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Politics of Co-Optation: Community Forest Management Versus Joint Forest Management in Orissa, India

Prateep K. Nayak · Fikret Berkes

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Abstract The article considers the impact of introducing government co-management policy in the form of Joint Forest Management (JFM) in an area with a five-decade-old self-organized community forest management system in Orissa, India. We ask a question that appears not to have been previously examined: What happens when JFM replaces an *already existing* community forest management arrangement? Our comparison of the JFM arrangement with the self-organized community forest management regime (pre- and post-2002 in a selected village) provides three conclusions: (1) The level of villager participation in forest management has declined, along with the erosion of the bundle of common rights held by them; (2) multiple institutional linkages between the village and outside agencies, and reciprocal relations with neighboring villages have been abandoned in favor of a close relationship with the Forestry Department; and (3) the administration of the forestry resource has become politicized. We conclude that the "one-size-fits-all" approach of the JFM, with its pre-packaged objectives and its narrow scope of forest management, is likely to limit experimentation, learning, and institutional innovation that characterizes community forest management.

Keywords Community Forest Management · Co-management · Co-optation · Reciprocal rights · Multi-level linkages

P. K. Nayak (✉) · F. Berkes
Natural Resources Institute, University of Manitoba,
70 Dysart Road, R3T 2N2 Winnipeg, Manitoba, Canada
e-mail: nayakprateep@gmail.com

F. Berkes
e-mail: berkes@cc.umanitoba.ca

Introduction

Joint Forest Management (JFM) involving the state and resource users, introduced formally by the Government of India in 1990, has been a source of considerable controversy. On the one hand, the JFM has immense promise and reach, covering by 2006 some 106,482 villages and an area of 22 million ha of forestland in 28 states and the Union Territory of Andaman and Nicobar Islands (Pai and Dutta 2006). The JFM has paved the way for rehabilitating former forestland, and is said to have contributed to sustainable human development, income generation, decentralization and rural empowerment (Prasad and Kant 2003). On the other hand, it has come under criticism for the gap between rhetoric and reality in relation to participation (Agarwal 2001) and devolution (Sarin and others 2003).

Lele (2000) postulated that (a) participatory management involves the devolution of power, (b) but the state is by nature interested in maintaining control and accumulating power, and therefore (c) joint forest management must be a "sleight of hand" carried out by the state to co-opt activists and placate donors while retaining control and even expanding it in new ways. Such an analysis is not far-fetched. In the pre-1990 period, activists in India were pushing for community management of all natural resources, and the spread of JFM, from the initial experiments in the state of West Bengal in 1972 to India as a whole in the 1990s, owes much to this movement (Poffenberger and McGean 1996).

However, the promised devolution has not materialized. Instead of "village republics" (Wade 1988) managing their own resources, government managers are still in control. As Lele (2000) points out, rather than *community management in all sectors*, what has actually been adopted is

joint management in some sectors, forestry and irrigation water. However, to keep the issue in perspective, India's JFM is here to stay and is still expanding. The initial successes in West Bengal, as well as the India-wide impetus to rehabilitate forests through revenue sharing with villagers, providing them with the incentives to replant and look after degraded areas, is not denied even by the critics (Poffenberger and McGean 1996; Lele 2000).

Unlike Mexico, the world's other large experiment in community forestry, much of Indian community forestry and all of JFM takes place on what is nominally government land. By contrast, as much as 80 percent of Mexico's forests are in the hands of communities through two categories of land classification, known as ejidos and indigenous community lands (Bray and others 2002).

Learning from the JFM experience requires among others, attention to co-optation, always a problem with any kind of joint management. In the area of fisheries, for example, questions of co-optation are as old as co-management itself (Berkes 1989). This is also true in many other sectors (e.g., Dressler 2006). What is referred to as the "cooperative movement" in Sri Lanka is mostly the extension of government programs and subject to supervision by government officials (Winslow 2002). In analyzing community forest management and JFM in India, there is a need to develop richer models to examine what happens at the local level, with attention to the historical context of community forest management (Agrawal 2005); the nature of participation in JFM (Agarwal 2001; Bingeman and others 2004); the mechanisms by which the state may seek to expand its power "in new ways" as Lele (2000) puts it; and whether the resulting co-management is adaptive, i.e., involves learning by experience (Nayak 2006).

Our study asks a question that appears not to have been previously examined: what happens if JFM replaces an *already existing* community forest management arrangement? We analyze the impact of such a shift from community management to JFM. We pay specific attention to community empowerment, i.e., people's ability to make decisions on matters that affect their lives, changes in local power and control, and impacts on the adaptive capacity of communities to deal with their own problems. Following some background on the study area and methods, we first examine the historical setting of the shift from community management to JFM, and then proceed under three headings, to examine the impacts of the shift with regard to (1) participation and the bundle of forest commons rights under community management versus JFM, (2) the impact of the shift on institutional linkages and reciprocal rights, and (3) the mechanisms by which power and control have changed, and the impacts of this on the adaptive capacity of the community to deal with its forest-related problems.

Study Area and Methods

The study was conducted in the State of Orissa, situated on the eastern coast of India. Officially, "forestland" constitutes around 47,000 sq km (thirty-eight percent) of the total area of the state, but continued degradation has reduced the actual forest cover to about twelve percent (Rao 1999). The principal forest types are tropical moist deciduous, tropical dry deciduous, tropical semi-evergreen and sub-tropical broad-leaf hill forests. Orissa has a total of 46,989 revenue villages (the smallest area of habitation with a definite surveyed boundary; officially recognized as a separate administrative unit which may have one or more hamlets). Of these, 29,302 have their own forest areas. A total of 1,779,953 ha of forest is situated within the revenue boundary of these villages. Another 12,000 villages have Reserve Forests adjoining their boundary.

The impetus for community forest management in Orissa has been primarily the large-scale destruction of forests leading to loss of forest-based livelihood (Guha 2001; Rai and others 2002; Nayak 2003). The forest types, their species composition, rainfall, and especially the presence of root-stocks in the degraded forests that are capable of coppice and sucker regrowth, make regeneration of degraded forestlands relatively easy when facilitated by community protection.

Field research was conducted in Gadabanikilo village, some seventy kilometers south of the state capital, Bhubaneswar, in the administrative unit of Ranpur block (an administrative unit for the implementation of development activities by government) in Nayagarh district. Gadabanikilo is a mixed caste village of 165 households that initiated forest management in the 1940s as their forest resources became scarce. It is considered to be one of the earliest self-organized community forest management villages in Orissa. Based on local criteria, determined by the villagers through a wealth ranking exercise, there are 69 rich, 40 medium, and 56 poor households. Irrespective of wealth status, all households are dependent on the forest to varying degrees; about 40 percent of the people earn about 60 percent of their livelihood from forest-related activities.

We (PN) have known the village and the region since 1996 in the context of community forest management. Gadabanikilo village was chosen because of its shift from community management to JFM, thus providing the scope to compare the two kinds of management, and the availability of relatively good contacts, information and records. The study is based on an understanding of the evolution of forest management in the area over nearly a decade, and the data reported here were collected in an intensive three-month study period in 2005.

A wide variety of data sources were accessed. Written records of forest institutions during both community

management and JFM were studied. Government orders, management plans and other policies concerning JFM were analyzed to understand the overall policy and administrative environment for forest management. Data collection and analysis were carried out within the broad parameters of qualitative research approach (Creswell 1994). Participatory research (Chambers 1994; Pretty and Vodouhe 1997) included 23 semi-structured interviews with individuals and groups at community, NGO, forest federation and forest department levels, and 9 focus group discussions at the community level.

Village elders, some of whom were actively involved in the initiation of community management in the village, were an important source of information. One of these elders, nearly 100 years old, was the first forest watcher who continued in the post for about 40 years. Interviews with the members of forest management institutions were conducted, and focus group discussions were held to elicit views of women and other vulnerable groups. Views of NGOs, forest department officials, and representatives of forest federations were collected to understand perceptions of a cross-section of stakeholders. The interviews, focus groups, other participatory exercises, and discussions had representation from about 40 percent of the village households.

Context of Community Forest Management and JFM

Community forest management is generally understood to be the active protection of a forest area and regulation of its use by a community (Conroy and others 2001). Orissa has more than 10,000 self-organized community forest management arrangements, perhaps more than anywhere else of comparable size. A large proportion of these have been in existence for more than twenty years. The first attempts at community forest management in Orissa seem to go as far back as the 1930s (Sundar and others 1996), comparable to some of the earliest village-run forest management systems in the Kumaon Himalayas in the 1920s and the 1930s (Agrawal 2005).

The success of a local peoples' movement that claimed rights on "fish and tree" from the colonial rulers around that time made it possible for villagers to assert their rights over the surrounding forest areas, bringing forestland under *de facto* local possession. Forest management started as an informal protection activity by a small group of village leaders. They declared some patches of the forest as restricted and opened up other forest patches for firewood and grazing. A watcher was appointed for forest patrolling, paid by the households. As protection activities developed, a village committee of 10 members formally took charge.

Even though there were several hundred villages engaged in forest regeneration in the region, the story of forest management in Gadabanikilo is unique in more than one way. Gadabanikilo is the first village in the region to have self-initiated forest protection and to continue without interruption for more than six decades. Three factors seem to have contributed to the shaping of this unique forest management arrangement: (1) crafting of inclusive rule-making arrangements, (2) negotiation and deal making with neighboring villages toward forest conservation, and (3) creation of various mechanisms to conserve the forest and meet local needs. We discuss each in turn.

First, the forest management committee in Gadabanikilo is considered an inclusive arrangement because it is answerable to the village general village assembly. Importantly, it also deals with the management of other natural resources and cultural events of the village. Over the years, the institutional arrangement concerning forests has come to include the management of ponds, fisheries, mango orchards, village funds, as well as several annual cultural and religious events.

Second, resource management arrangements included negotiation with about 20 villages surrounding Gadabanikilo that might have otherwise posed a threat to forest protection. Giving certain benefits to neighboring villages was the strategy for gaining their support for conservation. Forest dependent tribal villages were specifically targeted as they posed a serious threat to the already degraded forest.

Third, forest protection institutions catered to the needs of both the forest and the people. Mechanisms for rule making, monitoring and benefit distribution provided opportunity to the villagers to get involved in all aspects of forest management. Table 1 highlights some of the key mechanisms created by the forest management committee and their purposes.

In emphasizing the importance of what we have referred to as the mechanisms in Table 1, one villager commented, "without these arrangements, our forest management system would not have continued for so many years. Each of these practices plays a double role by combining forest management with fulfillment of our livelihood needs." To investigate how these mechanisms developed, we asked the villagers for their notions of the factors that shaped these mechanisms (Table 2).

The above discussion applies to the situation up until 2002. The situation changed dramatically after JFM was introduced in Gadabanikilo in 2002. A new forest management institution was created and a different set of rules and mechanisms replaced the arrangements discussed above. For example, the forest department determined the species to be planted, and these did not include the species preferred by the villagers. The 23 species planted under community forestry prior to 2002 (Rai and others 2002)

Table 1 Key mechanisms created under the self-organized community forest management

Mechanisms	Purpose
Village Institution: General Assembly, with all adults as members, has main rule making role	Broad-based decision-making by creating space for all adults to involve themselves in decision-making
Executive Council, with a few elected / selected members, makes operational rules	
Village Institution: Executive Council has main role followed by General village assembly with overall monitoring responsibility	Create layers of institutional arrangements for effective rule implementation
Mohua (*Madhuca longifolia)* fruit collection and distribution	Management of Mohua trees for regular flow of non-timber forest products
	Equitable distribution of benefits
Forest maintenance ('Forest Cleaning')	Facilitates forest growth by eliminating undesirable trees as well as making space for preferred trees to grow well
	Supply of firewood for all households in the village
Protection of preferred tree species	Create a valuable reservoir of diverse tree species that may cater to the varied forestry needs of the people
Cattle grazing	Facilitates seed regeneration and makes available compost from the visiting herds. Supports fodder needs of cattle from Gadabanikilo and many neighboring villages
Use of Village Fund	Expenditure on general village development, and cultural and religious festivals met with. Provision for soft loans to needy villagers.

Source: Based on a focus group discussion with members of the community forest management system that existed prior to JFM

Table 2 Characteristics of community forest management in Gadabanikilo

- Based on needs
- Subsistence (rather than commercial use) as the driving force
- Does not neglect the needs of neighboring villages
- Decision made by majority of villagers
- Determined by the villagers (no role of outsiders)
- Requires adequate time to shape (not a one-time decision)
- Considers specific histories and dynamics in the community (context specificity)
- Considers how much the forest can give; harvests consistent with resource status
- Mechanisms are flexible in nature, with scope to learn and modify practices
- Operationalization of mechanisms by villagers themselves

Source: Compiled from several semi-structured interviews, focus group discussions, and personal interviews with key informants

were replaced by three species under the JFM, all of them different from the earlier list. The difference in the choice and diversity of tree species is only one example of the differences in perception and preferences of the two forest management regimes. Table 3 contrasts the worldviews of the two kinds of management and their objectives.

Participation and the Bundle of Forest Commons Rights

Many villagers of Gadabanikilo participated in forest management to safeguard their livelihoods; for a few others, the reason for participation remains political, for gaining power and prestige. Villagers were interviewed to understand their notion of participation and rights. Two specific questions were posed, one regarding the conditions that encouraged participation, and the other regarding their definition of forest use rights.

Villagers talked about participation by linking it to their role in forest protection. On participation one villager commented that "if our basic forest-based resources such as firewood, small timber, grazing, Mohua fruits, and medicinal products are available to us, we would not indulge in the destruction of the forest." Several other villagers voiced similar understanding of the notion of participation during focus group discussions and interviews. One villager said that "forest is our life and it is our responsibility to protect it. Our rights are secured if we are able to get firewood, house repairing and fencing material, medicinal herbs, Mohua fruits and other non-timber forest products every year."

Thus community members considered rights as their entitlements to forest products, linked to their responsibility to protect the forest. One forest-dependent Scheduled Caste (a polite term used for the lower caste Hindus who were once considered as "outcasts" from the Hindu social system and granted special status by the Constitution) member of the community said, "I feel responsible towards the forest and its protection because the committee allows me to take seasonal forest products." There appeared to be no significant distinction between the notions of participation and rights. Villagers talked about participation and

Table 3 Management objectives in pre- and post-2002: Gadabanikilo's community forest management versus JFM

Community forest management	Joint Forest Management
Size and types of forest landscapes available	How many hectares reforested
Kinds of tree species available (focus on diversity)	How many trees planted (focus on numbers)
Capacity of the village in undertaking the task without any external dependence on funds	Size of budget for management unit (focus on size of budget – larger the better)
How many households contribute voluntary labor. How many households get share in the forest benefits	How many jobs generated
Doing the work within the available resources	Total expenditure (focus on expenditure – larger the better)

Source: Based on the meetings with former members of the community forest management institution, members of the JFM committee, interview of the secretary of local forest federation and interview of NGO staff

rights by making frequent references to their roles and responsibilities in forest management and benefits they should be able to derive from the forest. There was emphasis on the continuity of access to resources; as one villager put it, "we are forest dependent people. We require not one or two but many types of forest products and we need these various products throughout the year. It is the responsibility of the committee to make it possible for everyone in the village to get forest products without conflicts." Table 4 summarizes some of the key rules and practices in the use of commons, carried out under community forest management and as modified after 2002 under JFM.

The changes in many of these rules and procedures with the arrival of JFM in 2002 had far reaching consequences for the nature of rights and participation by villagers. For example, adoption of auction methods for Mohua fruit and medicinal plant products was considered a radical change, as these used to be equitably distributed to all the households free of cost under community forest management. The ban on forest "cleaning" eliminated the only major source of firewood for the villagers. This gradually led to an increase in firewood theft from the forest, and eventually to the theft of other resources. Table 5 shows the increase in the number of forest offence cases after 2002. The frequent change of community-appointed forest watcher was reported to be an important reason for increase in forest offences. Between the 1940's and 2001, the forest watcher was changed only six times, whereas between July 2002 and July 2005, the forest watcher had already been changed six times. There were no forest watchers for about four months in 2005. Moreover, offenders took advantage of the new watchers as it took them time to get familiar with the forest patrolling system. Irregularities in payment of monthly salary to the watcher led to infrequent forest patrolling and a consequent increase in the number of forest offences.

The staff of the local NGO at Gadabanikilo observed that the poor in the village were most affected because of the ban on "cleaning" and unavailability of firewood while the rich depended on private trees on their farms and other lands. Based on available data from village record books, the forest-dependent scheduled caste and other economically disadvantaged groups were involved in forest offences six times more frequently than the better-off groups.

The sudden ban on cattle grazing in the forest had adverse impacts on practices of animal husbandry in the village. The village cattle damaged the new plantations on village grazing common lands under the JFM program. At least five villagers had to sell their cattle due to lack of grazing space, a trend that was later confirmed by members of the forest federation. Because of the ban on grazing and restrictions on the collection of forest products by outsiders in Gadabanikilo forest, the traditionally maintained resource rights and linkages with the neighboring villages were severed. Clearing of the natural barriers on the forest edge for plantation made way for timber smuggling from Gadabanikilo forests. The exhaustion of the village fund, which previously acted as the financial backup for needy households, forced several households to resort to moneylenders. The JFM committee virtually replaced the customary village institution that looked after all village affairs including forests, and there were allegations of the misuse of the village fund. As discussed elsewhere, malpractices linked to JFM funding to the village led to reduced financial accountability that affected government and village funds alike.

Aside from its impact on the day-to-day management of the forest and forest products, the committee of JFM also had several implications for the bundle of rights (Ostrom and Schlager 1996) (Table 6). Under community forest management, the bundle of rights included access, withdrawal, management and exclusion rights, and thereby accorded the status of "proprietor" to the people. Some of the same rights supposedly exist under JFM policy as well, but the nature of the bundle of rights has changed. For example, even though there are access rights for all in the village, the right to withdraw has been restricted. Mohua fruit collection, previously open to all, has been replaced by a system of auction to a single individual. Rights to

Table 4 Mechanisms that facilitate or impede participation and rights

Mechanisms	Under Community Forest Management	Under JFM
Mohua fruit collection and distribution	• Distributed among all the households	• Auctioned to a single individual
Forest maintenance (Cleaning)	• Twice a year, i.e., before rains and after rice harvest, to facilitate forest growth and supply firewood	• Completely stopped
Cattle grazing	• Entire forest was free for supervised grazing • Herds from neighboring villages also allowed • Forest supported approximately 2000 cattle with varying levels of dependence	• Major grazing routes and places banned • No explicit system of forest grazing determined • Plantation on the grazing routes and places • Entry of neighboring villages' herds banned
Collection of medicinal plant products	• Free for collection without any charges • Neighboring villages were allowed to collect • Both personal use or sell allowed	• Auctioned to a single individual who sold it outside • Neither insiders nor outsiders were allowed to collect
Decision-making at village institution level	• Village Institution with all adults as members was in charge	• Eleven-member JFM committee in charge • Forest Department representative in the JFM committee
Use of village fund	• Village Fund was initiated around 1945 with contributions from the villagers • Expenses on village development including forests met from this source • Provided easy loans to needy villagers	• Village Fund exhausted during 2004 and 2005 • JFM committee is planning to sell trees to generate money for the Fund
Barriers at forest edge (declared as "not-to-be-cleaned-ever" locations)	• Certain areas on the forest edge left untouched since beginning of protection • The patches are used as barriers against intrusion of human and animal from neighboring villages	• No strict adherence to the concept of 'not-to-be-cleaned-ever' patches in the forest • Chunks of these patches have been cleaned out for plantation under JFM
Protection of preferred trees species (What can and what cannot be cut)	• A list specifying preferred species was maintained • Preferred species were protected during the forest cleaning and firewood collection	• Community's preferred list of species not valued • Some trees planted under community forest management were cut to create space for plantation under JFM • Selection of species for plantation under JFM does not include a single species from community's preferred species list

Source: Based on interviews with groups of villagers, interview with the first forest watcher of village, and village records

Table 5 Trend in forest offence[a] cases in Gadabanikilo village

Year	Total cases	Firewood and fence	Construction & agriculture	Others	High value timber	Remarks
1998	62	62	–	–	–	One watcher
1999	105	83	7	11	4	One watcher
2000	21	21	–	–	–	Two watchers, change in rules
2001	48	28	10	10	–	One watcher
2002	186	131	30	16	9	Transition to JFM, no forest "cleaning" for firewood, irregular or no payment to watchers
2003	263	148	39	15	61	JFM committee in charge, no forest "cleaning" for firewood, no watcher from June–September 2003, irregular or no payment to watchers

[a] As the table indicates, most forest offences are driven by people's need for firewood and fencing materials. While the poor committed such offences, the rich were involved in offences relating to encroachment of forestland for construction and farming, and harvesting timber.

Source: Based on village records on forest offences and written reports of forest watchers on forest offence

Table 6 Bundle of rights under different regimes of forest management in Gadabanikilo

Bundle of rights	Community forest management	JFM policy	JFM implementation
Access	XXX	XX	X
Withdrawal	XXX	X	X
Management	XXX	XX	X
Exclusion	XXX	–	–

exclude other users, once held by the community, under the rules made by the community, have been taken over by the government under JFM. In effect, JFM has provided the mechanism for the state to re-claim proprietary rights of forest land.

The actual implementation of JFM policy has resulted in effect in further changes in the bundle of rights. For some products, like Mohua fruits and medicinal plants, the access rights are transferred to a single individual through auction who then sells the right to collection of those forest products to the villagers who can pay a fixed rent. This leads us to conclude that rights to access and to manage forest products have a cost under the actual JFM implementation. Just as the bundle of forest commons rights of the villagers have become restricted under JFM policy, they are further restricted by JFM implementation.

Reciprocal Rights and Multi-Level Linkages

The study village is located in an area where more than 80 percent of the villages either have their own forest areas and/or they are involved in protection and management of neighboring forests. These community forests vary in size and in the kind of benefits they produce. For example, some village forests are rich in medicinal plant species and other non-timber forest products, others have tree species suitable for house construction, and others have fuelwood. Some forests are a significant source of bamboo (poor persons' timber) which is a sought-after species especially by the Scheduled Caste and tribal households primarily engaged in weaving of bamboo craft. This diversity in forest types and the varied benefits they produce are the triggers for linkages between villages with community forest management and development of reciprocal rights.

Discussion with three neighboring villages, including some that do not have their own forest areas, revealed that these villages depend on Gadabanikilo's forest for a number of products, especially medicinal plants, fuelwood, and Mohua fruits. Similarly, households of Gadabanikilo depend on the forests of other villages for benefits such as grazing, construction materials, and bamboo. Even though these reciprocal rights are well established, the formal forest management in Gadabanikilo under JFM rules does not have any mention of them. The linkages between villages with community forest management are visible in terms of reciprocal rights over forest benefits but do not extend to decision-making. Hence, reciprocities exist only informally. However, their continuity over a long period of time has turned them into strong linkages and good relations among villages.

Giving certain rights to the neighboring villages and ensuring their participation in forest conservation, mostly at the benefit sharing level, is probably an effective strategy for ensuring compliance. Villages like Gadabanikilo with forest patches often have to deal with outside pressures that could be high in certain seasons of the year. Gadabanikilo is particularly vulnerable to such pressures because 14 villages surround its forest area, and strongly forest-dependent groups including tribal people inhabit six of them. Gadabanikilo villagers mentioned that one of the important factors contributing to the initial forest degradation was excessive pressure from these surrounding villages. As a solution, Gadabanikilo made informal arrangements to ensure that these villages get certain benefits as a way of containing their pressure on Gadabanikilo's forests. Over the years these surrounding villages have developed a stake in Gadabanikilo's forest and play an important role in providing protection to the forests from their strategic location of being on its edges.

In contrast to these community forest management arrangements, JFM policy makes forest protection village specific. "It teaches the village that this forest is yours and yours alone. This impacts or alters most linkages that the village might have developed over a period of time," commented one of the forest federation members. An analysis of the relevant JFM policy provisions revealed two factors. First, the JFM policy recognizes revenue villages only as the unit of management, and secondly, it provides for formal demarcation and allocation of a specific forest area to this unit. Once under JFM administration, both the management unit and the allocated forest area are treated by the forest department as exclusive to each other. There is no provision for honoring existing use rights, formal and informal, of surrounding villages; nor does the policy recognize the web of relationships that might exist amongst self-organized community forest management villages. Compartmentalization of forests under JFM may make good sense from an administrative point of view, but this "one-size-fits-all" approach largely undermines the social values for sharing forest benefits across village boundaries.

The selection of villages for implementation of JFM policy seems to contribute to the creation of inequities among villages. Not all villages with forests in the area have been included in JFM; they are handpicked by the

Forest Department based on certain criteria. Only villages with a track record of good forest protection and without major conflicts seem to be included in JFM. Moreover, the number of villages to be brought under JFM in a particular year is determined on the basis of funds available in the Forest Department. This would mean that not all the potential villages are included under JFM, thereby leaving a majority of them to their own devices. Out of a total of 317 villages in the area that have community forest management, only 31 villages have been brought under JFM over the last decade. Figures for the state of Orissa indicate that out of a total of more than 10,000 villages with community forest management, less than 2000 were brought under JFM during the last decade. This is not to suggest that self-organized villages should or should not be brought under JFM. Rather, the purpose is to examine the implications of JFM selection for interactions and linkages among villages. Once a particular village is brought under JFM arrangement, a process of extrication begins, weakening or severing linkages among villages. What used to be an interaction between two or more self-organized villages quickly turns into an interaction between formal JFM and informal community-based arrangements, which, because of their distinct structural and normative dispositions, often do not go well together.

It is not only village-to-village (or horizontal) linkages that suffer due to conversion of community forest management arrangements into JFM arrangements. Vertical linkages across levels of management are also affected. We compared the status of vertical institutional linkages under these two different arrangements. Under community forest management, the village institution had stronger links not only with neighboring villages but also with higher level institutions. For example, Gadabanikilo village was a member of the local forest federation with over 200 other self-organized villages, and had links with an NGO providing support for forest resource assessment and management. Each of these higher-level institutions had their own linkages with additional institutions. Once a village was linked to them, it had obvious access to all those other institutions and the services and opportunities they offered. However, the self-organized villages did not have direct linkages with the Forest Department. In fact, several earlier requests by the Forest Department to implement JFM had been turned down by Gadabanikilo because the villagers viewed the involvement of the Forest Department as interference.

After 2002, Gadabanikilo developed strong linkages with the Forest Department. The Members of the Executive Council of Gadabanikilo's JFM committee said, "we will maintain relations only with the Forest Department because it is giving us monetary support which neither the NGO nor the forest federation ever provided. Organizations that do not offer us money are not our friends anymore." It is important to note that neither the FD required the VSS to leave the federation in order to get funding under JFM, nor did the village have any major problems with the federation.

If monetary incentive is the major driver for JFM, linkages under community forest management are largely determined by historical, cultural, and other ties. It is possible that the JFM system of Gadabanikilo may come to be supplemented by informal linkages in the coming years; the JFM system has only been operational since 2002. Since JFM implementation follows five-year phases, during which there is a more direct control by the Forest Department, some of the earlier linkages could be revived, but there was no evidence as of 2005 for the re-creation of these links.

Equity, Decision-Making, and Control

An important area within the discourse of rights and participation pertains to power relations between actors, and the complexities in defining access and control and building effective checks and balances. To analyze the factors that influence power relations, we examined some key questions: Who are the key actors? What are the various agendas? Who has the control?

Power is the ability to influence processes by which individuals create rules, make decisions, implement and ensure compliance, and adjudicate disputes. This, in itself, is critical for community-based resource management which depends not only on opportunities to access power but also on the context, including the social situation and related institutional arrangements in which power is exercised (Agrawal and Ribot 1999). Analysis of the institutional space for different groups in the community revealed that the community forest management decision-making had remained solely under the control of the higher caste male members of the community. Data from 1997 to 2005 on the caste and gender composition of the executive council of the village institution in charge of community forest management revealed that there was no representation of the Scheduled Caste (which constitute 35 percent of the village households) and women (45 percent of the population). In fact, villagers reported that these two groups have never been a part of the formal decision-making arrangement related to the forests, since the inception of forest management in the 1940's. Even among the higher castes, one particular group, the Khandayat caste, has continuously held about 80 percent of the membership in village decision-making structure.

The JFM policy brought in significant structural changes in the decision-making structure, making it mandatory for

representation of Scheduled Castes and women in the executive council of the village JFM committee. Even though the executive council of the JFM committee of Gadabanikilo has both Scheduled Caste and women members, in practice there may be little scope for achieving a power balance among the stakeholders, as decision-making control rests with the higher caste male members. In the total of nine JFM meetings conducted during the course of this study, there was not a single instance of women or Scheduled Caste members attending these meetings. Some male members justified the absence of women by stating that "they (the women) cannot speak in public, especially in the presence of elderly male and they are good within their households." Discussion with women members of the JFM institution revealed that there was not enough encouragement and cooperation from the male members for their regular participation. In the case of the Scheduled Caste member, either he cannot attend because most of the meetings are held at the village temple (where he is not allowed to enter) or he simply remains voiceless in a group of dominant higher caste members.

While JFM policy formally opened space for various groups in the community to get involved in the decision-making arrangement, its implementation has not been effective. This clearly indicates that experiences of JFM and the presence of the Forest Department did not have any impact on the ways villagers perceive governance-related equity issues, a finding consistent with those from elsewhere in India (Agarwal 2001; Bingeman and others 2004). Village leaders pointed out, "we had to include women in the JFM institution because that was the legal requirement, without which the funds would not have been released to our village. But village institution is our own and we will manage it in the way we want." The Forest Department seems contented with enlisting the names of a few women and Scheduled Caste members without any apparent concern for actual change.

One may ask how Gadabanikilo's self-organized community forestry, with its inequitable power distribution, was able to achieve robust forest management for over five decades. How were equity issues handled in benefit distribution, villager rights, and participation in forest management? Three interrelated considerations can be mentioned in this regard.

The first consideration is that even though the executive council of community forest management had only higher caste males, the general village assembly, which includes all adults irrespective of caste and gender, provided both structural and functional space to a wider section of the village. The executive council is answerable to the general village assembly. In the words of a senior leader, "the general village assembly was the foundation of the arrangement under self-organized community forestry which formulated all important management rules and monitored their proper execution by the executive council. In fact, the executive council had the primary responsibility of execution of rules set by the general village assembly with virtually no power to make rules. Moreover, the executive council remained answerable to the general village assembly through periodic reporting."

In contrast, the JFM arrangement is heavily biased towards a stronger executive council in which the forest officer is designated the secretary. The executive council is responsible for making and executing rules with virtually no accountability to the general village assembly that consists of one male and one female from each household. To check if the general village assembly was in control of the forest management under community forest management, we calculated the number of meetings it held in a year before and after JFM. We found that the number of general village assembly meetings averaged more than one per month under community forest management, as compared to zero general village assembly meetings under JFM. This analysis leads to the conclusion that community forest management not only provided better opportunities for involvement of a larger section of the village in decision-making, but it also maintained an effective check-and-balance mechanism whereby the general village assembly continuously monitored the moves of the executive council, keeping in mind that women were never an active part of the general village assembly meetings. JFM brought in better structural arrangements for involvement of caste and gender groups in the executive council, but it actually put in place a weaker and ineffective general village assembly.

Two other considerations are relevant to the question of decision-making equity under the two regimes. Since the general village assembly nominated the members of the executive council under community forest management, it ensured that acceptable leaders be in charge. In contrast to the customary criteria used in community forest management for selection of members, the JFM does not follow any specific criteria, with the result that the executive council gets formed along political party lines. Finally, the flow of forest benefits to all villagers in a relatively equitable manner, as detailed earlier in Table 1, is evidence that decision-making under the community arrangement had been working reasonably well. Since the JFM arrangement is relatively new, it is possible that more equitable benefit-sharing may yet develop, despite such changes as the privatization of Mohua fruit and medicinal plants.

Perceptions of Gadabanikilo villagers on what constitutes the sources of power provide interesting insights into the analysis of decision-making and equity-related issues. As shown in Table 7, villagers identified ten factors that determined who in the community has power and can exercise control on the decision-making processes.

Table 7 Perception of villagers on what constitutes power in Gadabanikilo

- The caste group one belongs to
- The religious group one belongs to
- Economic status: Land owners and those who have jobs outside village
- Gender: Men holding more power than women
- Level of education
- Political affiliation: Aligning with the party in power
- Positions in the village institutional structure
- Those aligning with government programs like JFM
- Long periods in office in village institutions
- Contractors, as potential source for wage labor

Source: Based on the results of six individual interviews and three focus groups (including caste groups) in the village

The results indicate that the conventional factors (caste, religion, gender, land holding) are still considered key determinants of power. However, these determinants of power stand eroded as compared to their status in previous decades. Instead, political affiliations have become the biggest source of power and control within the decision-making structure of the community. An individual or a particular group grows powerful if their affiliated political party holds power. The group wields more power if their affiliated political party runs the government at all the levels, from the local to national. Analysis was done to understand how one particular political group in Gadabanikilo village grew powerful with their affiliated political party holding office at several levels. In 2005, this group held forest management power under the JFM arrangement, with 9 out of 13 seats in the JFM committee executive council, while the other political party had only four seats.

Political affiliations are important because they can lead to increased access to government offices, both for information and funds. Because their affiliated political party is in office, members of the ruling group have access to government contract work that enables them to create wage opportunities. As a result, most of the villagers, especially the wage-dependent poor, align with this group. Villagers also need occasional help from the dominant group in dealing with the local police, land revenue department, courts, and other offices. Consequently, members of a dominant group within the village can increase their hold on power for the duration that their affiliated political party remains in office.

Party politics and their related dynamics are not a new concept for villages of India. Up until 1990, Gadabanikilo villagers supported only one party. But since 1990, the vote is being spilt between two parties. Since 1990, there has been an increasing trend of shifts in political affiliation in Gadabanikilo village. In this context, the study dealt with an important question. Why did the political affiliation and its related dynamics not affect community forest management between 1990 and 2002 when it did so with the initiation of JFM in the village?

There seem to be primary reasons for this. First, JFM made a deviation from the traditional institutional arrangement in the village by creating a new forest management institution. Under community forest management, decisions reflected consensus of all the villagers. However, the JFM, being a government-sponsored entity, soon became a symbol of power and money, thereby attracting the attention of all political groups.

Second, JFM promised to bring new funds to the village and, as remarked by a villager, "everyone jumped in and wanted to have a share in the big money it promised to bring and associated power." Interestingly enough, Gadabanikilo's community forest management was regularly handling an annual budget of an amount greater than what the JFM related funding has brought to the village in 2004 and 2005. Why, then, did funds under JFM became such a big attraction for many in the village? Discussions with a cross-section of villagers revealed that they make a distinction between village money and outside money. In making these categories there was an obvious reference to the sources from where the monies came from. In case of community forest management the funds were generated mostly through periodic contributions from villagers for the management of their forests. Everyone looked at it as his/her own money and pressures were always high for the judicious use of it. Accounts were maintained and presented to the General Village Assembly making it available for public scrutiny. In contrast, funds under JFM were viewed as Forest Department (outside) money, which according to some sources, "provides a good scope for malpractice that actually starts with a percentage cut taken by the department at the time when funds are released." Moreover, the financial accountability of the village JFM committee is to the Forest Department, with no control of the village of the funds and financial transactions.

Conclusions

India is a large and diverse land, and the results of one study cannot lead to sweeping conclusions. Nevertheless, the results of the Gadabanikilo case provides insights on what happens when India's Joint Forest Management replaces an already existing community forest management arrangement. The comparison of the JFM arrangement after 2002, with the self-organized community forest management regime that existed prior to 2002, provides three conclusions: (1) The level of villager participation in forest management has declined, along with the erosion of

the bundle of rights held by them; (2) multiple institutional linkages between Gadabanikilo and outside agencies and reciprocal relations with neighboring villages have been abandoned in favor of a close relationship with one agency, the Forestry Department; and (3) the administration of the forestry resource has become politicized.

Regarding the first conclusion, our results are consistent with those of Agarwal (2001) regarding the gap between rhetoric and reality with respect to participation, and those of Bingeman and others (2004) with respect to the sheer absence of women even when they are listed as JFM committee members. Further, our results indicate poor participation, not only in comparison to a JFM ideal but in comparison to the arrangement displaced by the JFM in 2002 in Gadabanikilo. To put the issue in perspective, a distinction should be made between forests needing rehabilitation (the original purpose of the JFM) versus forests already rehabilitated, or in sustainable use, by existing local arrangements. After all, Gadabanikilo villagers had rehabilitated their own forest by instituting rules and practices to manage land that is nominally state property. In such a situation, JFM provides the excuse for the state to re-assert its control, at the expense of *de facto* community management, an example of the state expanding its control in new ways as postulated by Lele (2000).

Regarding the second conclusion, the loss of reciprocal relations with neighboring villages is a potentially damaging situation that could lead to increased poaching as well as regional conflicts. There is overall loss of resource availability to the surrounding villagers, but the consequences are likely to be borne disproportionately by the poorest and the most forest-dependent groups in the area, the tribal people and the Scheduled Castes. Likewise, the closer relationship with the Forest Department under JFM seems to be a poor tradeoff for the loss of local forest federation and NGO linkages and the whole network of regional groups. Successful community-based resource conservation seems to be strongly dependent on the availability of a diversity of partners providing a diversity of services (Berkes and Adhikari 2006). The "one size fits all" approach of the JFM with its pre-packaged objectives (Table 3) and its narrow scope of forest management with few tree species used, is likely to limit the experimentation, learning and institutional innovation that had characterized Gadabanikilo's earlier approach to community forestry.

Regarding the third conclusion, the politicization of Gadabanikilo's forest administration is not solely attributable to JFM; it is consistent with the changing determinants of power in contemporary rural India. Nevertheless, the power struggle along party lines for the control of forest resources, along with the bias of the JFM arrangement towards a stronger (but often elite-dominated) executive council and a weaker voice for the general village assembly, does not bode well for equity in forest resource use. The weakening of the role of the general village assembly — the institution that was instrumental in developing the arrangements (Table 1) for forest rehabilitation and in distribution of benefits — may hinder the ability of the village to solve its own problems in the future.

On the whole, JFM is probably a positive force for India's development (Prasad and Kant 2003). But this is not necessarily so at the village level where JFM can displace self-organized community forestry. The "one size fits all" prescriptions of JFM, with its privatization bias, cash emphasis, and commercial species fixation, provides a blunt instrument, upsetting locally evolved conservation alliances and re-forestation methods that are sensitive to local needs and livelihoods. The future success of JFM may depend on developing greater flexibility to build on existing local arrangements, instead of displacing them.

There are good reasons to support, and not to dismantle, community forest management (Gibson and others 2000). First, the diversity of arrangements with community forestry provides a rich reservoir of experiences from which to learn. Second, local problem solving has the potential to be more responsive to local needs, as in the choice of species for replanting. Third, there are a number of operational advantages to community-based management. For example, community forest management seems to result in better monitoring than does JFM (Ghate and Nagendra 2005). By building on the existing strengths of India's diverse and vibrant community-based resource management traditions, JFM can contribute to increasing the set of viable options rather than decreasing them.

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