Across Andhra Pradesh, a large state on the eastern coast of India, a dramatic change is afoot. The state government has introduced on a massive scale a new approach to protecting forest resources known as joint forest management. Under this approach, local people living on the fringes of forests are forming Vana Samrakshna Samithi (VSS)—village organizations established to protect forests—and are joining forces with the state forestry department to work in partnership for a common cause: rejuvenating Andhra Pradesh’s degraded forests. Together they now share the responsibilities and benefits of forest restoration, protection, and management. The initial gains from this people-centered management strategy are impressive, and a huge effort is under way to support and sustain the change. The Forestry Department, once regarded as a rule-bound and hostile bureaucratic police force, is now often heralded by rural people as a friendly promoter of their development. A dramatic change indeed, in perception and attitudes, brought about within the past four years.

BRINGING BACK THE FOREST

“My village is my country, my backyard is my forest, my wealth is my trees, my people, and I will protect them,” thunders a proud Mr. Ramu, chairman of the Thanimadugu VSS, to any visitor. And why not? He and his fellow villagers working together with the Forestry Department have saved 500 hectares of forestland adjoining the village that was virtually destroyed by illicit felling and transformed it into a luxuriant and productive forest. Their backyard, the forest, now provides a livelihood to all 70 households of this fringe village of the Gond people—an ancient and distinct tribe of Andhra Pradesh.

Less than a decade ago, ruthless and unchecked illicit cutting of trees had turned this forest into a parched landscape of dying stumps and scorched bushes. At this time, the villagers, who stood as sad witnesses of this plunder, found that their very existence was under threat: drinking water sources were fast drying up, and there was no bamboo or grass available to repair their huts and renew the thatched roofs. Despite the vast forest in their backyard, they had to purchase roofing materials elsewhere. They appealed to various agencies to protect the forest and their interests, but to no avail.

Thus, when the Andhra Pradesh Forestry Project was launched, introducing joint forest management, villagers of Thanimadugu readily came forward to form a VSS, elected a woman as first chairperson, and started protecting and rehabilitating the forest.

The Forestry Department provided the technical support, assisted in the formation of the group, and helped VSS members at work.
plan for the restoration of the forest and for its protection. Teak tree stumps were cut back to ground level, and the regenerating shoots were carefully managed; bamboo was planted; measures to improve soil and moisture conservation were introduced; and the tender new growth was protected from encroachers by the villagers through group action. As a result, the backyard is now green and the VSS has a bank balance equivalent to US$8,000 from the income earned from forestry activities and the produce of natural regeneration. This money will be used to maintain the forest in the future and to contribute to village development needs identified as priorities by the VSS. Such success stories abound throughout Andhra Pradesh.

**The Joint Forest Management Approach Takes Off**

At present there are more than 5,000 VSS busy rejuvenating more than 1.2 million hectares of degraded forests in the state. By the year 2000, the Forestry Department hopes to foster about 7,000 VSS to help manage 1.7 million hectares of forest. A World Bank-assisted forestry project with a large joint forest management component is helping to make this happen. The state government, spurred by the enthusiasm of the Chief Minister, has been proactive: it quickly perceived the potential, picked up the joint forest management strategy, and extended it throughout the state with its own funds. There are now two streams of the joint forest management program in Andhra Pradesh: one funded with credit from the World Bank’s concessionary lending arm, the International Development Association (IDA), and another with other state resources. Both have common aims and approaches.

**Government Policies Promote Participatory Forestry in India**

Andhra Pradesh is not alone in these efforts: throughout India, state governments are experimenting with ways of involving people in the restoration and management of public forestlands. The World Bank has been an active partner in supporting the efforts of six states to this end. The situation of India’s forests is critical. The average forest area per capita is 0.07 hectares, one of the lowest proportions in the world, and the productivity of these remaining forests is well below capacity. Degradation of forest resources resulting from more than a century of overexploitation, increasing human and livestock pressures, and inadequate conservation has been of great concern to the nation and has especially taxed the poorest of the poor, who have long been the most reliant on these natural assets.

In 1988 the Government of India introduced a new forest policy that called for substantive and significant change in the management of the sector. This policy radically altered the aims of forest management, shifting it from a commercial and industrial focus to one that stresses restoring environmental forest functions and meeting the basic needs of people living in, or near, forests. The policy clearly directs that forests be managed first as an ecological necessity, second as a source of goods for local populations, and only third as a source of wood for industries and other non-local consumers. It envisages that the bulk of industrial wood demand will be met by farmers and private investors. As S. D. Mukerji, head of the Andhra Pradesh Forestry Department, notes, “The policy marked a new era where, for the first time, the rights of people living in and around the forest were recognized as an essential requirement in the governance of forests, where for the first time they were considered partners of the Forestry Department, and where the demand of the people was recognized as the first charge on the forest produce.”

In support of this new policy, in 1990 the Government of India directed the states to develop a participatory approach in their efforts to restore the nation’s degraded forests. By 1998, the vast majority of the states had introduced joint forest management programs and policies. These programs build from the varied and considerable traditions of people managing their own forests, as well as from the pioneering efforts of foresters in West Bengal.

**Forest Decline in Andhra Pradesh**

As in other parts of India, forests in Andhra Pradesh were under serious threat from timber smuggling, overexploitation by industry, deteriorating law enforcement, ravaging fires, uncontrolled grazing, agricultural encroachment, and unmanaged exploitation for firewood and other basic needs. The state owns and manages 6.4 million hectares of forest (effectively 23 percent of its area), but 45 percent of this state-owned forestland is degraded. Past management strategies had focused on timber production, and government-enforced protection failed to reverse the trend. Even social forestry programs introduced in the 1980s, to promote fuelwood plantations on communal lands and tree growing on farms, had not yielded significant results because local people were not involved and the programs focused on lands outside state management control. To address the continuing crisis, the government approached the World Bank for assistance in 1992.

**The Andhra Pradesh Forestry Project**

The Andhra Pradesh Forestry Project builds on the experiences of the social forestry era of the previous decade. In particular, the decision to use joint forest management techniques in its project design was heavily influenced by lessons from the foresters in West Bengal, who had developed the approach in the 1970s and success-
The Andhra Pradesh Forestry Project is a six-year program that began in February 1994. Its goals are to increase the productivity and quality of forests, protect the environment, alleviate poverty, and strengthen and streamline the policies of the forestry sector to be consistent with these objectives. To achieve them, the project will:

- Introduce people’s participation in the protection and management of public degraded forests (joint forest management)
- Institute better practices and new technologies to increase forest productivity
- Promote private sector participation in forestry sector development
- Maintain and even improve biodiversity
- Strengthen institutions involved in forest sector management.

The total project cost will be US$89.10 million, and IDA is providing US$77.4 million of this in credit. The project is complex, addressing problems and opportunities across the sector, and it is focused on reform and renewal of the Forestry Department through changes in policy, training, and direction; improvements in planning and conservation management; technology development and research; development of joint forest management; and the promotion of private sector involvement in forestry.

The project supports forest rehabilitation and development on 354,600 hectares, and 50 percent of its budget is reserved for restoring forests through joint forest management. The main forestry investments are for the protection of degraded areas with viable rootstock; treatment of natural regeneration of forest vegetation; enrichment planting, particularly of nontimber forest products (such as bamboo) cherished most by local people; and soil and moisture conservation works. The project further supports joint forest management by:

- Funding training and study tours for village leaders
- Providing initial incentives for community efforts through support for improved drinking water facilities
- Reducing fuelwood consumption through the introduction of alternative energy technologies
- Helping to meet priority development needs identified during initial negotiations
- Providing development assistance to tribal groups
- Fostering NGO participation.

Thus, joint forest management is a central component that absorbs a major portion of the investment in the project.

Mukherji concluded that “the major hurdle in Andhra Pradesh was to change the habit of its employees, from doing everything departmentally to involving the people as equal partners. Once forest officers start believing in the people and are mentally prepared to help the poor, then half the battle is won. However, for this change of mind-set, some dedicated officers at the helm of affairs must be available.”

At the outset, foresters had to spend a great deal of time in meetings trying to convince people of the value of the program; now, in 1998 the situation is quite reversed. After seeing the benefits of joint forest management nearby, villagers are demanding the formation of VSS in their own villages. The problem now for the Forestry Department is meeting these demands and expectations.
Andhra Pradesh’s Policies and Procedures Shape Joint Action

The joint forest management program is framed by a government order that sets out the principles and procedures for VSS formation, the roles and responsibilities of the VSS and the Forestry Department, and explains the benefit-sharing policies. Andhra Pradesh’s benefit-sharing policy is the most generous and ambitious of all the states’ policies in India. It stipulates that VSS will share all of the nontimber forest produce (grasses, fuelwood, fruit, medicines, and so forth) amongst themselves, and that they will also receive 100 percent of the income from the harvest of timber and bamboo resulting from their protection efforts, providing that they set aside half of this income for the future development and maintenance of the forest. Thus, the policy ensures resources for the long-term sustainability of the forest and recognizes that government support will be required only in the first few years while the forest returns to a productive state.

How Joint Forest Management Works

The Forestry Department is responsible for organizing and providing technical and administrative support to the VSS. Villages on the fringe of the degraded forests are carefully selected. To the extent possible, socially homogeneous groups are brought into one VSS fold. Persons from all households are eligible to become members, but those from the most deprived section of society—the scheduled castes and tribes—are automatically eligible to be members. Generally, two people from each household become members, and one of them must be a woman. Most VSS range in size from 75 to 150 members. This general body elects a managing committee of 10 to 15 members, 30 percent of whom must be women, who in turn elect a chairperson to oversee and manage the affairs of the VSS. The Forestry Department participates on this committee through its field officer, who acts as a secretary. It is proposed to transfer this task to the committee over time.

The primary purpose of the VSS is to protect the forest from encroachment, grazing, theft, and fire, and to improve the forest in accordance with an approved joint forest management plan. This local plan, known as a microplan, is formulated in stages. The discussion about what to do with the forest is initiated through a participatory rural appraisal. In this way, all members of the VSS get a chance to take part and express their views. The Forestry Department surveys the forest adjoining the village and demarcates boundaries at this time. Keeping the conclusions of the initial discussions as a framework, a detailed microplan for forest development is prepared by the committee and the forester. Where available, locally based nongovernment organizations (NGOs) help facilitate this planning process. Thereafter, costed annual programs are worked out and submitted to the Forestry Department for approval. The microplans are designed to ensure protection of the forest and aim to restore its productive capacity as quickly as possible. All of the planting, silvicultural operations, and soil conservation works are undertaken by members of the VSS and paid for out of project funds. A legal memorandum of understanding between the VSS and the Forestry Department formally details the duties, functions, and entitlements of everyone involved.

As compensation for protecting a particular forest, a VSS is entitled to all of that forest’s produce. The income so generated must be distributed equally among the members of the VSS. However, in most instances, it will be a number of years before these degraded forests start generating any income. Thus, at the outset, to help motivate people and to address some of their most pressing social needs, the Forestry Department provides some support to village development. For example, microplans promote women’s thrift groups and provide for drinking water facilities, community halls, water storage facilities, fishponds, household biogas plants, low-cost smokeless ovens, and small-scale irrigation facilities. The project supports some of these “entry point” activities, but mainly the foresters must seek the assistance of other government departments or NGOs to facilitate this broader rural development. In many instances, this experience has encouraged the government to assign foresters the task of coordinating all rural development assis-
tance within their localities. This trend illustrates the transformation of the Forestry Department, which now successfully integrates the conservation and development aims of the government.

The works and funds of the VSS are handled in a transparent manner jointly by the chairperson of the VSS and the forester who acts as the secretary. This transparency helps to ensure the quality and cost-effectiveness of all activities.

**THE IMPACT OF JOINT FOREST MANAGEMENT**

The present arrangement is well received by the people who participate in joint forest management. They are aware of their responsibilities and entitlements. With protection, the degraded forests have sprung back to life. Timber smuggling has almost been stopped. Cattle grazing is under control. There is no further encroachment by agriculture on lands vested with VSS. Between 1983 and 1993, 45 percent of the forest in the Adilabad district was lost to these encroachments. Since joint forest management was launched, this trend has been reversed, and there have been no reports of forest loss in any areas currently managed by VSS. Village labor is gainfully employed, and outmigration has declined. Women participate in all VSS affairs as equal partners and get the same pay as men. The soil conservation works have resulted in higher water tables in many areas, leading in turn to improvements in agricultural production. There is a general improvement in the flora and fauna of the area. To monitor these changes, the government of Andhra Pradesh has commissioned an independent evaluation.

The gains are impressive. Joint forest management has become a mass movement in the state. Standing on a high ridge overlooking the Odepally forest in Nizamabad district, a forest regenerated with the assistance of a VSS, the conservator, Mr. Pandey, said: “The smugglers had removed even the stumps from the forest. But with VSS protection, the forest has bounced back to life. See the swaying trees, hear the chirping sounds of birds, and melodious note of the fast-flowing stream. Nature has so much vitality to revive if only human vandalism is stopped.”

**SUSTAINING THE MOMENTUM FOR CHANGE**

The swift expansion of the joint forest management approach in Andhra Pradesh has been driven by the spectacular regeneration of forests and the resulting economic gains of local people, and by the personal involvement of the state’s Chief Minister, who turned the strategy into a mass movement and ensured access to resources from different sources. The rapid, visible, and tangible results paved the way for growing enthusiasm and participation. A band of committed and visionary forest officers, benefiting from substantial training, and the involvement of NGOs, contributed to this rapid stride.

To sustain the efforts and gains of the joint forest management program, integrated development of the fringe villages is critical. This includes developing technologies to increase the productivity of forests, changing enforcement regulations, focusing on the regeneration of common wastelands to reduce pressure on forests, providing new skills and employment to people, and introducing measures to improve the quality of life. The state has focused its attention on these issues by pooling resources and directing developmental efforts through coordinated action at the district level.

**EFFECTIVE COLLABORATION IS THE KEY TO SUCCESS**

Joint forest management differs from many earlier attempts to promote forestry oriented to meeting people’s needs. The essential difference is that it builds from the roles played by both local forest users and the professionals employed by the state to act as custodians. The head of the Forestry Department, Mr. Mukherji, concludes that the “experience in Andhra Pradesh has shown that deforestation cannot be stopped by the Forestry Department alone. Experience has also shown that communities on their own cannot do much. It is the combined effort of community and government that seems to be the best solution under prevailing circumstances where a large section of the people are illiterate and poor, and are unequal to the dominant group. Government intervention is needed to ensure equity, transparency, and to strengthen the
voice of the poor. Similarly, participation of the people is absolutely necessary to keep constant vigil against all odds and to protect the forests. NGOs play a very vital role in bridging the gap between the bureaucracy and the people. VSS should not be viewed only to develop the degraded forests but as an instrument for an overall development of village resources and its people."

**KEY LESSONS**

There are many lessons to be learned from the successes and difficulties experienced by the foresters and villagers as they have embarked on joint forest management in Andhra Pradesh. It is still very early days for the program, the forests are only just starting to rejuvenate, and many institutional and technical challenges lie ahead. However, lessons that have emerged so far include:

- Managed natural regeneration, together with effective protection from fire and grazing, provides a cost-effective means of rejuvenating large areas of degraded forest.
- Rapid natural regeneration provides a major incentive for increased participation in joint forest management.
- Sharing of benefits and responsibilities for forest management can provide sufficient incentive for people's participation in the restoration of forests.
- Training and reorientation of frontline staff is essential from the outset of the program.
- Committed leadership, particularly at the political level, makes a huge difference to the pace of reform.
- The participatory forestry approach will lead to a radical shift in the orientation and management of the government forest service; it will result in a service that is less insular, more client-oriented, and responsive to the conservation and developmental needs of the local people.
- NGO involvement improves the quality of participation and helps facilitate joint action by the bureaucracy and the villagers, but it can be effective only when there is demand for NGO services at the field level.
- VSS management of funds and accounts contributes to the sense of ownership and responsibility for the sustainability of the program.
- Forest conservation and development need to be undertaken in conjunction with village development in order to improve rural livelihoods and reduce poverty, and strong linkages need to be built between these two related objectives in order to sustain people's commitment to forest management.

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Quotes from Mr. Mukherji taken from an article he wrote for *Wasteland News,* May-July 1998.