

FOREST MANAGEMENT

Recent years have seen a number of changes in the management of forests. There is a major shift towards a more decentralized and people oriented forestry. Responding to scarcities, villagers have started organizing themselves to reverse degradation and restore productivity. The result has been a renewal of degraded ecosystems.

The destruction of natural forests for timber, cropland, fuelwood, pasture, urbanization have had an impact on many poor rural families who are dependent on forest resources for fuel, fodder, food, medicine, housing etc. The deterioration of forests has accelerated soil erosion, sedimentation of rivers, increased flooding, and over-taxed the land's capacity to regenerate and sustain. It is now being recognised that local communities need to be involved in establishing sustainable forest management systems. Governments are opening a number of opportunities for sustainable forest management and biodiversity conservation by decentralizing authority and responsibility for resource management in different parts of the world.

In the Asia-Pacific, attention is to community-based forest management programs and the devolution of management responsibilities on some forestry activities to local government units in the Philippines, land and forest allocation programs in China, Laos, Vietnam, transfer of use rights to forest user groups in Nepal, Joint Forest Management programs in India, and privatization of forest plantations in New Zealand. Similar processes are underway in other parts of the world.

The various initiatives have led to greater access and control of forest resources by local people, in turn resulting in improvement in forest protection and management and reducing pressure on resources. Substantial areas of degraded forests have been rehabilitated and new forests planted. Local people have started supporting forest conservation where they have been able to reap financial returns from benefit-sharing schemes.

Joint Forest Management in India

In India **Joint Forest Management (JFM)** has emerged as an important intervention in management of forest resources. In many parts of India, small village groups have started to protect and reclaim degraded forestlands through collective action. The Joint Forest Management Programme seeks to develop partnerships between local community institutions and state forest departments for sustainable management and joint benefit sharing of public forest lands. The primary objective of JFM is to ensure sustainable use of forests to meet local needs equitably while ensuring environmental sustainability. The central premise is that local women and men who are dependent on forests have the greatest stake in sustainable forest management.

The official ground for JFM was prepared by the National Forest Policy of 1988 which envisaged people's involvement, particularly of women, in meeting their basic forest related needs and in managing their local resources. This was followed in 1990 by a circular from Ministry of Environment and Forests providing guidelines for involvement of Village Communities and Voluntary agencies in regeneration of degraded forests.

The National Forest Policy of 1988 and the JFM resolution of 1990 combined with state level resolutions acknowledged the need to give greater rights and authority to community groups. The policy envisages a process of joint management of forests by the state government and the local people, who would share the responsibility for managing the resource and the benefits accruing from this. Under Joint Forest management (JFM) village communities are entrusted with the protection and management of nearby forests. These communities are required to organise forest protection committees, village forest committees, village forest conservation and

development societies. The guidelines provide for rights to usufruct and non-wood forest products and percentage share of final harvest to organized communities willing to help regenerate depleted forest and waste lands. Around 19 states have issued enabling orders for implementation of JFM.

A project has been drawn up by the Ministry of Environment and Forests to conserve degraded forests. Known as the National Forest Programme- India (NFP), it evolves programmes in accordance with the provisions of the National forest policy and integrates the proposed forestry development programmes in the country within the framework of the five-year plans. The Ministry has formulated a comprehensive plan for the next 20 years by integrating proposals of the respective states. It is a comprehensive prospective work programme to bring 33 % area under forest/tree cover in a phased manner within 2020 A.D. The scheme involves assisting the states to set up forest protection forces as well as to assist the JFM cell and involve people in eco-generation activities. The Centre has also stressed the need to reduce incidence in forest fires and increase the forest base in India.

There are many cases of communities protecting natural forests either on their own initiative or with the encouragement of forest department. Communities in many parts of rural India, are organizing into formal and informal groups for forest protection and management in states of Orissa and Bihar, Rajasthan, Gujarat, Karnataka, Haryana, Madhya Pradesh and Punjab. While some are promoted by state forest departments, some are sponsored by local government or NGO programmes eg.village (gram) panchayats, women's organizations (mahila mandals) and tree growers cooperatives. Forest protection organizations include Groups of Village Elders, Village Forest Protection Committees, Village Councils', Village Youth

Clubs, in Orissa, Forest Cooperative Societies in Kangra district of HP, Van Panchayats in UP hills, Forest Protection Committees in West Bengal.

When villagers dependent of forests, have initiated forest protection on their own, the challenge for forest departments is of Facilitating the process which implies adapting the official JFM frameworks to enable forest departments to participate in villager's initiatives. For JFM to represent participatory forest management emphasis on regenerating timber through community protection needs to be shifted to developing sustainable alternatives for meeting diverse forest produce needs of members of community institutions. Mechanisms need to be evolved for meeting immediate essential needs of the most dependent members through appropriate forest management interventions (*Sarin, M. Joint Forest Management: achievements and unaddressed challenges. Unasylva, vol 46 (1) 1995*).

Impact

There are indicators of the positive impact of JFM across the country. In many states forests under JFM are regenerating. Remote sensing data are showing an improvement in quality and area of forests. Studies in Gujarat, Andhra Pradesh, Haryana, Madhya Pradesh and West Bengal have recorded improvements in productivity and diversity of vegetation and increased income to members of community institutions from non timber forest products.

Experiences from West Bengal, Haryana, Orissa, Himachal Pradesh, Andhra Pradesh, Gujarat, Uttar Pradesh, Jammu & Kashmir and Tamil Nadu indicate that participatory forest management offers an important survival strategy for threatened Indian forests. However, for JFM to be successful, an essential condition is to convince people at the microplanning stage itself about the benefits likely to accrue

to them. The villagers around a particular forest block need to be consulted for their views and consent.

Given in the following pages are glimpses of some initiatives taken in different states across the country. While some are promoted by the Forest Department or by NGOs, some are collaborative attempts between government and the rural population or rural population alone to reverse degradation, restore productivity and conserve biodiversity and move towards sustainable development.

Case Studies

Joint Forest Management in Andhra Pradesh

Realising the importance of people's participation in forest management the "Joint Forest Management" approach was implemented in which all the fringe forest villagers were made partners in forest management with legal entitlement to the usufructs. People living on the fringes of the forests were encouraged to form Vana Samarakshana Samithis (VSS) to protect and rejuvenate degraded forest areas.

Around 6580 Vana Samarakshana Samithis (VSS) have been formed. Degraded forest area of 16.58 lakh hectares has been brought under JFM of which 5.38 lakh hectares has been treated so far by taking up regeneration work, including soil and moisture conservation and gap planting. 13.05 lakh VSS members, including 6 lakh women are actively participating in JFM. 24000 hectares of forestland under encroachment has been rejuvenated through VSS.

The latest government order on JFM gives 100% usufruct rights to the VSS villagers on usufructs from the forest with a condition that the village community should keep apart money required for regeneration and management of the forest on a sustainable basis.

The Vana Samarakshana Samithis have been playing an important role in protection and improvement of forests. The samithi members with the help of micro-plans developed by them are collectively working to generate forests by removing weeds and shrubs for proper growth of important tree species in line with needs of the local people. Village development is another thrust area of VSS and focus is on improving drinking water, roads, building community halls, improving women's economic status by contributing to women's groups etc. The Samithis have also been successful in upliftment of tribals and bringing them into the mainstream.

Impact

- Increased availability of fuel and fodder within two years of taking up JFM.
- Reduction in incidences of smuggling, fire and grazing
- Generation of adequate employment in the village itself has reduced rural to urban migration.
- Improvement in natural regeneration of forests
- Increase in water table due to execution of soil and moisture conservation works.
- Increase in non timber forest produce (NTFP) in VSS areas resulting in villagers getting more income from collection of soapnut, custard apples etc.

As part of support activities, smokeless chulhas have been provided to VSS members which has cut down consumption of firewood by more than 50 %. Provision of individual biogas plants has discouraged practice of storing huge stocks of firewood by villagers.

Special features of JFM in Andhra Pradesh

- VSS members are given 100% rights over forest produce
- VSS gets 50% of the net revenue realized from beedi leaf collected by the member.
- 25% of the fine collected from forest offences apprehended by VSS is given to VSS members
- transparency in VSS operations is ensured by channeling the funds through Joint Account System
- Investments are based on microplan prepared in consultation with VSS members.
- There is 50% compulsory enrolment for women in the general body and 30% minimum in the Managing Committee. Women have formed into thrift groups to save the income that they earn through the Samithis.
- All sections of people including SCs, STs are involved and made active participants.
- There is involvement of NGOs in strengthening VSS through motivation, extension, training and other support activities.
- Medicinal plants in forest areas have been identified and VSS members are encouraged to cultivate and conserve medicinal plants in VSS areas.
- Mobilising resources from Employment Assurance Scheme, Centrally sponsored schemes, NABARD, World Bank for making requisite funds available.
- Effective inter-departmental coordination for ensuring development of VSS villages as “Model villages”

- Comparison of satellite imagery between 1996 and 1998 has shown that the forest cover under the management of VSS improved appreciably within two years.
- The World Bank has rated JFM programme in Andhra Pradesh as the best in the country

Success stories from different parts of the state indicate how people led efforts in JFM have led to increased productivity, increase in the water table, generation of adequate employment and an improvement in socioeconomic conditions. These have been documented by the A.P. Forest Department in a report “Jyoti se Jyoti jale Joint Forest Management: Forest conservation with people’s participation: a saga of success”. Some of these successes are documented here. We are grateful to the Principal Chief Conservator of Forests, A.P. for having permitted us to include these studies.

Ghanapur Vana Samarakshana Samithi

Ghanapur village in Manchareddy mandal of Nizamabad district has 700 ha. of forest area in its boundary. Overutilisation of forest resources led to degradation. The villagers were convinced about the JFM approach. VSS was formed with all households as members and the entire forest area was given to the Samithi for protection and management. So far the VSS has treated 230 ha. Area in which check dams has been constructed to store water. This has improved soil moisture resulting in natural regeneration of extinct species. Water table has also improved. To reduce requirements of firewood households have been provided with smokeless chulhas. Two people have been appointed for watching over the forest and fund for this is generated by VSS by charging nominal cost from members for supply of firewood. The villagers have also passed a resolution requesting for development of agricultural lands and providing irrigation facilities to ST poor families on a cluster approach, to

wean them away from forests. This has benefited about 48 families, who are able to raise crops and improve their standard of living.

Due to improvement of forest cover the number of NTFP species is improving. During silvicultural operations un-saleable removals were used as firewood. VSS earned by selling small poles to its members. This amount has been kept in the VSS account as fixed deposit for utilization after 2001 as Rolling fund.

From scrub jungle to thick forests

Kamdhan village, in Mahbubnagar district has a degraded Reserve forest spread over an area of 329 ha. The village was selected for implementing JFM and VSS was formed with all households becoming members. Micro plan was prepared for development of the forest through a PRA exercise. With better protection and active participation of the people the degraded forest has improved in both flora and fauna. Women have formed 5 thrift groups and started saving. The Forest Department has helped the groups by providing them matching grant. The group have raised 5000 seedlings nursery which were used in planting gaps in the forest and given to surrounding villages for planting.

A nominal charge has been fixed as grazing fee and the amount collected is deposited in the corpus fund of VSS. The VSS has regularised marketing of NTFP. VSS members can collect fruits of custard apple, etc. for self consumption and the marketable surplus is auctioned by the VSS. Sale proceeds are deposited in the corpus fund account. Clonal plantation of species like tamarind, seetaphal, usiri has been raised. The VSS proposed to multiply the clones by grafting and supply to villagers. Large-scale soil and moisture conservation works taken up include a percolation tank, check dam which has arrested soil erosion and raised ground water table. Regular meetings, training, exposure visits have created awareness

among VSS members. During January 1998 the VSS was adjudged as the best VSS in the district. Today the VSS is not only protecting the forest but they are sending children to schools, organising themselves into thrift groups and actively participating in developmental programmes. The VSS has become a good institutional framework for successful implementation of Government programmes at grassroots level.

Jinnelagudem village

To develop the degraded forest and improve socio-economic status a VSS was formed with 121 women and 121 men. During 1996-97 to 1998-99, 50 ha. area each year has been treated by taking up tending coppice cutting operations and SMC works. Demonstration plots were raised with eucalyptus clones and bamboo. Gap planting was taken up with teak, grafted tamarind seedlings were obtained and planted. Gully plugging works were taken up.

Under a Tribal Development Programme the VSS members were assisted to develop their agricultural lands by removal of stumps and bunding to the fields to get better returns.

To ensure full participation of women in decision making, benefit sharing and socio-economic upliftment, awareness and training programmes were organised at village, mandal and division levels. Women members are participating in all developmental activities, thrift movement and in activities of tribal development plan. The thrift group is functioning well. The group obtained a matching grant and the amount is being used as seed money and revolving for their economic upliftment activities.

Assessment of performance indicates an increase in ground water level, sufficient employment opportunities, increase in the growing stock in the treated area. The VSS is also found to be sustainable.

The idea is to deposit the amount earned in the Joint Account of the VSS and utilise it for its sustenance. The health status, socio-economic condition and literacy level of the villagers has improved. (*A.P. Forest Department. (1999) Jyoti se Jyoti Jale... Joint Forest Management: Forest Conservation with People's Participation; a saga of success.*)

Exploring Equity for Women through preferential allocation of usufruct in common land resource

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Natural regeneration is the most cost-effective approach for improving perennial vegetation in common lands particularly in situations where root stock of tree component has not been permanently damaged. For this purpose, social fencing has been considered as a crucial pre-requisite, which involves: ban on entry of goats; restriction on grazing by other animals and strict regulation on cutting of trees. During the last 2-3 decades a number of successful examples of natural regeneration particularly in unreserved forest land have emerged through the social fencing concept. It has however been observed that replication of above concept is very difficult due to likely conflicts with poor households particularly with those who are owning goats.

The field experience at Japal village in Ranga Reddy district of A.P in Manchal Watershed has however shown that the concept of social fencing can be simplified to a large extent. This involves temporary ban on goat for 1 year and permanent ban on axe by unauthorised tree cutters from within and outside the concerned village. However there has been no ban on grazing by other animals. Through this

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approach the community is protecting the forest since 12 years. After the initiation of watershed activities by MANAGE the above success story in Japal village was replicated in Buggavagu watershed of Arutla village with minor modifications.

The Buggavagu watershed has about 160 hectares of forest land under the revenue village of Arutla. At present the condition of tree component (including timber, MFP etc.) is poor. Majority of trees have already been cut due to uncontrolled biotic interference. Their stubble is however in good condition. The farmers (having their land in the vicinity of above forest) are keen to protect and develop the tree component through natural regeneration on the pattern of the successful example in Japal village. For facilitation of natural regeneration process, a series of meetings were arranged with the community of Buggavagu watershed. Particular attention was paid to work out the social fencing process and allocation of usufruct right to various stakeholders. While allocating the usufruct right attempts were made to promote equity for resource poor families and also women.

During the meeting the following suggestions were made/agreed by the members:

- The grass component of the above forest may be utilised only by those families who are having their land within 2 kms of the forest boundary towards revenue village of Arutla. These families may pay a fixed annual amount per animal towards grazing, to the forest protection committee (VSS) to be organised on the pattern of joint forest management.
- It was also suggested that 50 percent of the above area may be used for grazing by cattle upto December and the remaining 50 per cent may be used by sheep throughout the year. However, after December the sheep could graze even in the

area reserved for cattle. This arrangement shall help in providing sufficient fodder for cattle in the first half area.

- The Usufruct right over the Minor Forest Produce (sethaphal, tamarind, soapnut etc.), may remain with Mudirasi community members within the Arutla village. The right of harvesting that produce may be given to them through open auction.
- The usufruct over the timber component (which shall emerge later after natural regeneration / new plantation of trees) may be shared between forest department and the village community as per the latest state government rules. Among the community members, the above right (tree patta) may be allocated exclusively in favour of women (preferably female children) belonging to poor households (landless families or those owning less than one hectare). It is however, understood that only those shall be given the proposed tree patta who are willing to take care of emerging/regenerating trees in the common land areas. After six months of natural regeneration each tree may be marked with serial numbers and allocated to its users/owners so that the users have an incentive to put their efforts in further developing the trees in the best possible manner.
- The usufruct right over beedi leaves may be freely availed by any of the interested families in Arutla village/Bugga thanda etc. The women members may sell the leaves it to the government as per their approved rates. The income from above activity shall go fully to the concerned families/labourers.
- The pruning and clearing of tree component in the remaining forest area may be done only during the specified periods. The twigs and other fuel material becoming available through

pruning/cleaning may however be suitably allocated by the VSS.

- The overall management of the forest shall be carried out by the forest protection committee (VSS) which shall consists of 16 members including one representative from A.P Forest Department, five from each of the user groups associated with grass, MFP, and timber. VSS shall employ 2 watchmen for protecting unauthorised tress pass in the forest area. It was also agreed that the user group members shall not bring any goat inside the above forest area (for at least three years) so that tree component would be able to survive in a better way. Besides this there shall be complete ban on use of axe inside the forest area (except during the authorised period for pruning/cleaning of trees).
- The committee shall frame suitable bye-laws for social sanction against tresspass. The income arising due to any penalty etc., shall be deposited in a common account of the committee.
- After successful implementation of social fencing and natural regeneration for at least two years, new plantation/seeding may be done on rotational basis so that ban on entry on animals shall be imposed over the entire area.

Currently all suggestions except for timber component have been implemented.

Joint Forest Management in West Bengal

Participatory action involving the government and local communities for regeneration of degraded forests was initiated as a pilot project at Arabari in West Bengal in 1971-72. The programme covered an area of 1270 hectares of degraded forests involving 618 families

in 11 villages. In the Arabari range of Midnapore district in West Bengal local villagers were motivated to form Forest Protection Comittess (FPCs) to protect public sal coppice forest in return for first preference in forestry department employment, free usufruct rights to most NTFPs and a 25% share in net cash benefits from sales of short rotation sal poles when these were ready for harvesting. Initial success led to gradual expansion of the effort to neighboring areas. Around 3289 Forest Protection Committees are managing 4493 Sq Km hectares of forest land.

Joint Forest Management in Haryana

The JFM programme in Haryana involves communities living at the foothills of the Himalayas in the Shivaliks. Increased grazing and fuelwood pressures accelerated the deforestation and denudation of hills. The JFM programme which started as an experiment in Sukhomajiri village in Shivalik hills in late 70s, highlighted the importance of providing alternative sources of livelihood to villagers to reduce dependence on forests. The programme is now operational in 60 villages in the Morni-Pinjore and Yamunanagar forest divisions, which are organized into 57 Hill Resource Management Societies (HRMS).

The concept of “social fencing” evolved in Sukhomajri and focussed on enabling villagers to reduce their dependence on unsustainable grazing practices in fragile forested hills. This was facilitated by rainwater harvesting with an earthen dam built in the forests whereby cultivable land of small and marginal farmers was irrigated. A fourfold increase in agricultural production gave the villagers an incentive to protect the dam catchment from grazing to prevent siltation of its storage capacity. All households were allocated an equal share of water in return for not grazing in the hills. Those

without land or with very smallholdings could use their share of water on land rented from larger land holders.

Over the last ten years, TERI has been collaborating with the Haryana Forest Department (HFD) for institutional development, both within the department and the local village communities. The objective of TERI's involvement has been to integrate JFM into the policies, programmes, procedures, and operations of the HFD, and to motivate local communities to protect and manage the forests on a sustainable basis for their benefit. Gender, equity, and benefit distribution concerns are important focal points of the programme. The Haryana JFM programme has been successful in maintaining a balance among the three criteria viz. of environmental soundness, affordability, and social desirability. The programme has led to a gradual shift in attitudes and actions of the HFD and the HRMS towards building a partnership for the regeneration and rehabilitation of forests. Villagers under this programme have benefited from increased supply of forest produce like fodder grasses, bhabbar grass, irrigation water, and bamboo, which has led to increased income at household level; increased income to HRMS from sale of fodder grass, surplus bhabbar in open auctions, fines levied, membership fees, etc., savings; and greater employment opportunities.

Impacts include improved tree and grass cover in the forest areas, improved soil moisture regime, and reduced water run-off from the catchment. There are fewer conflicts, cases of theft, fires, illegal felling of wood, etc. With the new benefit sharing arrangements, the state derives a percentage of the profits from joint management of forest areas while a portion of the community's share is set aside for development of the forestry resources. This is to ensure the sustainability of the forest resources, and, of the JFM programme. The impact of different strategies and interventions has been assessed by the implementing team through a number of case studies, which

have helped in analysing the success level of each strategy and also the desired modifications for better results.

The JFM programme of Haryana is among three projects, worldwide, to be presented with Saving the Drylands award instituted by United Nations Environment Programme for the year 1997/98. This programme was evaluated on the basis of its sustainability, replicability, and the socio-economic and environmental impacts of the institutional and policy initiatives. (at <http://www.teriin.org>)

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Greening the Forest: Villagers show the way in Karnataka

In Davangare district of Karnataka, four km from Kumaranahalli village one hill stands out from other bare hills, as it is covered with vegetation. This hill is a result of transferring forest management to local communities, which has benefited the people dependent on forests for their livelihood and has reversed ecological crisis created by degradation of forests. What villagers have done is - organised protection of the vegetation from poaching. The village poor are reaping the minor forest produce.

The Village Forest Committee (VFC) is responsible for conserving the forest wealth. All the Kumaranahalli households are represented in the VFC. An agreement was signed by the management committee of the VFC with the State Forest Department to manage a selected area. The committee has power to prosecute and fine for stealing timber or digging sand from the stream. Residents are able to gather leaves, grasses, shrubs and branches. Tendu leaves, gum, thatch, fruits and berries are some produce with a ready market. The stream that originates in the forested area now carries water

for more months than before. Sheeps/goats would be permitted to graze when leaves on tops of the plants grow higher than the animals. There is also a campaign by local groups to educate villagers to claim and manage forest areas, which have been monopolised for long. Villagers in surrounding areas are now being educated on natural regeneration of forests on the Kumaranahalli model. (*Bhattacharjea, Ajit. Grassroots August 1999*).

Forestry Project for Karnataka

The Forestry and Environment project for eastern plains of Karnataka is sanctioned by the Overseas Economic Cooperation Fund (OECF) of Japan to be implemented during 1997-98 to 2001-2002. The Project envisages to treat 4,70,500 hectare area with tree planting and soil and water conservation works in 138 taluks of 23 districts of Karnataka. Of the total area targeted for treatment 3 lakh ha. is private farmland to be treated under farm forestry through distribution of a variety of seedlings required by farmers and extending advisory services in tree cropping to the rural community. The project area also covers a huge chunk of reserved forests where it has been proposed to provide cattle proof fencing. The project proposes to involve users and farmers in planning and establish effective linkage between them. (*The Hindu 14.9.98*).

Protecting forests in Rajasthan

The Overseas Economic Cooperation Fund (OECF) is funding three major projects in Rajasthan – the Forestry development Project, Afforestation in the Indira Gandhi Canal area, and the Aravalli Afforestation Project. These projects have been instrumental in stepping up the activities relating to people's participation and human resource development. The Forestry development Project has adopted the principles of Joint Forest Management (JFM) in its activities

with a focus on participatory approach. The ultimate aim is to make the communities capable of attaining the long-term objectives of sustainable forestry development. Human Resource Development has been the major thrust in the Project. Around 728 Village Forest Protection and Management Committees (VFPMCs) have been constituted in the project area for execution of forestry development work through people's participation. The VFPMCs are getting minor forest produce from the project area (*The Hindu September 12.9.1998*)

Participatory approach in Forestry in Rajasthan

A cluster of six villages in Sawai Madhopur district in eastern Rajasthan has adopted a participatory approach for implementing the forestry programme and proved the utility of Joint Forest Management (JFM). The six villages in the cluster are located 4 to 8 km from panchayat samiti headquarters and surround the forest block of Killa Bowli. Advance action work by the forest department. on 100 ha of degraded forest land led to increase in land productivity. Encouraged by the results of plantation the staff and villagers came closer and a dialogue started, regarding plantation and forest related activities. The staff sought the cooperation of some of the villagers of Gangwada village. The select villagers and staff joined hands and motivated the whole village to get organised as a result of which the VFPMC was formed. Microplanning was done and need based activities to be undertaken identified.

Seeing the benefits, people in nearby villages were inspired to join hands for developing the entire area. Thus VFPMCs were formed in five other villages in the cluster.

The six villages in the cluster are now collecting grass from various plantations. The water table has increased. Soil erosion has been greatly reduced by plantation, in situ moisture conservation and treatment of sandy tracts. Agriculture – next to impossible earlier

- is now being practiced. Increased forest cover has also increased population of wild animals. The visual impact of the success of plantation acted as a “live demonstration” and motivated the villagers it is asserted. *Case presented by Mr. R.P. Kapoor, Chief Conservator of Forests, and Mr. A.K. Upadhyaya, Conservator of Forest during a national workshop on OECF assisted forestry projects in Jaipur during September 1998. (Hindu September 17.9.1998.)*

Villagers protect forests in Orissa

In Orissa 2373 Van Samrakshan Samiti (VSS) are protecting 25% of the total degraded forests in the State. Around 5000 self-initiated Forest Protection Groups (SIFPGs) are also protecting and regenerating forests adjoining their habitation. About 78000 ha of village woodlot plantation raised under the social forestry project is being managed by 5600 VFCs formed by the Social Forestry Division.

In Kesharpur village in the foothills of Orissa’s Nayagarh district, villagers are guarding the forest from timber smugglers and stray grazing. This message has now spread to 600 other villages in the districts. Similar efforts are on in 28 out of 30 districts of Orissa. Local communities have been protecting degraded forests, driven by economic needs.

Severe forest degradation was followed by soil erosion, drying of water resources and loss of forest stripping, the villager’s only source of income. There was severe drought leading to a collapse of the agriculture-based economy. The villagers realised that this was due to destruction of forests.

In every village a committee is elected by the people. There is a ban on felling and stray grazing. The committee supervises these bans and resolves conflict and also collects fines decided by villagers for any violation of rules. It also decides villagers contribution for

protection /regeneration of forests. At the block level a committee formed by a cluster of villages settles disputes. At the district level there is a federation of village committees. At the state level there is the Orissa Forest Forum established by the people to fight for legal status of forests and comprises of members from district federation, NGOs and civil society. However each village differs in the internal structure of the institutions and monitoring of forest protection activities, which are decided by the villagers.

Sharing the minor forest produce and fuelwood is also decided by the villagers. In Bolangir and Mayurbhanj districts villagers are free to collect sal leaves (for making plates), and mahua flowers, hill broom plants and tamarind. In Magarbandh village, villagers pay Re.1/- for every headload of fuelwood they collect from the protected forest and once in 3 months each household pays another rupee towards the salary of the forest guard. People are allowed into the forest for two days in a month to collect bamboo and fallen timber. Everyone is allowed to take 20 pieces of bamboo and logs for which they pay an amount fixed by the village committee.

In the Chadayapalli village of Nayagarh which protects 1800 ha of forest land, passes are issued for timber and bamboo extraction for fuelwood to villagers twice a week at the rate of Re1/- per piece of bamboo. The village has been earning Rs. 90000 every year this way, which is being used to run the school, constructing a road etc.

In Mayurbhanj the money collected resulted in an institution called Perti Society, which now leads forest protection activities in the village. Other villages have joined and now there are 95 villages protecting the 10000 ha of forest. The forest provides employment to villagers. Villagers are free to collect all non timber forest produce like sal leaves, mahua and soboi grass (used to make ropes).

Agricultural incomes of the villages have gone up. Land productivity has improved. Almost every village where there is a community protecting the forests is a success story says Mahapatra. (*Mahapatra, Richard. Grassroots 1999.*)

Joint Forest Management in Rajasthan

Rajasthan has more than 1700 Village Forest Protection and Management Committees. Membership is open to one adult member willing to participate from each family of the village or village-clusters. VFPMC is responsible for protection, collaborative micro-planning, production, management, resource sharing, resolution of dispute and marketing. VFPMC is required to protect and manage forest/plantation area for at least ten years to earn rights to forest produce. Before the final harvest, villagers can collect some of the non-wood forest products free of charge. Munj, Bhuari and Khus are sold through auction. While half of the income generated from auctions will go to the State exchequer 50% will be deposited in the VFPMC account. Half of the share of VFPMC will distributed equally among the members and the remaining half reinvested in plantation and forest development. In case a VFPMC is not existing, the income will go to village panchayat subject to its supportive role in protection for a minimum period of 10 years.

Participatory forestry has shown initial promise in the following cases:

Ambua, a small hamlet in Udaipur district in Rajasthan is located close to a forest block. Overuse of resources led to scarcity of fodder and livelihood goods. People felt the need to regenerate their forests and approached the forest department with their problem.

Officials of the Forest Department started interacting with the villagers. A Village Forest Committee was registered. Information

gathered from VFPMC meetings and PRA/RRA exercise was used for need assessment and prioritisation of needs and a detailed microplan for the village was prepared. Species ranking was done with the help of user groups and certain species were selected on the basis of this.

The VFPMC is protecting 200 ha of plantations raised in the village and equitably distributing grass yield from the area. Villagers are entitled to take non-timber forest produce (NTFP) free of cost from the area. The committee will also get 50% share in profits at the time of final harvest. The villagers collect grass free of cost from the area protected by them.

VFPMC Ambua received the highest state honour - The Amrta Devi Award from the Govt. of Rajasthan for their work.

In Gorela village for regeneration of forest land the choice regarding the composition of species for plantations has changed in favour of the species recommended by villagers.

The Gorela Village Forest Protection and Management Committee (VFPMC) was formed with one person from every household as a member. VFPMC is responsible for organising patrols by members. Problems and forest protection matters are discussed in VFPMC meetings. In return for protection, the villagers have rights to collect fallen wood, fodder grasses and other non-timber forest products. Felling of trees in the regenerated area is prohibited. The VFPMC has powers to impose fines and the money collected as fines is deposited in the VFPMC account.

The most immediate benefit of forest protection activity is the regeneration of grass, which can be collected by members of the VFPMC. The cash collected is deposited in the community fund. Regulated grazing and pruning is being practised. The villagers are

entitled to 60 percent of the net revenue from the final sale of timber which is arrived at after deducting government expenditure on plantation, fencing, soil and moisture conservation, raising of

Non Wood Forest Products: impact of state control

Non-Wood Forest Products (NWFPs) have a key role in JFM efforts and are one of the keys to successful joint forest management. The increasing awareness of their economic potential, concerns for sustainability of the resources and distribution of benefits derived have led to state governments taking over control of a number of NWFPs. Ram Prasad in this article looks at some cases and examines its impact on JFM.

Case studies suggest that state NWFP monopolies may have disadvantages for collectors as well as for forests. In many states membership of JFM committees and primary forest produce collectors (PFPCs) societies are not the same. While membership in forest protection committees (FPCs) and village forest committees (VFCs) is open to all families of the village, PFPCs are made up, of collectors only. While FPCs and VFCs are entrusted with conservation and development of forests and NWFPs, no such responsibilities are assigned to NWFP collectors. While PFPCs get the monetary benefits from the sale of NWFPs under monopoly they are not held responsible for management of the resource. On the other hand those who have such responsibility do not share the benefits. It is suggested that the two types of organisations need to be integrated so that interest of the members conserving and developing the forest resource and those of NWFP collectors do not clash. This could be done by inclusion of members of JFM committees in PFPCs. Alternatively part of the profits from NWFPs could also be given to JFM committee members who are not part of PFPCs says the author. (Prasad, Ram. *Joint Forest Management in India and the impact of state control over non-wood forest products. Unasyva vol 50 (3), 1999.*)

Incentives for Joint Forest Management in India

This study by the World Bank examines the economic and financial incentives for various groups of forest users in India to participate in JFM arrangements. The objective of this study is to develop a better understanding of the incentives for communities to participate in JFM, particularly the economic and financial incentives for participation of various groups of forest users, the stakeholders in forest resources, within and outside the community. An analytical method is developed and applied to two case studies of communities managing a mixed teak forest system in Gujarat and a sal coppice forest system in West Bengal. Analytical results show that economic returns to JFM are considerable in both forest systems; there is an increase in revenues from the forest to the communities but a theoretical loss to forest departments; income flows into the communities increase significantly though in sal coppice systems this is partially offset by declining income from collection of non-timber forest products; benefits of JFM are not always distributed equally which may result in collectors of firewood and some NTFPs losing even though overall gains are sufficient to compensate losers.

The realization of benefits is dependent on an enabling environment consisting of complex institutional and social conditions, in particular the representativeness and functioning of the village forest committee, regulatory framework and sharing arrangements and the regional economic and marketing context. The method however needs to be more widely tested in a variety of social and environmental conditions and the results from the two cases can only be extrapolated with caution, express the authors. However they do point to significant economic and social benefits to communities and the need for specific measures to safeguard the interests of those who may lose as a result of unequal distribution of benefits. *(I. Hill and D. Shields (1997). Incentives for Joint Forest Management in India : analytical methods and case studies. Washington, World Bank.)*

seedlings and weeding. Management of forest resources is on the basis of people's suggestions.

Village Eklingpura

As excessive removal of wood depleted the forest in Eklingpura, the villagers were persuaded by Forest Department to organise themselves and protect the forest land adjoining the settlement. The Forest department took up a plantation programme, which enhanced the production of grass in the village.

Every household has a right of membership to the Village Forest Protection and Management Committee (VFPMC). Each participating member contributes 5 kg of wheat or Rs. 25 per year, and gets a grass collection card from the VFPMC. Each household is also required to contribute some grass to a common pool which is auctioned daily to generate additional funds for the VFPMC.

After the land came under community protection, local species regenerated dramatically from existing rootstock. During the harvest season every participating household is allowed to take a headload. (Pandey, Deep Narayan. ***Joint Forest Management in Rajasthan : A case Study of Three Villages in Udaipur District*** excerpted from *Beyond Vanishing Woods*, Himanshu/AFN, New Delhi/Udaipur, 1996)

Participatory Forest management in Maharashtra

In Buldana district of Maharashtra, 90 % of the forest area is at different stages of degradation caused by Kathiyawadi (cattle herders) and sheep grazers etc. Some villagers approached the Deputy Conservator of forests regarding the problem. A meeting was conducted and the villagers and forest officials jointly decided to remove the cattle herders from the forest area. This initial experiment with active participation of the villagers resulted in the removal of

the Kathiyawadi cattle and infused confidence in villagers and forest officials. This led to villagers forming Forest Protection Committees (FPCs) to control illegal sheep grazing which was successful. Rotational grazing was adopted in many villages resulting in increase in productivity of grass and natural regeneration of local species. Felling of teak trees was also reduced through villagers' efforts. Villagers carried out plantation on encroached lands. Forest officials were able to convince villagers that they could get 50% of the plantation produce. They could also get employment in forestry works and gather NTFP for sale thereby increasing their income. Initial success in forest protection with villagers' participation encouraged forest staff to adopt the participatory approach. Training was organized for foresters and guards to appraise them of the need for change. Formation of FPCS has increased and at present there are 112 FPCs in Buldana division. Other committees are working for forest protection and getting benefits of NTFP from the protected area. In some villages plantation works are carried out under the plan scheme, EGS, JRY for providing employment and other benefits. It is decided to channelize all funds for plantation and soil conservation to villages where FPCs have been formed.

Additional income generation programmes like bee keeping, mushroom cultivation etc. are being implemented to provide alternative income to select groups, mostly women. Many FPCs could also generate village common funds from sale of grass and anjan leaves, voluntary labour, etc. These funds are used for giving loans for purchase of buffaloes or for financial assistance to the poor. This is helping reduce dependence on money lenders and making available timely credit.

The success of participatory forest management is due to involvement of senior officials and reorientation of foresters and guards, and association of villagers in forest protection and management.

Authors conclude that decisions at the government level to assign the Forest department a nodal role in integrated development of the village in and around the forests is necessary for success of JFM. (*Jha, Mohan. Participatory Forest Management in Buldana division. Exchanges, no. 23, December, 1998.*)

Joint Forest Management in Tamil Nadu

Interface Forestry Project (IFP)

Concerned with problem of forest degradation, Interface Forestry Programme was introduced in the Phase II of the Social Forestry project during 1988. An Interface Forest is that part of the degraded Reserved Forests which has an Interface with abuttant village and it forms the catchment for direct and indirect benefit flows to rural communities in its command area.

This Programme aimed at restoration of degraded forests close to habitations, on watershed basis, with active cooperation of abuttant villagers. Besides developing the forest resources to provide sustained ecological and economic benefits, efforts were made for socio-economic development of the village as a whole. People's participation was sought for from the initial planning stage onwards upto benefit sharing and to some extent for the management and protection of forests.

Interface Forestry programme came to a close in the year 1996. and has evolved into Japanese OECF Aided Micro Watershed based Comprehensive Forestry Project in Tamil Nadu from 1997 onwards. (*Prof. Dr. R. Annamalai*)

Tamil Nadu Afforestation Project (TAP)

The Tamil Nadu Afforestation Project (TAP) was launched during 1997-98 with a massive tree planting programme to bring about

balanced ecological upgradation and for meeting the requirements of the local people with respect to wood and non-wood forest produce. The project is implemented with the assistance of Overseas Economic Co-operation Fund, Japan. The objectives are to improve forest productivity by creating heterogeneity of tree species and through intensive soil conservation and water harvesting measures; preserve areas rich in biodiversity; optimise use of land resources on scientific basis and provide employment opportunities in rural areas; enhance capabilities of the Tamil Nadu Forest Department by establishing Geographic Information system, various training programmes, and re-orientation in the management of natural resources through Joint Forest Planning and Management. This project is scheduled for five years.

While Firewood, Fodder ,Green leaf manure, NTFP are available free of cost for domestic Consumption, surplus quantity of NTFP is sold. From the sale proceeds 25% is remitted in VFC fund and balance is equitably distributed among VFC members. (Prof. Dr. R. Annamalai. Joint Forest Management in Tamil Nadu at <http://www.iifm.org>.)

Community-based Conservation – The BR Hills Case

Biligiri Rangaswamy Temple Wildlife Sanctuary, or BR hills, constitutes a live link between the Eastern Ghats and Western Ghats, facilitating an active exchange of gene pools between them. In 1994, Tata Energy Research Institute (TERI) New Delhi and Vivekananda Girijana Kalayana Kendra (VGKK) BR hills, designed a project to increase the economic stake of the *Soligas* ,an indigenous tribe, in conserving their biotic resources and their capacity to ensure the ecological sustainability of these resources. The approach to conservation in BR Hills sanctuary seeks to involve Soligas in conservation of their resources.

ATREE (Ashoka Trust for Research in Ecology and Environment), Bangalore, also joined as a partner in 1998. The central aim of the project was to create enterprises, based on NTFPs (non-timber forest products) to be operated by the *Soligas*. The *Soligas* were to process some of the NTFPs collected through LAMPS (Large Scale Adivasi Multipurpose Society) and sell the processed items in the market to generate profits for the local community, while simultaneously ensuring the sustainable extraction of NTFPs. The long-term goal of sustainability in extraction was to be achieved by a biological monitoring programme to be undertaken with full participation of the *Soligas*. A socio-economic component of the project was designed to ensure participation.

Biological monitoring has been initiated. Vegetation maps of all the species and distribution maps of major NTFP species have been prepared. Spatial data have been integrated into a geographical information system. Members of the *Soliga* community have been recruited as field assistants and trained to monitor the levels of production, extraction and regeneration of NTFP species. Monitoring exercises were conducted to estimate production, extraction, and regeneration of NTFP species.

Socio-economic monitoring was conducted to determine degree to which *Soligas* rely on NTFPs and other sources of income to sustain their livelihood, prices that the *Soligas* get from the LAMPS, levels of profits. The socio-economic activities also included empowering the *Soligas* to realise social and economic benefits from different government non-government activities aimed at their welfare, and involving them in operating and managing enterprises. A separate organization was formed by the *Soligas* to operate the enterprises and to involve the entire community in associated socio-economic and resource monitoring.(at <http://www.iifm.org>.)

Gender Equity and Joint Forest Management

While women do the bulk of collection work for commercial and domestic use, of resources like fuel, fodder, and non timber Forest Produce (NTFP) yet they have little say in decision making with regard to management of these resources. Seema Joshi and Bishwadeep Ghose in this article highlight an effort to improve women's participation in decision-making concerning management of forest resources.

Aga Khan Rural Support Programme (India) is an NGO working in four districts of Gujarat. In Bharuch district of Gujarat AKRSP has been working with village communities for afforesting and protecting degraded wastelands. It has initiated JFM in around 60 villages covering 3000 ha approx. This is being initiated through village institutions viz. Gram Vikas Mandal (GVM) where both men and women can be members and Mahila Vikas Mandal (MVM) where only women are involved.

To strategise empowerment of women to participate in decision making and facilitate adoption of more equitable forest management processes a workshop cum training programme was held at Netrang (AKRSP's field campus) for women across two blocks. The objective was to initiate a sensitisation process regarding their stake in JFM decisions, the implication of JFM policy for their day to day activities, and access to decision making process.

A number of suggestions were given by women for ensuring their own participation in the JFM process :

- All women forest users should become members in GVM as it was a platform where all decisions were taken.
- Ensure Women's representation in Managing committee of GVM, by becoming committee members.

- Make the presence of women members mandatory for decision making.
- Discuss the forest related agenda in each MVM meeting, and convey decisions taken by women in the GVM meetings. *(Joshi, Seema and Ghose, Bishwadeep. A participatory strategy for bringing gender equity into Joint Forest Management. Exchanges 25 & 26, June and September 1999.)*

Forest Management policies of International lending agencies

The Sustainable Development Institute (SDI), a non-governmental, non-profit organization, has been studying the trends in policy among the major donor agencies, that support the role of communities in managing forests and natural resources. SDI identified a number of projects that have a major community forestry component and emphasize village level development. SDI's main purpose is to improve the understanding of the role of local communities in sustaining environmental quality and economic development.

SDI conducted a "comparative analysis" of forest management policies designed by the chief international lending agencies viz. World Bank, U.S. Agency for International Development (USAID), the Asian Development Bank (ADB), and the InterAmerican Development Bank (IDB) - and forest management practices that depend on local community participation. Andre McCloskey examines institutional policies, project reports and evaluations, to gain insight into the links and gaps between policy and practice. There are some shifts in policy thinking, there is increasing language in some donor agency portfolios about the need to incorporate local communities and NGOs into forest and protected area management plans says McCloskey.

The World Bank

SDI selected World Bank forestry projects in **India, Indonesia, Thailand and Brazil** for their size, emphasis on local communities/indigenous peoples' involvement in project management and activities to improve community socio-economic status; and innovativeness in trying new methods of participatory planning and implementation:

In **India**, the Bank is supporting several projects, including the Andhra Pradesh (AP) and Madhya Pradesh (MP) Forestry Programs, and the GEF-funded India Ecodevelopment Project.

The AP project is designing and implementing a joint forest management (JFM) program, using the **ZOPP workshop** method of community participation which involves process of participation analysis, problem and objectives identification, and action program with communities etc.

The MP project, seeks to create a statewide forestry project to include institutional reform; improved production of timber and non-timber forest and biodiversity conservation. "Income improvement" of populations living in and around forest areas, is an element of the project, and will involve "introducing local participation" into forest protection and management. An indication of the Bank's move towards more innovative methods of involving local peoples, is a Village Resource Development Plan (VDRP) to be created through participatory planning and management of forest resources.

The Ecodevelopment project has a primary focus on involving local people in the management of designated protected areas and working with them to build alternative livelihood activities. This includes participatory impact assessments of protected area and local people interactions; participatory microplanning; creation of a "village ecodevelopment fund" to facilitate alternative livelihood activi-

ties; and strengthening capacity of implementing institutions to carry out the above.

In Thailand under the IBRD/GEF-funded Forest Conservation and Management project, the IBRD program involves formation of joint management agreements with local peoples in buffer zone areas to protect biodiversity as one key objective, while the GEF part consists of extensive, direct efforts to incorporate local participation into protected area management.

In **Brazil** the Extractive Reserves Project aims to set up local level management plans for protected areas and reserves, while working with local communities and indigenous people to initiate income-generating activities based on sustainable resource use. An emphasis is on strengthening local institutions in areas of community organization, education, marketing, health, etc. to take responsibility for the project.

The US Agency for International Development (USAID)

USAID has participation as a key element in many projects. USAID-funded initiatives in natural resources management have significantly influenced efforts to decentralize resource management and protection to local communities.

In the **Philippines**, USAID has a large, country-wide natural resource management program with a focus on empowering local upland communities to take over management of forests on which they depend. While the first phase of the program concentrates on policy reforms that would shift management authority to local communities, in the second phase the goal is joint design and development of community management plans and activities.

In **Nepal**, USAID has forestry projects aimed at promoting community forest management throughout the country.

The Asian Development Bank (ADB)

The Asian Development Bank has unveiled a forestry policy “based on protection, production and participation... participation of local communities and NGOs in policy formulation and implementation.” (Mc Closkey, Andre, Forest Management Policies of National lending agencies.)

