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Ensuring 'Collective Action' in 'Participatory' Forest Management

Rucha Ghate



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ABSTRACT

The Government of India appealed a new forest policy in 1988 which resulted in Joint Forest Management. This new policy allowed community groups to share part of the responsibility of forest management with the State. However, even before this, community-initiated and NGO-promoted “Collective Action– based” resource management had emerged sporadically throughout the country. This paper is based on a qualitative analysis of three case studies, each belonging to one of three types of institutional structures: Self-initiated, NGO-promoted, and Government-sponsored JFM. The basic objectives of all three institutional structures is strengthening ecological security and meeting the subsistence biomass needs of the local people. Yet, they are different, each with its strength and weaknesses. Thus, this paper suggests several important points. First, lack of well-defined property rights over communally managed forests may adversely affect the long term sustainability of local institutions. Second, given the caste hierarchy in Indian villages, the State or another external agency may have to intervene to ensure fair distribution of community forestry benefits. Third, inter-community cooperation, in addition institutions within the village, is necessary in order to ensure sustainable utilization of forest resources. Finally, the paper argues that rather than oscillating between a simplistic either/or model of ‘state’ or ‘village community’, there is a need to conceive of more complex arrangements in which forest areas are protected for multiple objectives, under the joint management of multiple institutions.

Key words: Forest management, Collective action, Joint forest management, Process analysis, India.

ENSURING “COLLECTIVE ACTION” IN “PARTICIPATORY” FOREST MANAGEMENT

RUCHA GHATE

1. Introduction

India followed the British colonial approach of command and control to forest management until recent times. Important policy initiatives were undertaken to change this approach in 1988. A decade and a half since the policy change in India, “participatory” forestry has been gradually maturing. With three subsequent Government Resolutions¹, each one more liberal than the earlier, and with evidence on successful implementation of participatory efforts, the indications are that finally co-management of forestry resources is becoming acceptable at various levels of governance. Although “participatory” forestry is a modern concept, “community” management has a long history. Travelogues of the early 19th century and old gazetteers present a picture of a well-stocked country with pastures and forest resources. What also finds mention is that these resources were controlled and managed fairly by the local village communities in the pre-British era. The forests were then a communal property with no private claim by individuals and all the members of a community had access to forests for their needs. Despite the fact that during the pre-British period there were few incentives for the tribal communities to conserve forests as there existed vast tracts of seemingly inexhaustible forests and with low demographic pressure, there is evidence that conservative use of the resources was in practice. Restrictions on reckless and indiscriminate exploitation have always been the foundation of the social and cultural institutions developed by the people in various forest areas of India (Guha, 1983; Roy Burman, 1985; Gadgil and Berkes, 1991; Gadgil and Subhash Chandra, 1992). There were social laws and norms that made sure that even as human beings extracted their needs from the forests, the rate of extraction did not exceed the natural growth, which avoided resource depletion.

This situation changed with the first policy statement in 1894. The tribals and the forest communities then became “intruders” and “aliens over the state property”. Forestlands were transformed into mere sources of revenue for the British Government (Rangarajan, 1996) even at the expense of forest areas allocated to villagers’ use (Guha and Gadgil, 1989). After India’s independence in 1947, the minimum expectation of the tribals and the social workers working among them was a basic restructuring of the forest policy and recognition of tribal rights over forests in the new forest policy of the Indian Government (Ghate, 1992). But the government of free India disappointed everybody by adopting all the basic principles laid down by the British.

At the time of independence, India had almost 20 per cent of its geographical area under forest cover. The Forest Policy of 1952 envisaged bringing 1/3rd of India’s geographical area under forests, with only 23 percent of the land under the control of the FD. However, with the exception of protected areas and some reserved forests, which are away from human habitat, all other forests have turned into *de facto* open access. According to National Remote Sensing findings, from 55.52 million hectares (mha) in 1972-75, the forest cover has decreased to 46.35 mha. in 1982. India lost 1.3 mha of forest every

¹ No.6.2/89-Forest Policy, June 1, 1990; No.22-8/2000-JFM (FPD), February 21, 2000; Strengthening of JFM Programme, Guidelines, by MoEF, on December 24, 2002.

year between 1972-75 and 1980-82 (CSE, 1982: 80). This further justified the need for consolidation of authority by the state, which is very well reflected in the stringent provisions of the Forest Conservation Act, 1980. However, severe protests by activists, academia, politicians, and communities at large compelled the Government to adopt a more accommodative approach, which came in the form of the Forest Policy of 1988. The dramatic shift in the approach of government towards forest dwelling communities since 1988 has changed the expectations as well as the mutual relationship between the communities and the Forest Department. The data published by the Forest Survey of India shows that there is an increase in forest cover from 63.33 million hectares (mha) in 1997 to 67.55 mha in 2001 (FSI, 2001). This could be attributed to reasons like stringent laws against the conversion of forest land to non-forestry uses, deserting the populist policy of regularizing encroachment of forest lands and, especially, nation-wide voluntary efforts of communities and non-governmental organizations (NGOs) to reforest denuded lands (Baal, 2002; Bahuguna, 2001). Apart from these, improved techniques in evaluating forest cover and changes in the method of interpretation of data may also account for the drastic increase in the figures. Rooted in the Forest Policy of 1988, the Joint Forest Management (JFM) program of the Government of India is considered an attempt to legally forge a partnership between the FD and the local community. This partnership is based on joint management objectives in which communities are expected to share in both the responsibilities as well as the benefits that would be generated. In a way, it is partially promoting common-property regimes as a means of restraining the process of forest degradation and building up a community resource base (McKean, 2000).

2. Participation or collective action?

It is now a well-accepted fact that unless the large number of biomass-dependent communities in India is accepted as stakeholders of the forest resource, its protection is extremely difficult. This has been the basic tenet of a participatory program like JFM since 1992. However, community-initiated and NGO-promoted “collective action”-based resource management had emerged sporadically throughout the country almost two decades before JFM. Studies in different parts of the country (Roy Burman, 1985; Gadgil and Berkes, 1991; Gadgil and Guha, 1992; Gadgil and Subhash Chandra, 1992; Ghate, 2000, 2002; Guha, 1983; Sarin 1996 etc., to cite just a few) point to the existence of communities that were consciously maintaining and managing the forests within their village boundaries at their own initiatives. In fact, in order to catalyse the processes of decentralized management, with or without government support, an informal network of NGOs too sprouted in the 1980s.

This study analyses three institutional structures i.e., Self-initiated, NGO-promoted, and government-sponsored JFM, evolved over time as a result of the above mentioned developments in the forestry sector in India. The basic objectives of all three institutional structures have been the strengthening of ecological security and meeting the subsistence biomass needs of the local people. Yet, the three institutional structures are different, with different strengths as well as weaknesses. It would be interesting to identify the factors that may ensure the sustainability of collective action in each of these institutions. JFM, the participatory management approach proposed by the government is not necessarily based on “collective action”. It could be a forced program, which either relegates “collective action” to a paper theory or a sub-optimal level approach with no real interest in the community. Similarly, community-based autonomous collective efforts suffer the likelihood of non-sustainability in the absence of legitimate sanctions set by the government. These, like the NGO-promoted efforts, can neither be replicated nor be expected to bring in change within a reasonable period of time. For that purpose, government-backed efforts at larger scale are essential. However, the “participatory approach” of the government needs to lead to “collective action” by the community, which is voluntary and indigenous.

This paper is based on three case studies (for location, see Appendix-2), each belonging to one of the three types of institutional structures: Self-initiated, NGO-promoted, and government-sponsored JFM. The three communities studied are the *Deulgaon* community which started forest protection all by itself; *Ranvahi* community which started protecting its forest after being inspired by an NGO; and *Markegaon* community which is covered under the JFM program. However, by now even *Deulgaon* (2000) and *Ranvahi* (2001) are covered under the JFM program. All the three case study villages are from the Gadchiroli district. It is one of the eleven districts of the Vidarbha region, in Maharashtra State. Most of the forest in the State is concentrated here. Yet, the per capita income of Gadchiroli district is 48 percent less than the State average. The total geographical area of the district is 14412 sq. kms, which works out to 4.68 percent of the State. About 61 percent of total forest revenue comes from this district. The population density of the region is very low. Only 0.99 percent of the State's population resides in this district, of which 38 percent belong to the tribal community. The data for all three case studies was collected through the research instruments developed by the International Forestry Resources and Institutions (IFRI) research program², and through informal group discussions. Group discussion and observation are an inevitable method of information gathering, especially in rural/tribal set-ups where the population tends not to be very forthcoming in giving information.

The paper will first describe the three institutional structures. This will be followed by a process documentation of the three case studies. Original idea was to evaluate and compare the three institutional structures. Three case studies showed that each institution structure has functioned at different time periods, which make the comparison difficult because institutions and their performance evolve with time. Moreover, the JFM enters into all three institutional structures at different times as shown later in the paper. This also makes it difficult to compare the three institutional structures. Therefore, the purpose of the study has been restricted to understand their strengths and weaknesses, which could provide suggestions for reorientation of the forest management policies.

2.1 Self-initiated Efforts

“A self-governed forest resource is one where actors, who are the major users of the forest, are involved over time in making and adapting rules within collective choice arenas regarding the inclusion or exclusion of participants, appropriation strategies, obligations of participants, monitoring and sanctioning, and conflict resolution” (Ostrom, 1997). Apart from its effect on forest condition and optimum resource use, a shared understanding of social norms plays a crucial role in community-initiated management regimes. The writings of scholars regarding commons, with historical and contemporary evidence, have shown that resource users often create institutional arrangements and management regimes that help them allocate benefit equitably, over long time periods, and with only limited efficiency losses (McKean, 1992; Ostrom, 1992a and 1992b; Agrawal, 1999). It is also found that when the users of a common-pool resource organize themselves to devise and enforce some of their own basic rules, they tend to manage local resources more suitably than when the rules are externally imposed on them (Tang, 1992; Baland and Platteau, 1996; Wade, 1994).

Usually communities organize themselves for collective action in the case of resources that are scarce as well as salient for the community (Gibson and Becker, 1999). A huge amount of literature has come

² IFRI, based on a Workshop in Policy Analysis, at Indiana University in USA, has developed a set of ten research instruments to facilitate collection of information about the demographic, economic, and cultural characteristics of communities dependent on forests. The set of ten pre-structured questionnaires is filled in using rapid appraisal and in-person interview method.

up in recent times in search of an answer to the perennial question, why do “some communities organize themselves to solve the problems of institutional supply, [while] others in similar circumstances do not” (Agrawal, 2002). Another important issue that has been widely discussed is the factors that are conducive for collective action. In the Indian context as well, despite hostility from forest authorities, some communities have opted for self-governance of forests basically to meet their sustenance needs. Forests are a ‘lifeline’ for the biomass-dependent millions of Indians living in rural areas in general and those living in and around forests in particular. Realizing the fact that they themselves are the primary sufferers of forest degradation, these more enlightened communities have taken it upon themselves to protect forests that are within their village boundaries by restricting use within the community. Some such attempts have been informal and merely based on mutual understanding while others have been much more explicit with a formulated rule structure regarding inclusion or exclusion of participants, obligations of participants, appropriation strategies, monitoring and sanctions, and conflict-resolving mechanisms.

However, it is important to take note of the fact that not all efforts on behalf of the community to manage its resources are successful. Caste hierarchies, the domination of the economically better-placed individuals or the elite within the community, etc., can easily mar the well-intended self-initiated efforts of the communities. These instances are rarely recorded.

2.2 NGO-promoted efforts

In India, NGOs have played an important role in encouraging communities to manage their own resources. These NGOs are characterized by their diversity. Most might be characterized as private, voluntary, or non-profit organizations, but not all. Some may be located in urban areas while others may be based in rural areas. Their area of impact too varies from international to local. While some NGOs focus their work on a particular issue, others may have a holistic approach from the point of view of overall development. Some may only provide technical and financial support for various activities, or remain in an advisory capacity while others may be involved directly in developmental activity. Like the local communities and states in which they operate, NGOs too can be widely different in terms of ideology, political and economic power, and organizational capacity (Isager, Theilade and Thomsen, 2002).

In the Indian context, NGOs have gained credibility, especially in the forestry sector, mainly because of the unpopular regulatory role of the Forest Department (FD). The transition from people’s ownership (free use) of the resource to the policing and regulatory approach has given a negative image to the FD amongst the people. Even after the FD adopted participatory approaches, at the initial stages the local communities found it hard to believe that the department was willing to accept them as partners in forest management. However, in many places NGOs have played a crucial role as a facilitator in bridging the credibility gap (Varalakshmi and Kaul, 1999) as well as in providing assistance on the non-technical and social aspects of participatory forestry as distinct from the technical aspects that are more commonly handled by forestry authorities. Despite their own limitations and constraints, there is potential for the involvement of NGOs in practically every aspect of common property resource (CPR) management and in making decentralized forest management a reality. The inevitable next step after JFM is ‘community forest management’ in which NGOs will have an important role to play, be it building community stakes in CPRs or rebuilding social capital to facilitate CPR management, or promoting bottom-up approaches to natural resource management strategies, or in facilitating the devolution process in general (Jodha, 2002). The Government of India too has recognized the positive role that NGOs can play. The recognition has come in the form of the mandatory involvement of an NGO representative in the JFM committee (via the GOI circular no. 6.21/89-FP-dt.1.6.1990). Extending their role further, NGOs are now increasingly involved right from the beginning—from the first stage of preparation of the micro-plan at village level, to

monitoring and evaluation. Due to the diversity of the nature, purpose, reach, and working of NGOs, it is not possible to evaluate the role of NGOs *en bloc* but the fact remains that NGOs often play a critical role in successful negotiation and co-management between people and governments (Isager, et.al, 2002). The presence of capable and environmentally concerned NGOs indicates that efforts to counter the increasing struggles over natural resources can be made at multiple levels.

As in the case of self-initiated efforts, the efforts of NGOs to prompt collective action amongst communities to manage their own resources may not always be successful. The credibility of the NGOs concerned, resources available, level of motivation, acceptability of the NGO by the community, the attitudes of the concerned forest officials can be cited as some of the factors that determine the success or failure of such efforts.

2.3 Joint forest management

The reasons for the government's shift from a century-old centralized command and controlled management system to decentralization in the form of participatory JFM have intrigued scholars ever since its inception. Thompson (1995) best summarizes the probable reasons: fiscal crisis, exacerbated by structural adjustment/economic liberalization policies; pressure from donor agencies for greater accountability and transparency; the recognition of the failure of past approaches by state agencies; and the demonstration effect of successful pilot efforts by non-government organizations or other government agencies in other sectors. Environmental activists and rural communities have been sceptical about the intentions of the government in sharing powers with the people, especially in the forest sector, as it is one of the revenue-generating sectors. Their apprehensions are based on past experience as well as the inherent limitations of the initial provisions of the JFM scheme. Earlier, in all government forestation programs, participation of the rural poor was largely limited to wage employment. This was in keeping with Hardin's belief that the poor destroy forests through overuse and overgrazing. The forest-poverty relationship was defined negatively, i.e., if people continue to be poor they will destroy forests. In fact, although JFM talks about the positive role that forests can play in poverty alleviation and the role that people can play in forest protection, the implementing agency, the FD itself, was apprehensive at the beginning.

Criticism against JFM has been manifold. Although JFM implied an increase in the collective ability of the communities adjacent to forests to manage, grow, and equitably share common resources, there have been few efforts to involve people in the planning process or in identifying priorities. Rarely can the communities decide which species are to be taken up for plantation. There has been little correlation between the amount of land that is brought under JFM and the amount of land required to meet the biotic requirements of people and livestock. JFM does not take into consideration the fact that the management objectives of the locals could be very different and may not coincide with those of the state (Ligon and Narain, 1999). While the JFM agreement talks about sharing long-term benefits from timber, the fate of the forests after being successfully regenerated remains hazy (Arora and Khare, 1994). Another major limitation mentioned is that the important question of "tenure" that includes clear, secure, and exclusive rights of access to the resource is kept ambiguous in the JFM scheme (Lele and Rao, 1996). Absence of legal status to Forest Protection Committees (FPCs), the government's right to dissolve FPCs, unilateral decision making, and inappropriate sharing of forest produce (Pattnaik and Dutta, 1997) are some of the other aspects criticized by scholars. The participation envisaged in JFM has been considered more in execution than in planning, "the structures are more puppetish than autonomous" (Lele, 1998a).

Many of these criticisms were dealt with in the two subsequent resolutions, as mentioned at the start of this paper. Recently, two states in India, Andhra Pradesh and Madhya Pradesh, have taken a step forward by decentralizing decision-making and by granting limited financial autonomy to the communities. Incidentally, both these states have been recipients of large funding from the World Bank while it is a well-known fact that ‘decentralization’ has been on the Bank’s agenda when it comes to dispersal of funds. One is not sure whether the government is interested in expanding this shift from “joint management” to “community management” for the whole nation but one thing seems clear: it will now be difficult to go back to the days of unilateral decision-making and total control. Similarly, the fact cannot be overlooked that more and more communities are coming forward to join JFM. Between 1990 and 2000, a relatively short period of ten years, as many as 36,130 FPCs were set up and this number further rose to 64,000 by August 2002.

3. Process documentation

“Process documentation/analysis” is the method used to understand how the communities or their institutions have developed, what were the aims and motives behind coming together, and how the process was initiated. In other words, it tries to understand the ways through which their objectives were achieved, aims were fulfilled (or why they were not fulfilled), and what the potential areas of intervention are for achieving wider, common goals. The participatory process inevitably varies from institution to institution and from one community to another within the category of an institutional structure. In the three case studies presented here, since all three are covered under JFM now, attention has been focused on the process of participation through an investigation of the genesis, leadership initiatives, interest-holder analysis, local land-use history, institutional analysis (rule structure, infractions, compliance), legal rights and privileges and strengths and weaknesses. Sustainability of each institutional structure has been assessed based on the strengths and weaknesses. The three villages, i.e., *Deulgaon*, *Markegoan*, and *Ranvahi* are predominantly tribal villages with comparable forest dependence. *Deulgaon* was chosen to represent the category of self-initiated participatory forest management as “collective effort” for forest protection and management was made by the community itself. It was only after eight years of protection that JFM came to the village. Collective action in *Markegoan* was initiated through JFM, which further encouraged forest management activities in the village. *Ranvahi* was able to initiate forest management with the guidance of a local NGO. JFM was introduced here two years later. The geographical, social, economic and demographic profile of these case studies is given in tabular form in Appendix-1.

3.1. Case study-1: Village Deulgaon

“We protect forest because without the forest, we would have no water in our wells” is what the people of this village feel. This belief has its roots in the recent history of the village. Around 60 years ago there was a severe shortage of water forcing people to sell off their land. As a result a massive exodus took place, where people moved out in all directions. A few settled in neighboring villages. Only half of the 300 households survived the impact. Once again, approximately 40 years ago, malaria took its toll and another exodus took place where all the households except ten, left the village, selling their land to outsiders. A new settlement was established by the newcomers, and that is the present *Deulgaon*.

3.1.1. The beginning of collective forest protection

Forest protection activities started in the village in 1990. The villagers had felt the need to stop indiscriminate felling, taking place in the forests adjacent to *Deulgaon*, by neighbouring villagers. But the villagers were not sure whether the forest was within their village boundary or not. On the other hand, the activities of the *Tendu*

leaf (also known as bidi leaves, used for rolling country cigarettes) contractors appointed by the FD in the *Deulgaon* forest were making the community impatient, as these contractors neither employed the villagers for leaf-extraction, nor did they spare any trees for the villagers to extract *tendu* leaves from. Collection of *tendu* leaves is a major source of cash income for most communities living in the proximity of forests in central India. But the community did not articulate their discontent since they were not sure of their village boundaries as no land survey had taken place since 1922. Thus, immediately after the land survey in 1988, the villagers decided that all that forest that was in their revenue boundary would be protected from outsiders. The decision was also influenced by the spurt of forest protection activities taking place in a nearby village called *Mendha*.

~~It was the~~ Police 'Patil' (a person nominated by the Police Department) of the village, Mr. Raoji Dev Madavi who was instrumental in getting the people together, assisted by another resident, Mr. Marutrao Kaluram Gedam. In 1990, during one informal meeting, the community finally decided to take steps not only to stop neighboring villagers from harvesting from their forest, but also to impose restrictions on themselves. It was decided in consensus that each household would have to harvest according to its genuine requirement, and would not sell any forest product. This was the simple rule introduced by the community at the outset. No formal forest association was formed. Day patrolling by the community members was started. The community continued to believe that they had traditional usufruct rights to harvest from the forest and therefore protecting the forest would only ensure better availability. They were blissfully unaware of the fact that their 'nistar (usufruct) rights in reserved forests had been withdrawn with the abolition of the '*malgujari*' system of management way back in 1955.

3.1.2. A step forward

These informal efforts of the community continued in the form of 'protection' work allowing natural regeneration alone, with no access to funding or technical know-how for increasing the stock and quality of the resource. A step forward in this direction was taken when Mr. Gedam was elected the 'Sarpanch' (chief of the local public body) of the village in 1992. He happened to attend a meeting in a neighboring village at the end of his tenure. The meeting was held to set up a FPC under JFM in the presence of the Range Forest Officer (RFO). It is here that the RFO spoke to Mr. Gedam about what he had heard of the good work being done by the people of *Deulgaon* and of his desire to visit the village. The visit by the RFO to the village and the meeting with him generated further interest within the community about joining JFM. The villagers took their time making the decision: they held frequent meetings amongst themselves, discussed the pros and cons of joining JFM, and only after consensus was reached was it decided that they would register under JFM. The proceedings of the meeting, along with the application, were submitted to the FD to initiate the process required to register under JFM. This was followed by visits from senior forest officials who explained the importance of forest protection for the development of the village. The community was appreciative of the benefits, namely, 50% of the proceeds from the sale of timber that they would share under JFM, and a right to harvest non-timber forest products from the forest. In 1998 the FPC under JFM was formed. An executive committee and a general body were constituted, where the office-bearers and the members of the executive body held office for a year. In 2000 it was formally registered under JFM using the name of *Samyukt Van Vyavasthapan Samiti* (Joint Forest Management Committee).

Under the formal set-up, the general body of the association constitutes one male and one female member from each household. All members are eligible to participate in the meetings that are held once a month, and on an average are well attended. The decisions related to forest are taken only at the meetings of general body as no separate executive committee meeting takes place. Decisions taken at these meetings normally relate to daily

wages for plantation work, punishments, and fines related to infractions. There is also a provision to call an emergency meeting in a special case like theft, but no such meeting has been required as yet. Suggestions from all members are invited. For example, night patrolling was started along with day patrolling on the basis of a suggestion made by one member. The suggestions are, however, incorporated only if all the members accept them unanimously.

Under the wings of JFM, the self-initiated attempt at forest management got a boost in the forms of technical know-how and funds. Since the formal inauguration of the forest association, a plantation on 85 hectares of forestland has been established with FD assistance, where species that the forest lacked or the villagers desired have been planted. No full-time or part-time employees have been appointed in order for the village forest association to carry out its various forest-related activities. Forest patrolling is on a voluntary basis; two persons are sent from two households everyday, throughout the year, on rotational basis as was done earlier. The association is now looking into activities such as harvesting of forest products, distribution of forest products to local users, determining the quantity of forest products that can be harvested sustainably, determining who is authorized to harvest these forest products, monitoring compliance to rules, sanctioning the rule breakers, arbitrating in disputes among local users, restricting areas of forest for harvesting, monitoring of forest condition, and interaction with higher authorities etc.

3.1.3. Rules governing forest activities

The association, independent of the rules under JFM, has developed a rule structure for the harvesting of forest products, determining who is authorized to harvest from this forest, monitoring forest condition and conformance to rules, and the sanction of rule breakers. There are restrictions on felling certain trees even for self-consumption, for e.g., species like *Tendu*, *Moha*, gums that have traditional value and are regular suppliers of leaves, flowers, and fruits. Similarly, only trees of a certain minimum girth can be harvested, thus ensuring protection to smaller trees and saplings as a basis for sustaining forest stocks. When it comes to fuel, only dead wood and fallen branches can be gathered. Sale of timber, fuel wood and fodder is not allowed. In case anyone needs to harvest more than the legitimate requirement because of a special occasion, one has to submit the request at the monthly meeting where the decision is taken unanimously.

Infractions to these rules are few and have subsided over the years with the growing clarity of purpose and provisions. Since the rules have been strictly implemented, with monetary sanctions, right from the beginning, compliance has been increasing. A sliding scale penalty structure has been built wherein the fine graduates with the frequency of the infraction. For the first infraction Rs. 51 or a fine greater than a day's work is imposed. The same fine applies for the second infraction. For subsequent infractions or if the person refuses to pay the fine, there is provision for the offender to be taken to the police, but not to the FD, since communication and co-ordination between the village and the FD are not very good. There is also a provision for "public apology" to restore harvesting rights if under exceptional circumstances any member loses them. These penalties are decided by the vote of the executive committee members and are enforced by an official of the association. The fine so received is used for activities of the association.

The rules and regulations formed are the ones the community has developed over the years through experience. Almost everyone in the community is aware of these rules and considers them easy to understand and responsive to the needs of the people, fair, and legitimate. During informal discussions it became clear that no individual of the user group has been deprived of the benefits from this forest or become worse off due to the rules of the association.

3.1.4. Financial discipline and record keeping

The major financial source of the association has been the voluntary contributions and fines. Under the World Bank sponsored JFM program, money has been provided to the association to set up the *Samaj Mandir* (community hall), and for buying cooking utensils for community use. Funds have also been provided to set up biogas plants although none of them are in use. Records on income and expenditure, the identity of the office-bearers, meetings and resolutions, rules about punishment, types of punishment etc. are maintained by the association. The records are available to the general public but there is no system of auditing. There is no organization other than the FD to guide and help the association.

3.1.5. Hurdles

These attempts by the community to protect ‘their’ precious resource are often met by hurdles. The major disincentive has come from their very own co-guards and owner of the resource, i.e., the FD. Lack of cooperation is clear from the way the Department deals with poachers from neighboring villages, apprehended by the guards of *Deulgaon*. When offenders were taken to the forest office, the officials would only confiscate the products that were caught; the tools used by the offender were however be released a few days later. The villagers of *Deulgaon* were neither informed nor was the amount paid as penalty shared with them. This served as a disincentive for the people to protect their forest. The *Deulgaon* community has also been suffering from a confusion regarding revenue boundary with a neighboring village. The department has done little to solve the dispute, which is basically over collection of forest products. Despite such discouragement, the people of *Deulgaon* continue to protect “their” forest. For them it is both a source of livelihood and water. They do believe that more forest means more rainfall and more forest produce for sustenance.

3.2. Case study – 2: Village Ranvahi

Ranvahi is the largest and the oldest village among the three villages selected for case studies. It is believed that this village was settled approximately in 1800. The name of the village came from the dense forest called “Ran” (in Marathi) that existed then. The forest had many streams flowing (“vahi” in Marathi) through it, thus the village next to the forest with flowing streams came to be known as *Ranvahi*. The founder of the village is supposed to be Mr. Ganu Patil Sayam who was given the Zamindari of this village by the ruler of Palasgad, Raja Ranshababu Sayam. Mr. Ganu Patil Sayam, who came from Murumgaon, settled in the village and through him the village developed. With his sons and sons-in-law settling in this village, it grew fast. The ninth descendant of Mr. Patil is seventy-three year old Mr. Parshuram Sayam, a resident of *Ranvahi*, who has in his possession the records of the nine generations. The micro plan of the forest association, however, has a different story to tell. It mentions that Raja Ranshababu Sayam gave the ownership of the village to his *diwan* (accountant and advisor), Mr. Sravan Sayam, who set up this settlement. The descendent of Mr. Sravan Sayam is the present police *Patil* of the village.

3.2.1. Initiative: An NGO effort

The seeds of change in the attitude of the community of *Ranvahi* towards “its” forest were sown by an NGO—*Amhi Amchya Arogya Sathi* (AAA) located in a nearby town. Women from villages all over Maharashtra had come for a *Sakhi Mela* (an all women get-together) organized by Mrs. Shubhada Deshmukh of AAA in 1995. Each woman representative of a village was asked to share the positive and negative developments taking place in her village. *Ranvahi*’s representative was Mrs. Umakantabai,

who spoke of the problems that *Ranvahi* had to face, such as indiscriminate felling by timber contractors, the problem of drunkenness in men, etc. There were other women who spoke about forest protection work in their own villages. Umakantabai narrated her experiences and the positive developments in other villages to her fellow villagers. That very year AAA came to *Ranvahi* as a part of a government scheme to set up women's self-help groups. It was during this process that Dr. Gogulwar of AAA called a meeting of the community, and spoke to the villagers about the need for forest protection, and JFM and its advantages. He gave them the address of the District Forest Officer (DFO) of Gadchiroli to send in their application. After reaching a consensus, the community sent its application to the FD in 1995. After the DFO received the application, he sent the Range Forest Officer (RFO) of *Malegaon* to hold a meeting with the people of *Ranvahi*, and to test their commitment.

In the meantime, inspired by the NGO, the *Ranvahi* community had already started protection work on its own. The poachers were mainly from the neighboring villages, who were habituated to harvesting forest products from the forest area belonging to *Ranvahi*. One such incident narrated by the villagers speaks of a few people from the local road construction company who came to get timber. While they sneaked in unnoticed, they were caught on their way back with a tractor load of timber. It was the women of the village who stopped them, and did not allow them to leave with the timber. However, while outsiders were prevented successfully from harvesting this forest, wasteful harvesting by the *Ranvahi* community itself continued. Encouraged by the suggestions coming from the NGO (AAA), some villagers tried to estimate the usage of forest products by each household. It was found that they were using forest products like timber and fuel-wood much more than was required. For example, it was found that, on an average nearly 20 cartloads of fuel wood were being harvested by each household per year (which is three times the present average consumption). It was decided by the community that this had to be stopped immediately and that the community members would be allowed to collect only what was genuinely required. More decisions of that sort took place either in the *Gram Sabha* (village meetings) that were held at regular intervals, or in informal meetings as and when the need arose to get together to take such decisions. There was initially only one member, invariably male, from each household who could participate in these meetings. AAA further suggested and encouraged participation by women. Thus two members from each household, one male and one female, became participants in these meetings. The community in fact started round-the-clock vigilance. All this went on without any forest protection association or committee being formed. Thus, protection of the forest from external and internal use was the only activity taken up by the community until 1998 when the application to register under JFM was finally accepted and a FPC (with two members, one male and one female from each household) was informally set up. In 2001, it was formally registered under JFM.

3.2.2. Structure and functioning of the association

Under its JFM status, an executive committee was formed out of the FPC (referred to as the general body) where five men and two women were elected for a term of five years. There is a provision through which committee members can be removed through a resolution by the general body of the association. All the executive members work on voluntary basis without any pay or material compensation.

The structure of the association still remains unchanged. All members are eligible to participate in the meetings that are held once a month. The level of general awareness being high, these meetings are attended by almost all the members of the association. Among decisions normally made at these meetings are regarding requirements for timber, put forward by members for house construction. The applications

are discussed, and decisions are taken whether full or part requirement is to be met. Forest patrolling is taken very seriously too and, if any irregularity is found, it is taken note of. Areas of forests most frequented by the poachers often find a place in the discussions, and strategies to deal with the problem are also taken up. There is a provision to call special meetings in case of a special problem, but no such meeting has been called to date. Similarly, distribution of money received from the FD for forest activities undertaken by members of the community also takes place at these meetings. Conventionally, all decisions are taken unanimously. Conflicts within the user group have decreased over the years, but this is reportedly due to leniency shown in imposing penalties.

3.2.3. Activities of the association and formulation of rules

The association carries out its activities with the help of its members as there are no full-time or part-time employees of the association. All members work on daily wages for any kind of forest activity taken up by the FD. Guarding the forests is done on a voluntary basis. It has been proposed that in future the FD should assign a lump sum for protection work to be distributed amongst the households through the association. At present the guards are selected by lots, where two persons from two houses go on patrol every day.

In the past years, the association has co-ordinated activities such as forest maintenance, determining the quantity of forest products that can be harvested, determining who should be authorized to harvest these forest products, monitoring the condition of the forest, monitoring conformance to rules, sanctioning rule breakers, etc. Revenue earned through forest contracts, where a lump sum amount is given by the timber contractors to the villagers, is then distributed by the association between households according to the work done.

To ensure the smooth functioning of forest-related activities, rules have been framed by the association itself, with the guidance of AAA. Almost everyone is aware of the rules that govern the association, as they are easy to understand and very clear with regard to what behaviour demonstrates conformity to and violation of the rules. The rules are kept flexible in the interests of the community, taking into consideration times of emergency or urgent needs of the members of the user group. This has resulted in the rules being perceived by the members as fair and legitimate. No trees can be felled for fuel wood. In the case of timber for construction of houses, ten poles per year per household are permitted. If the requirement is more, say up to 50 poles, permission can be sought by applying to the committee. Any harvesting over 50 poles is on the basis of a payment of Rs. 5 per pole. In the case of fodder, there is no limit fixed on the quantity that can be harvested and open grazing is generally practised. Only certain parts of the forest, such as the 60-hectare plantation set up under JFM, are closed for grazing. The members of the user group generally follow these rules, but infractions do take place as fuel wood or timber is often collected in excess of the limit. For such infractions the provision is to pardon the offender on the first and second occasions either with a warning or with a small penalty. But on the third occasion, steps to expel him/her from the association should be taken. The kinds of penalties to be imposed are normally decided by a vote of the individuals in the user group, and it is the members of the executive committee who impose the fine. In case a person refuses to pay the fine, there is a provision to totally withdraw his harvesting rights. In case he is keen to restore his harvesting rights, it can be done only by apologizing publicly in one of the association meetings. Although FD officials are not called in to enforce penalties on the community members, whenever the neighbouring villagers are caught ~~stealing from the~~ *Ranvahi* forest, they are taken to the *Malewada* forest office where a fine is imposed, and a certain percentage is given to the association of the *Ranvahi*.

3.2.4. Finances and records

The major financial source for the association has been the World Bank loan to the FD, which through its JFM program has provided funds for building a community hall, and for improving forest quality, including plantations of valuable species like bamboo and teak. The records that are maintained and submitted to the FD include the identity of the office bearers, of meetings and resolutions, and of income and expenditure incurred by the association. The records are meant to be available to the general public for examination but in reality these are not accessible to the general public. They do not remain in the village and are with the FD.

3.2.5. Added advantage

The community of *Ranvahi* not only has excellent relations with the FD, but receives all kinds of help from it. It is also constantly guided by AAA through its voluntary workers. Along with the guidance from forest officials on forest governance and improvement techniques, the *Ranvahi* community also has the advantage of securing income-generating activities such as forest nurseries with a buy-back guarantee from the FD. With the help of the NGO, some 'study groups' on wildlife, agriculture, medicinal plants, trees, etc., have also been set up. These are indirectly helping the community members to realize the benefits that are available to the community through the forest. As a result of this, the level of awareness regarding their rights is also increasing.

3.3. Case study – 3: Village Markegaon

Markegoan, a small tribal village, came into being in the period 1930 to 1935 when residents of a distant village moved into village *Heti*, its present neighbouring village. It was in the *Heti* village that all revenue-related meetings used to take place at the time of the *Malgujari* system. *Heti* had turned into a ghost town due to an epidemic that had spread in the village, resulting in an exodus of people. The empty houses in *Heti* made it easier for families to move in. Gradually, the village grew and in order to accommodate the growing population, a new settlement came up near *Heti*, which is the present *Markegaon*. Access to forest and forest products have always been readily available here due to a comparatively low density of population and an abundance of forest surrounding the village. Thus the need for forest protection and a restrictive use of forest products never made sense to a majority of the people.

3.3.1. Initiation: The JFM influence

Markegoan started its forest management activities in 1997 with the setting up of the Forest Protection Committee under the JFM program. Although the need for forest protection was felt by a few people in the village, especially a resident by the name of Chatura Halami, the community as a whole was not united on this issue. Very few realized that the forest could not cope with the pressure exerted on its resources by the constant population increase in the surrounding villages. However, difficulties in harvesting forest products and conflicts with intruders arose continuously. With scarcity also came corruption and the forest guard started demanding some kind of payment to allow people to take their harvests every time they were caught. This led to a situation of simmering discontent among the people. In 1995, however, Mr. Devaji Tofa from Village *Mendha* came to *Markegaon* to invite a representative to attend a 15-day Indo-German training program on watershed management. Mr. Chatura Halami was the resident who attended this training. The training incorporated not only techniques of watershed management but also various aspects of forest management. After returning to

Markegaon, Mr. Chatura Halami shared his experiences with the community members. As a result, they got together and built rock dams in the forest. But the community did not do much as far as forest protection was concerned. In the mean time, indiscriminate felling by not only the community members but also by neighbouring villagers, for self-consumption as well as for sale, continued.

It took two years for Chatura Halami to convince the community that at this rate they would be left with no forest at all and that protection was needed for the benefit of the present as well as the future generations. However, there was still a section of the people who felt that forest protection from thefts and fires, and a round-the-clock vigil were not their responsibilities. But a consensus to that effect was finally reached. With JFM already working in *Mendha* village, and its benefits visible to its neighbour, i.e., *Markegaon*, the natural next step was to contact the FD to set up a FPC. An application was submitted to the Range Forest Office, which led to a visit by a Range Officer and the forest guard to talk to the people about the provisions of JFM. The officials explained the responsibility of forest protection that came with the benefits of joining the program. Subsequently the FPC was formed under JFM in 1997. At the first meeting of the FPC, the villagers decided on three types of restrictions: restricted grazing (*Chara Bandi*), no liquor consumption (*Nasha Bandi*), and no tree felling (*Kurhad Bandi*). The FD promised to provide funds for plantation and soil-conservation.

3.3.2. The institutional set-up

The forest association was registered in 2000. An executive committee of the association was formed where eight men and three women were elected from the general body (formed of one male and one female member from each household). According to the rules, each term is fixed for a period of five years, and the members can be removed by a majority vote by the general body. The members of the executive body work on a voluntary basis, and do not receive any remuneration in cash or kind.

The meetings of the association are held once a month where all members are eligible to participate. The attendance at these meetings is normally 50 per cent, despite a provision of a fine of Rs. 2 for every member who does not attend two consecutive meetings. Decisions at these meetings are normally taken regarding the poaching of bamboo and thefts in the plantation areas. Such instances are brought to the notice of the persons responsible for patrolling the forest. Suggestions are invited from members for improvements to be made in the vigilance or in restrictive rules although no suggestions have come from any member yet. Payments of fines also take place at these meetings. Provision for an emergency meeting in case of special cases like theft has also been made, but no such meeting has been needed yet.

3.3.3. Activities and rules of the association

The association has a written statement of its mission and objectives, which is based on the forest policy of the Government of India, 1988, and the World Bank/Government of Maharashtra JFM program. The rules of the forest association are based on the original set of rules provided by the government and are the same as other forest associations under the JFM program. In reality, the villagers of *Markegaon* are not aware of these rules, and the rules that are followed presently have been developed by the community itself. For any forest-related activities such as the construction of rock dams, plantations, or timber- contract employment, etc., the villagers are paid on a daily basis (there are no full-time or part-time employees) while protection work is done voluntarily, where three people from three households go every day for a twelve-hour vigil from eight in the morning till eight at night. No overnight patrolling takes place as the villagers believe that no night-time thefts can take

place due to the difficult terrain of the forest. The guards are appointed at meetings that take place every month. No new trees can be cut to meet the requirement of timber, especially valuable trees like *Tendu*, *Awala*, *Moha*, which are more important for their leaves, flowers and fruits. Only one pole per year per family is allowed for house construction. For fuel wood, only fallen wood and stems can be harvested. Earlier, that is before the advent of JFM, even full grown trees were cut down for fuel wood. But now only one cartload of fuel wood per year is free; for every additional cartload, Rs 5 is charged. For all extra requirements, an application has to be submitted to the FPC. To meet grazing requirements, open grazing for three quarters of the year has been allowed, except in the plantation area. For this purpose, each household has to carry a livestock grazing permit for which Rs.1 per year is charged. The rule structure has been influenced by FPCs in neighbouring villages and NGOs working in the area.

Infractions of these rules do take place as people collect more than what the limit defines. Provision to deal with infractions is also in place. For felling of timber, the fine is equal to the market price of the tree(s). It includes the value of flowers, bark, and fruits as well. If the person is not in a position to pay the amount, the executive committee decides on the amount to be paid. With a minimum amount of Rs. 51, (in case of fuel wood and other forest products) a fine structure has been devised according to the economic status of the members. In general Rs. 51 is to be paid by the poor households, Rs. 101 by middle-income households, and Rs. 151 by high-income households (according to the local definition of wealth and poverty). However, penalties are not strictly imposed and the offender (s) is let off in the first couple of infractions. The incidence of anyone losing his harvesting rights has not occurred as yet. The FD plays no role in either the framing of rules, fixing penalties, or in dealing with infractions that occur at present in these communities.

3.3.4. Financial management and records

The major financial source of the association has been the World Bank, which through its JFM program has provided funds for building a community hall, drainage, and plantations of valuable timber species for improving the quality of forest. Another source of income is the practice wherein people who are employed voluntarily contribute 5 per cent of their first pay packet to the FPC. Records on the identity of the office-bearers and fines collected have been maintained for the last two years only. The records are kept with the Forest Guard and the RFO. The villagers neither know about them nor have ever seen them. The Round Officer who is also a member of the executive body maintains these records.

3.3.5. The community view

The villagers feel that registration under JFM has been beneficial to them, as without it they would never have started the protection work. It is due to JFM that the villagers have come to know about the importance of stopping and the techniques to stop forest fires, and have also received funds for various developmental work. They are now aware of the limited tree tenure and the benefits that would follow after 10 years of JFM, yet they are happy with the harvesting rights that have been “granted” by the government.

Although relations with the FD can be labelled as cordial, there is little help coming from the Department regarding the development of rule structures or enforcement of rules. Meetings of the forest association are rarely attended by any representative of the FD, not even by the Forest Guard who is an ex-officio member of the Executive Committee. As a result, meetings do not take place regularly. The community continues to remain unaware of the provisions of JFM; nor is the Department aware of the decisions taken by the FPC. Management of forests is all that the community does on its own. In other words, the

“jointness” in day-to-day decision-making is totally missing.

4. Strengths and weaknesses under each system

As mentioned earlier, a strict comparison of the three systems is difficult due to different time periods involved and the presence of JFM in all three systems. Despite this difficulty, a reasonable comparison was made on the genesis, evolution, planning, structure, and the democracy. From these comparisons the performance and the sustainability was assessed.

As has been mentioned earlier, the genesis of the self-initiated attempt at *Deulgaon* can be attributed to the community’s experience and awareness of an increasing scarcity in a salient resource, i.e., its forest. In this case, collective action evolved through day-to-day informal interactions within the community in which members shared their concerns and experiences regarding indiscriminate exploitation of the resource from within the community as well as from outside. This led to the community taking up protection activity through patrolling and a gradual evolution of a rule structure from basic to more comprehensive rules. But this collective action could not go beyond protection from outsiders, and a regulated use by community members, in the absence of autonomy to take their own decisions. Therefore, every decision was taken unanimously in informal gatherings, which were usually dominated by men. It also resulted in a periodic revision of the rule structure that took into account suggestions from various members. This not only brought flexibility of rules and sanctions, with general adherence, but also ensured quick and inexpensive implementation. Their collective effort has given the community members self-confidence and a sense of belonging toward the resource.

Table 1: A summary of the process analysis

Institutional Structure	Self-Initiated (<i>Deulgaon</i>)	NGO-promoted- <i>Ranvahi</i>	JFM - <i>Markegao</i>
<i>Genesis</i>	Scarcity felt, threat of accentuation of scarcity. Concern for external threat to forest resource. 1990, JFM = 1998, 2000	Passing of information, awareness building. Rich forest resource, but degrading due to external poaching and internal over harvesting. 1996, JFM = 1998, 2001	Secondary role, only after being approached by the community. Lack of community consensus on need to protect and manage forest. JFM = 1997
<i>Evolution</i>	Voluntary collective action, consensus building, gradual evolution of rule structure - but flexible, adhered to. More egalitarian make up of association. Taking control of forest resources.	Rapport building through self-help groups, support in evolving rule structure.	Incentives in the form of plantation, community hall etc. No role in building of rule structure. Community slow (2 years) to appreciate need to act themselves, without waiting for the FD to take initiative.
<i>Planning</i>	Not beyond protection from outsiders, which encouraged natural regeneration; regulate self - consumption.	Just protection at first. Support from NGO in approaching and pursuing with FD.	No help or suggestion from FD regarding rule structure. Community taking initiative only recently, yet no unanimity regarding 'need ' to do so.
<i>Structure of Association</i>	Informal, dominated by men.	More formal. Women encouraged to participate	Membership to men and women in accordance with rulebook, in reality only men participate in decision-making.
<i>Democracy</i>	Unanimity in decision-making. Regular reformation of rule structure in accordance with suggestions.	In coordination with the NGO and FD.	Effort to ensure women's participation. Rule-adherence not very strict.
<i>Important aspects</i>	Leadership: Local, tribal (dominant tribe), self-literate, self-motivated, belongs to middle class of village. Saliency: Scarcity of forest products due to low forest availability for neighbouring villages and scarcity of water. Internal Unity: To stop outsiders from poaching and regulating internal use.	Leadership: Provided by the NGO, worked towards empowerment of women. Saliency: Basically from Economic point of view, emphasized by the NGO. Internal Unity: Basically to stop outsiders from poaching. Weak internal regulation	Leadership: Local - influenced by outsiders, tribal, average economic background. Saliency: Strong non-economic reason, fear of scarcity in future. Internal Unity: Due to homogeneous population, weak internal as well external monitoring.
<i>Results</i>	Little help from FD in forest management, technical know-how and funding. Community determined to continue on its own. Lack of coordination with FD as major hindrance in dealing with external poachers.	JFM formalized association and procedures and provided improved forest management and products. Leniency in dealing with internal infractions, and high dependence on the NGO has negative impact on the working of FPC.	Community interest half-hearted. Expected initiative and support not coming from FD, although forest management taking place.
<i>Sustainability</i>	Possible. Based on historical commitment. Need to be stricter on sanctions, with the help of FD, which needs to improve coordination and support	Likely. Support from NGO and FD, Good coordination with FD due to mutual understanding & respect, no unasked-for interference. Gaining forest revenue. Dealing with internal infractions needs to be stricter. Dependence on NGO needs to go down gradually.	Unlikely. Control on illegal harvesting weak. FPC not functioning properly. Lack of community support and interest. Insufficient FD interest.

However, till *Deulgaon* joined the JFM program, it had very limited exposure to techniques for improving the resource as well as the financial wherewithal/backing to do so. In keeping with the general traditions in rural India, it did not make any conscious effort to involve women in either decision-making or in implementation. Because of a lack of co-ordination with the FD, *Deulgaon* has not resolved many forest-related disputes including the boundary dispute with the neighbouring village *Palaswadi*. The achievements of the community can increase qualitatively if they receive proper support and guidance from the formal governmental or non-governmental agencies.

In the case of the NGO-promoted collective action in *Ranvahi*, awareness-building regarding effects of deforestation, the need for proper monitoring of the resource, provisions in the law etc., was done by the NGO. The NGO had already built rapport in this village through its work amongst self-help groups. *Ranvahi* received support from the NGO to approach the FD, to apply for JFM, and also to develop their own internal rule structure. This support entailed guidance in approaching and pursuing the matter with the FD. The NGO helped the community not only to get information about the program, but also to gather the courage needed to approach a government agency. The structure of the Forest Association thus formed was more formal. The NGO tried to instil “modern” values in the community by encouraging them to maintain appropriate records and by encouraging women to participate in all the activities of the association. The Association’s excellent co-ordination with the FD at present can be attributed to the NGO’s efforts. The *Ranvahi* community also was exposed to efforts of other rural communities in resource management since the NGO organized visits to distant places where similar forest management activities were going on.

At the same time, it is to be noted that instead of becoming independent gradually, the dependence of the community on the NGO continues. Since the NGO is actively involved in the creation and functioning of self-help groups, domination of these groups on the forest association is also quite clear. Thirdly, in an attempt to maintain its good rapport with the village, the NGO has suggested that the Forest Association should try not to antagonize any member. This has resulted in a poor adherence to rules in the absence of strong sanctions and even weaker implementation.

In the case of *Markegaon*, JFM seems to have played a secondary role in promoting collective action. Despite its “participatory” nature, the concerned forest officials did not put in sufficient effort to make the community actually participate in forest management. A more committed forest official could have achieved much more in *Markegaon* with an enthusiastic, convinced, and hard working local leader. The institutional structure that exists in *Markegaon* today is totally the result of Mr. Chatura Halami’s one-man pursuit. It is because of him that the community passed a resolution and requested the Department to register them under JFM. The FD has played no role in helping the community to develop a rule structure. Thus, in keeping with the rule book, membership of the association includes one male and one female member from each household but in practice no efforts are made by the local officials to ensure the participation of women in decision-making.

However, it is the legal backing to their collective action, in the form of membership in the Association that strengthens the *Markegaon* community in its attempts to restrict outsiders harvesting from their forests. Also, it is only after the introduction of JFM that the community has come together to make a rule structure for regulating internal use and to imbibe an awareness of their ‘ownership’ (although in a very limited sense) of the resource.

5. Conclusions

Impoverishment due to deforestation has encouraged many rural communities to start managing state-owned forests on their own. These self-initiated efforts have proved quite effective at regenerating forests in many cases. Yet, there are serious limitations, when it comes to technical skills and finance, to these efforts to improve the resource. Often these local initiatives can be sustained only if supported by external institutions (Krishnaswamy, 1995). NGOs cannot totally provide that support although NGOs have played an important role in building awareness and in encouraging communities to manage resources like forests. However, in the absence of tenure and legal backing for dealing with disputes and infractions, the sustainability of these efforts is questionable. This is one important reason for more and more communities willing to come into the JFM fold. Although the success stories of self-initiated and NGO-promoted community efforts are recorded and often publicized, many such attempts probably end up mid way on the path to success due to internal conflicts. A conscious effort is needed therefore to give such informal institutions the necessary backing through JFM, without taking away their freedom to formulate their own rule structure.

Despite the achievements of self-initiated community efforts in forest management, it would be wrong to assume that there exists a well-defined “community” as a cohesive unit that would always be willing to take control over common lands—a control that the communities had supposedly exerted in pre-British times. The ground reality is that rural communities are not well-knit and homogeneous, or ready to adopt joint forest management. Indian villages are economically and socially divided into several factions. Caste hierarchy is still very strong in rural India, which means that “equal” participation and “equal” sharing of benefits is likely to be interpreted according to the standards determined by a few people in the village. Although in *Deulgaon*, despite the heterogeneity of the population, the community has worked together for the past one decade, it cannot be generalized for all self-initiated efforts. Therefore, carefully designing the institutions in a manner that will ensure fairness in the face of these realities is required—a requirement which is more likely to be, and can be, provided by the state.

One thing that stands common in these three communities’ achievements is the role of leadership. Even in the case of the JFM village *Markegaon*, it is due to the efforts put in by Mr. Chatura Halami that the community has now decided to develop its own rule structure and to organize patrolling and monitoring. In *Deulgaon* too, leadership has come from within the village. In the case of *Ranvahi*, the NGO did provide the initial impetus to get the protection work started but it also tried to develop leadership from within the village. Similarly, in all the three cases, the major concern of the communities has been protecting the resource from outside poachers. But it is only in the case of *Deulgaon* that there has been serious effort to regulate consumption of forest products by the community members themselves. It is clear from *Markegaon* that despite minimum per capita forest availability (in comparison with the other two communities), external pressure has been minimal due to the good quality of forest being made available to the neighbouring villages as well. In their case, poaching is restricted to bamboo only. Thus consolidating forest protection through focus on, or the efforts of, one community alone would not be sufficient *under any institutional structure* as long as pressure from the neighbouring villages continues to exist. To take care of this, a more extensive area, constituting of several villages as a unit, will have to be planned for. And this is possible only if an agency with a larger management capacity like the FD provides the necessary input.

The joining of hands envisaged in JFM is two-fold—between villagers as individuals and the villagers as a community of forest users, and between this community and the FD as a representative of the state. But it is a tricky task. A uniform imposition of the JFM program that does not take into consideration geographical variations, social and economic inequalities, and differing cultural perceptions amongst communities is not feasible and would be ineffective and even resisted. Such pre-structured models oversimplify the various local social and biotic complexities and imposing them from above is likely to lead to practical difficulties in relation to implementation and sustainability. For the sake of convenience in implementing JFM uniformly all over the country, the FD tries to ignore such variations not realizing the fact that it is fruitless to attempt to establish uniformity when each local community and forestry situation differs and when such differences need to be appreciated and taken account of. At the same time they often fail to realize that local initiative and the fostering of such initiative is central to success. This vital element of “local initiative” is bound to take shape in accordance with local variations. In other words, one needs to appreciate the fact that “participation” in forest management can be diverse in nature and may make generalization difficult, if not impossible. For example, the three institutional structures discussed in this paper too have many variations, which have to do with the different socio-economic-ecological contexts that would make the replication of any one case extremely difficult.

One cannot ignore the fact that the majority of the forest area in India belongs to the State. It is highly unlikely that communities will gain exclusive rights over forests and be the sole decision-makers in the short run because, along with the local needs, forests have a wider ecological role to play from which the global community benefits. At the same time, one cannot expect that a very large number of communities will take up forest conservation on their own if they do not enjoy any tenure right. Thus, we need to accept the fact that self-initiated efforts cannot become a pattern or a rule. Moreover, local leadership may prove to be ineffective if it fails to reach out and attract additional resources from the state (Krishna, 2001). Local leadership can prove to be most efficient in resource management if groomed properly by the State because social capital is not a historically fixed endowment. But if the formal agency tries to integrate its efforts with the existing informal efforts, it might even be possible to build upon the existing stock of social capital within a relatively short span of time (Hall, 1998). Co-ordinated efforts of the two institutions have the maximum potential to be feasible as well as effective on a wider scale. It is best put in the words of Ostrom (1992c: 351):

“Without some specialists who monitor, record information and interpret the rules in a consistent way, the shared community of understanding can so erode that the rules become meaningless. If the specialists are not themselves subject to review by the others – including all the members of the community – their shared understanding of rules can also disintegrate and be replaced by local despotism. Thus, I would argue that neither community nor enforcers are sufficient. Both are needed and both can enhance the other.”

Ranvahi is a good example of effective co-ordination between the informal and formal agencies, mainly because the FD in that case has restricted itself to interfering only when the community asks for it. Thus, rather than oscillating between the simplistic models of either “state” or “village community”, there is a need to conceive of more complex arrangements in which forest areas are protected for multiple objectives, under the working of multiple institutions. The need of the day is to develop a nested structure in which formal centralized strategies and informal decentralized ones reinforce each other.

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APPENDIX 1

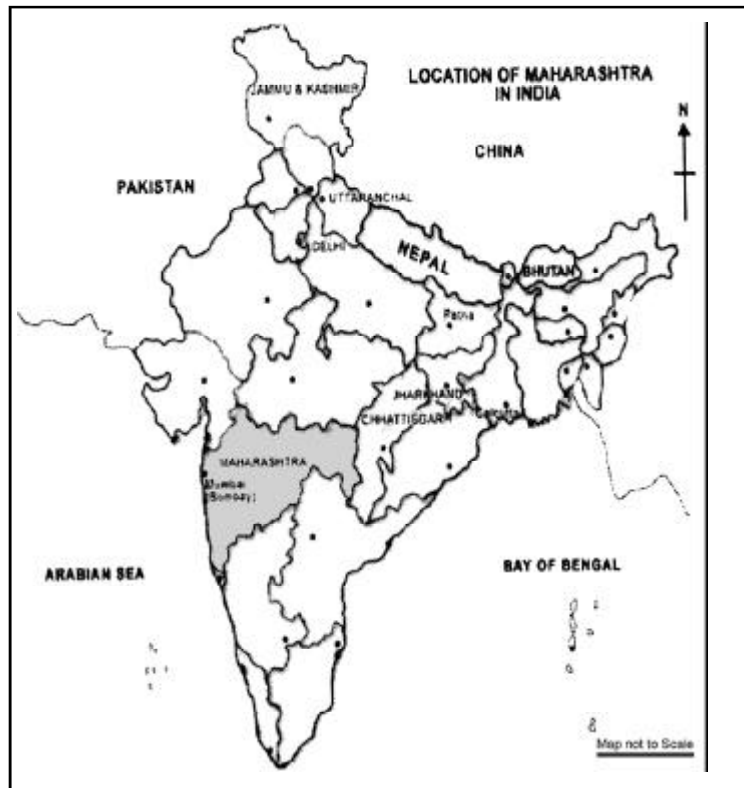
VILLAGE PROFILE

Villages	Deulgaon (self- initiated)	Ranvahi (NGO promoted)	Markegaon (state program)
Latitude	20°15'16.0" latitude	N 20°30'22.8" Latitude	20°14'42.3" latitude
Longitude	80°11'41.4" EO longitude	80°21'37.7"EO Longitude	80°19'59.6" EO longitude
Mean sea level	230 meters ASL.	250 meters ASL	250 meters ASL
Location	18 kms from Dhanora, the sub-district (Taluka) of Gadchiroli district of Maharashtra State	25 kilometers from Kurkheda town, the Sub district of Gadchiroli district of Maharashtra State.	5 kilometers from the sub-district center, that is Dhanora in Gadchiroli district of Maharashtra state.
Geographical area	718.48 hectares	924.43 hectares	530.29 hectares
Forest area	601.37 hectare	641.71 hectares	431.44 hectares
Per capita forest	3.5 hectares	2.4 hectares	2.7 hectares
Population	173	393	161
Number of households	33	81	32
Three main Ethnic/caste groups	70% = Gond (tribals) 30% = kunbi (OBC)	096% = Gond 1% = SC 1% = nomadic tribe	Gond = 100%
Languages spoken	Marathi and Gondi	Marathi and Gondi	Marathi and Gondi
Literacy	51% are literate	62.84%	48%
Houses	Mud and brick with tiled or thatched roofs	Mud brick & concrete houses with tiled roofs.	Mud brick with tiled or thatched roofs.
Main occupation	Agriculture	Agriculture	Agriculture
Households with Land	33 households	62 households	30 households
Land holding	2-3 acres	1-7 acres	2 to 3 acres.
Crops grown	Paddy, tur, lakhori (pulse), jawar, chana etc	Paddy, chana and tur, chilly (cash crop)	Paddy, tur, mung, urad, beans, kurat
Own crop consumed	8-9 months	8-9 months	8 months
Forest dependence	Fuel wood, fodder, timber, wildlife, minor forest products like awala, hirda, moha, Tendu leaves, char etc.	Fuel wood, fodder, timber, bushes, grasses, leaves (tendu), water, wildlife, fruits, vegetables, bamboo, Moha flower, gum etc.	Fuel wood, fodder, timber bushes, grasses, leaves (tendu), water, wildlife, agricultural implements, hunting gear, herbs to make pesticides for crops, storage utensils, kitchen implements, livestock sheds, furniture, toys, headgear for marriage purposes and other items like carved pillars made especially for marriages, grain crushing implements etc.

APPENDIX 2

MAPS

MAP 1: MAP OF INDIA



MAP 2: MAP OF MAHARASHTRA STATE



MAP 3: MAP OF GADCHIROLI DISTRICT



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