the Forest Department and communicated to village governing bodies that would then regulate the supply of customary requirements – using a quota system – as per the established rules. However, the Forest Department was critical of many aspects of this programme which granted large areas of forests for customary needs. In the 1960s, the Forestry Department, looking to regain control of more forestland, took control of the quota system. As quotas were not sufficient to meet people's basic needs, and paying more money for further concessions was not feasible, paying bribes to the local forest officers became a common practice. Mendha villagers describe the period between the state take-over in the 1950s and

¹⁵ The IFA identifies three categories of forests under state control: Protected Forests (PF), Reserved Forests (RF) and Village Forests (VF). The RFs are the strictest category where very few rights of the people are accepted and most rights are extinguished. PFs allow more rights in them. VFs are forests which are owned by the state but are handed over to the villagers for management and use, a category seldom used.

the beginning of the movement towards self-rule in 1989 as filled with unpleasantness and humiliation.

The state also exerted greater control over the forests in 1959, by declaring its intention to constitute some of the PFs as Reserved Forests (RF). In accordance with the IFA, a study was carried out on the rights of the local people in the forest (the IFA states that the rights of the local people must either be legally accepted or acquired before any forests are converted to RF). In 1992, based on the study's recommendations, 84% of the total PF and unmanaged forests in the Gadchiroli Forest Division were declared RF (1697.27 sq. km out of a total of 2019.65 sq. km). The remaining 16% was assigned as PF to meet people's customary requirements. This decision affected a substantial part of the forests traditionally falling within the boundaries of Mendha village. It also meant that approximately 1900 hectares of the customary zone of the village was to be Reserve Forests. This left only about 350 hectares as Protected Forests for the villages to meet their customary needs. The criteria used by the Forest Department for determining and assigning areas that would fulfill people's customary needs were not clear. Despite local resistance, the process was carried out.

Between 1950 and the late 1980s a number of state sponsored commercial extraction activities were initiated in the forests surrounding Mendha village. These activities, such as the indiscriminate felling by charcoal contractors, Forest Department timber and bamboo extraction, and activities of a paper mill (private bamboo extraction), along with the increased human and cattle population within the village and in the surrounding areas had a negative impact on the quality of the forest.

Regarding forest-based wild animals little is known about regulations or legal provisions protecting them from hunting or trapping prior to 1972. After the enactment of the Wild Life (Protection) Act 1972, hunting of wild animals was officially banned across India.

Village institutions managing forest-related issues

In Mendha, the movement towards self-rule and protection of the surrounding forests in the late 1980s led to the creation of three key village institutions. Following is a description of each and the role they play in community conservation.

The Gram Sabha (GS): The village council for Mendha is called the Gram Sabha (GS). In the past, village elders took most decisions. However, through the village discussions that took place during the late 1980s' movement towards self-rule, a decision was reached to constitute a village-level decision-making body. The GS was created, and is responsible for all village level decisions including those related to natural resource use and management. It was agreed the GS would use a consensus process for decision-making, and that these decisions would prevail over any government or other decisions. The GS initiated the move towards self-rule by acquiring factual, legal and political information about the village including various revenue and customary use documents. The move initially faced strong opposition from officials but villagers eventually succeeded in acquiring every important document.

The GS is composed of at least two adult members (one male and one female) from each Mendha household. All adult members of the village can attend the meetings. The GS has its own office and an office administrator maintains the records of all meetings organized in the village. It meets once a month and issues are discussed and revisited, if necessary until a consensus is reached.¹⁶ On average, about 75% of the members attend GS meetings with equal participation from men and women. In 1999, a decision was taken to declare a traditional holiday on days when the GS is convening to make it possible for the maximum number of people to participate. Outsiders (including government, industry, NGO

¹⁶ However, if there is unanimity, a decision will go forward without consensus. For example, despite divided opinion on the value of controlled fires for maintaining forest health, the GS made a unanimous decision not to set forest fires and this is strictly followed.

representatives, etc) are occasionally invited to discuss their plans and programmes with the villagers. The GS also functions as a dispute resolution body for smaller, village-level disputes. For larger conflicts, a meeting of elders from 32 surrounding tribal villages is called. The GS also decides what activities will be assigned to other village institutions based on interests, responsibilities and capacities.

The GS is responsible for the following forest-related decisions and activities:

- Carrying out watershed development in the forest;
- Holding discussions on forest use activities and other issues such as forest fires and soil erosion from the forests;
- Formulating forest protection rules and ensuring adherence to these rules;
- Selecting representatives for the official Van Suraksha Samiti (see the Joint Forest Management programme below);
- Delegating responsibilities for forest protection;
- Handling NTFP extraction and trade-related issues.

In carrying out these decisions and activities, the GS works with Forest Department staff. Most often, they will be the local forester and two guards who are directly responsible for the forests falling within Mendha village boundaries. As well, the GS can interact with the 4 forestry officers who oversee these three functionaries.

The GS has also registered itself as an NGO, the Village Management and Development Organization. In this role, the GS carries out a number of village development and welfare activities. It focuses on equitably distributing the costs and benefits of development projects and programmes amongst the villagers. The GS has also been a strong force in coordinating the efforts of many government departments and NGOs wanting to offer various forestry protection or development programmes.

So far, the GS has deliberately avoided receiving major external funds, unless originating from government programmes targeted for the region. Each member of the GS donates 10% of her or his wages to the GS corpus fund from their employment generated through the GS. Any money leftover from GS projects or programmes also goes into the fund. In addition, any donations or payments made by visitors go into the fund. The GS now has its own account in a local bank, and uses a unique accounting system that spreads the responsibility and accountability for withdrawing and spending money among many villagers.

The Mahila Mandal (MM): All women in the village (of all ages and classes) are members. The President of the MM is chosen at every meeting for that meeting. Often the GS meetings also work as MM meetings. Forest-related activities carried out by the MM are:

- Regular monitoring of the forests;
- Punishing those who breach forest protection rules.

The Abhyas Gats (AG): This is a study circle which operates as an informal gathering of people. Meetings are convened as and when desired for discussions on any issue. Outsiders are sometimes specially invited if the village wants some specific information or desires debate on a certain issue. These dialogues have helped the villagers develop their conversation skills, increase their awareness of the outside world, learn about their rights and responsibilities, and obtain important inputs and information which help them take informed decisions at GS meetings. In turn outsiders have gained insight into village life and the process of village self-rule. For example, discussions initiated by outsiders at the AG significantly helped the village overcome the problem of encroachments on forestland.

Discussions in the AG have also been ongoing about the negative impacts of fire and hunting on the ecosystem. Frequently, the AG members establish smaller, specialized study circles to pursue particular issues and research (e.g., bird and habitat inventories, honey extraction).

The following are a few examples – including some results – of the many participatory research and monitoring activities related to forest management:

- A study on the number and types of bird species and their habitats;
- A study on the impact of NTFP collection on the productivity of the concerned species. Results led to a decision to prohibit the felling of fruit trees in the village;
- A study on the behaviour of bees and structure of their combs during honey extraction. Findings led to the development of a new enterprise specializing in “non-violent” honey extraction. The marketing of non-violent honey has generated substantial economic benefit for the members of the Honey-bee Study circle.

Both village and outsider members of the study circles carry out these activities.

The Gram Sabha often interacts with another key village-level administrative structure, the village panchayat. The panchayat is an executive council of elected representatives from one village or a group of villages. It works with government administration and the judiciary. In most government schemes and programmes the elected panchayat is responsible for receiving funds and implementing projects. The panchayat for Mendha is composed of the elected members from Mendha and two other adjoining villages. In 1999, a decision was taken by these three villages to select, rather than elect their members to the panchayat. By doing so they hoped to eliminate the corruption involved in the election procedure. The selection has to be unanimous and the process takes place in an open meeting where the merits of each candidate are discussed freely.

Establishment of forest protection activities

Efforts towards forest protection started in 1987 through various discussions in the Gram Sabha. Several decisions were taken, including:

- All domestic requirements of the village would be met from the surrounding forests without paying any fee to the government or bribes to the local staff;
- Approval of a set of rules for sustainable extraction;
- No outsider, including governmental, would be allowed to carry out any forest use activities without the permission of the Gram Sabha. If someone was caught doing so, the material would be seized by the village and the offender would have to accept any punishment decided by the village;
- No commercial exploitation of the forests, except for NTFP, would be allowed;
- The villagers would regularly patrol the forest;
- The villagers would regulate the amount of resources they could extract and the times during which they could extract resources from the forests.

To implement these and other minor decisions regulating extraction, an unofficial Van Suraksha Samiti (forest protection committee, see below) was formulated, including at least two members from each household in the village. Originally, collecting fines from those who did not adhere to the village forest protection rules was established but failed to work because people did not want the responsibility of collecting fines, and most often, fines were not paid. As a result, the system for applying sanctions to Mendha village members became one of peer pressure, creating family shame and social ostracism. In the commercial sector, the Gram Sabha – representing a strong and united village opposition to forest practices and revenue sharing – succeeded in stopping the timber industry’s bamboo and teak extraction from the late 1980s/early ‘90s.

Mendha villagers speak proudly of the fact that the forests now “belong” to them, and that they have implemented effective forest protection activities. Indeed, despite the state’s 1992 declaration of 1900 hectares of the customary zone of the village as Reserve Forests, the villagers continue to view the entire area as their forest and include them in their activities governing regulated use and protection.

Establishment of the Joint Forest Management programme

The efforts of the villagers at forest protection were not initially recognized in official circles. However, in 1992, an opportunity arrived to remedy this when the state adopted a Joint Forest Management (JFM) Resolution. In general, the JFM scheme envisages the handing over of degraded lands and forests to villagers for raising valuable timber species. Plantations are created and valuable forests regenerated, with the Forest Department and villagers jointly responsible for forest management. After 5 – 10 years, valuable timber is harvested and local villagers involved in forest protection are entitled up to 50% of the revenue generated. The scheme, however, was not applicable for districts like Gadchiroli where most of the forests were still close canopy natural forests. Since Mendha's forests were healthy standing forests, the government did not plan on creating plantations for revenue generation, and there were no guidelines for benefit sharing for standing forests. The villagers, however, persistently demanded that they be included in the JFM scheme, pointing out that they should not be punished for protecting their forests thus far. With the help of some supportive forest officials, the villagers succeeded, and they entered into a JFM agreement in 1992. Subsequently, an official Van Suraksha Samiti (VSS)¹⁷ was formed and Mendha became the first village with standing forests in the state – and one of the few in India – to be brought under the JFM scheme.

After the introduction of the JFM programme, the villagers discussed the scheme in greater detail with outside experts. Subsequently, the villagers managed to bring in many provisions that were not usually within the mandate of the JFM resolution. These included meeting the actual needs of the villagers and not interfering with the rules set out by the villagers for controlling the extraction of resources from the forest. Thus, the rules (some written, but most unwritten) followed by the villagers are a mixture of what the official resolution states and what the villagers have decided. The written rules include:

- All decisions regarding the forests will be taken in a joint meeting between the Forest Department and the villagers;
- Mendha villagers will have the first right to employment in any official forest-related activity in the village;
- To carry out any work in the forests, permission will have to be sought from the Gram Sabha.

The unwritten rules include:

- Labourers from the outside will have to take a letter of permission from the VSS;
- Villagers will extract forest produce for their real requirement as per the existing village rules;
- Villagers will have the power to punish offenders both from within the village and outside;
- Details of the joint meetings will be recorded both by the Forest Department and the villagers.

The functions of the VSS were also adopted for Mendha's JFM programme. The VSS in Mendha meets far more often than it is officially obligated, and the meetings are open to all members of the GS, not just the executive committee. The creation of the official VSS has not affected the functioning of the unofficial Mendha VSS, and official decisions found unacceptable to the villagers are not carried out. The official VSS has a set of forest protection rules, and supports the authority and role of the GS regarding its forest protection activities. The official VSS in Mendha carries out the following forest-related activities:

- daily forest vigilance, carried out equally by men and women members;

¹⁷ The Van Suraksha Samiti (VSS) is the official forest protection committee established under the JFM resolution. The VSS needs to include at least one member of each family in the village and is expected to elect an executive committee composed of six village representatives, two NGO representatives, the head of the village executive, and the local government-appointed village liaison person.

- stopping outsiders from commercial extraction, e.g., the paper industry;
- initiation and implementation of JFM in the village, including decisions about the time of bamboo extraction and plantation, methods to be employed and payments to be made;
- appointing an official firewatcher in the village.

For any forestry operation to be carried out under the JFM, a joint meeting between the Forest Department and the villagers is organized and all matters, including those of daily wages are openly discussed.

As evidenced above, the implementation of the JFM scheme is largely based on the Mendha village rules and regulations, not the provisions of the JFM Resolution. The JFM in Mendha village is viewed as among the very few successful cases of JFM in Gadchiroli District.

Present forest-based employment and livelihood opportunities

After the village initiative towards forest protection in the late 1980s started, all the outside commercial activities in the forest were stopped. Beginning in 1994, the Forest Department designed a Forest Working micro-plan for Mendha village. Despite limited involvement of the villagers, the Gram Sabha did discuss and accept joint bamboo extraction by the Forest Department and the villagers. The micro-plan has been in operation since 1997-98, ending almost a decade-long ban on commercial extraction from forests (except for NTFP). The following are the present-day forest-based employment and livelihood opportunities for Mendha villagers:

- Food: There is substantial dependence on the forest for food, such as honey, roots, fruits, mushrooms, bamboo shoots, fresh leaves, and hunting for wild meat.
- Under the JFM agreement with the Forest Department, the villagers have the first right to any daily wage employment for forestry works in the surrounding forests. These activities include bamboo extraction and plantation of forest species.
- Non-violent honey extraction and specialized marketing
- Fuelwood: Permission from the VSS is required for each cartload. As per the village rules collection of only dry wood is allowed, with some exceptions for collecting green branches. Currently, biogas plants are being constructed in the village to reduce the dependence on firewood.
- Timber and bamboo: for household needs, collected from the surrounding forests as usufruct rights. Bamboo is a vital material in the villagers' lives.
- Fodder for livestock: Each family owns about 5-6 heads of livestock on an average. Rearing of livestock is for both consumption and sale. Cattle depend entirely on the forests for fodder. Cattle dung, as manure for the fields, is an important added incentive to maintain livestock.
- NTFP: Collection for domestic consumption and for sale. Food and commodities are sourced from various species' flowers, fruits and leaves.

IMPACTS OF COMMUNITY EFFORT

Ecological Impacts

Limited ecological studies have taken place to try to measure the impact of Mendha's conservation initiative. A major finding is that, since the introduction of forest protection activities, the unregulated use of forest resources by commercial interests, the adjoining villagers and Mendha villagers has been controlled to a great extent. Mendha villagers claim that the quality of the forests in general has improved during this period, but they qualify this by saying that availability of certain resources, especially closer to the village, has gone down, including fuelwood and some palatable grass species. They attribute this to the increased human and cattle population within the village and in the adjoining areas. Due to

increased human and cattle populations, encroachment of forest areas for agricultural expansion has increased. Thus, the forests have receded further away from the village and a decrease in forest resources in the vicinity. However, the quality of the forests in Mendha improves as the distance from the village increases. Villages in adjoining areas have the same, or worse amount of degradation in nearby forests, and all have greater degradation than Mendha in forests further away from the villages (possibly due to the continuation of commercial extraction activities).

Specific, positive ecological impacts include:

- Soil and water conservation programmes. In the last seven years the villagers have taken up a number of soil and water conservation programmes, including building an earthen dam to retain water for longer periods. This has been especially critical in summers when water is a scarce commodity;
- The decision to not set fires to the forests and to the extent possible help in fire extinction;
- A vigilant watch is now kept on the forests against illegal activities;
- The forests are protected from commercial activities, such as, extraction of bamboo by the paper mill;
- Imparting to the government the value of bio-diverse forests. Through the JFM scheme, the villagers have been able to impress upon the Forestry Department their preference for a more diverse forest in contrast to government-preferred forests dominated by commercially valuable species.

A re-visit to the forests in 2004 indicated that the quality of forests has gone down since the extraction of bamboo started in 1998. Conversation with the villagers revealed that this has been noted by them also and there have been discussions in the *gram sabha* about what can be done to check further degradation. Villagers are of the opinion that a three year extraction cycle is too short for optimal development of bamboo. This is also so because, in addition to bamboo extracted with the department, villagers also take bamboo boles and bamboo shoots. They were considering bringing this up with the forest officials also.

Along with a team of people under the guidance of Dr. Madhav Gadgil from Indian Institute of Sciences, the village Youth have also compiled a People's Biodiversity Register for the village. The information has been uploaded on the village computer for the use of the villagers, if need be.

Social impacts

The following are some important social impacts of the village initiative towards self-rule and forest protection:

- increased empowerment by striving and achieving the capacity and confidence to assert their rights and reaching a stage where the village is respected even in official circles. Today all government and non-government people come to the village (if they need to), instead of calling the villagers to their offices, sit with them and converse with them on equal grounds and often in their language;
- inclusion in decision-making processes;
- established a reliable reputation as effective partners in development and forest protection. Through a non-violent strategy Mendha has established strong and good relationships with many government officials, who in turn have helped them at many crucial points;
- established informal yet strong institutional bodies: the village has initiated a democratic and transparent process of informed decision-making and implementation, which creates clarity in understanding and collaboration in community effort;

- Stronger equity: They have created almost equal participation of all villagers in the process of decision-making, including women and the poor;
- Inspired others: the village effort has set an example for many surrounding villages, which have lower economic status. Many villages have begun to work towards the same model of fostering self-reliance and a better quality of life;
- Managed financial transaction with confidence: The GS has its own bank account and manages it well;
- Strengthened livelihood security to all: the GS tries to ensure basic economic security to all villagers through access to forest resources or other employment opportunities, including forest-based industry like honey and other NTFP collection;
- Strengthened inter-departmental coordination and co-operation among various government agencies: Villagers have achieved inter-agency coordination and co-operation among all line agencies functional in their area. For example, the Gram Sabha organized joint meetings of representatives of all the government functionaries in the area with the villagers. These meetings facilitated a face-to-face dialogue among these agencies and resulted in a pooling together of otherwise segregated resources for certain developmental activities in the village.
- While earlier there was a strong opposition to Mendha and its efforts at self-rule and forest protection in surrounding areas, a visit in 2004 found the situation quite transformed. Adjoining villages such as Lekha and Tukum are now trying to follow in the footsteps of Mendha. Despite a multi-community society, Lekha village now meets regularly and discusses issues related to village development as well as forest conservation.

OPPORTUNITIES AND CONSTRAINTS

Constraints and steps for future

While Mendha village has made significant progress with their process of self-rule and forest protection, many challenges remain. The following are some of the main ones:

- Ecological monitoring and evaluation at the village level does not take place. There are no studies being done to evaluate the impact of forest use activities such as hunting and bamboo extraction on the long term viability and sustainability of the forest and its resources. The villagers, along with a few researchers, are presently planning to establish a research station in the village. The local villagers will assist the researchers both in fieldwork and data analysis;
- More efforts towards controlled hunting and grazing by cattle are needed, as is better personal use of forest resources;
- Greater legal recognition of village process is needed. Even though Mendha villagers have *de facto* control on the ecological and developmental processes in the village, aside from those included in the JFM programme, these processes are not yet recognized by the law. There are possibilities of giving legal recognition to the village efforts through many existing and proposed laws and policies, which need to be explored. For example, in the case of long term protection of the forests, the villagers could consider requesting status as a protected area (i.e. national park or sanctuary, under the Indian Wild Life (Protection) Act 1972). However, as yet there are no provisions in the Act where the control of the protected area could remain with the conserving communities and where they would be able to meet their subsistence needs while protecting the area. Under the revised Wildlife Protection Act 2003 two new categories, Community Reserves and Conservation Reserves have been introduced. However, both these would be inappropriate for a situation like Mendha as of now. Mendha would be suitable as a Community Reserve. The proposed Biodiversity Bill of

India also has a provision for the declaration of heritage sites, which could be useful for Mendha once the Bill is enacted. In the Forest Act of 1927, along with the RF and PF categories (both government owned and managed) there is a third lesser-known and highly under-utilized category of Village Forests (VF). In this category, the forests are owned by the state but the management powers rest with the surrounding local community. Mendha is an excellent candidate. The most important legal provision for Mendha is the Panchayat (Extension to Scheduled Areas) Act, 1996. This Act gives more decision-making and implementing powers to village level institutions, especially in tribal areas. It also confers the ownership rights to a specified list of NTFP to the local communities. There are many useful provisions in the Act which can be helpful to initiatives like Mendha's. However, the Act is relatively new and there has been little work toward implementation at the ground level. Therefore, its potential remains unknown, and there are many outstanding issues. For example, it is not yet clear whether the Act provides control over the resources and development plans of government-owned lands (this would include the majority of Mendha's forests) to the local communities, or whether the GS (as in Mendha) is recognized as the basic administration institution at the village level.

- Stronger institutionalization of the initiative is needed. In the absence of statutory recognition, and subsequent institutionalization, the sustainability of Mendha's initiative depends very heavily upon various informal support structures. These are, for example, outside individuals, sympathetic officers, and dedicated village members and leaders. Major changes in any of these people could affect the character and progress of the initiative.
- An extension role should be considered. Considering that a large part of the villagers' time must go into earning livelihood, it is sometimes difficult for them to dedicate the time and energy required for the forest protection activities, especially if there are no immediate threats. Therefore, a proactive outside agency, especially a state agency, could play an important extension role to keep the momentum going.
- Ongoing government resistance to power sharing continues. Despite the success of the JFM, the JFM resolution does not provide guidelines for benefit sharing in standing forests. Mendha villagers demand that 50% of the profits from the sale of any forest produce extracted from their forests under the JFM scheme should be shared with the villagers, since they are sharing equal responsibility with the Forest Department for forest protection. The Forest Department contends that the area involved is too large and the revenue generated too much to share with a single village. Mendha has put forth a number of possibilities to solve this issue, but so far, the Forest Department has resisted sharing revenues. Moreover, the Forest Department originally denied the village had been officially accepted as a JFM village, an assertion quickly refuted based on the village's own copy of the minutes of the meeting establishing it as part of a JFM scheme. Some of the problems stem from a distrustful attitude toward the Mendha initiative on the part of forestry officials. This attitude comes from the bureaucracy's continuation of the colonial attitude of distrust and authoritarianism towards local communities. Education, including visits by officials at all levels to Mendha can help create new beliefs and attitudes that support these positive initiatives and social processes.
- Till the year 2000, efforts to include surrounding villages in village protection and regulated use activities did not succeed. Even though neighbouring villagers were required to seek permission for extraction of biomass for basic requirements from the VSS, they seldom abided by these rules. To protect the forest resources from unauthorized extraction, material was confiscated. Moreover, on-the-ground forest department staff are known to have accepted bribes from members of surrounding villages in exchange for illegal extraction of resources. The situation has changed in recent times when surrounding villages on the persuasion of the Forest Department, have decided to get into a Joint Forest Management arrangement;

- Village leaders and government officials need to make more efforts to engage villagers in the development a long-term forest management plan. Present forest staff, though helpful to Mendha's initiatives, or not proactive themselves. Suggestions have been made to the FD to include villagers more in forest planning processes;
- Role of leadership and sustainability of effort. Transparent and democratic functioning of all decision-making processes has achieved greater villager participation and investment, and thus, a more sustainable initiative. However, there is a lack of participation of youth in the process which could create a vacuum in second line of leadership. A greater focus on village life and including local issues as an important part of the formal education syllabus may improve the situation.

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MAHARASHTRA

CASE STUDY 2: SAIGATA, CHANDRAPUR¹⁸

BACKGROUND

Saigata is a small village situated in the Brahmapuri Block of Chandrapur District in the western Indian state of Maharashtra. For over twenty years this village has protected 280 hectares of its surrounding forests. The population of 426 in the village has a multi-caste, multi-religion, non-tribal and tribal composition. Under the leadership of a village resident, Suryabhan Khobragade, the villagers realised in the late 1970s that their survival was linked to the survival of the surrounding forests, which had reached a degraded state. From then begun their work of protection and today the forest has regenerated and harbors dense vegetation. Not only do the villagers find it easier to meet their biomass needs, but the increasing water table has increased the agricultural productivity. Wildlife too has returned to inhabit the regenerating forests. The village has now become a part of the official Joint Forest Management (JFM) Programme.

The total area of the forests under protection and regeneration is 280 hectares and has a large water reservoir adjoining it. The adjoining forest to the south of Saigata is protected by the villagers of Lakhapur, on all other sides virtually no forests remain. Saigata forests are mainly dry deciduous forests with tree species like *Lagerstroemia parviflora* (*lendia*), *Terminalia alata* (*saja*, *ain*), *Tectona grandis* (teak), *Pterocarpus marsupium* (*bija*), *Madhuca longifolia* (*mahua*), *Buchanania lanzan* (*charoli*). A 1999 observation¹⁹ showed that almost all the above mentioned were coppice shoots that had grown after the stumps of trees (that had been felled repeatedly in the past) were given adequate protection. The latter two species are mainly the original species which had been protected on account of the economic value of their flowers and fruits. Amongst these coppicing trees there were numerous other seedlings of various different species. There are also thickets of the usual secondary growth species like *Gymnosporia* and *Flacourtia* and different kinds of climbers. Villagers have carried out bamboo plantations which often do not succeed as the seedlings are uprooted by the wildboars which feed on the rhizomes of the bamboo. According to the villagers, the wild animals found in the area include Leopard (*Panthera pardus*), Spotted deer (*Axis axis*), Barking deer (*Muntiacus muntjak*), Blacknaped Hare (*Lepus nigricollis*), Wild boar (*Sus scrofa*), Jackal (*Canis aureus*), Wolf (*Canis lupus*), various species of birds and snake. According to a local professor, Dr. Mahajan 70 sp. of birds and 250 sp. of plants have been recorded from the protected forests so far (a more detailed list of flora and fauna is attached). Villagers also claim that in 2004, a Gaur (*Bos gaurus*) was sighted in the fields close to the forest.

Human population of Saigata village is 426. The eight communities residing here include Dalit Buddhists, Gonds, Dhivars, Govaris, Manas, Malis, Lohars and Kunbis. According to official classification these belong to Scheduled Castes, Scheduled Tribes, Nomadic Tribes

¹⁸ Neeraj Vaghlikar. 2000. Kalpavriksh, apt. no5, Shri Dutta Krupa, 908 Deccan Gymkhana, Pune 411004, Maharashtra, India. Information was crosschecked and updated based on a trip to the village and surrounding forests in October 2004 by Neema Pathak and Ashish Kothari, Kalpavriksh.

¹⁹ Vivek Gour Broome, field biologist, Kalpavriksh, apt. no5, Shri Dutta Krupa, 908 Deccan Gymkhana, Pune 411004, Maharashtra, India.

and Other Backward Castes. In the year 2000 there were 88 households in the village. The main source of livelihood for the community is agriculture and employment as agricultural labourers. Some (mainly the younger generation) are employed outside the village.

It is important to note that the forest produce (wood, grass etc.) is presently used for personal consumption only. Since 1989, there has been no commercial exploitation of the forest produce by the villagers. However, they allow the neighbouring villages of Uchli and Kaleta to collect mahua, *charoli* and *palas* leaves for their business of making leaf-plates, from the Saigata forest, as they have done traditionally.

Forests protected by Saigata villagers are legally classified as Protected Forest (PF), under the Indian Forest Act, 1927. The rights over forest produce in this forest are as per the *Nistar Patrak*²⁰, 1956.

TOWARDS COMMUNITY CONSERVATION

After independence, the authority to overlook land matters and *nistar* (forest resource) rights of people, shifted from the *jagirdar* (as this region was under the *jagirdari* system)²¹ to the Revenue Department. The control over granting access to forest resources - firewood, minor forest produce etc. now lies with the *Talathi* (the land records officer) through the *Nistar Patrak*. The overall management of the forest lies with the Forest Department.

Aided by a corrupt administration, timber started being illegally extracted by outsiders from this forest. The villagers watched helplessly as the forest was gradually being denuded. Soon residents from a neighbouring village, Mayar, started selling firewood from the forest. A time came when some of the villagers in Saigata themselves started selling firewood. Around the early 1970s the forests were all but wiped out. Due to the extreme degradation of the forest, livelihood options based on collection of non-timber forest produce (NTFPs) such as mahua flowers, tendu leaves, gum, etc. were no longer possible, and the availability of forest resources for personal consumption - fuelwood, fodder etc. - were also affected.

In 1973 a “Krushak Charcha Mandal”²² was established in the village under the leadership of a Dalit²³, Suryabhan Khobragade. The aim of this group was to initiate reforms to improve the agricultural productivity in the village. This Mandal also had a kabaddi team and a dramatics group, and served as a useful platform to bond people together. The synergy which emerged from these activities also led to the formation of the “Nabhovani Shetkari Mandal” (a farmers’ collective) and a library.

With the evolution of the Krushak Charcha Mandal came the realisation that it was critical to conserve the forests for future survival needs of the village, and a special Gram Sabha²⁴ meeting was called on March 31, 1979. Khobragade stressed on the relationship between the forest, land and water, and called on the villagers to protect the forests. The message was

²⁰ An official government document which lists out types and quantities of forest resources people can extract as their customary right for bonafide personal use.

²¹ In the *jagirdari* system the state administration assigned a certain area of the state to an individual, the *jagirdar*, as a favour. The *jagirdar* collected the revenue from this area, with a portion going to the state.

²² Agricultural discussion group

²³ A generic term for communities which have been traditionally “lower” castes in the Hindu Caste system.

²⁴ Assembly of all adult members of the village

well-received and a unanimous resolution was passed by the Gram Sabha to protect their forests.

The villagers started patrolling the forests to stop the removal and sale of timber and firewood. It was initially decided that everyday two villagers would patrol the forests and stop the wood-sellers. This was a tough task, as many people from Saigata itself were engaged in these activities for their livelihood and were not ready to give this up. But the village community decided that they would first tackle the people from their own village before they stopped the wood-sellers from other villages. Though they eventually managed to wean the Saigata villagers from selling firewood, information is not available of whether concrete alternative livelihood options were offered to them then. The surrounding villages were more difficult to tackle, but by now the villagers had grown in strength and managed to deal effectively with the timber thieves even though they received death threats. The patrolling often involved confiscating axes and ropes from these people.

The conservation initiative had a minor hiccup in the period around 1982-1983 when there was timber felling by outsiders with the help of a certain section of the village itself. This strife continued for two years. But the villagers recovered from this and renewed their resolve to conserve the forests after another special Gram Sabha meeting called by Khobragade. They formulated certain rules in their village, which included - *charaibandhi* (ban on grazing), *kurhadbandhi* (ban on use of axes), *nasbandhi* (population control) and a ban on sale of any form of wood. Access to basic forest resources was available after consulting the Gram Sabha.

Though by mid eighties the village had strengthened itself considerably, the struggle was far from over. In 1982, they had to take on the Forest Department itself. The local department officials confiscated the grass bundles which the villagers had cut for use in their homes, even though the grass had regenerated only as a result of the protection efforts of the community. But the villagers met the Divisional Forest Officer of Chandrapur. The DFO asked villagers but what right were they claiming to protect the forest. Villagers responded in writing saying that it was the responsibility of all villagers to protect the government forests in their vicinity. Eventually, the grass was freed and the department stopped questioning the village authority to protect the forests. They villagers got their forest boundaries demarcated clearly by the department on the ground. Around the same time a major battle had to be fought during the construction of a road coming to the village (the Khed - Saigata road). The 650 labourers engaged for this work were exerting tremendous pressure on the forest. The villagers guarded the forest round the clock during this period and faced many confrontations, several of them violent.

In the late 1980's, the village decided to keep two paid chowkidars to guard the forest. These were chosen from the village and contributions of Rs. 10, 20 or 30 (depending on the economic status) were taken from the villagers. The villagers also imposed a ban on hunting in the area and vigils became stricter as the people fought fires, confiscated axes and bullock carts of thieves, faced armed robbers and on occasions, even hostile relatives.

It is important to remember that though the initial catalytic movement was provided by the Krushak Charcha Mandal and later the Gram Sabha was used to give a call for forest protection, neither of these really developed as strong institutional structures. Though the village fiercely guarded their forest, the village depended largely on the guidance of Khobragade rather than any village institutions.

In 1993, the villagers were approached by the Range Forest Officer, Nagbhid, to join the official Joint Forest Management (JFM) scheme of the Government. The villagers agreed to be a part of this and a Van Samrakshan Samiti (VSS) - Forest Protection Committee - was elected for this purpose. Soon plantations, pit digging etc. were taken up, providing employment opportunities to some of the villagers. This was for the plantation work which was undertaken over 125ha. As this partnership with the government completes eight years in 2000, Khobragade and a few others with whom the author interacted felt JFM has strengthened their initiative of twenty years by giving it a legal backing. Soon the villagers will be able to reap the benefits of their initiative, as some of the forest produce will be harvested, giving them their 50% share as per the benefit-sharing mechanism. In 1994 three wings of the forest department - working plan, social forestry and territorial - sat with the VSS members in Chandrapur to draft the micro-plan, but the villagers expressed a lack of their proactive involvement in the drafting of the working plan. The micro-plan should ideally have been drafted in the village with maximum participation of the villagers and not in a far away place like Chandrapur where only few village members could have made a small contribution.

Initially, some conflicts were also created with the neighbouring villages as Saigata villagers didn't allow extraction of fuelwood. Eventually, people overcame the sacristy of firewood thus caused by using agricultural residue and planting trees in their agricultural fields.

In 1993 grazing was stopped in the entire protected forest. Between 94-95 only rotational grazing was allowed to encourage regeneration. Subsequently the entire forest has been opened for grazing, except where new plantations have been made. In the initial years the villagers had reduced the number of goats per family. The number of goats have now increased again because of a government scheme under which loans are given for buying goats.

IMPACTS OF COMMUNITY EFFORT

As per the villagers the regeneration of the forest has facilitated the availability of basic survival resources such as firewood, fodder etc.

Water table has gone up and while earlier there was no water after January now they have enough drinking water as well as water for irrigation. Villagers do not use water provided by the government and meet their entire drinking water requirement from the two bore wells in the village. Besides, the rise in the water table due to forest conservation has helped improve agricultural productivity. In recent times some of the works undertaken under the JFM scheme have also provided employment to the villagers.

NTFP based livelihoods had once disappeared from the village, but from 2002 onwards Mahua *Madhuca indica* flowers are being sold by the villagers.

Box1: Community effort and local empowerment and unity

This effort of the community at conservation has in turn helped them achieve empowerment. "It has united us, increased the esteem of the village community, and helped us overcome barriers of class, caste, religion", says Khobragade. Achieving social equity as part of the effort towards forest conservation and equitably sharing the benefits of the conserved forests have definitely been among the major achievements of the community.

At a time in the 1970s when the rest of Brahmapuri Taluka faced riots between Dalits and other caste-communities, this village of eight different communities unitedly fought to conserve their forests under the leadership of a Dalit.

There have been no forest fires since 1980. Fires are extinguish immediately by the villagers.

With the regenerating forests, wildlife too has returned. The villagers report the presence of wolves, wild boar, jackals, hares, cheetal, barking deer and also leopard. In 2004, some farmers also sighted Gaur in their fields coming from the protected forests.

The bird life and reptilian life too has benefited from this protection. While one tries to understand the dynamics of the conservation initiative, the "product" of the initiative is very clear to see as on the once degraded land stands thick vegetation today.

OPPORTUNITIES AND CONSTRAINTS

While the forests around Saigata stand testimony to the efforts of the villagers there are several challenges before the villagers.

1) The villagers feel they need to strengthen the Gram Sabha as an institution and also develop a second line of leadership, as a large part of the effort has depended on the initiative and guidance of Khobragade and remains till today an individual driven effort.

2) While the villagers feel that the JFM programme has given legal backing to their conservation initiative, it appears that it has not been internalised either by the villagers or the FD. This could be due to several reasons, some of which are mentioned below:

a) The VSS is elected every five years and includes 3 women members, 7 men members and one forester. The VSS has to yet establish itself as a strong institution. Interaction with some members of the VSS indicated that the committee met very infrequently. Villagers felt a need for it to meet more often. They also expressed the need for a more proactive participation of the Forester, who is the Member Secretary of the VSS. Forest related decisions are made in the *gram sabha* rather than the VSS.

b) Another important issue is the need for sustained employment opportunities within the village. As the youth look outwards for employment opportunities, how this will affect attitudes of people towards their natural resources in future, is difficult to gauge. While the forest protection initiative is old, one of the main reasons in people's interest in the official JFM programme has been the employment opportunities it provided, although temporarily. The JFM programme now is facing serious monetary constraints to carryout its activities. This programme was initially supported by a World Bank loan. This fund, however, is now over. Self-sustaining livelihood opportunities have not really taken off. e.g. the dairy farm project is yet to start, almost three years after it was initiated. According to Khobragade, the VSS itself is responsible for inertia on this front as they have also not pushed the issue strongly enough.

c) A lack of proactive involvement of the villagers in the micro-planning for management of the forests is another vital issue. This is in many ways linked to the weakness of the VSS. As the commercial exploitation of the forests and subsequent sharing of benefits is slated to begin, the need for active involvement of villagers in the planning process is vital to ensure that their conservation initiative of 20 years is not undermined and there is sustainable exploitation.

4) The increasing wildlife populations have also brought with them increasing rates of crop-damage.

Box2: Increase in wild animal population and crop damage compensation

The population of wildboars has increased considerably. Wildboars, reportedly, cause much damage in the forests as well as to the agriculture. In 2004 wildboars have been declared as pest by the government and license holders are allowed to kill damage causing boars. However, the body of the animal killed in this manner needs to be buried and cannot be consumed. The government has also agreed to pay compensation for crop damage. Such compensation is paid based on a joint assessment done by the *sarpanch* (elected political representative), forester (local forest officer) and *patwari* (local revenue officer).

5) On the one hand the villagers have been trying to control the goat and sheep populations in the village. On the other had under a government scheme the villagers are being granted loans to buy sheep and goats. This has resulted in the increase in the number of goats in the village now where once they had nearly disappeared.

6) A very interesting feature to examine will be to compare the forests of Saigata and the neighbouring forests of Lakhapur, which have also been protected by the village residents. It is important to note that the forests of Lakhapur were never wiped out as were those of Saigata. According to Khobragade, the Lakhapur forests are not protected as well as the Saigata forests, but more detailed social and ecological investigations will have to be undertaken to examine this. Some of the possible factors which might have been responsible for the Lakhapur forests surviving the degradation the Saigata forests experienced, could be the relative isolation from the main road and less pressure from other villages.

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MAHARASHTRA

CASE STUDY 3: SATARA TUKUM VILLAGE, MAHARASHTRA²⁵

BACKGROUND

Satara Tukum is a small tribal hamlet Pombhurna Tahsil about 25kms from Chandrapur District Headquarters. It falls under the Mul Forest Range of Chandrapur Forest Division. Legally the forest under conservation are Reserve Forest. Forest Department initiated the Joint Forest Management (JFM) Programme here in November 1997. The forests of Satara Tukum once housed local species like *Dhaoda*, *Ain*, *Kalam*, *Chinchwa*, *Ttendu*, *Moha* etc. However, unrestricted grazing and illicit felling in past few decades left these forests largely degraded, although they still supported mammals such as tigers (*Panthera tigris*) and panthers (*Panthera pardus*). Under the JFM the forests are now recovering their past glory. These forests represent the last stretch of forests extending all the way to Tadoba-Andhari Tiger Reserve.

TOWARDS COMMUNITY CONSERVATION

Villagers in Satara Tukum have been watching degradation of their surrounding forests and to some extent contributing to it. The general feeling among the villagers was that the forests belonged to the government and they had the responsibility to protect them. Much of the protected forest around the village had already been encroached upon. Satara Tukum was brought under the World Bank sponsored forestry programme in 1997. Mr. Chaphekar (DFO) and Ms. Imtienla Ao (ACF), persuaded the villagers to join the Joint Forest Management (JFM) scheme under this programme. An agreement to this effect was made in the *gram sabha* (village assembly) on 14th Nov. 1997. About 285ha were allotted to the village community for protection. Imtienla Ao prepared the micro-plan for the area which was approved by the samiti. A samiti was formed, which included, 96 members i.e one member each from all the 96 households. These 96 members included, 84 men and 12 women. Since the government resolution prior to 1998 required only one person per household in the JFM committee, the samiti is dominated by men, women representation comes from the women headed house-holds only. The executive committee consists of 12 members, 3 of which are women. The participation of women members in the decision-making process is non-existent. The executive committee is elected every two years.

To protect the forests the FPC undertook the following:

1. Forming groups of 7, which would patrol the forests daily on a rotational basis. The patrolling teams tried to convince hunters and others to stop rather than forcibly stopping them.
2. Prohibition on grazing. Illegally grazing cattle were impounded by the FPC.
3. Controlling illicit felling, a serious problem facing these forests.
4. Appointment of a forest guard to look after the plantation area as well as the protected area.
5. Generation of employment through forestry works such as plantations, soil and

²⁵ This case study has been compiled from 'Joint Forest Management. Satara Tukum'; A report on the progress of JFM of the village on its 3rd anniversary. 2000. The information was further updated after a field visit to the site by Neema Pathak and Ashish Kothari of Kalpavriksh, Suryabhan Khobraghade of Saigata village and Dilip Gode of Vidarbha Nature Conservation Society in October 2004.

moisture conservation, and so on.

6. Headloaders from the neighbouring villages were strictly warned or punished.
7. Soil erosion was effectively checked by building check dams on various nallahs and big gullies.
8. Raising plantations of bamboo, shiwan, khair and teak on 60ha of degraded area.
9. Giving loans to needy villagers to establish small cottage enterprises, such as vermicompost plant, swing machines, dairy development, etc.
10. Various other schemes were taken up to create alternative livelihoods for the villagers such as beekeeping, sewing machine training for young village girls, dairy development activities, development of medicinal plants in the village etc.
11. Health and education were given importance with the introduction of toilets, bio gas plants and better educational facilities, all with FPC funds.
12. The women of FPC formed a *Mahila Bachat Gad* in which they got 57 quintals of rice in subsidy which was distributed to each family in the village. The rice recovered from each family was stored in a Seed Bank for use in the next year.
13. Youth in the village were organised to protect environment and study fauna and flora of the village. A 'Young Environmentalist' movement was organised by a Nagpur based NGO, Vidharbha Nature Conservation Society.

The FPC has an account jointly managed by the FPC and the forest department. This account receives money from the forest department for various developmental activities. The profits from a community fish tank established under the JFM also go to this account. Sometimes various forestry works are carried out through voluntary work (*Shramadan*) by the villagers and the amount meant for their payment is deposited in the FPC account. As of September 2004, the samiti had Rs. 1.26 lakhs in its account. The sarpanch (president) of the samiti and the forest guard (member secretary of the samiti) are the joint signatories. Before making an expense the Samiti has to pass a resolution and the accounts are regularly announced at the meetings of the samiti but not at the *gram sabha*. The funds in the account are used to give loans to farmers. In the lean period, each member of the samiti gets a loan of Rs. 1000. This loan is returned on January 14 (Makar Sankranti, the harvest festival) with 2% interest. If the loan is not returned on time some property of the concerned person is mortgaged. These funds are also used for some community activities, such as buying vessels for village functions, etc.

The effort was very successful till the funding was available from the WB, however, after the forestry scheme ended the government is not anymore as interested in the initiative. This has demoralised the villagers, villagers are not sure what kind of benefits they would eventually get because till 2004 no Memorandum of Understanding had been signed between the village and the government. Lack of funding and lack of information at the village level of tapping various government scheme has made it difficult for people to continue to patrol the forests at the expense of daily wages that they would earn.

Bamboo harvesting was taken up in 2004, villagers were only paid daily wage labour. No royalty or share of the harvesting was paid. Initially, the villagers refused to offer labour for bamboo harvesting because the paper mill was only paying Rs. 2.60 per bundle of bamboo. When villagers raised the point that for similar work villagers were getting Rs. 8 per bundle company got labourers from outside. The village put an embargo on the outside labourers, gave them food for 15 days but did not allow them to work. Eventually, the company agreed to pay Rs. 3 per bundle. Considering that there are few opportunities

available for employment such incidents are extremely discouraging for the village, more so because they have protected the forests for nearly a decade now.

The samiti is demanding that the adjoining forest compartment should also be handed over to the village for protection. This according to them will bring a larger area under protection and villagers would also benefit more eventually when any harvesting takes place. In discussion in 2004, the local RFO and ACF, agreed that this could be done as there were no villages around. If the village would pass a resolution this area could be handed over to the samiti.

IMPACTS OF COMMUNITY EFFORT

1. Due to effective patrolling and protection, natural regeneration took place rapidly and within a period of two years the forest has regenerated to its past glory with the return of wildlife such as tiger and panther. This is shown clearly in the satellite imageries (see picture 1) taken in years 1994 and 2004.
2. Hunting was prevalent earlier as the inhabitants of the village are largely tribals. According to the villagers there is very little hunting in these forests now.
3. Villagers also claim that wild animal population has also increased considerably. Animals like wild dogs (seen in packs coming to drink water at the community tank), panthers, sloth bear, chital, barking deer are sighted regularly by the villagers. 4-5 incidents of attacks of wild animals on human beings are reported every year. According to the villagers these incidents have increased in last few years.
4. Before JFM was initiated in the village, forest encroachments was a major issue. No encroachments have been recorded in the reserved forests by either residents of Satara Tukum or from other villages.
5. Due to protection, abundant grass was available in 1998 itself. The grass was enough to meet the village requirement and also to supply to the victims of a flood hit Orissa in 1999 to lend a helping hand. Similarly, in 2000, 3 tons of grass was supplied to 'Gorkshan Kendra' at Nagpur and two tons was used to thatch their own houses and to feed their own cattle.
6. Prior to JFM, crop loans were taken from money-lenders who used to exploit the farmers. Considering this the FPC started giving loans to the needy as explained earlier. The interest collected would again be pooled back into the FPC account.
7. Vermicompost developed by one of the villagers, increased paddy yield by about 25%, so did the production of vegetables. Villagers noticed that this also considerably decreased the insect and pest attack. These observations made the villagers use vermicompost during the next crop season.
8. Encouraged by the success of JFM in the village, the Zilla Parishad of Chandrapur allocated fisheries work in one of the tanks to the FPC for a period of 5 years. The profits from this also go back to the FPC account.
9. Availability of daily wage labour, even though irregular, construction of a community hall to conduct community functions, vessels, sound system, etc. for the village are also seen as a benefit of being part of the programme by the villagers.
10. Adoption of JFM by the village seems to have made the villagers more aware of the virtues of forest conservation. There has been a sea change in the relationship between the forest department and the villagers. The fear and antagonism that the villagers felt against the department earlier is not felt anymore.
11. Funds available for fire extinguishing come to the village fund in Satara Tukum. This

is a unique experiment being tried at the behest of the local staff. During a personal communication in 2004, the local RFO revealed that this experiment has not been tried anywhere else in Maharashtra so far. “Since the villagers are protecting the forests against fire, this saves the department meant for fires extinguishing activities. This money has therefore been allocated to the village fund”.

OPPORTUNITIES AND CONSTRAINTS

1. WB Bank funding and JFM: This JFM initiative was started as part of the WB sponsored Maharashtra Forestry Project. The project came to an end in 2000. During a trip to the village in 2004, it appeared that the project while initiating JFM programme in various villages had not worked out an exit strategy. Once the funds came to an end the enthusiasm of the department also diminished. Lack of funds made it difficult to carry on with employment generating schemes. For a village, where land holdings are very small and daily wage is not very easily accessible, it has become very difficult for villagers to forgo a days wage to go for forest patrolling. Villagers are right now continuing in the hope that some day income will be generated from the forests for those who have helped protect it. However, villagers feel let down by the department, Satara Tukum which was once being portrayed as one of the best examples of JFM is not in the priority for the department since WB funds have exhausted.

Box 1: Funding opportunities for JFM in Satara Tukum²⁶

The local RFO confessed in 2004, that implementation of JFM requires funds “this is the best village in my range, but I don’t have funds to encourage him”. He felt that there were a number of local sources of funding which can be pooled together to support initiatives of this kind. According to him some good sources of funding could be:

- a. Bringing this range under the Forest Development Authority (FDA) of the government. Here the Central Government funds for all development activities are pooled together at the District level and can be allocated directly to the village institutions for implementation of forest and social development scheme.
- b. 20% of the revenue earned from confiscated material (material being illegally smuggled out and confiscated) could be deposited in the village fund.
- c. The Chief Secretary of Maharashtra has issued a circular stating that JFM villages should get a priority for implementation of schemes under all line agencies.
- d. In all forest areas in Maharashtra 10% of sales from forest produce is deposited by the forest department to the state government. State government then distributes this money to *zilla prishads* (Elected District Council) in the state. The *zilla parishads* are expected to use this money for development of forests under their jurisdiction. This however, doesn’t happen. Range Forest Officer’s Association in Maharashtra has demanded in an intervention in a High Court case that this money should be returned to the forest department for forest development activities. Through this tax the state government earns about Rs. 500 million per annum. The RFO, felt if this money could be returned to the department, programmes like JFM would benefit.
- e. The RFO intends to construct bio-gas plants for all the families in the village under Environment Guarantee Scheme (EGS) through the local *panchayat* office.

²⁶ Information in the box is based on personal communication with Range Forest Officer of Mul Range, Shri A.N.Tikhe and others, during a field visit by Kalpavriksh members Ashish Kothari and Neema Pathak in October 2004.

2. **Lack of tenure security:** Often villagers feel concern that after all these years they may not get the benefits from the forests also. This fear emanates from the fact that after all these years a Memorandum of Understanding has still not been signed between the villagers and the department. No records are being maintained about the harvest levels at the village level. In addition to that, while the JFM Resolution of the state government earlier talked about an understanding with the villagers for 30 years, an amendment in 2004 says that the agreement will be for ten years only. Such changing policies make villagers insecure about their effort.

3. **Lack of information:** Villagers indicate that they could do with information about various government schemes for villages. They felt they needed support from the forest officials at the Divisional level to help them get such information, which in turn will help them generate employment at the local level.

4. **Institution building:** In 1997 when the JFM committee was formed, only one member per household was included in the committee. This immediately excluded women from the decision-making process. Over the years the constitution of the committee has remained the same. However, by the year 2004 a group of young people had started taking interest in the activities of the committee. They also participate in forest patrolling. Since the young boys have been school some of them also play an important role in the administration of the committee. Pravin Chichdhare in fact has been included in the executive committee even though he is not a member of the general body of the Forest Protection Committee (FPC). The youth, therefore, also wish to be included in the FPC, however, the older members are reluctant to do so. There concern is that they have invested almost a decade in protecting the forests and now if new members are included then the share of benefits from the forest harvest per member would further reduce.

During a village meeting in 2004²⁷ many villagers expressed concern that the accounts are not being announced to the entire village. The FPC members clarified that many people do not come for the meeting when these announcements are being made. In addition, alcoholism is still quite prevalent in the village. It therefore becomes difficult to elicit effective participation particularly if the meetings are being organised in the evening.

This brought home a reality that although the forest protection by the village was very effective, for its long term sustainability much more attention should have been paid to building institutional capacity and systems of conflict resolution. Much of this could be done by facilitating regular dialogues among the villagers and between the villagers and government and non government individuals from out side. A constant flow of information and regular dialogues could help strength the village initiative.

Contacts

²⁷ Attended by Neema Pathak and Ashish Kothari of Kalpavriksh, Dilip Gode of Vidarha Nature Conservation Society and Suryabha Khopraghade of village Saigata.

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3.3 ORISSA

CASE STUDY 1: DENGAJHARI VILLAGE, NAYAGARH²⁸

Background

Dengajhari village is situated in the Nayagarh District of Orissa. The forests of Nayagarh were once dense which were plundered due to the setting up of heavy industries and the pressure on the forest resources due to population explosion. The road from Bubhaneshwar to Ranapur in Nayagarh District of Orissa bears testimony to Orissa's desperate efforts to join the list of so-called 'developed' states. The road winds along barren and quarried hillocks, trees either felled or covered in dust and struggling to breath. Burning *bhattis* (brick kilns) making it difficult to remember that we were on our way to visit some of Orissa's well-protected forests. It was not long however before the barren hillocks began to give way to green ones, some lush with thick standing forests, others not quite there but definitely on their way. Ranapur range is known for two completely conflicting traits: on the one hand, hundreds of households deriving their income from sale of illegally collected timber from the forests, and on the other, hundreds of villages successfully regenerating once-barren lands or protecting still-standing natural forests.

The story of the people's conservation movement in Ranapur began sometime in mid 1970s. As more and more forests were crumbling under smuggling of timber, heavy industrialisation and increasing biomass requirements of the local people. Sources of water were drying up, women had to walk as far as 12 km daily to collect firewood for their hearths, and villagers began migrating for employment. Faced with an impending ecological disaster many villages in Ranapur initiated forest protection and regulated use of resources within and around their villages. By 1990s, almost all the forests in the area were under protection by one village or another. There were few open access forests left, leading to consequent clashes between the protecting communities and the illegal users. The need for a conflict resolution body and a support structure to fight against external pressures resulted in an organic grouping together of neighbouring villages into small clusters. Gradually, various clusters came together to form a federation (Parishad) facilitated by some NGOs, including Vasundhara. Today, Maa Maninag Jungle Surakhya Parisad (MMJSP) stands strong as a composite body of 190 member villages. The federation helps villages with forest related inter-village conflicts; interface with the forest department, other government agencies, NGOs and politicians; struggles against strong external pressures; and assessment of the ecological status of the protected forests. For example recently, adivasi and dalit women of the area have pressured the federation into taking up with the State Government their demand for opening Kendu (*bidi patta phadis*). Together these villages are conserving a contiguous patch stretching over many hill ranges. No assessment has so far been made of the actual area under such protection.

²⁸ Barik, Satyasunderm Woman Power. *Down to Earth Vol.10 No. 21*. March 31, 2002.

The case study has also been compiled based on a field trip to Dengajhari by Neema Pathak, Ashish Kothari and Tasneem Balasinoorwala of Kalpavriksh in January 2005. Prashant Mohanty of Vasundhara, Tasneem Balasinorwala of Kalpavriksh, and Kundan Kumar from Orissa provided inputs for writing this case study.

The villages that constitute the federation vary in their character and composition, some being multi-caste, while others predominantly occupied by a single tribe. Some were once dependent on timber smuggling completely, some still remain so while others have now gone on to other sources of income. Yet their stories are similar. Stories of forest destruction, realisation of the loss, community mobilisation, and finally success, in some cases, on the face of life threatening clashes with the timber mafia.

TOWARDS COMMUNITY CONSERVATION

Dengajheri is one such village where the able support and intervention of the federation resulted in successfully thwarting external pressures. With that emerged a unique and powerful initiative by the women to become the caretakers of their forests. Dengajheri consists of 30 households dominated by Kand tribe. The success that women here have achieved in regenerating and protecting their forests has come after a long struggle.

Like in the rest of Ranapur block, the once well-forested hillocks around Dengajheri had become barren by mid 1970s. Degraded forests for local villagers meant walking much longer distances to meet their requirements, and constant harassment by other villagers or Forest Department. It was then that the villagers decided to regenerate and protect their forests. Two neighbouring villages, Lonisai and Madakot joined in the effort. The three villages organised regular patrols to the forests and their efforts paid off as the forests started regenerating well. This lasted for about a decade, after which internal conflicts resulted in the breach of trust amongst the three villages. Each village then decided to protect its own forests independent of the others. Lonisai and Madakot being politically stronger and larger in size could sustain their protection efforts. However pressure started mounting on Dengajheri which was a small and politically weak village. Patrolling parties, all men, began to face serious threats from the timber mafia and villagers were demotivated and discouraged. Additionally, time spent on patrolling started affecting the daily wages to compensate for the loss men were often compelled to fell a tree.

In the mean time Ranapur Federation, with the help of an NGO named Vasundhara, started convening monthly meetings of the women from the member villages. The objective was to elicit better participation of women in the decisions related to forest protection. Women from Dengajheri regularly participated in such meetings. It was in one such monthly women's meeting in 1999 that women from Dengajheri expressed their disappointment at the situation in their village. They were also concerned for the safety of their men involved with forest protection. After some deliberations, the women decided to take on the responsibility of forest protection. Around the same time on October 26, 1999, 200 people with 70 carts were seen entering the forest. The village men rushed to the Forest Department but received no help from them. All the village women gathered at the village temple, divided themselves into two groups, waited at the paths leading to the forest and besieged the offenders with spades and sharp weapons. The offenders, all men, were scared of retaliating because of social reasons. They feared that they could get charged with violence against women, that too, tribal women, which was a serious offence in law! The men ran off. Women then sent for members of the Federation and forest officials. The felled timber was confiscated and sold by the villagers, and the money was deposited in the village fund.

After this incident, women started patrolling the forests regularly. Maa Ghodadei Mahila Samiti, a committee comprising exclusively of women was constituted with help from Vasundhara. Although all meetings about village protection are open to all villagers women

are the main decision-makers. In a state like Orissa where women's participation in decision making is negligible, Dengajheri is among the few villages where even the monthly general body meetings of the Ranapur Federation are attended by women. The Federation has been a constant source of support and inspiration for these women.

The women have adopted the *thengapalli* practice for forest vigilance. Every day four women would patrol the forest and by the evening the *thengas* or batons would be placed in front of the houses that should take over patrolling the next day. The women's committee has also laid down certain rules for collection of forest resources. The small population of the village, which makes for a high amount of transparency and visibility of each other's activities, ensures that people abide by the rules. Timber is extracted only when it is required for agricultural or building purposes. A few other forest products such as date palm leaves, bamboo, etc. are extracted for crafting small articles, such as baskets, mats, grain stores, and so on. Commercial extraction of timber is strictly prohibited. For fuelwood, villagers are allowed to collect dry and fallen wood only. Poor families, dependent on firewood sale for survival are also allowed to collect dry, fallen wood for sale. Hunting is strictly forbidden.

Dengajheri women realised that the timber mafia often operates through local people of other villages. Therefore, those caught felling wood are tied to a tree in the village, and the president and secretary of their respective Forest Protection Committee (considering that most villages have one) are called to bail them out. Fines for stealing wood often depend on who the offender is. For examples, habitual offenders are charged much more than someone caught the first time; poorer offenders are let off with smaller fines.

IMPACTS OF COMMUNITY EFFORT

As a result of the protection by the villagers the forests have regenerated and fulfil all the biomass requirements of the villagers. Dengajheri itself protected about 80 ha. of lush green forest and if seen in association with protected forests of adjoining villages, the green patch is considerably large, and possibly contains significant wildlife populations. Villagers report, leopards, sloth bear, mouse deer, even wild Buffalo (which needs to be confirmed), and a rich bird and insect life. In fact the villagers proudly claim that they now have elephants in their forests. It is indeed possible that the regeneration of the entire Ranapur range by hundreds of villages has created a corridor for species like the elephants to re-establish their migration, though this would require a scientific study to establish.

The regeneration of forests has had many other non tangible benefits, such as, securing catchments for the water sources in the village. Probably among the greatest benefits has been the surging confidence among the women. This confidence is evident in the eyes of the women when they are recounting their experiences to the visitors. This confidence is infectious too, women from many smaller villages in the range, facing similar problems as Dengajheri did, are now in the process of organising themselves for forest protection.

CONCLUSIONS

Much can be learnt from an assessment of what drives these villages to start a conservation movement and move towards a district level federation without much external input. Or by understanding how women can be empowered enough to take on the threats that men cannot. These community initiatives can be supported by helping the villagers assess the biodiversity value of their protected forests. A range level mapping exercise could also help in

understanding the extent of area under such conservation and its value as an effective corridor for larger species like elephants. A strong encouragement would also come by recognising their efforts and ensuring a long-term custodianship over the forests that they are conserving and generating innovative livelihood options.

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ORISSA

CASE STUDY 2: CHILIKA LAGOON²⁹

Introduction

The Chilika lagoon, located in the south-eastern state of Orissa, is India's biggest brackishwater wetland. Spread over 1100 sq. km. during the monsoons and 900 sq.km in summer, Chilika harbours a large diversity of plants and animals (over 800 species of fauna), including several threatened species such as the Irrawaddy dolphin (*Orcaella brevirostris*) and the Barkudia limbless skink (*Barkudia insularis*). India's largest concentration of wintering water birds is found here, numbering nearly a million. Its enormous ecological importance earned it a place in the Ramsar Convention list of Wetlands of International Importance, in 1981.

Chilika also provides livelihood to over 200,000 fisherfolk, and is used as a major tourism spot by Indian and foreign visitors. The fisherfolk traditionally had a number of practices that have contributed to sustainable harvesting of fish, while also conserving species like the Irrawaddy dolphin.

However, over the last few decades, the lagoon has been in serious trouble. Siltation from degraded catchment areas, pollution, intensive commercial aquaculture (mostly by outsiders and non-fisherfolk), and other factors were causing so much damage that the lagoon was said to be dying. Perhaps most seriously, the mouth of the lagoon towards the sea, which helped maintain a delicate balance of salt and freshwater in the lagoon, was closing due to silt deposition from lake basin. The resulting changes in salinity in the water, were impacting both wildlife and people. Several species such as the Irrawaddy dolphin were threatened, as were fisherfolk whose production was declining. The uncontrolled spread of commercial shrimp and prawn farming, mostly by outsiders to the area including some corporations, had caused further degradation.

So serious was the situation that Chilika was put onto the list of Ramsar sites in danger (the Montreux Record), in 1993.

It is in this scenario that the Chilika Development Authority stepped in, in the early 1990s. Over the last few years, the CDA has taken a series of measures to tackle the above threats. Through innovative collaboration with scientific institutions, NGOs, and to a limited extent the local communities, these measures appear to have reversed the decline of the lagoon. Available evidence suggests that Chilika is back on the road to recovery, and that many wild animals and plants are benefiting from this revival. Reportedly fish catch has also increased, with attendant benefits to fisherfolk, though as we point out below, the perceptions amongst fisherfolk themselves seem to be different. The Ramsar Bureau was suitably impressed, after an evaluation in 2001, to remove it from the Montreux Record, and to present it with the Ramsar Wetland Conservation Award.

This case study provides a brief glimpse of the process of transformation at Chilika, and analyses its links with the policy and practice of decentralisation. It asks: has decentralised

²⁹ This case study is based on a January 2005 field trip to the area by Neema Pathak, Ashish Kothari, Tasneem Balasinorwala, Manshi Asher, and Nidhi Agarwal; a January 2006 revisit by Ashish Kothari; discussions with local officials, fisherfolk, and scientists (see next footnote); and literature listed in the References.

governance had any hand in the transformation, and has the transformation itself led to more democratic decision-making? It also briefly assesses what more needs to be done to sustain the change and tackle some of the critical challenges that the area continues to face.

The case study is based on a field visit during 6-8th January 2005, a revisit on 9-12 January 2006, conversations with a range of people at Chilika³⁰, and a perusal of relevant documents.

The Initiative

Though the decline of Chilika as an ecosystem has probably been going on for a few decades, widespread alarm over it began to be voiced only very recently. In the early 1990s, in response to this alarm, the central and state governments decided to tackle the situation through an innovative mechanism. Realising that the task of reviving the lagoon could not be undertaken by only one department of the government, or indeed by the government alone, they created a Chilika Development Authority in 1992. The structure of the Authority was somewhat unique in the history of the state and perhaps of the country, in that for the first time it brought together a range of stakeholders under one institution which was granted considerable powers to effect changes. The Chief Minister of Orissa is the Chair of CDA, and the governing body consists of senior-most bureaucrats of the state government, independent experts and scholars from the state and outside, a representative of the Government of India, political leaders, district administration, and environment/wildlife officials. Interestingly, too, considerable autonomy was built in for the Chief Executive as the Member-Secretary of the CDA and as the officer in charge of day-to-day affairs. Unfortunately even such a structure did not deliver the goods in the first few years of CDA's existence, until the present CE Ajit Pattnaik took over (in 1997). Pattnaik has used his personal interest and commitment in the work, to good effect, by maximising the use of the CDA structure, and has been instrumental in the transformation that has taken place in the last 7-8 years.

The CE has under him, a small staff of engineers, scientists, and research scholars, as also some help from his parent agency, the Forest Department. This small team has been augmented by the CDA's innovative approach of engaging with a series of other institutions and NGOs and community groups, through collaborative projects, which has brought in considerable expertise and experience otherwise not available within the CDA.

When he inherited the job, Pattnaik was faced with an unenviable task. The lagoon was continuing to shrink at an alarming rate, salinity levels had dropped due to the closing of the sea mouth, and there was considerable local conflict between traditional fisherfolk and

³⁰ A detailed interview was conducted with Ajit Pattnaik, CE of the CDA, in January 2005 and again in January 2006. Detailed talks were held with Lakhinder Jali and Bhagirath Jenna, in January 2005 the President and Secretary, respectively, of the Dolphin Boat Owners' Association at Satpara. A group discussion with members of the Dengei Pahada Watershed association and others from the catchment villages, was held in January 2005 at village Mansinghpur under the chairpersonship of its Acting President Purna Chandra Patnaik and its Chairman Satyavadi Hota. Discussions were also held with groups of fisherfolk at Satpara and at the fish landing centre at Sorona, and with office holders (including Balram Das, President, Tapan Kumar Behera, Secretary, Laddu Bala, former President, and Muralidhar Bala, Board member) of the Chilika Matsyajibi Mahasangha (Chilika Fisherfolk Federation), on separate occasions in January 2005 and January 2006. At a visit to Mangalajodi wetlands on the edge of Chilika, in January 2006, talks were held with Nanda Kishore Bhujbal of Wild Orissa, and poachers-turned-conservation guides Madhav Behera and Madhusudan Behera. Brief discussions were held with scientists at the Banka Behary Das Centre for Research and Training on Wetlands, and with scientists of the Bombay Natural History Society who are researching birds in the lagoon. Comments on a first draft of this case study were received from CDA CE Ajit Pattnaik and Dipani Sutaria, a scientist conducting field work for her doctorate thesis on the Irrawaddy dolphin.

commercial prawn/shrimp farmers. The latter had at one point taken over a vast area of the lake, and even big national corporations like the Tatas had at one time expressed interest in aquaculture. Already fisherfolk had expressed their resentment at the aquaculture farms, including by physically destroying several; in the process they had also paid a heavy price as five of them were killed and several more injured, in violent clashes between the district administration and the agitating fishermen on 29th May 1999 at village Sorono (one of the main fish landing centres). In a sense, the CDA could use this resentment as a critical ally in the move against the commercial aquaculturists, since they could cite not only environmental damage but also widespread social unrest and livelihood loss as being a legitimate reason for removing the shrimp/prawn farms. It is not clear how much state action had to be initiated to get rid of the farms, and most likely it was a combination of such action along with fisherfolk agitation that saw the departure of a large part of the aquaculturists (though they have never been completely removed, and seem to have consolidated in some parts of the lagoon again in the last few years).

This was only one of the actions that CDA has participated in or initiated. There have been a number of others, equally important. Amongst the first was to commission a detailed scientific study of the lagoon, its catchment, and the adjoining marine areas. This study, by the Pune-based Central Water and Power Research Station (CWPRS), came to the conclusion that if Chilika had to be saved, one of the critical steps to take was to re-open the mouth to the sea (a demand that local fisherfolk had reportedly been making for years). It was determined that instead of attempting to do this at the site of the earlier mouth, since considerable silt had gathered there, a new mouth should be opened further to the north. The National Institute of Oceanography (NIO) also carried out a study of the possible ecological impacts of such a step.

This rather radical step was taken in September 2000. With sea-water once again allowed to enter the lagoon, the average salinity level of the water began to be restored to its original balance. Ecological monitoring by CDA suggests that this has helped to revive fisheries in the inner parts of the lagoon. Invasive species have reportedly declined (the weed free area increasing from 334 sq.km in 2000 to 506 sq.km in 2001). Sea grass area has considerably increased, which according to the CDA officials is providing fertile ground for fisheries and dugong habitat³¹. The population of six species of fish that had become threatened, has stabilised or increased. Fisheries production, as per data collected by the Fisheries Department, has also gone up: from an average minimum level of 1,600 metric tons over the 10 years before the opening of the sea mouth, to 11,877 metric tons in 2001-02, and upto 13,260 in 2004-05. In addition, with a large part of the commercial aquaculture having been removed, and the invasive weed spread having been considerably reduced, local fisherfolk are said to be once again assured of a productive catch.

Simultaneously, CDA has initiated a series of measures to treat the catchment of the lagoon. This is aimed at arresting the rapid erosion of topsoil into the lake. At a number of villages in the catchment area, participatory afforestation and regeneration of slopes has been initiated, both as a means of arresting soil erosion, as also a means of providing some livelihood options for villagers. As of 2004, a total of 22 of the micro-watersheds that need treatment, have been taken up, and there are plans for a much larger number in the near future. At one such site we visited (the Dengei Pahada Watershed), three villages had taken part in planting about 50,000 trees. These included *Acacia*, cashew, bamboo, and other species. We enquired

³¹ This is disputed by scientist Deepani Sutaria, who is studying dolphins at Chilika; she says that the co-relation between increasing area of sea grass and dolphin habitat is not clear.

why there were many exotics amongst the species planted; the response was that this was a choice of villagers who wanted not only to regreen the hills but also to earn some livelihood from the effort. Harvests of fuelwood and fodder are considered important for local use, and any revenue that may be earned from harvesting timber, would mostly (75%) go to the villagers, with the remaining going into a Watershed Association Development Fund for use of the community as a whole. A number of additional economic benefits are reported. Several village tanks have been revived or created, filling up due to percolation from the regenerated hills; these provide irrigation and drinking water, as also opportunities for pisciculture. Training has also been given in agricultural, nursery, and bee-keeping techniques. The CDA claims that outmigration from this area, which was earlier rampant, has been reduced by 70%. Ecological benefits other than the greening of the hills are also reported. Villagers have observed the return of some wildlife to the area, including barking deer, wolf, and wild pig.

The CDA has also been involved in some attempts at enhancing the livelihood of local fisherfolk. Other than the direct benefit of increased fish catch due to the restoration measures, better marketing and docking facilities have been provided at some sites. With the technical assistance of Central Inland Freshwater Aquaculture, value addition to the fish catch by the womens self-help groups is being experimented with in a couple of settlements (e.g. Hatbarodi near Tangi). Training has been started also in various aspects of fish gear and storage, including attempted reduction of some destructive methods that fishers had adopted in the last few decades, and encouragement of more sustainable methods (though this is reportedly encountering difficulties in the field). Ongoing proposals include reduction of dependence on middlemen, creation of kiosks for dissemination of market information, value addition of catch, use of what is now considered 'trash' fish for ornamental purposes, creation or strengthening of self-help groups, and revival of the 87 fishermen's cooperatives set up under the Fisheries Department but allowed to become defunct.

The reliance on scientific assessments as a basis of action continues. The Central Inland Fisheries Research Institute (CIFRI), for instance, has been commissioned to do a fisheries yield assessment, including studies on areas of the lagoon that are over-fished or under-fished. The CDA has urged CIFRI to carry out this research in association with fisherfolk, building on their traditional knowledge (a report on this participatory approach is under preparation). A Chilika Fishery Regulation Act is being proposed, with the hope that the output of the CIFRI study will be a good baseline for its implementation.

With tourism to the lagoon on the rise, the CDA has begun some steps to use this as an opportunity to generate livelihoods for local people, along with achieving some level of regulation of visitor impacts (though at present this is quite inadequate, a point discussed later). At Satpara, it has helped a Dolphin Boat Owners' Association with some local education and training. All the 250-odd persons owning boats that take tourists out to see the Irrawaddy dolphin, or to the new lagoon mouth to the sea, to Nalaban Sanctuary, and other sites in/around the lagoon, are members of this Association³². Through this their activities are coordinated. Rules have been formulated regarding behaviour while showing tourists the dolphins (such as a Rs. 100 fine on anyone caught chasing a dolphin). Some level of equity is guaranteed as each boat-owner gets an equal chance to get clients. The Association also helps to generate awareness amongst tourists regarding disposal of garbage, controlling use of plastics, etc, though this is reportedly not very effective. An annual Dolphin Conservation Day is observed. Members of the Association pay a fee of Rs. 15 per trip, which is pooled

³² Reportedly there are three associations in the area, but we could not get details on the others.

and used for helping the larger community of Satpara. CDA have been organizing orientation training periodically to build the capacity of these unemployed youth. The CDA is proposing to sponsor some of the boat owners to go abroad for orientation on tourism management, with help from the Whale and Dolphin Conservation Association.

Yet another initiative of importance is the creation of bird protection groups in several fishing villages adjoining Chilika. The NGO Wild Orissa has helped in mobilising villagers to form such groups, and the CDA has encouraged them through small-scale support, such as building a birdwatching bund and watchtower at Mangalajodi village. Some of the people involved in the protection groups were bird poachers earlier. The precise process of this 'conversion' is not clear. At Mangalajodi village, several unemployed youth who were earlier poachers have been trained in bird-watching, so they can earn an income from tourists interesting in this activity. Ecological studies on birds by Bombay Natural History Society are providing a strong scientific back-up to these activities.

Key Lessons: Main Elements in the Transformation

The Chilika story has a number of critical lessons, relating in particular to issues of participatory management of natural resources:

1. Moving from a situation of uncoordinated interventions in the lagoon, in which various government departments were functioning in their own compartmentalised ways, towards a more coordinated inter-sectoral approach, has had clear benefits. Such an approach is not new in concept, indeed it has been recommended for several years. However, there seem to be very few examples in India where, on a large scale, it has worked. One of the critical factors in the case of Chilika seems to be the establishment of an institutional structure for inter-sectoral coordination (the CDA), with clear powers and functions, and a stated mandate to integrate conservation and development in and around the lagoon. The fact that all relevant departments are within a structure headed by the Chief Minister, seems to ensure their cooperation within the overall direction of the Chilika plan. However, this approach is not without its problems, including continued lack of coordination in some situations on the ground (e.g. with regard to tackling illegal prawn/shrimp culture); more on this in the section on "Continuing challenges" below.
2. Even such an institutional structure could, however, remain ineffective in the absence of political support from outside and dynamic leadership within. In the last few years, Chilika seems to have received both of these. The CDA CE has played a prominent role in galvanizing the institution and in bringing together a range of actors, and in turn has been able to move the entire government machinery because of the political support received from the Chief Minister's office, and because of a conscious move by the state government to provide him relative autonomy in functioning.
3. Nor could an institutional structure for inter-sectoral coordination work in the absence of strong public support. The CDA has tried to bring to centre-stage, a more participatory and decentralised approach to managing Chilika. One of the key attempts has been to build a relationship of constructive engagement with local bodies like the Chilika Matsyajibi Mahasangha (CMM, a federation of primary fisher cooperatives from across the lake). Mechanisms of participation attempted include formal interactions between the CDA and the CMM, facilitation of meetings between the CMM and other government departments to sort out disputes or work out synergies (e.g. on the issue of fishing prohibitions in the Nalabana Sanctuary, which are at times disputed by the fishfolk), the involvement of the watershed associations, and collaboration with several local NGOs whose members are being trained for watershed and other work. These mechanisms have

been instrumental in gaining some level of public support for the various steps taken by or with the CDA. In the case of CMM, however, this appears to be on fragile grounds, raising questions of sustainability (addressed later below)

4. In turn, the opportunity for such a participatory approach was partly created by the fact that local people (especially the fisherfolk) were already well-organised around their occupation and around the struggle against aquaculture. The CMM has clearly played an important role in representing the interests of traditional fishers, in lobbying for action against destructive forces, and in providing a critical perspective to the work of the CDA. The initiative has in turn helped to create or strengthen a few more institutional structures of decentralised functioning, such as watershed associations, the Dolphin Boat Owners' Association, self-help groups, bird protection groups, and others. The links with existing panchayat raj institutions, such as *gram panchayats*, are not yet well established (an issue discussed further in the next section), though there are some in the catchment areas where the watershed associations have panchayat representatives, or in the case of the Satpara Gram Panchayat which calls in the Boat Owners' Association for discussions on Chilika-related issues.
5. CDA's approach to research too has been instrumental in the transformation. Firstly, there has been healthy reliance on scientific analysis (such as the work leading to the identification of mouth-opening as a solution), and a respect for independent scientific and technical advice (which is often lacking in government agencies). Secondly, equally important, there has been respect for traditional knowledge and science, and traditional practices, as being important components in decision-making. CIFRI's research on fishery yield assessment started out being based on modern scientific methods, but the CDA was able to persuade it to also involve fisherfolk who had immense knowledge on site-specific fish yields and fishery trends. Pattnaik reports that after taking this approach, CIFRI admitted that they were saved months of research time, and that the results were likely to be much more robust.
6. The frequent problem of financial inadequacy has been overcome in the case of Chilika by building on a small corpus, bringing various departments together, accessing funds from various collaborations, and other such innovative methods. Indeed, it is remarkable that very little of the budget for CDA's work has come from foreign sources. Also, many small bits of the funds were channelised to several NGOs, individual experts, and departments, as seed money, rather than big funds for big projects. This example goes to show that there is not necessarily a dearth of money in India, but rather that the money is not available in the right place at the right time. CDA's financial acumen lay in not necessarily obtaining huge budgets for itself, but in accessing a range of partners and collaborators with their own funds, to carry out tasks needed for the overall plan.
7. A key part of the initiative has been the focus, from the start, on integrating conservation and livelihoods. This is a refreshing departure from conventional conservation practice and policy in India, which has tried to divorce the two. In most national parks and sanctuaries of India, such an approach has created conflicts between traditionally resident or dependent communities and wildlife officials, considerable alienation and economic insecurity amongst the communities, and other problems. At Chilika, the livelihood needs of fisherfolk and catchment area villagers, have been an explicit part of the overall programme of ecological restoration. Though the results have been mixed, it is a positive sign that at least the approach is in place.
8. Appropriate legal back-up for the initiative has come from the Coastal Regulation Zone notification of the Environment Protection Act 1986. Under this notification, the entire shoreline of Chilika is classified as CRZ1, which indicates it is ecologically fragile, and authorises the government to restrict any kind of destructive activity. No activity can be

carried out without permission from the state Environment Department, which in turn has insisted on CDA's involvement in deciding about any such activity. Pattnaik claims that this has been extremely useful in curbing a number of unsustainable processes and projects. Further legal back-up is given by the Wild Life (Protection) Act 1972, in the case of the Nalaban Wildlife Sanctuary. The CDA is now proposing a Chilika Fishery Regulation Act, which will be based on the CIFRI study of fisheries capacity. Such clear legislative support is crucial.

9. Reportedly a lot of the work initiated by CDA, though based on scientific inputs and people's participation, was not preceded by a lengthy planning exercise. As the CE of CDA expressed, it was important to start off some work to generate confidence and local support, and not build up too many expectations through an elaborate planning process. However, in a sense planning was happening simultaneously to action, learning from the lessons on the ground.
10. Also instrumental has been the status of Chilika as a Wetland of International Importance, under the Ramsar Convention. Indeed, during the phase of decline, Chilika was in danger of being removed from this list, and it was at least partly the indication of such a drastic step being taken, that motivated action by the state and central governments. The CDA's success has helped to take the lagoon off the Montreux Record, and in fact earned it the Ramsar award for wetland conservation. It is now being cited in other parts of the world as a possible model to learn from.

Continuing Challenges

Within an overall context of positive transformation, there remain a number of problems and challenges, some quite serious, that the Chilika initiative will need to deal with:

1. Not all ecological problems have been tackled, or tackled adequately. Some poaching of birds continues (in January just before our field visit, there was a report of two men being arrested with a catch of 57 birds from Chilika), though at reportedly much lower numbers than before. Threats to the Irrawaddy dolphin remain significant, with 54 dead dolphins being reported between September 1999 and December 2005 (Dipani Sutaria, pers.comm, Jan. 2006); the Orissa Chief Minister admitted to 34 dolphin deaths in the period 2002-05. The threats include accidental catch in fisheries gear (especially trammel, shark/ray, and seine nets), and heightened motor boating by tourists (the number of boats is reported to have gone up from about 30 to nearly 400 in the last few years) (Dipani Sutaria, pers.comm, Jan. 2006; Beasley 2003; Anon 2005). The state government was considering declaring parts of the habitat as a dolphin sanctuary, while retaining the rights of the fisherfolk (Ajit Pattnaik, pers.comm., 2005), but seems to have thought better of it after strong signals of resistance from the local fisherfolk who are scared that a sanctuary status would stop their access to the fishery grounds³³. This is not a unjustified fear, given that current policy regarding protected areas in India does indeed alienate local people from their resource base (Kothari 2005). Oil and other forms of pollution remain, especially in localised areas around settlements or on the main motorboat routes.
2. Extensive *gheris* (enclosures for intensive aquaculture) also continue to operate, illegally, especially on the southern shore. Reportedly even some of the traditional fisherfolk have taken to it either in the lagoon area or in their paddy fields, possibly the result of a "if you can't beat them, join them" attitude. CMM office-bearers in fact admit to the fact that

³³ On 24 November 2005, fisherfolk at Satpada held a demonstration against the proposed dolphin sanctuary, as also against a state government proposal to provide legal access to the lagoon's resources to non-fisherfolk communities.

- some of their own member fisherfolk are indulging in destructive aquaculture activities. CDA has recently employed mechanized *gheri* demolition equipment and freed some of the area of the encroachments, but claims it needs about Rs. 300 crores more to completely free the lagoon, a sum the central government is so far not willing to provide.
3. Changes in the kind of fishing gear used even by the local fisherfolk, have brought in some destructive technologies. Zero nets, nylon nets with very small mesh size, certain kinds of motors, and other unsustainable or over-exploitative gear have been adopted by many fishers. The CMM admits that some of their own fisher members are engaged in such practices, but expresses its inability to tackle the issue given that these fishers reportedly enjoy the support of local administration.
 4. Tourism is not regulated or managed in most parts of the lagoon, and there is no overall plan for such management. Negative impacts of unregulated tourism, including disturbance to wildlife, huge amounts of plastic and other waste, oil pollution, and so on, are likely to continue till such a plan can be formulated and put into place. The CDA is considering commissioning an independent agency to prepare a Tourism Master Plan for Chilika.
 5. Several sections of fisherfolk seem not to have benefited from the opening of the sea mouth and other measures taken up by CDA. In particular, 22 villages near the new sea mouth seem to have been negatively impacted by loss of fisheries, though some people have in turn benefited from the new tourism to the sea mouth. The CDA is aware of this differential impact, and claims to be taking up some special measures for these fisherfolk. These include construction of a jetty to help with their fishing and trade activities, and training in deep sea fishing. A task force has been constituted to look into this issue. Fisherfolk in this area remain strongly critical of the sea mouth opening and of the CDA, a situation that is so ripe for unrest that it could explode into unpleasant situations at any time. Other sections of the fisherfolk complain that the CDA initiative has left them out. For instance in the Alandapatna area in the southern part of Chilika, heavy prawn aquaculture (*gheri*) encroachment and siltation have reportedly devastated the fisheries, with serious impacts on fisherfolk livelihoods, and the residents feel that CDA has not done anything to alleviate their crisis. CDA in turn points out that it needs several hundred crores for desilting and *gheri* removal (through mechanical means), which the government has not yet allocated.
 6. In addition to actual negative impacts, there seems to be a widespread impression amongst fisherfolk that fish production has fallen, and that CDA is not doing much to address their concerns. In all our discussions with fisherfolk, very few actually stated that fish catch had gone up. This is in sharp contradiction to the statistics of the Fisheries Department, and the increased number of fish landing centres and the reportedly increased amount of railway freight bookings of fish produce over the last few years. Whether this is a posturing of a highly politicized local movement, or a genuinely felt grievance, or a mix of the two, is not clear. Whatever the truth, the fact of widespread discontent of fisherfolk, is of serious worry to the initiative.
 7. Institutions of self-governance under the Indian Constitution (see Introduction to the report), appear to be only partially involved with the CDA and its initiative. As mentioned above, they are involved or linked to some extent in the catchment work, or at some sites like Satpara. However, *panchayats* or *gram sabhas* of most of the villages surrounding the lagoon (as distinct from those in the hilly catchment), are not adequately involved. While this has not apparently created a problem so far (though our investigation was not detailed enough to verify this), it could well do in the future. In particular, if and when the CDA created institutions or processes become more successful, perhaps become more politically or financially empowered, the PRI institutions could perceive a threat to

themselves. One of the innovative steps that the CDA is considering, at least for the catchment villages, is the creation of Natural Resource Management committees that coordinate all environment-related activities (in place of multiple institutions for multiple functions) and directly relate to the panchayat. It has not yet considered the possibility of using Biodiversity Management Committees, which have since 2004 become mandatory under the Biological Diversity Act 2002, for this purpose. Such Committees have not yet been set up since the state is yet to implement the Act, but could potentially become important for the Chilika initiative provided they are established within the umbrella of the PRI institutions and in consonance with existing institutions.

8. The relationship of the Chilika Matsyajibi Mahasangha (CMM) with the CDA appears to be on a fragile footing. CMM's office-bearers do not have very positive things to say about the CDA, and CDA officials in turn express difficulty in obtaining consistent participation of the CMM in its meetings or initiatives. Some recent or proposed moves by the state government have not helped the situation; these include the proposal to provide legitimate access to 30% of the lagoon to non-fisherfolk (which would legitimize aquaculture and greatly intensify conflicts), and the proposal (since then fortunately dropped) to declare a dolphin sanctuary. Given the power of the CMM (and allied federations), and its legitimacy as a collective voice of the fisherfolk, it is imperative that CDA's relationship with it is improved through trust-building measures, perhaps mediated by a third party. One critical step would be a formal place for the CMM in the CDA's decision-making structure; the state government's attempt to short-cut this by appointing a representative of the FishFed (a government set up fisherfolk cooperative, with little apparent support from the fisherfolk³⁴) has not helped the situation. The CDA plans to work through primary fisherfolk cooperatives at local levels, and through a network of around 30 community based organizations, and hopes thereby to improve relations with fisherfolk.
9. Though some ecological monitoring is ongoing, there has to date been no detailed socio-economic survey of the impacts of the initiative. CDA is now contemplating such a study under proposed Japanese (JICA) aid.
10. Given that the Chilika initiative rests partially on dynamic leadership and political support (as mentioned above), there is a big question mark on how the initiative will sustain itself if these circumstances change. What happens if a CE with less dynamism or commitment comes into the current CE's position, will the initiative collapse (as has so often happened with positive ecological initiatives by government officers, across India)? What happens if the next Chief Minister of Orissa is not so interested, or worse, is motivated to take measures that would legally bring back destructive development such as intensive aquaculture to Chilika? In all such initiatives, the question of sustainability is crucial, and this has not yet been adequately addressed here.

It is in answering this last challenge, that the need for stronger processes of decentralisation and institutionalisation becomes clear. CDA officials are considering various options for sustaining the initiative:

1. Appointment of a committed, dynamic Deputy CE, who can maintain continuity if/when the current CE is transferred.

³⁴ The precise history of this is not clear. Apparently in the 1980s, the fisherfolk were organized under the Chilika Fisheries Cooperative Marketing Society, set up by the state government mainly for marketing. In 1988-89, the fisherfolk formed their own Mahasangha (federation) in the form of a trade union, to fight for their rights. In 1990, the CFCMS was replaced by a Fish Federation (FishFed), which the fisherfolk has opposed as it was dominated by the government. The FishFed is apparently inactive.

2. Steps for financial self-sustainability, such as ploughing back of visitor centre revenue, charges from the barge/ferry that CDA operates for local people, and building capacity amongst local youth.
3. Transforming the CDA into an autonomous foundation, with support from the government but not under its control, and using a corpus that has been built up over the last few years (this is as yet only the germ of an idea).

While these and other such measures would certainly help, more would be needed to tackle the challenges listed above. In particular, greater coordination with the CMM and other institutions representing the local communities, experimenting with granting them more powers to regulate destructive practices, and other such measures of a more decentralized governance approach, are urgently needed. Building synergy amongst the various institutional structures on the ground, and up to the district and inter-district levels, would only strengthen the ongoing initiative, and would help minimize future conflicts.

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Chapter 4

KEY LESSONS

The case studies and state level reviews carried out in this study, cover a range of situations. These have varying kinds and levels of decentralisation, and different kinds of conservation initiatives. The table below summarises this diversity, by placing the initiatives into the following categories of decentralisation:

- *Political*: where decision-making power on various aspects of village life have been devolved to village level institutions, either directly related to the conservation initiative, or more generally for village affairs.
- *Administrative*: where village level institutional structures have been created or empowered, specifically to manage the conservation initiative, either formally by the government, or informally by the community itself
- *Legal*: where control over the relevant conservation area has been devolved through one or more laws

Ecological impacts of decentralisation

Most of the local sites visited during this study had conservation initiatives in operation for between 7 to 25 years. We believe that this is enough time to perceive ecological impacts. However, with the exception of one site (Chilika), none of the areas had been subjected to scientific assessments to understand how the initiative had benefited the habitats and the species.

Examples from Nagaland were the only ones where the objective of the initiative was purely wildlife conservation. However, in the absence of any studies, ecological impacts of these initiatives could only be judged based on visual impressions and interactions with local people. It appeared that the initiatives have had a significant impact on the conserved area. For example in Nagaland, it was in general easy to come across forested areas (over 80% of the state has forest cover!) but very difficult to come across signs of birds or mammals. Exceptions to this rule were the community protected areas where one frequently encountered signs of various species and saw and heard many birds. In Khonoma, where hunting is completely banned, birds and signs of other smaller animals were very common. A preliminary study of the biodiversity of Khonoma's Tragopan Sanctuary shows high diversity (though, being a one-time study, it is not possible to gauge whether this richness owes itself to the conservation initiative). In Sendenyu, the difference in sighting of birds and their calls in the protected area as compared to other areas was stark.

Table 1: Kinds of decentralisation at the local sites studied

	Formal political decentralisation linked to the initiative	Formal political decentralisation independent of the initiative	Formal administrative decentralisation	Legal decentralisation	Informal political or administrative decentralisation	Objective of the initiative	Local decision-making institutions
Khonoma, Nagaland	*		*	*	*	Wildlife preservation	Village Council for village development issues. Khonoma Nature Conservatiand Tragopan Sanctuary Trust for the Tragopan Sanctuary
Luzophuhu, Nagaland	*		*	*	*	Wildlife preservation	Village Council with the Youth Club
Sendenyu, Nagaland	*		*	*	*	Wildlife preservation	Village Council with the Wildlife Management Committee
Satara Tukum, Maharashtra		*	*			To receive benefits from the regenerated resources	Forest Protection Committee under Joint Forest Management
Saigata, Maharashtra		*			*	Sustainable use of regenerated resources	Unclear
Mendha, Maharashtra		*	*		*	Self empowerment and sustainable use of resources	Gram Sabha with the Forest Protection Committee
Dangejari, Orissa		*			*	Protect against destruction from outsider and sustainable use	Group of women informally taking decision.
Chilika, Orissa			*	*		Prevention of	Chilika Development Authority

				(partial)		degradation and sustainable use	
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In Orissa, our visit to Ranapur range was too short to state clearly whether there has been any “improvement” in the quality of ecosystem. This entire range is under protection from different villages. The overall result is that compared to the completely bare hillsides in the surrounding area this entire range is well forested (this observation is purely impressionistic). In Dengajheri, the villagers spoke about elephants now visit their forests. It was very clear that the quality of forests was much better than those outside the range where there was no community conservation. In Chilika, the initiatives by the Chilika Development Authority appear to have improved the ecological and livelihood situation by integrating the resources and activities of different government agencies (though the livelihood improvement is not across the board for all local people dependent on the resources). A partially decentralised administration, with some (though by no means adequate) consultation and participation of the local communities, appears to have helped in this.

From discussions with the local people, NGOs and government officials, it is clear that the forests in Saigata have been considerably regenerated and enriched over the last two decades. In the forests where even the root stock had nearly finished, today one can see a diversity of flora, and clear signs of fauna including mammals and birds. In Mendha village in Maharashtra the conservation initiative started as part of a movement towards self-empowerment and self-determination. For first few years of the initiative all commercial exploitation of forest resources was stopped by the villagers. A study carried out in 1998 (see Section 3.2, Case Study 1) indicated that this had a positive impact on the quality of the forests, particularly areas further away from human habitation. The initiative has also brought under control encroachment over forest land. In 1998, the village decided to restart bamboo extraction under the state government’s Joint Forest Management Scheme. A visit to the village in 2005, under this study, indicated that the quality of the forests had deteriorated compared to 1998. Although, there were no fresh encroachments, the open areas inside the forests seemed to have increased. This was confirmed by the comparison of satellite imageries between these years (Sujoy Choudhary, Pers. Comm., 2005). This indicates that the forests appeared better when there was no extraction. Quality started deteriorating once the extraction process started. Much more studies on the impact of this on the flora, fauna and overall biodiversity need to be carried out to understand precisely how the extraction processes impact the forest. Considering that most CCAs have sustainable use of natural resources as their major focus, it is imperative that such studies are carried out and communities are helped to establish processes and levels of extraction that would be economically viable and ecologically non- damaging. In Satara Tukum, the forest regeneration was initiated under the Joint Forest Management (JFM)³⁵ programme of the state government. The villagers expect regulated resource extraction for revenue generation after a few years of protection. Such extractions had not started till 2005. A forest department study based on the comparison of the forests before and after the initiative indicates significant regeneration, judging by available satellite imagery. How the extraction process would affect the quality of forests is yet to be seen.

³⁵ Joint Forest Management is a country-wide programme to decentralise forest management by creating village-level committees to manage forests. With over 15 years experience, and a spread of several million hectares, JFM is now well-established. However, the programme suffers from a number of deficiencies: power-sharing between the Forest Department and villagers remains poor, decisions are still largely taken by the former, benefits to communities have often been iniquitously shared, and in places traditional institutions of management have been displaced by JFM committees imposed from above.

It is important to note that the quality of forests 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. For example, in Satara Tukum the Forest Development Corporation (see case study for details) is carrying out clear felling in good patches of forests immediately surrounding the conserved area. This had often led to human population dependent on the cleared forests diverting their pressure to the forests protected by Satara Tukum. Also this means that fauna species come to the protected patch for shelter, increasing the human wildlife conflicts. Demands of the villagers that the surrounding forests be included under JFM have not been accepted yet.

Based on the above observation, it is clear that there is a need to carry out detailed assessments of how the conservation initiatives have benefited the ecosystem and various species in these areas. In most of the examples mentioned above there doesn't even exist a basic inventory of the flora and fauna found in these areas. In Nagaland, Satara Tukum in Maharashtra and potentially at other sites, youth members of the village have expressed an interest in developing such inventories or being part of the biodiversity studies. Such local human resource and expertise should be used for the benefit of the area. Detailed oral histories, especially of elders, would also provide an invaluable source of information.

None of these initiatives (except Chilika, partially) have a monitoring system to regularly get a feed back on the impacts of human use or management on the conserved ecosystem. In all of these areas there is a need to establish a continuous monitoring system both for self and external monitoring. This will be of particular importance in areas where sustainable resource extraction is one of the objectives, to gauge the impacts of such extractions.

There may be a need to organise training programmes for community members interested in such studies.

Conservation and decentralization: a two-way relationship

Conservation efforts often facilitate greater local community organisation. In Orissa, conservation movement often started in small clusters of 3 to 10 villages. Experience with CCAs in the country generally indicates that it is difficult for a small village to thwart external pressures on its own while trying to protect their forests. While in other parts of the country it is still common to find single villages involved with conservation in isolation from villages around them, in Ranapur conservation appears to be taking place in clusters of villages. This has happened out of a feeling that conserving forests alone, for any village, was too difficult in the face of the timber mafia and other pressures. The impact of uniting has spread even further; as the clusters began to feel a need for a larger body to resolve boundary and other disputes, and provide overall guidance, the Federation was formed consisting of 191. The process of formation of the Federation was facilitated by the NGO Vasundhara. The Federation now organises monthly meetings to discuss problems being faced by various villages. The Federation also is a forum that negotiates and interfaces with the government agencies on many issues being faced by the conserving communities.

In Mendha village, effective management of forests increased the negotiation power of the community. After fighting to take control of the forests, today they are in a position to dictate the fate of the forests within their boundaries. The village is under JFM, and none of the programmes designed under JFM can be implemented without the consent of the village, a situation very different from other villages under JFM. In the initial years of the struggle, the

village managed to stop bamboo extraction by the paper industry that had a licence from the government to harvest the bamboo. Because of its success Mendha has also managed to influence the larger policy environment towards more decentralisation. Mendha villagers negotiated to be a part of the government's JFM programme even when the policy only allowed for degraded forests to be included. It was possibly the first village in the state, where standing forests were allowed under JFM, paving the way for a general re-interpretation of the policy and further such on-ground initiatives. Mendha villagers also fought for the recognition of their customary rights over the surrounding forests. Subsequently responsible use and conservation gained them the confidence to influence the policy of the state for accepting customary rights, and adopting a more decentralised decision making process. Mendha has also managed to integrate its informal decentralised decision making with that of the formal decentralisation system in the state. The village has taken a decision to unanimously select representatives for the formal *Panchayat*³⁶. There had been much demand from grassroots organisations in India to make the assembly of a village, rather than the panchayat which might spread across several villages, as the first unit of decision-making. In Mendha although the formal system remains the same, by being organised better the village is in a position to argue for appropriate allocations for their village in the panchayat. They are also in a much better position to articulate the needs of their village. This indicates that an organised and strong community can push for spaces even within a malfunctioning formal decentralised system. In addition, Mendha villagers were able to negotiate with the government that the development funds coming to different line agencies for their village should be pooled together, after which the village would determine what use to put to it.

Conservation effort in Saigata, has led to the empowerment of the *Dalits* (lowest caste in the Hindu caste system, because of their "low" social status, they are usually not part of village decision making processes). The conservation movement in Saigata was initiated by a *dalit* youth. This may not be the situation in all CCAs but it shows the potential of conservation efforts in facilitating reduction in social inequities. Another example of socially disempowered sections of society gaining power because of forest conservation is Dangejheri village in Orissa. Here forest conservation and decisions related to the forests are largely the responsibility of the women. Consequently women, who had never travelled outside their village, have now developed the capacity to not only make decisions about the forests but also to represent the village in the Ranapur Federation (see above). The status of women is such that they also play an important role in general village level decision-making, which is traditionally a forbidden territory for women.

Thus on the one hand as shown in the examples above, conservation efforts can lead to better organisation of village communities which in turn lead to a more empowered communities. These communities eventually can gain enough power to be able to influence the administration and policies both at the local, state and national levels. On the other hand decentralisation creates the space for potential communities to participate in conservation efforts. For example, Satara Tukum village is located in the buffer zone of Tadoba National Park and conventionally its ecological importance would have led to the area being declared an official protected area (PA). From all available experience and information it can be safely concluded that such declaration would have been shrouded with conflicts between the local

³⁶ *Panchayat* is an executive body of 5-7 members representing one or more villages. *Panchayat* members are elected once in five years. How many villages a panchayat would represent depends upon the size of villages under it. A panchayat is the first unit of decision making and implementation. Funds for village development in most cases come to the *panchayats* from where they are disbursed to the concerned villages.

people and the PA authorities. Using spaces available through JFM, even though limited, the forest department has managed to involve the local people in conservation. The initiative though started by the department has been internalised by the village community. Similarly, in Nagaland the current movement in which village after village is declaring parts of their community owned or privately owned lands protected for wildlife has been possible because of the decentralised institution of the village council. The village councils have the mandate to define the land use in the village. Also the mode of declaration and systems of protection can all be defined by individual village councils depending on their local situation.

From the above, it appears that there is a need for more systematic research into the relationship between decentralisation and conservation, and for facilitating a stronger relationship between the two.

Decentralisation and the integration of conservation and livelihoods

At all the sites where decentralised decision making and implementation is followed, a strong link between conservation and local livelihoods emerges. Local communities will necessarily bring in elements of their livelihoods into the equation, if given a chance through decentralised decision-making. They may decide to completely forego any direct livelihood benefits (e.g. Khonoma), or derive only very restricted extractive but substantial ecological benefits (e.g. Dengajheri), or derive very considerable direct extractive benefits (e.g. Satara Tukum, Saigata, Mendha, and others). In most cases, however (and given other favourable factors), they will tend to integrate conservation and livelihoods. Decentralisation also means that govt. officials dealing with the situation, are forced or sensitised to take livelihoods into account, or indeed may have on their own been facilitated to take such an approach because decentralisation was already a framework they could use. At Chilika, the twin objectives of conservation and livelihoods are built into the planning process of the Chilika Development Authority.

If used effectively conservation can in fact become a model for biodiversity based livelihood options. By developing models of fair trade and encouraging value addition at the source livelihood options can be increased many fold 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 conservation movement.

Tenurial security, decentralisation and conservation

This study clearly indicated that 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. Successful conservation effort increases the confidence among the communities about stressing their authority over the conserved land. For example in Saigata, after years of forest protection once the forests began to regenerate, the forest officials began to question village's authority. The confidence of a successful initiative made the villagers fight back and regain de facto decision-making powers over the forests.

In Mendha, even though most part of the forests being conserved are reserve forest under the Forest Department, having conserved these forests for more than two decades have now ensured that no activities in this forest can be conducted without the consent of the village. Forest conservation therefore has given the villagers a confidence about demanding legal

security of tenure over the area that they have a strong sense of belonging to. On the other hand decentralisation gives the people the space and tool to work towards biodiversity conservation. For example Satara Tukum is an example where limited space provided for decentralisation in JFM was used effectively by some officers. This resulted into Satara villagers helping in forest management and protection. Once the village was involved in forest management the villagers developed a sense of ownership and custodianship towards these forests. Or in Nagaland, the fact that the ownership of land is completely under the communities, gives them the freedom to negotiate among themselves, which land should be protected, how much area needs to be protected, how and why. This has also been possible because of a decentralised governance structure such as the Village Councils. The limited exposure to CCAs in Nagaland indicates that such declarations have happened through open and wide discussions with all members of the council and hence are agreeable to most people in the village.

At Chilika, the situation appears mixed. There is a strong institution to represent the fisherfolk, which has managed to stave off some serious threats to their livelihoods and to the lagoon. But the fisherfolk's tenurial security over the lagoon's resources remains limited, and their formal involvement in the functioning of the Chilika Development Authority is not in place, factors that the fisherfolk claim as being major hurdles in tackling unsustainable practices including amongst their own members.

The role of local leadership

At all the sites that we visited as part of this study, it was clear that an individual or a group of individuals from within the community played an extremely important role in motivating the community, carrying out important tasks and guiding the entire initiative. In Mendha, Devaji Tofa along with a group of elders from the village have played that role, in Saigata a Dalit youth Surbhan Khobragade who initiated the effort continues to play the role. In Satara Tukum, although the initiative was started by the forest department, soon the village youth took on the responsibility of forest protection. The leadership and motivation in Satara is provided together by these youth and the Range Forest Officer, who has been posted here. In Khonoma, the initiative came from Tsilie Sakhrie, although it has now broadbased, with many village council members, youth club members and women association being members of the Sanctuary Management Committee. However Tsilie continues to bring in fresh perspectives and guide the initiatives as and when required. Similarly in other community initiatives in Nagaland and Orissa, local leaders are playing an important role. At Chilika, forest officer Ajit Pattnaik is providing the leadership, having used the opportunity provided by the CDA's structure and authority. Sometimes there appears to be a heavy dependence on these leaders with no one to continue in their absence. In Mendha, villagers have identified this as one of the problems facing the sustainability of the initiative. In last few years they have made many efforts towards including the youth in the village processes. Similar efforts of creating a second line of leadership are taking place in Khonoma. In other areas this has not been felt as one of the problems yet. In developing a decentralised conservation policy it is important that efforts are invested into developing or creating circumstances for such leadership within the community to continue and elements of the same to be passed on to the next rung of leadership. Also it is important to bear in mind that such leaders, working largely for the social cause, are not replaced by leadership emerging because of financial, political, and other ulterior motives.

Local institutions and governance structures

The success of Satara Tukum in achieving forest conservation was beyond doubt (even without any scientific assessment). However, a meeting with the *gramsabha* (village assembly) revealed that there was serious discontent among the villagers about the functioning of the Forest Protection Committee (FPC). Many villagers didn't attend the meeting of the committee and were not sure whether the funds were being utilised appropriately. In Saigata, the initiative seems to be sustaining entirely on the efforts of Suryabhan Khobragade. Although he is well respected and has the support of the entire village, yet there is no institution to take charge in his absence. This brings to the notice the importance to be placed in institution building, particularly where decision-making is decentralised. In Khonoma, Mendha, and to an extent Chilika, the strongest initiatives in our study, much attention has been paid towards developing local institutions managing conservation. In Mendha, the overall decision-making body is the *gram sabha*, which also doubles up as the forest conservation committee. Two decades of regular and open discussions have ensured that the functioning of the *gramsabha* is regularly modified and improved based on the village needs. To ensure transparent and fair governance, the village has taken a decision to implement decisions by consensus only. They have also worked out a detailed system of keeping accounts and regularly explaining the accounts to the entire village. In Khonoma, a Khonoma Nature Conservation and Tragopan Sanctuary Trust (KNCTS) has been established under the Village Council to manage the sanctuary. The Village Council has worked out a detailed terms of reference, and rules and regulation regarding the management of the sanctuary. We could not get a detailed understanding of institutional functioning of other village communities in Nagaland; this needs further study. At Chilika, a state-established institution, the Chilika Development Authority, has managed to bring about a partial reversal of a fast-deteriorating situation. Critical to its success has been the strong mandate given by the government, backed by the Chief Minister, to bring on board all relevant departments and agencies, and some (though limited) participation of the local fisherfolk. However, formal involvement of the Chilika Matsyajibi Mahasangha has not yet been achieved, and the involvement of panchayat raj institutions remains limited especially around the lagoon.

In Dangejheri in Orissa the functioning of the women looking after the issues of forest protection appeared to be extremely informal. However, so far Dangejheri does not face issues of fund transfers and resource allocation. Once these issues become important a need for a more organised yet transparent system is likely to be felt. In implementing decentralised conservation policies, it is important that while entrusting the village community with the responsibility of resource management and protection, time and effort is spent in building institutions and capacities of those institutions to handle such responsibilities.

The role of the “outsider”, and external institutional support

The conserving communities are highly influenced by processes outside of the community or the village. As Devaji Tofa of Mendha village had expressed “however autonomous a decision-making process in a village may be, a village in these times cannot be completely independent of the world outside”. Neo liberal economic policies and open market systems have penetrated even the remotest of villages. Communities remote in location and rich in natural resources are now dependent on the markets and money. In fact merely meeting subsistence requirements is rarely an objective of natural resource management. After having achieved empowerment, ecological functions and basic biomass needs, most communities look at natural resources as a means to fulfil their economic needs as well. The few

exceptions to this are probably the sacred groves and the wildlife protected areas in Nagaland. Although even in these cases the protected area is completely inviolate but the surrounding areas are exploited often for economic returns. However, the markets with which these communities interface are often highly exploitative. Government policies often end up supporting the exploitation. For example Mendha and surrounding villages that are rich in non timber forest produce (NTFP) have been trying to develop a market for their produce. However, tendu patta (*Disopyros melanoxyton*), Mahua (*Madhuca indica*) and other NTFP that they collect have been nationalised by the government and cannot be sold in the open market. This makes collectors dependent on the government approved contractors or government run purchasing centres. Both of these do not give the collectors desired prices. Developing fair trade market linkages, and as mentioned above, developing sustainable harvest levels could prove crucial in sustaining CCAs in future.

At Satara Tukum the villagers have not been as successful in creating livelihood and employment options as in Mendha. A great amount of effort and time is spent by the villagers in protection and patrolling of the forests. This is often at the cost of wages that they would have earned, opportunities for which are otherwise few and far between. Communities are not in a position to find out about any beneficiary schemes that may be available from the government. Remoteness of the area does not bring about other employment opportunities easily. Villagers clearly expressed a need for a body at the level of the district, that could help them in exploring employment opportunities on a regular basis and also guide them towards a sustainable conservation effort. It is therefore important to not only create a decentralised decision-making system but also a decentralised facilitation system. In some areas, such systems have emerged organically, such as in Orissa (the Federation) and Nagaland (the tribe-level Public Organisations)

The national and state policy environment within which these initiatives are located have a great influence on their success and failure. For example, despite a widespread community forestry movement in Orissa there is still no state level policy to facilitate or support these initiatives. The protected forests are either reserved forests or disputed forests which can be claimed by the government at any point in time. In Satara Tukum, the initiative was started by the Forest Department under a World Bank funded programme. However, as soon as the funds finished the department could not sustain the initiative, although the enthusiasm among the villagers continued to be very high. Lack of resources has also diminished the interest in the department. Without external support the village is now finding it difficult to sustain the initiative. In Chilika, on the other hand the state policy environment has been highly conducive and has contributed towards the initiative. Chilika Development Authority (CDA) has been given the authority to be able to coordinate with various line agencies as well as freedom to interact with the local people in productive ways.

In case of Mendha and Saigata the support and encouragement from external non government organisations, individuals and sensitive government officers have played a very important role in sustaining the initiative. Villagers in Mendha, realising the importance of impartial information in gaining power, started what they call “abhyas gat” or study circle. This provides a platform for outsiders to come and interact with the villagers, share experiences and information. These interactions have played a crucial role in helping the villagers in making informed decisions. In Satara no such platform exists, although there are many internal issues related to the initiative as well as larger external factors that influence their initiative that the villagers would like a better understanding of. In Ranapur, Vasundhara, a NGO based in Bhubaneshwar has played a critical role in facilitating the growth and guiding

the direction of the Ranapur Federation. Without such support at critical junctures the federation would probably have found it difficult to sustain its activities. In Nagaland, the Chakesang People's Organisation has played a crucial role in spreading the awareness about the damages from extensive hunting and indiscriminate fire. In many cases when the Village Councils fail to deal with the offenders, the pressure from CPO help adherence to rules and regulations. CPO also works as a district level support platform for these communities as and when needed. Even at Khonoma in Nagaland, which is among the well known villages in the state and has many creditable and visionary leaders to support the initiative, the villagers have expressed a desire for regular encouragement from the outside.

CCAs need a decentralised support system, along with a central (state and national) framework (including legal and policy regimes) that facilitates such a system. These could help by identifying the needs of the organically developed existing systems such as the Ranapur Federation or Chakhesang People's Organisation and strengthening those. In areas where such structures do not yet exist, but there is a potential, then the government or NGOs need to provide need based support for the same. In areas where currently there are no possibilities of such systems developing organically then to create such a forum with authentic and complete participation of the local people. The existing spaces such as the state biodiversity boards or if there are other such mechanism already in place can be explored for this. Such a body if created should be well represented by government line agencies, non government agencies, individuals associated with the initiative, and members of the concerned community. Its important that this body:

- a. Gains an understanding of the local systems in operation in the community conservation sites in their area.
- b. Carries out an independent assessment of the strengths, weaknesses, needs, and limitations of these initiatives.
- c. Creates a forum for regular interaction and information/experience sharing.
- d. Encourages and supports the community to overcome their limitations, constraints and weakness with appropriately taking into account local sensitivities.
- e. Organises capacity building programmes whenever necessary.
- f. Helps communities monitor the impacts of their activities.
- g. Helps communities create an appropriate and non-exploitative market link.
- h. This body should be careful about not creating dependence of the community.

Legal and policy spaces

All the local sites where conservation initiatives are taking place, except in Nagaland, are on lands under the ownership of the government. The situation in Nagaland is unique, since 88% of the state's land is under community or private ownership.

None of the initiatives mentioned above have a status *vis a vis* statutory law, other than in Nagaland and Chilika, but they do have backing from local or customary law. This makes the initiatives vulnerable, since other than in the Nagaland case, if the government decides to change the land use or management pattern in these areas, communities have no power to stop it. For example, a few decades ago the forests in Mendha were leased out to the paper industry for bamboo extraction. Villagers had no say in that decision, neither were they financially benefited. The only gain was that it was a source of daily wage for many in the village. As the village initiated protection, they realised that the methods of bamboo extraction by the industry were destructive. They had to fight a long battle with the industry and the government to stop the extraction. Eventually, the village was able to stop the

extraction because of its social and institutional strength. However, even today Mendha does not have any legal right over decision-making related to the forests that they are protecting, not even the right of consultation.

Saigatha villagers faced a similar situation a few years ago when they stopped outsiders from entering their forests. They were not only questioned by the trespassers about their authority to protect forests, but the Forest Department officials themselves questioned them. However, they argued with the department that they were merely fulfilling their obligation as the citizens of this country to protect the forests. Reportedly the officers did not have an answer to this, so the villagers were left to their devices to protect the forests. There is no law which makes it mandatory for the government agencies to support the protecting villages, who are left to fight their own battles.

On the other hand when the forests have regenerated or protected rivers have fish in them, government agencies sometimes contract these out for harvest and revenue generation. Not all villagers are socially and institutionally strong enough to fight such moves or to carry on their own fights. For example in some villages in Orissa when women started protecting the forests and apprehended the offenders, the forest officials did not come for help. This discouraged and disheartened the protecting groups as the offenders also got a clear message that the villagers were not backed by the government, whose property they were protecting. With industrialisation being put on fast track in Orissa, many more community conserved areas are under threat. In 2005, according to the reports in local media (*India First* and *Dharitri*), the Indian Metals & Ferro Alloys Ltd group plans to set up Utkal Coal Project at Rajjharan for open cast coal mining. The forest land and other common lands, which fall under the proposed mining area, are densely covered with Sal *Shorea robusta* forests. Four villages, namely Rajjharan, Nandijhor, Goalgadia and Similisahi, have been protecting and managing the forests for last 15 years. These include villages which are under the government sponsored Joint Forest Management scheme.

To be able to understand how well the existing legal system protects CCAs, it is important to understand provisions in law that deal with CCAs in India. There is no one national level policy to recognize conservation efforts by communities, though there are references to such a need in documents such as the National Wildlife Action Plan. Neither is there a law specifically focused on providing support to CCAs. However, there are some limited spaces available in some of the environmental laws, limited because they do not take into account the ground reality of CCAs, their local contexts and local institutions. As far as we know, none of the CCAs have yet taken support from any of the laws and policies mentioned below (though in the case of Nagaland, the state specific law on village councils has been used).

(i) Wild Life (Protection) Amendment Act 2003

Till the year 2002, the Wild Life (Protection) Act 1972 had little to encourage or mandate people's participation in conservation, or to recognise areas conserved by communities. that can be complementary to the conventional conservation model in the country. More recently, two new categories of protected areas were introduced into the Wild Life (Protection) Amendment Act 2003 .

Conservation Reserves: Are meant to elicit people's consent in declaring government owned lands protected for wildlife conservation. This category does open up some space in the law for people's participation in wildlife conservation. Also consultations with local people

before declaring an area a Conservation Reserve is mandatory as opposed to the situation in other protected areas such as national parks and sanctuaries. Considering that local people generally do not come aware of the changed legal status of an area even after years of it being declared a national park or a sanctuary, any consultation (even if not consent seeking) is a step towards some form of democratic decision-making. However, most communities visited during this study and many other CCAs sites, are unlikely to be happy with this category. Though their efforts are on government lands, they have their own well worked out management and regulation institutions, and a high degree of *de facto* control. It is unlikely that these well established institutions would agree to become part of a Conservation Reserve where their only role in decision making is to advise the Chief Wildlife Life Warden who may or may not agree to the suggestions. Additionally, in case of villages like Mendha where the entire village makes the decision, if it were to become a community reserve only a few representatives will be in the committee.

Community Reserves: These can only be declared on community owned lands. Therefore they can be relevant (particularly after a few modifications) to only a few states like Nagaland. However, in its current form the Act does not recognize existing systems and institutions of management and has a uniform prescription for the composition of the local institutions. This would straitjacket a very diverse institutional reality. Finally, there are no guidelines on how these areas are to be declared. For all these reasons, Community Reserves is an inappropriate category for most CCAs.

(ii) The Biological Diversity Act 2003

This newly enacted legislation provides for declaration of Biodiversity Heritage Sites. Since the Act has not defined this, it is open to interpretation. This is both the weakness and the strength of this category. If rules are appropriately framed then this can be used for CCAs. Unfortunately the national level Rules under the Act do not provide any further provisions on this.

The Act also provides for establishment of Biodiversity Management Committees in all settlements, and in theory provides for conservation, equity, and other functions to these institutions. However, the Rules under the Act envisaged that BMCs will be primarily making village biodiversity registers of knowledge! Neither the national rules under the Act or the Act itself give BMCs the power to manage or protect biological diversity within their territory. Also the area under the jurisdiction of the BMCs is unclear. If they are given a right to manage the biological resources within their boundaries, the question is whether this would be the traditionally defined village boundary (much of which is now under state control) or what is specified as the revenue boundary of the village (within which there are hardly any forests or other natural ecosystems anyway). Finally, there are potential problems if the BMC is yet another institution without a cohesive link with existing village institutions, a link that has not been defined in the national Act or Rules. If these aspects are dealt with in Rules (as some states are doing, going beyond the national Rules), then BMCs could become a useful institution for providing legal backing to CCAs.

(iii) Indian Forest Act 1927

The Indian Forest Act 1927 has a provision for declaring Village Forests, under which the village gets powers similar to the Forest Department. But despite being in existence for nearly eight decades, this provision has hardly been implemented. No village forests exist

except a few sites in Uttaranchal, Karnataka, and Mizoram states. If implemented, this can be a strong category to support forest CCAs, particularly the forests on government lands that are currently being conserved by the local communities. Most existing CCAs in India are not just areas under strict protection but also areas from where biomass needs are fulfilled in a regulated manner. The village forest category entails handing over government controlled reserved forests to local villagers for conservation and sustainable use and hence suits the purpose well. Many JFM villages such as Satara Tukum and others such as Mendha and Saigatha have been demanding to be declared Village Forests, without much success.

(iv) Panchayat (Extension to Scheduled Areas) Act 1996

The Panchayat (Extension to Scheduled Areas) Act 1996 (PESA) was passed in order to empower the communities that inhabit Schedule V areas. Historically, the Scheduled V areas are those, which were considered as “partially excluded” under the colonial rule and largely inhabited by tribals. These areas were only partially accessible to the British and therefore difficult to administer, therefore called “partially excluded”. These areas are also rich in terms of natural resources such as forests, minerals and water and thus the people living in these areas are vulnerable to exploitation. The need to protect and empower the communities living in the resource rich Schedule V areas led to the enactment of the PESA. This law for the first time recognized local traditional management practices and conferred a number of rights on the local tribal institutions, including the following:

1. State legislation on the Panchayats should be in consonance with the customary law, social and religious practices and traditional management practices of community resources.
2. Every Gram Sabha shall be competent to safeguard and preserve the traditions and customs of the people, their cultural identity, community resources and the customary mode of dispute resolution
3. The Gram Sabha or the Panchayats at the appropriate level shall be consulted before making the acquisition of land in Schedule Areas for development projects and before resettling or rehabilitating persons affected by such projects in the Schedule Areas; the actual planning and implementation of the projects in the Scheduled Areas shall be co-ordinated at the State level;
4. Planning and management of minor water bodies in the Scheduled Areas shall be entrusted to the Panchayat at the appropriate level;
5. The recommendations of the Gram Sabha or the Panchayats at the appropriate level shall be made mandatory prior to grant of prospecting license or mining lease for minor minerals in the Scheduled Areas;
6. The prior recommendation of the Gram Sabha or the Panchayats at the appropriate level shall be made mandatory for grant of concession for the exploration of minor minerals by auction;
7. While endowing Panchayats in the Scheduled Areas with such powers and authority as may be necessary to enable them to function as institutions of self-government, a State Legislature shall ensure that the Panchayats at the appropriate level and the Gram Sabha are endowed specifically with –
 - (ii) ownership of minor forest produce (or what is called non-timber forest produce or NTFP)
 - (iii) power to prevent alienation of land in the Scheduled Areas and to take appropriate action to restore any unlawfully alienated land of a Scheduled Tribe;

- (vi) power to exercise control over institutions and functionaries in all social sectors;
- (vii) power to control over local plans and resources for such plans including tribal sub-plans

Despite having some revolutionary provisions, this Act has not been implemented in most states, and where implemented has not been effective because of a number of reasons. Some of these reasons include:

1. State governments subverting the powers provided to the gram sabha by diluting the provisions of the central act in their state adaptations, e.g. states like Maharashtra have excluded commercially important NTFP like Tendu Patta (leaves of *Diospyros melanoxylon*) outside the purview of local ownership.
2. Lack of clarity about the area under the jurisdiction of the gram sabha. Particularly, whether all the provisions mentioned above are applicable only to lands under the legal ownership of the village, or also government lands where customary usage, rights and interactions exist?
3. Lack of political and administrative will amongst states to implement the Act.
4. Lack of information about the provisions of the Act among the local inhabitants.
5. Limited applicability, since restricted only to scheduled V areas and not available in non-tribal areas, or even in non-scheduled states which have some tribal population.

(v) National Wildlife Action Plan (2002-2016)

The National Wildlife Action Plan probably provides significant space for community participation in conservation, particularly in PAs. Some of these commitments include:

1. Evolving and prescribing guidelines for local community involvement in different management zones of PAs and adjacent areas. These guidelines would complement the WII guidelines for planning PA management and concurrent ecologically sound community welfare programmes.
2. Designing people participation schemes for all PAs by focusing upon landless families so as to provide them gainful employment, particularly through NTFP.
3. Developing and implementing guidelines for providing incentives and measures for benefit sharing among local communities.
4. Formulating schemes for conflict management, especially for life, livestock and crop damage.
5. Providing a range of incentives to conserve wildlife in different landscapes across different land and water uses: rewards and public honour for commendable conservation work and actions, granting of biomass and water resource rights for personal consumption for communities that have helped protect or restore wildlife habitats, employment in local conservation works, financial rewards and incentives to protect sacred groves, share in penalties extracted from poachers, share in tourism revenues, incentives to move away from ecologically ill-advised activities.
6. Encouraging people to help protect and manage wildlife habitats outside PAs (including community conserved forests, wetlands, grasslands and coastal areas).

All the above action points, however, need a legal tool to be implemented. In its current form the Wild Life (Protection) Amendment Act does not give backing to the above actions, in some cases specifically would hamper them. All these action points have been

mentioned with a time frame in the Plan. However, more than three years after the plan came into existence, little effort has been made towards its implementation.

(vi) State specific Laws

There are some state specific laws and policies which can be more appropriate for CCAs. For example, *The Village Council Act 1978 of Nagaland* is one of the strongest state legislations in the country, providing communities rights to manage their own lands. To be able to do so the community is free to constitute any appropriate local institution. There are a number of community owned and declared protected areas in this state. Efforts are also currently on to give these sites recognition as Community Reserves under the Wild Life Act, which seem to be unnecessary given that the state law is sufficient. Implications of such move are yet to be seen.

(vii) The Scheduled Tribes (Recognition of Forest Rights) Bill 2005

This Bill explicitly deals with granting of forest land and forest use rights to the scheduled tribes. The Government of India has a long standing commitment to resolve the issue of land and forest use rights to the scheduled tribes. The commitment is to give ownership over land which has been occupied by these communities since before 1980. Such land could be encroachments or lands owned by these communities which were never recognised in government records. The Tribal Rights Bill specifies a clear process by which the rights can be settled. This Bill for the first time in the history of forest rights tries to establish ownership over land, as also rights to use and protect forests which have been customarily used by these communities. The Bill also attempts to empower the village gram sabhas to deal with activities that are socially and ecologically destructive. It places clear responsibility on the right holders and the gram sabhas to ensure conservation of natural resources, water sources, habitats and species. The Bill mentions that the local tribal communities will have a right to protect “community forest resources”, although it is not clear whether the phrase “community forest resources” includes forests (reserve forests, protected forests) under government control. If it is clarified that such right to protect could also extended to government owned forests then this could potentially be the most useful category for CCAs in scheduled areas. This Bill is also restrictive in that it is applicable only for tribal communities and not to all forest dependent communities. Therefore villages such as Satara Tukuma and Saigatha cannot avail of it in its present form. There is however a strong demand to extend it to all forest-dependent communities.

Chapter 5

CONCLUSIONS

The broad direction towards decentralized governance seems to be firmly established in India, even if somewhat faulty in conceptualization and weak in implementation. Conservation paradigms too are changing, with much greater focus on participatory mechanisms and the integration of social and economic concerns with ecological ones. In this situation, it is urgent to critically examine the relationship between decentralization and conservation, to understand the weak and strong points of this relationship, and to take appropriate action.

Some broad trends are clear from the case studies and regional situations analysed in this report, as outlined in the Key Lessons above. Based on this, the following would be critical steps forward:

1. Greater and more in-depth understanding of ongoing initiatives in decentralization and community based conservation, including their ecological and socio-economic impacts, the institutional dynamics with which they are handled, and their relationship with the external context.
2. Greater social recognition of the ongoing initiatives.
3. Action to tackle the critical threats and challenges facing these initiatives, including those emanating from the communities themselves such as inequities in decision-making and benefit-sharing, and those emanating from external forces such as unsustainable 'development' and commercialization.
4. Changes in existing policies and laws, to further facilitate and enable community based approaches, and meanwhile, clearer guidelines to maximize the available spaces in these policies and laws. Amongst the critical changes/strengthening needed is with regard to tenurial rights and responsibilities of local communities, over natural resources.
5. Incorporation of community based approaches into relevant existing schemes and programmes, including through the orientation of staff working in these.