CONSERVING NATURE WITH COMMUNITIES
Lessons from Real Life Experiences in South Asia[1]

Ashish Kothari
Kalpavriksh, Pune, India[2]

A UNIQUE MEETING

A unique meeting took place in early September 2000 in the Sariska Tiger Reserve, western India. For perhaps one of the first times in India's history, villagers, forest officials, academics, wildlife conservation NGOs, sat together to initiate a participatory management system for the wildlife reserve. Over three days, they presented their respective positions, made commitments for reducing human pressure on the one hand and enhancing conservation benefits to community members on the other, and pledged to protect the tiger and all creatures that lived with it. Indian government officials even pledged financial support for the process, on the spot. A decision was taken to form an overall Sariska Tiger Reserve Management Committee consisting of villagers, officials, and NGOs. Over the next month, the gist of the discussions will be taken village to village with the help of a local NGO (Tarun Bharat Sangh) and the ground staff of the Forest Department, and detailed action plans will be formulated. Sariska may well be the first national park in India to move towards collaborative or joint management.

To anyone who knows the history of official wildlife conservation in India and other countries of South Asia, or for that matter much of the world, this step is nothing short of revolutionary. For the past century or more, governmental management of wildlife habitats has been centralised in the hands of a small bureaucracy. It has been based on the assumption that local people are at best, helpful in labour-intensive works, and at worst, destructive individuals who should be removed from the site as soon as possible. It has also assumed that all human use of natural resources must necessarily be destructive, and therefore that wildlife reserves should be devoid of human presence (except, for some strange reason, tourism!).

For most communities in South Asian countries, the most important stake in nature is an assured access to biomass resources: to fuel, fodder, medicinal plants, thatch, honey, grass, fish, and the dozens of other natural products that they depend on for livelihood and cultural sustenance. That is where official wildlife policies and laws have gone wrong in the past: in curtailing not only destructive resources uses (which was justified) but also sustainable ones; in converting legitimate users into criminals almost overnight; in forcing people to "steal",

---

[1] This paper, to be presented at the 2nd World Conservation Congress of IUCN, Amman, 3-11 October 2000, is based on field-based and theoretical work over the last 15 years or so, including two specific projects: Towards Participatory Conservation in India, coordinated by the author at the Indian Institute of Public Administration, New Delhi, under the sponsorship of Society for Promotion of Wastelands Development and Ford Foundation; and the South Asian Regional Review of Community Based Conservation, conducted by the author and two colleague members of Kalpavriksh, under the Evaluating Eden project of the International Institute of Environment and Development, London. Experience has also emerged from the coordination, by Kalpavriksh, or a national Conservation and Livelihoods Network (CLN) over the last few years. References of publications emerging from these and other studies are given at the end. Acknowledgment is due to Neema Pathak, Farhad Vania, Bansuri Taneja, Saloni Suri, Neena Singh, and others who have been critical in evolving the ideas and information given here.

[2] Kalpavriksh is a 20-year old conservation and development organisation, based in New Delhi and Pune, India. Contact: Apt. 5, Shree Datta Krupa, 908 Deccan Gymkhana, Pune 411004, India. Tel/fax: 91-20-5654239; Email: ashish@nda.vsnl.net.in.

bribe, collude with poachers, and in other ways undermine conservation efforts; and in alienating people from their own homes. Coupled with the obvious hypocrisy of the elite conservation class, which zoomed about in cars in core zones from where villagers were kicked out, or which did not bat an eyelid in lining their houses with marble and granite possibly mined from a wildlife habitat, it is not surprising that the rural masses have developed a strong antipathy to "government tigers" and "government forests".[3]

This is changing, albeit slowly. What happened in Sariska is the cutting edge of a silent revolution that is taking place in the way that conservation is envisioned and practiced across South Asia. From a centralised, elitist strategy, it is becoming decentralised, participatory, mass-based. From a sole focus on wildlife protection, it is moving towards more holistic biodiversity conservation, integrated with livelihood security of communities. In so doing, of course, it will encounter pitfalls and hurdles. Participatory conservation is by no means a panacea, nor is it smooth sailing…but as a direction, it is inevitable and unmistakable.

This paper does not enter so much into the arena of what is *wrong* with official conservation policies and programmes, but rather with what can be learnt for such policies and programme from successful, and not so successful, initiatives involving communities. It points towards the direction in which changes are, or should be, taking place. It also relates the experiences of South Asia with the recent Policy on Social Equity in Conservation and Sustainable Use of Natural Resources, adopted by the IUCN Council in February 2000.

SETTING THE SCENE: CONSERVATION AND PEOPLE IN SOUTH ASIA[4]

The region of South Asia covers seven countries: Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka. It contains over one-fourth of the world's population, and harbours some of earth's most diverse ecosystems. Three of the 18 global biodiversity 'hotspots' identified by Myers et.al. (1988, 1990) occur in this region.

The region's countries are culturally and politically extremely diverse, with at least three major world religions holding sway, and political regimes ranging from royal monarchy to democracy to dictatorship. Yet, there are many points of commonality: they have a common colonial past, they share a great deal of biodiversity amongst them, and their current natural resource management regimes are fairly similar. A comparative assessment of community-based conservation of biodiversity is therefore very fruitful, yielding both elements of diversity and uniqueness on the one hand, and of commonality on the other. In particular, a cross-country study is likely to come up with many points in which one country of the region could learn from the other, rather than having to rely on 'experts' from outside the region (in particular from the industrialised countries).

Though with common elements, each of the countries has its own peculiarities[5]:

Bangladesh hosts a major part of the largest mangrove forest in the world - the Sundarbans, and a huge number of inland water bodies. Fishing seasonally occupies 75-85% of all rural households. Some 26 government departments have responsibility for some or other aspect of water or fishing management. Government regulations are supposed to prioritise the needs of traditional fisherfolk, but a powerful nexus of contractors, politicians and moneylenders prevents this. However, new policy - an aquatic version of land reform - aims to negotiate more secure leases and a greater share of fishing income to those most dependent on fishing.

[3] For more detailed exposition of this trend, please see Kothari et.al. 1995; Kothari et.al. 1996; and Kothari 1999.
[4] Adapted from Kothari et.al. 2000; for more detailed treatment of country-wise trends, also see individual essays in Kothari et.al. 1998.
[5] For the purposes of this study, Maldives was not taken into consideration at all, due to difficulties in establishing a local partner.

In a country with a huge number of aid projects, community based natural resource management is increasingly talked about, but there is little to show for it yet.

Some initiatives have been recently started on community-based fisheries management, and involvement in forest and protected area conservation. These are largely under the influence of external donors, though of course there are a number of local NGOs/academics/activists who have been advocating such an approach.

Bhutan has 70% of its area covered in forest, a relatively low population and development strategies that the State claims are closed monitored from the environmental and cultural sustainability point of view. A unique feature of this country is its continuation of a royal monarchy. Information on the country is not easy to come by; there is not much documented, and the government is rather tight-fisted about giving access to records. There may have been a significant conservation tradition, building on Buddhist culture, but not much appears to be documented on its precise nature, and whether it is still in use or being built upon by the State.

Conservation policy and decision-making, following a period of alienation of local communities, is slowly moving back in the direction of local involvement. For example, local communities are managing pastures within the Jigme Dorji National Park, through a system of rotational grazing and levying of taxes on the grazing of yak herds. Traditional boundaries between village forests have also been recognised by the park's planning. Recent government forestry programmes seek to transfer forest management responsibilities to local management groups, akin to the Nepal example.

India, a vast country with a multitude of ecosystems and peoples, hosts many examples of local sustainable use based on traditions of self-restraint and abstinence. These come in several forms: restrictions on the methods of harvesting and amounts harvested; religious protection of species or habitat patches; protection at certain stages of the life-cycle; and restrictions on the basis of gender, age and social standing of the user. The effectiveness of these measures has changed over the years. For example, sacred sites may have covered about ten per cent of the land and water in pre-British India, but only about a thousandth of these sites may still be protected.

Official wildlife conservation policy has managed to reverse, to some extent, the decline in wildlife population. However, it is still largely based on an elitist assumption that the only way to save wildlife is to exclude local people from protected areas (PAs), and through management by a trained bureaucracy. This approach has caused severe hardships to communities living in and around PAs, alienated them from their surrounds, caused severe distrust between them and forest/wildlife officials, and led to neglect of wildlife conservation issues outside PAs. A number of people's agitations have highlighted these issues.

The government has responded during the last two decades with programmes of joint forest management in degraded forest areas, and ecodevelopment in and around protected areas. These two main programmes have a mixed record: in some cases they have helped local people to gain sustainable livelihoods, but both suffer from a lack of actual power-sharing with these people, and from the same exclusionary focus that characterised conventional policies. A major lesson from both is that handouts are not an adequate stake for communities, but rather that one of the most effective long-term stakes is tenurial security over livelihood resources, with appropriate responsibilities built in. This is also the lesson from a number of community initiated efforts at conserving natural habitats and wildlife. Based on these experiences, several NGOs, community representatives, and some officials are advocating joint management strategies for wildlife reserves, but this has yet to gain formal acceptance. Recent legal measures, especially the devolution of powers to village level institutions, have boosted such advocacy.

Nepal has become famous, in recent years, amongst advocates of local resource management for handing over rights (though not ownership) to some 400,000 ha of national forest to more than 7,000 community forest user groups. This has been accompanied by progressive changes in forest related policy. With very little investment by government, community forest management capacity has been enhanced, some of the mid-hills forests are now richer, and wildlife has significantly increased. Recently, a national federation of forest users groups has been formed.

Wildlife conservation policies, however, have not been so community-sensitive till very recently. Issues similar to India's have been raised here too. Some PAs have in fact been protected by the Royal Nepal Army, whose role has been "effective" from the wildlife point of view, but controversial with regard to local communities. There are signs of change, the strongest being recent measures which assist in devolution of management responsibilities to communities in so-called Conservation Areas (mostly in the mountains). The large Annapurna Conservation Area, for instance, is managed by an NGO and involves communities at various levels. In the plains, legal amendments have mandated revenue-sharing with communities surrounding PAs. Experience with these measures is relatively new.

A large number of these initiatives, both in forestry and in wildlife conservation, have been catalysed by donors. However, not so well-documented but nevertheless significant, are a number of community or NGO-initiated efforts at community-based conservation.

Pakistan, like India, is still pursuing a state-dominated approach to conservation of forests and wildlife that stems from the colonial era. However, compared with India there is less evidence of a history of local resistance to these top-down strategies. Combined with the recent record of more autocratic forms of governance this may explain why, with rather few documented exceptions, community-managed conservation efforts are recent phenomena catalysed by donor-supported projects and national NGOs.

A number of such area-based projects have sought over a period of some twenty years to address conservation objectives, through efforts which prioritise development of village organisations and improvements in local livelihoods. Some recent government initiatives have begun to improve the potential for community based conservation - in North West Frontier Province for example, the government has formalised several community game reserves. A feature of some of these initiatives is the focus on "sustainable harvest" of wild mammal species, as a means of generating benefits for local people; this is extremely rare in the South Asian context, the only other example of this being from Nepal.

Sri Lanka, it is said by many, has only one truly traditional community (the Veddhas) left, as almost all sections of society are involved in some way with the modern mainstream economy. Yet there are still several million people dependent on natural resources for survival. There is significant human-wildlife conflict, especially related to species such as the elephant. A dominant historical feature which has current bearings, is the almost total take-over of lands and waterways by the colonial administration, a move that created strong alienation amongst local communities which earlier had significant traditions of sustainable management.

It is increasingly realised that government cannot effectively manage natural resources without the support of local people. NGOs and donors are proving catalytic in an increasing number of initiatives, but there appear to be few recorded models of self-initiated community management to build on in forest and other terrestrial ecosystems. Several recent initiatives and policy changes have propelled Sri Lanka into a fairly far-sighted course in coastal management, with significant community-based projects, which other maritime countries in the region can learn from.

WHERE COMMUNITIES CARE: SOME CASE STUDIES

Countries in the region are therefore at different stages in dealing with a history of top-down, elitist and often ill-conceived wildlife protection policies which caused widespread human suffering, and made it impossible to build up a mass support base for conservation. There are increasing numbers of cases in which an alternative, community-based, approach is adopted. We have selected and studied a range of them, some from secondary literature and interviews, others by intensive field work. The locations and key characteristics of the case studies are shown in the table below.

It is important to note that these case studies have been chosen keeping in mind a broad definition of wildlife, which includes both plants and animals, and both terrestrial and aquatic species/ecosystems. Hence efforts at managing/conserving natural habitats, as well as wildlife populations, fit within this scope.

Case study	*Key characteristics*
Bhaonta-Kolyala villages (and Arvari catchment / Sariska Tiger Reserve), Rajasthan State, India[6]	Agricultural communities perceived serious problems due to local forest degradation, and severe water shortages. With local NGO support, community-initiated water harvesting structures were built. With this came the realisation that catchment forests needed to be conserved, for water, fuel, fodder. The *gram sabha* (village assembly) banned the cutting of live trees, and stopped livestock from outside the village from going in for graing. A village fund and grain reserve was built up through farmer contributions. *De facto* village control over the regenerated area was asserted. The return of wildlife is a source of local pride, as symbolised by the declaration of the several hundred hectares of the regenerated area as a 'public sanctuary'. The initiative is spreading - a “parliament” from several dozen villages is proposed to regulate natural resource management in the whole catchment of the Arvari river. In addition, successful conservation and development work in villages within the Sariska Tiger Reserve, has directly led to the official (if yet informal) acceptance of a joint management model (as described at the beginning of this essay). However, some issues of inter-village conflicts over forest use, and of local inequity, remain unresolved.
Jardhargaon village, Uttar Pradesh State, India[7]	Farmer communities in Himalayan foothills were mobilised by several individuals inspired through work with the Chipko ("hug-the-trees") movement, to do something about indiscriminate tree-felling by villagers. A *van suraksha samiti* (forest protection committee) was set up and community-initiated conservation efforts began. After 18 years of protection, several hundred hectares of forest have regenerated. Botanical assessments indicate the forest to be one of the most diverse in the region. The reappearance of large mammals is another valued by-product. There is also strong interaction between the VSS and other local institutions, including traditional irrigation systems and local initiatives in seed conservation. Key issues to be confronted include a lack of legal authority and erosion in traditional authority over the forests, and shortages of livelihood options linked to conservation.
Mendha-Lekha village, Maharashtra State, India[8]	Forest-dependent tribal groups fought for traditional rights to non-timber forest products, spurred by their earlier involvement in a successful struggle against a proposed hydroelectric project. *Gram sabha* and *VSS* institutions promulgated strong rules on extraction from the 1800 hectares of forest under it, and exclusion of outsiders without permits. Problem-solving *abhyas mandals* (study circles) were also set up for a range of issues. A strong sense of self-reliance has developed and government officers now come to discuss issues with the villagers at an equal plane. The village convinced the Forest Department to let them be the first in the state to include standing natural forest in a Joint Forest Management scheme. Traditional hunting, the sustainability of which is questionable, remains an unresolved issue.

[6] Shresth and Devidas, In press.
[7] Suryanarayanan and Malhotra, In press.
[8] Pathak and Gour-Broome, In press.

Kokkare Bellur village, Karnataka State, India[9]	Peasant village marked by a strong tradition of protecting nesting storks and pelicans, which breed in the midst of the village. Some local earnings result from the bird guano. However, modernisation has weakened the traditions, and individuals with clout in the village have cut some nesting trees. Development in the surrounds is also inimical to conservation, e.g. the Fisheries Department has introduced exotic fish in reservoirs, encouraging commercial fishing which competes with waterbird use. Forest Department has moved in with good intentions, but inappropriate 'incentives' to save the trees. A local NGO has initiated efforts to revive the traditions, get local youth interested, and focus attention on the threats to the birds.
Annapurna Conservation Area, Nepal[10]	Large (over 7600 sq. km), high-altitude area which had once become considerably degraded due to local over-use and unregulated tourism. Peasant and pastoral communities with serious lack of livelihood options. Perhaps Asia's first completely NGO controlled conservation area, it has significant community involvement in managing tourism, conserving forests, and other aspects of natural resource use. Forests in many places have regenerated, and wildlife populations revived. Out-migration remains an issue, as does the unequal distribution of benefits being generated from community based conservation and eco-tourism.
Hushey Valley, Northern Areas, Pakistan[11]	High altitude area, spread over 800 sq. km., with considerable decline in wildlife populations till recently, caused by hunting and habitat degradation. Earlier distrust between local people and government officials was slowly broken down by NGO- and government-initiated project that promised considerable benefits from an integrated conservation and development project. One of South Asia's few examples where revenue from mammal hunting is the major incentive for conservation, specifically of the ibex and its habitat. There is a small tourism component, and recent attempts at diversifying the livelihood options.
Rekawa Lagoon, southern Sri Lanka[12]	A large (450 hectares) lagoon and mangroves complex in southern Sri Lanka, earlier subjected to unregulated fisheries operations, destruction of mangroves, and over-exploitation of coral reefs for lime kilns. A local university-backed project initiated an alternative method of stocking the lagoon with shrimps (instead of intensive aquaculture which has threatened the northern coastline of the country), generating considerable economic benefits. This and another donor-backed project spread local interest in conserving other resources of the area, by setting up or strengthening local village institutions. Government agencies also accepted the need to revive local knowledge and practices. Villagers have now stopped 53 out of the 57 kilns and invested in other livelihood activities. A lagoon fisherfolk cooperative has also been set up with strict rules about fishing, coral and mangrove use. The sustainability of the effort is still unsure, as subsequent restocking of the lagoon by villagers has not taken place, and the help of the university group has been sought again.
Kanis, Kerala State, India[13]	The Kani tribe of Kerala, southern India, has yielded valuable knowledge regarding the use of the plant *Trichopus zeylanicus*, which has resulted in the development of a herbal drug with a potentially large market. The research institution which 'discovered' this and helped develop the drug has entered into a benefit-sharing arrangement with the Kanis. However, problems of lack of access (the forest where the plant occurs belongs to the Forest Department, which has been reluctant to allow its collection), of what precisely constitutes an "equitable" benefit-sharing arrangement, and of the sustainability of resource extraction, have had to be tackled.
Saigata village, Maharashtra state, India[14]	A multi-caste village with the traditional hierarchies that often defeat conservation initiatives, the residents of this settlement realised, about 20 years ago, that forest degradation in their vicinity was causing serious problems. People were struggling with their daily fuelwood and fodder requirements, and increasingly, they were having to purchase them in the market. Under the leadership of a "lower caste" youth, Suryabhan Khobraghare, the entire village united to revive its forests. Considering the strong hierarchy of the Indian caste system his leadership was remarkable in itself, Twenty years later the

[9] Manu and Jolly 2000.
[10] Krishna et.al. In press.
[11] Raja et.al. 1999.
[12] Ekaratne et.al. 2000.
[13] Anuradha 2000.
[14] Vagholikar 2000.

	village has a full-fledged forest and uses it in a manner that it thinks is sustainable. The village is also proud of the returning wild animals in the forests. Issues of alternative livelihoods are to be addressed.
Chakrashila Wildlife Sanctuary, Assam, India[15]	Rich forest area with tribal populations, with hunting and over-extraction of forest resources by villagers being used by timber merchants and poachers. An NGO established itself in the area and established good rapport with local youth, who began confronting poachers and smugglers. Kitchen garden and NTFP projects raised villagers' incomes slightly, while illegal activities were brought to an end. The area has regenerated well, and 4500 hectares have been declared an official wildlife sanctuary at the instance of the NGO. Informally, local management remains with the villagers and the NGO.
Kalakad-Mundanthurai Tiger Reserve, Tamil Nadu state, India[16]	One of the first major 'ecodevelopment' projects of the Government of India and the state government, funded by the World Bank, this is reported to have been relatively successful in reducing the excessive pressure of human use on the Tiger Reserve, and generated livelihood benefits from alternative sources for the affected villagers. The residents are now supportive of the reserve, and have helped to oppose a major road scheme that would have cut through the reserve. The approach, however, remains one of exclusion, and there is little community involvement in decisions regarding the management of the reserve.
Kailadevi Wildlife Sanctuary, Rajasthan State, India[17]	Dry forest area spread over 674 sq. km., buffering the world-famous Ranthambhor National Park, and part of the Ranthambhor Tiger Reserve. Facing considerable erosion of their fuel/fodder base, villagers instituted their own institutions to protect forests over several hundred hectares. New practices include a ban on carrying an axe into the forest, rotational grazing, stopping migratory graziers from entering the area, etc. Initially cold to these efforts, the Forest Department has recently tried to emulate them by establishing ecodevelopment and forest management committees in some villages. Officials and villagers especially work together in the matter of stopping the incursions of massive herds of migratory livestock. There is now extensive regeneration, though changes in wildlife populations are not clear. NGO initiated dialogues have discussed the issue of joint management of the sanctuary by the villagers and the Forest Department, but there is resistance from the latter.
Dalma Wildlife Sanctuary, Bihar State, India[18]	Tribal communities who find themselves inside a recently declared wildlife sanctuary (193 sq. km.), are heavily dependent on the forest resources. Many self-initiated and some NGO-catalysed forest protection committees have worked well, partly on the promise of benefits from timber and non-timber forest produce harvesting. These committees remain unrecognised by the Forest Department. The latter is now contemplating establishment of ecodevelopment committees. However, villagers are unhappy that earlier promises of sharing benefits, have not been fulfilled since sanctuary regulations do not allow timber harvesting. Sporadic discussions on possible joint management strategies have been held in the 1990s.
Kudada Joint Forest Management, Bihar State, India[19]	Forest protection initiatives over 2500 hectares, in predominantly tribal area. Started by the village community itself in the 1970s, the Forest Department later (in the early 1990s) stepped in with the Joint Forest Management scheme, which offered a share of forestry revenue.
Makalu-Barun National Park, Nepal[20]	Somewhat akin to the path-breaking Annapurna Conservation Area initiative, this effort is unique in that it is a collaborative effort between the Nepalese wildlife department and a foreign NGO. Covering 2330 sq. km. of valuable mountainous habitat, participatory management of the Park has been promoted through empowerment of user groups. These groups function by building on existing customary rules, institutions, and practices. There is a strong focus on livelihoods and community welfare measures. Gender issues, and monitoring, have been identified as areas of weak focus.

[15] Datta 1998.
[16] Melkani and Venkatesh 1999; Personal conversation with Sugato Dutta, Ecodevelopment Officer, Kalakad-Mundanthurai Tiger Reserve.
[17] Das 1997.
[18] Christopher 1997.
[19] Singh et.al. 1995.
[20] Various documents of the Department of National Parks and Wildlife Conservation and Woodland Mountain Institute; and Rodgers and Uprety 1997.

Khunjerab National Park, Pakistan[21]	Conventional conservation strategies had created a situation of hostility and distrust in this 2270 sq. km. protected area. NGOs and donors got together to plan an alternative management strategy that focused on alternate sources of livelihood, education, and inter-institutional coordination, backed by solid field research. Implementation of the plan is at a nascent stage, and continued hostility from one section of the area's population remains a constraint.
Kahalla Pallekelle, Sri Lanka[22]	Area with severe human-elephant conflict, partly due to the pushing of elephant populations down south due to the war and dams in the north and north-east. A donor-aided project has attempted to tackle the problem in a multi-pronged way, building water facilities for the elephants in the forest, researching the major elephant routes and suggesting that villagers avoid these, creating an elephant damage compensation fund, etc. Local village institutions manage some of this, but there continue to be NGO and donor inputs. The initiatives have reportedly reduced the conflicts, by reducing both the crop (and other) damage caused by elephants, and the number of elephants killed by farmers in self-defense.
Ritigala Strict Nature Reserve, Sri Lanka[23]	Rural populations around one of the country's most strictly protected areas (1525 hectares), have serious livelihood problems. Once high levels of illegal activity by these villagers, have declined with the initiation of employment and livelihood opportunities as part of a donor-aided project. The Nature Reserve being a major botanical store-house, medicinal plants and their processing are one of these opportunities. Interesting social re-alignment has also taken place, with people of different religions coming together under the initiative.
Hikkaduwa Marine Sanctuary, Sri Lanka[24]	Degraded coral reef and marine area, heavily used by tourists. Though recently declared a sanctuary (tiny: 48 hectares), there was not much protection effort until a community-based initiative was sponsored by donor agencies. A bold attempt to bring together disparate groups – local fisherfolk, glass-bottom boat owners, hoteliers, and others – was initially successful, but when donor-funded catalysts were withdrawn, the effort reportedly collapsed. Problems of inter-departmental coordination also remain an issue.
Muthuraja-wela Marsh, Sri Lanka[25]	Coastal lagoon and marsh area (over 6200 hectares), very rich in aquatic wildlife, but with severe pressure from several sources, and very complex social dynamics. NGO initiatives towards conservation with local fisherfolk, have helped to stave off large-scale diversion of the marshes for infrastructure development. Integrated conservation and development planning has been initiated with donor funding, starting with considerable social and ecological research. Community participation is reportedly uneven, being strong in the lagoon with the fisherfolk, but weak in the marshes with communities who mostly work outside the area.
Morjim beach, Goa state, India[26]	Spurred on by a retired army official who came back to his native village, fisherfolk of a quiet Goan beach have taken to protecting the nesting sites and eggs of the Olive ridley turtle. The Olive ridley is an endangered sea turtle, and in this area was especially threatened by poaching of eggs and habitat destruction. The fisherfolk now earn a better livelihood from discerning tourists who come and stay in their huts, converted into lodges, and are supported by the Forest Department.

WHAT LESSONS CAN BE LEARNT FROM THESE INITIATIVES?

Increasing research into community-based initiatives is providing insights regarding the course that natural resource management should take in the South Asian region. One major question is: how are community efforts different from the conventional, official conservation practices? What makes these initiatives succeed or fail? The following lessons are important:

[21] Ahmed 1996; Jamal 1996; Slavin 1993.
[22] Jayatilake et.al. 1998; DeCosse and Jayawickrama 1998; Nakashima nd; and personal conversations with several participants of the initiative.
[23] Jayatilake et.al. 1998; and personal conversations with participants of the initiative.
[24] HSAM 1996; and personal conversations with participants of the initiative.
[25] CEA and Euroconsult 1994; Samarakoon 1995; and personal conversations with participants of the initiative.
[26] Kutty 2000.

Decentralized, site-specific governance: One common factor in most successful community initiatives at natural resource conservation is the fact that they are decentralized, site-specific, and varied in their objectives and approaches. This is unlike most government or big NGO efforts, which are largely top-down with uniform policy frameworks and guidelines. Decisions taken at faraway centres rarely take into account the local concerns. For example, in the Indian village of Mendha (Lekha), the local people did not want forestry operations in their forests as they preferred a diverse forest to monocultures of commercially valuable species, but it took them years to get the government to agree.

Integrating conservation and livelihoods: In addition, government efforts tend to concentrate just on the conservation aspect. In reality, conservation of natural resources cannot be alienated from livelihood and other community development issues. For example, some villages inside Kailadevi Sanctuary in Rajasthan, western India, fall under the severely water deficient zone. For a long time, the basic need for water was completely ignored by both the conservation as well as development authorities. This being a protected area (PA), people's access to the forest resources to meet their basic day-to-day needs had been abridged, and yet people were expected to take part in the conservation program when they were dying of thirst! In contrast, in Bhaonta-Kolyala villages, the NGO first focused on meeting the basic needs of people for water and employment. Subsequently the people themselves realized the importance of conserving the catchment forests. This may be why community-led initiatives are often multi-faceted, where conservation of resources is a part of livelihood insurance, and linked with social and cultural dynamics. The ACAP (Nepal) and Hushey (Pakistan) experiences also demonstrate that an overall yet ecosensitive community development is an important aspect of the benefits that are envisaged for the community.

Dissolving artificial development/conservation boundaries: While a community views all developmental, land use, cultural and other processes as interconnected, the government's orientation is vastly different. It is organized in a highly compartmentalized manner with different agencies handling different aspects of governance. Very often these line agencies do not coordinate with each other, or worse, work at cross–purposes. As a result, there is no integrated development or conservation plan. In addition, the resources get dispersed between these agencies and hardly lead to the benefits that they are intended at. By forming the Arvari *sansad* (parliament), the people in Bhaonta-Kolyala and other villagers situated along the catchment of River Arvari have tried to manage their natural resources by basing the boundaries for the management on ecological rather than administrative considerations. People in Mendha have acted as mediators between various government agencies, ensuring that these agencies pool all the available resources for village development. In ACAP, instead of handling villages individually, the entire area has been declared as a Conservation Area. The expectation is that this will ensure that economic and market policies and programs support the efforts of the local community. In India and other countries, with the realization that integrated conservation and development programs will be far more effective than purely conservation ones, governments are initiating "ecodevelopment" measures in a number of areas, including protected areas such as Kailadevi Sanctuary. Though still restrictive in its approach (e.g. in not moving towards an integrative model of conservation, or not tackling issues of community tenurial rights), in some places such as the Kalakad-Mundanthurai Tiger Reserve (KMTR), southern India, such measures have helped to reduce conflicts and win over local communities towards conservation.

Conservation at landscape level: Conservation cannot be separated from other developmental processes both at the local as well as national level. Changes in one can lead to serious impacts on the other, often contradicting each others' objectives. For example the

national mining policy and the conservation policy may be contradictory; in turn, both may conflict with the laws related to empowerment of local institutions. This calls for a detailed landscape-level or regional planning. Such planning begins with local people planning for their area and then consulting with larger level authorities that, in turn, help to coordinate the efforts of individual villages. Examples of such landscape level planning are scarce in the region, but policies are moving towards it, and people's initiatives such as that of the Arvari *sansad* will help in understanding what works on the ground.

Transparent, equitable decision-making: The process of decision making is an important aspect of any governance, local or national. Most of the community initiatives have shown the success of transparent, equitable, and well-informed decision making. In a successful community initiative emphasis is given to equal representation of all sections of society, and often to each household, in information-sharing and subsequent decision-making. In Saigata and Jardhargaon, despite a strongly hierarchical village structure, impressive unity has been achieved on the matter of forest conservation through institutional structures that work with transparency and full participation. This, however, further emphasizes the importance of decentralization because such openness and equitable participation is more likely if the decision-making units are small and local. In both the Hushey and ACAP examples, the entire area is divided into smaller units, and then, the user groups make the management plans for their respective areas.

The power of information: Merely having the power to make decisions is not enough. It is vital that the decisions are made by well-informed participants. In Mendha and Saigata, villagers realized this. They have thus evolved a system of exchange of information with outsiders through group meetings and discussions. Locally these are called *abhyas gats* (study circles). Through such interaction, they became aware of the long-term damage of commercial exploitation to their forests even though the immediate gains were very high. They have also helped to solve complicated issues, such as the illegal extraction of resources, encroachments, and so on. In Jardhargaon information from both within and outside, garnered by the NGO Beej Bachao Andolan, was crucial in initiating the switch back to traditional seeds and agro-practices. In Rekawa the fisherfolk have benefited from the scientific information and training on stock enhancement of the lagoon. Unfortunately there does not yet exist a widespread (national) system to provide such information to the villagers, and so often people are not even aware of developmental plans or any other schemes envisaged for their areas, or the impacts of these schemes. Right to information movements in some of the countries are only now making headway.

The role of the "outsider": While the local community is certainly the most important actor in conservation initiatives, there has been a critical role played by one or more external interventionists in all the above-mentioned cases. It was a dedicated forest officer who initiated the first experiment in Joint Forest Management in India, a move that spawned a national trend that has by now covered several million hectares of degraded forest land. This points to the need for synergistic linkages between the local communities and the national and international levels. These linkages are especially important where local communities, or sections within them, are fighting against serious injustices (traditional or new). Thus emerges a very important role for local government officials, that of extension workers providing information and support to local people, but on equal terms. As faciliatators, such officials, or NGO representatives, can bring in wider perspectives not so easily perceived by the villagers given their limited experiences and access to outside information. In turn, the officials or NGOs could learn from the detailed site-specific information that the local people have. Marrying different levels of knowledge and learning has been a critical outcome of the initiatives profiled above, and many other community based programmes.

Outside agencies and individuals can also bring technical and other skills that would enhance a community's ability to achieve sustainability. At the Biligiri Ranganaswamy Temple Sanctuary in southern India, for instance, NGOs and scientific organizations have helped the Soliga tribals to achieve sustainable harvesting of medicinal plants through biological monitoring, and to do local processing and conversion into products so that the proceeds they get are much more than when they sold the plants as raw material. Such examples are increasing significantly in the region.

Fighting the industrial juggernaut: A well-informed and empowered community, which has a stake in conservation, can even challenge powerful commercial and developmental forces. There are numerous examples where communities have fought and won against destructive project proponents, where even government authorities have felt helpless. For example, Mendha villagers were able to stop the paper mill from destructive exploitation of bamboo; villagers in Sariska Tiger Reserve in Rajasthan, India were able to stop limestone mining after the Reserve officials failed to do so; in 1997, tribal groups fought and won a legal case against a luxury hotel in the Nagarahole National Park in Karnataka, India; a nation-wide agitation against mechanized trawling by traditional fisherfolk has forced the Government of India to stop issuing licenses to trawlers; similar agitation convinced the Supreme Court of India to stop further expansion of industrial aquaculture along India's coasts; Rekawa fisherfolk managed to change construction plans over the Lagoon; Bangladesh fisherfolk have managed to stop the government from licensing mechanised fishing; and so on.

Local values of biodiversity: Often it is feared that the local people do not know the value of biodiversity and thus cannot conserve it. Over and over again the community initiatives have proved this fear wrong. In all the above examples and others, people have strongly opposed the commercial plantations of single species by the forest department. Villagers believe that a monoculture is neither beneficial for nature nor for local livelihoods. A diverse forest provides life-sustaining produce throughout the year. Even in the official Joint Forest Management (JFM) program, in India, which is based on harvesting of timber and the sharing of sale proceeds, several communities have argued that a more important benefit is a continuous supply of non-timber forest products. In Nepal, too, this has been a major argument extended by communities that have been handed over forest management. This is not to say that all communities will be oriented towards diversity, but simply that such orientation is by no means uncommon, and even where weak or absent, can with not too much effort be developed.

Legal authority and security of tenure: Communities can go only a certain distance in making their initiatives work. To sustain them, it is critical that there be facilitative laws and policies. In many of the above-mentioned initiatives, communities have relied on customary laws and social sanctions. Yet, in the absence of statutory legal authority, they face problems. For example, they often feel helpless when outsiders cut their forests because they have no legal powers to punish them. There is, therefore, a strong need for some form of legal or statutory authority to be given to village-level institutions, and for long-term security of tenure over the natural resources that they are managing. There is a very strong tradition of customary law, handling natural resources, in many parts of India; this has become sidelined or corrupted by the imposition of formal national or state law. A truly decentralized governance system would have to be sensitive to the diverse customary or community-made rules that are relevant to natural resource management, facilitating rather than displacing them. In Hushey valley, the Aga Khan Rural Support Programme and IUCN have tried to ensure that management plans and their implementation are according to the existing traditional systems and laws. At the same time it is also important that there is a wider state

or national legal authority to curtail destructive community activities. Such authority might help control situations like those in some parts of northeastern India, in which tribal councils or individuals with full control over forests are selling them off to industrialists, often with the active help of state governments. Conventional wildlife laws that govern protected areas, with some modifications, could serve this purpose.

Tackling inequities: Many local communities are ridden with internal inequities that relate to caste, class, gender, and so on. These can be significant deterrents to natural resource conservation and management or any other democratic process. Legal empowerment and recognition of local initiatives should not mean that distant centres of power are simply replaced by local ones. There are many examples where local communities have tackled this problem on their own (for instance, the egalitarian principles on which Jardhargaon's irrigation and grass-cutting practices are based, or the relative equity in decision-making in Saigata and Mendha). But there are probably many more cases where this has not happened, and in these situations, some external intervention is required. At ACAP, due to a strong commitment to social equity on part of KMTNC, there has emerged some conflict with traditional hierarchies. While in the short run this may prove disruptive, over a longer period this could well lead to a more egalitarian and sustainable society. However, one important lesson from many such initiatives is that the relationship between equity and conservation is by no means simple.

One issue that needs to be tackled, therefore, at the outset of any new conservation initiative is who in a community has a right to make decisions, or receive benefits, and in what proportion? All members of a community may not be concerned with or dependent on the surrounding resources. On the other hand, there may be people who do not reside in the vicinity but depend heavily on the resources, such as migratory graziers. "Primary" stakeholders need to be identified, based on dependence, proximity, and willingness to participate, and so on. This is a critically missing element in many official conservation strategies, including participatory approaches such as ICDP and ecodevelopment.

Sustaining the initiative: Ensuring the ecological, social and financial sustainability of community initiatives is of utmost importance. In some community-initiated efforts such as Mendha and Jardhargaon, villagers have consciously decided not to take substantial outside funding/aid, but rather try to generate funds locally. In Mendha, villagers give 10% of their wages to the Village Development Fund. They have also tried to ensure that government funds meant for the village actually reach them. However, barring India, one worrying factor in South Asia is the substantial national dependence on external funding agencies for conservation programs. This often leads to lack of sustainability. In Hikkaduwa Lagoon in Sri Lanka, a donor-led program tried to unite a highly fragmented community to conserve the coral reefs and marine areas. However, with no local leader or self-initiated local institutions to carry the initiative forward, it collapsed as soon as the donor withdrew. A contrasting case is Hushey Valley, where the hunt and other proceeds go into a corpus fund that would hopefully sustain the initiative once outside agencies pull out.

Ecological sustainability, too, is not necessarily ensured by local action. In most community initiatives cited above, ecological improvement is "perceived" by the local communities as well as outside researchers and intervenors. However, there is usually no long-term monitoring and evaluation of these efforts. Some exceptions include the initiative in the Hushey Valley, where community monitoring of Ibex populations has been initiated, and at Rekawa where prawn stocks are being regularly assessed. One of the most interesting initiatives is at the Biligiri Ranganaswamy Temple Sanctuary in southern India, mentioned above, where Soliga tribals have been aided by NGOs and scientific organisations to monitor

the impacts of their extraction of medicinal plants. However, even in these cases, there is virtually no assessment of long-term trends in biodiversity as a whole.

Is the state redundant? Despite statutory powers, communities often realize the difficulty of managing natural resources on their own, especially given the internal and external social dynamics, and powerful political and commercial forces. These communities envision an active role for the state as a partner in the management of resources, but on equal terms and in the capacity of a supporter and guide rather than a ruler or as police. However, because of a bitter history of negative interaction, government agencies will have to overcome a great deal of distrust that exists among the people in order to be seen in a supportive role, and people will need to understand the constraints within which conservation officials work.

POLICY AND LEGAL CHANGES: HESITANT STEPS

Slowly but surely, initiatives such as those described above, are forcing, or being facilitated by, increasingly participatory policies and laws. Till recently these have been mostly non-participatory, with powers and functions for planning and implementing conservation programmes being largely held by centralized bureaucracies. Local communities have had virtually no legally enforceable means of involvement, and even where they are involved, it is either through self-attained empowerment, or at the discretion of government agencies.

Changes in this situation require that policy and legal measures be taken with at least three basic objectives:

- facilitating the empowerment of local, resource-dependent communities to manage and protect adjoining ecosystems and species, and the participation of all other stakeholders in various capacities;
- ensuring the biomass and other subsistence and livelihood rights of these people, including appropriate tenurial arrangements;
- regulating human activities to ensure their compatibility with conservation and sustainable livelihood values; in particular, prohibiting destructive commercial-industrial activities in areas of conservation or cultural value.

Most important, policies and laws will have to be flexible enough to allow for site-specific modifications, given the extremely diverse ecological and social situations in the region. In this sense, Pakistan's model of a separate wildlife legislation for each province would be interesting to look at, though there appears to be no analysis of its efficacy. The Nepal policy of community forestry too, appears to have considerable flexibility – its operational plan for the formation of Forest Users Groups has provisions for Forest Department staff to work with people in identifying actual users of the forests before making the management plan for the area. This helps it to understand the existing social and political structure, to understand and include existing forest-related knowledge and management systems, to mediate in resolving conflicts, and to identify the disprivileged sections of the society to ensure that they get a just share of benefits (HMG 1995). However, several people have observed that actual implementation of these guidelines is still seriously lacking.

A summary table of some major new policy and legal initiatives in this direction is given below.

Official policy and legal measures in South Asia: Towards CWM[27]

Facilitating a community-based approach	*Policy*	*Law*
No recognition	Past policies, such as Indian Forest Policy 1952	• Indian Wild Life (Protection) Acts • Bangladesh Wildlife (Preservation) Amendment Act 1974 • Islamabad Wildlife (Protection, Preservation, Conservation, Management) Ordinance 1979 • Sri Lanka Fauna and Flora Protection (Amendment) Act 1993
Partial recognition	• National Environmental Management Plan, Bangladesh • New Fisheries Management Policy, Bangladesh (1986) • National Conservation Strategy, Bhutan • National Conservation Strategy and Policy Statement, India (1992) • National Conservation Strategy, Nepal • National Conservation Strategy, Pakistan (1992); Forest Policy Statement, Pakistan (1991); Proposed Wildlife Policy, Pakistan • The Sri Lanka Forestry Sector Master Plan (1995); Coastal Zone Management Plan (CZMP), Sri Lanka (1990) • Joint Forest Management and Ecodevelopment guidelines, India	• Bhutan Forest and Nature Conservation Act (1995) • Indian Forest Act (1927) • Nepal Forest Act (1993) • National Parks and Wildlife Conservation Act, Nepal (1973, amended 1993) • Proposed Indian Wild Life (Protection) Amendment Act • Pakistan Forest Act (1927) • Sri Lanka Coast Conservation Act (1981) • Sri Lanka Forest Ordinance (1907, amended 1995)
Substantial recognition	• National Forest Policy, India (1988) • National Forest Policy, Nepal (1995) • National Conservation Strategy, Pakistan (1992) • Draft Wildlife Policy, Pakistan • National Forestry Policy, Sri Lanka (1995) • Forestry Sector Master Plan, Sri Lanka (1995) • Coastal Zone Master Plan, Sri Lanka (1997)	• Sri Lanka Fisheries Act No. 2 of 1996 • Indian Panchayat (Extension to Scheduled Areas) Act 1996 • Proposed Biodiversity Act, India

WHAT NEXT FOR PROTECTED AREAS AND WILDLIFE HABITATS?

Initiatives towards participatory conservation have yielded a number of important lessons across the South Asian region. What they point towards is the urgent need for the following broad steps (which may manifest in myriad ways depending on local situations):

1. Creation of a stake in conservation requires the revival of biomass resource rights of communities, especially those with extensive dependence and traditional usage, where this is sustainable. Where unsustainable, participatory development of alternatives is needed.
2. Existing positive links between natural habitats and villagers need to be encouraged, e.g. in the use of medicinal plants for *bona fide* consumption, or in the protection of sacred spaces and land/seascapes.
3. Assistance in enhancing livelihoods based on forest or wetland produce can be coupled with increasing the sense of responsibility towards conservation, as for instance is being done with Soliga tribals in Biligiri Ranganaswamy Temple Sanctuary, Karnataka, southern India.

[27] For an annotated list of these and other relevant laws/policies, please see Kalpavriksh 2000.

4. Countries should move towards an expanded set of protected area (preferably, renamed 'conservation area') categories, which range from strictly protected ones (where all but the protection staff are barred entry, such as Ritigala in Sri Lanka), to those with minimal traditional use (e.g. current PAs with tiny human populations, such as Anshi National Park, Karnataka, southern India), to sustainable resource use ones (such as Annapurna Conservation Area, Nepal, and most of the region's non-PA forests, grasslands, wetlands, and coasts), to community protected ones (such as sacred groves, community protected forests and village tanks such as the examples given above, larger wetlands, and so on). ***Seen in this way, the conservation area network in countries like India could expand to over 10% of its territory, double the current extent. And inviolate areas could easily be more than 1% of that territory…provided they are declared in consultation with local people.***
5. This also needs bold new institutional structures, from joint management boards at the level of each conservation area to participatory advisory bodies at provincial and national levels. Some countries are already experimenting with such structures, and examples like Sariska's will be worth watching over the next few years. ***One radically new approach being advocated is Joint Protected Area Management, but its advocates are careful to point out that this is one of possibly several new models, and may not be applicable in every situation.***[28]
6. Legal and policy changes are needed to facilitate participatory conservation. As is clear from the table above, all countries are moving in this direction, but progress is halting and slow. With the increasing lessons being learnt from community-based initiatives, the time for bold legal and policy changes has come.
7. Perhaps most important, a change in attitude at all levels within and outside government is essential. Wildlife officials, NGOs, and community members, must dialogue with one other, must be able to sit on an equal plane and chalk out joint management strategies for conservation and livelihood security. ***Most important, they must be able to join hands to fight the 'developmental' juggernaut which, otherwise, threatens to consume every wildlife habitat as raw material and every local community as cheap labour.***

In India, the recently set up Conservation and Livelihoods Network, born out of a series of national consultations[29], aims to build such bridges, synthesize lessons being learnt from field experiences, document positive examples of community based and collaborative conservation, and in other ways advocate and encourage the shift towards new models of achieving wildlife conservation and livelihood security. The Sariska meeting, with which I started this essay, is partly an outcome of these dialogues…a wonderful example of how attitudinal change and practical demonstration can bring erstwhile enemies to sit, eat, and conserve together.

---

[28] See Apte and Kothari 2000.

[29] A series of national consultations called "Building Bridges: Wildlife Conservation and People's Livelihood Rights", was initiated in 1997, and has been held annually since then. For reports and recommendations, please contact Kalpavriksh, Apt. 5, Shree Datta Krupa, 908 Deccan Gymkhana, Pune 411004, India (Tel/fax: 91-20-5654239; Email: kvriksh@vsnl.com)

IUCN Social Equity Policy: Reflections in the South Asian Context

The February 2000 Policy on Social Equity (hereafter, Social Equity Policy), adopted by the IUCN Council, is strongly reflected in the history of, and ongoing changes in, conservation in South Asia. Thus for example, to relate the experience with quotes from the Social Equity Policy:

1. The move towards participatory conservation is built on the recognition that "conservation does not accentuate or perpetuate existing social, economic, and cultural inequities and inequalities";
2. Models like Joint Protected Area Management (JPAM) are built on the premise that "social equity is not only a matter of basic human rights, but also a way to increase the efficiency and sustainability of … institutional efforts";
3. The emphasis on inter-departmental coordination, landscape level planning, and integration of conservation and livelihoods, recognises the "need to promote sustainable livelihoods at the local and global level", and supports the move towards "sustainable development";
4. The recognition of intra-community inequities and the need to tackle these, is a reflection of the fact that "broad participation of stakeholders without gender, class, agen, ethnicity, religion, culture or racial discrimination is required within natural resources management";
5. Though slow, the increasing focus on gender issues, mirrors the understanding that "gender equity is an integral part of the broader social, economic and cultural agenda for changing power structures that are obstacles to equitable human development" (and, one might add, to effective conservation);
6. The formation of participatory institutional mechanisms at the level of individual protected areas, or for larger areas, provinces and nations, covers the IUCN mandate to "develop institutional mechanisms and structures that fully support social, economic and cultural equity and diversity within conservation and natural resource management";
7. An inherent principle of models like JPAM is echoed in the assertion that "fair and safe tenure systems for land and natural resources increases social stability and local resource users' incentives and abilities to participate in resource management decisions in effective ways";
8. New participatory models also focus on the need to respect and safeguard the knowledge, rights, and responsibilities of local (including indigenous) people;
9. Community based initiatives also target and challenge "inequitable consumption, distribution and global economic development patterns", including the "expansion of markets, communication, Western consumption patterns, homogenisation and modernisation of culture and lifestyles".

Overall, trends in South Asia are towards the implementation of the IUCN World Conservation Congress resolutions on Collaborative Management (Resolution 1.42), on indigenous people and knowledge (Resolutions 1.49 to 1.57), and others on the subject. **Clearly, however, the IUCN network itself has a lot of learning to do regarding the implementation of this policy, and it would be extremely useful if it could become a forum for exchange of views, best practices, lessons learnt, and policy analyses.**

To some extent, this function will hopefully be played by the newly set up IUCN Inter-commission (WCPA and CEESP) Task Force on Local Communities and Protected Areas, which the author is heading. Networks like the Collaborative Management Working Group of CEESP, and units like the Social Policy group of IUCN, are already playing this role to some extent.

References

Ahmed, Ashiq. 1996. *Khunjerab National Park Management Plan*. WWF-Pakistan, Lahore.

Anuradha, R.V. 1999. *Sharing the Benefits of Biodiversity: The Kani-TBGRI Deal in Kerala, India.* Kalpavriksh, New Delhi and IIED, London.

Apte, T. and Kothari, A. 2000. *Joint Protected Area Management: A Simple Guide, How it will Benefit Wildlife and Humans.* Kalpavriksh, Pune.

CEA & Euroconsult. 1994. *Conservation Management Plan: Muthurajawela Marsh and Negambo Lagoon.* Wetland Conservation Project - Sri Lanka. Central Environmental Authority (CEA), Sri Lanka & Euroconsult, Netherlands.

Christopher, K. 1997. Dalma Wildlife Sanctuary: Prospects for Joint Management. In Kothari et al. 1997.

Das, P. 1997. Kailadevi Wildlife Sanctuary: Prospects for Joint Management. In Kothari et al. 1997.

Datta, Soumyadeep. 1998. An NGO-initiated Sanctuary: Chakrashila, India. In Kothari et.al. 1998.

DeCosse, P.J. and Jayawickrama, S. 1998. Issues and Opportunities in Co-Management: Lessons from Sri Lanka. In Kothari et.al. 1998.

Ekaratne, S.U.K., Jinendradasa, S.S., Abeysisrigunawardana, M.D., and Davenport, J. 2000. *Coastal Conservation Through Enterprise: A Case Study of Rekawa Lagoon, Sri Lanka.* Kalpavriksh, Pune/New Delhi and IIED, London.

HSAM. 1996. *Special Area Management Plan for Hikkaduwa Marine Sanctuary and Environs, Sri Lanka.* Hikkaduwa Special Area Management and Marine Sanctuary Coordination Committee, Coastal Resources Management Project, Coast Conservation Department, and National Aquatic Resources Agency, Colombo.

Jamal, N. 1996. Getting the Balance Right at Khunjerab. *Dawn,* 1 December, 1996.

Jayatilake, A, Pallewatte, N., and Wickramanayaka, J. 1998. The Practice of Community Based Conservation in Sri Lanka. In Kothari et.al. 1998.

Kalpavriksh and IIED. 2000. *Source Book on Community-Based Conservation in South Asia: People, Policies and Publications.* Community Based Conservation in South Asia, No. 10. Kalpavriksh, Pune/Delhi, and International Institute of Environment and Development, London.

Kothari, A., Pathak, N., Anuradha, R.V., and Taneja, B. (eds.). 1998. *Communities and Conservation: Natural Resource Management in South and Central Asia.* UNESCO and Sage Publications, New Delhi.

Kothari, A., Singh, N., and Suri, S (eds.). 1996. *People and Protected Areas: Towards Participatory Conservation in India.* Sage Publications, New Delhi

Kothari, A., Suri, S., and Singh, N. 1995. Wildlife Conservation in India: A New Direction. *Economic and Political Weekly* October 28, 1995.

Kothari, A. 1999. Towards Participatory Conservation in India: National Scenario and Lessons from the Field. In Oli 1999.

Kothari, A., Pathak, N., and Vania, F. 2000. *Where Communities Care: Community Based Wildlife and Ecosystem Management in South Asia.* International Institute of Environment and Development, London, and Kalpavriksh, Pune/Delhi.

Krishna, K.C., Basnet, Kedar and Poudel, K.P. In press. *People's Empowerment Amidst the Peaks: Community Based Conservation at Annapurna Conservation Area, Nepal.* Kalpavriksh, Pune/New Delhi and IIED, London.

Kutty, R. 2000. Turtle Conservation: Fisherfolk to the Rescue. *Hindu Survey of Environment 2000.* The Hindu, Chennai.

Manu, K. and Jolly, Sara. 2000. *Pelicans and People: The Two-Tier Village of Kokkare Bellur, Karnataka, India.* Kalpavriksh, Pune/New Delhi and IIED, London.

Melkani, V.K. and Venkatesh, A. 1999. Attempts at Reduction of Anthropogenic Pressure on Resources of Kalakad Mundanthurai Tiger Reserve Through Ecodevelopment Strategy. In Oli 1999.

Nakashima, Steven. n.d. An Analysis of the Human-Elephant Conflict Project at Kahalla Pallekele.

Oli, Krishna (ed.). 1999. *Collaborative Management of Protected Areas in Asia.* IUCN Nepal, Kathmandu.

Pathak, N. with Gour-Broome, Vivek. In press. *Tribal Self-Rule and Natural Resource Management: Community Based Conservation in Mendha (Lekha), Maharashtra, India.* Kalpavriksh, Pune/New Delhi and IIED, London.

Raja, Naeem Ashraf, with Ibrahim, M., Ali, Roze, and Aslam, M. 1999. From Alienation to Ownership: Conservation and Development in Hushey Valley, Pakistan. Unpublished report prepared for the South Asian Regional Review of Community Based Conservation, under the Evaluating Eden Project, IIED, London.

Rodgers, W.A. and Uprety, B.K. 1997. Parks and People Project (GEF Biodiversity Conservation Project NEP/94/001): Report of the Mid-term Evaluation. Summary. United Nations Development Programme, Nepal.

Samarakoon, J. 1995. Participatory Planning and Integrated Coastal Management for an Estuarine-Peat Marsh Ecosystem in Sri Lanka. Paper presented at a Workshop on Coastal and Marine Environmental Management, 27-29 March, 1995, Bangkok.

Shresth, S., with Shridhar Devidas. In press. *Forest Revival and Traditional Water Harvesting: Community Based Conservation at Bhaonta-Kolyala, Rajasthan, India.* Kalpavriksh, Pune/New Delhi and IIED, London.

Singh, R.P., Bhattacharya, P., Roy, S.B., Yadav, G., and Mahapatra, S. 1995. Community Forestry: A Case Study from Kudada, Bihar. In Roy, S.B. (ed.). 1995. *Experiences from Participatory Forest Management.* Inter-India Publications, New Delhi.

Slavin, T. 1993. Survival in a Vertical Desert. In Kemf, E. 1993. *The Law of the Mother: Protecting Indigenous Peoples in Protected Areas*. Sierra Club Books, San Francisco.

Suryanarayanan, J. and Malhotra, P. with Semwal, R. and Nautiyal, S. In press. *Regenerating Forests, Traditional Irrigation and Agro-biodiversity: Community Based Conservation in Jardhargaon, Uttar Pradesh, India.* Kalpavriksh, Pune/New Delhi and IIED, London.

Vagholikar, Neeraj. 2000. Saigata: A Forest Reborn. *Hindu Survey of Environment 2000.* The Hindu, Chennai.