

# Joint Forest Management in India: An Unavoidable and Conflicting Common Property Regime in Natural Resource Management.

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*The Joint Forest Management program in India is one of the largest co-management efforts in natural resource conservation in the world. Apart from providing livelihoods to forest dependent populations, forests provide crucial subsistence needs of housing materials, food, medicine, fuel-wood, small timber and non timber forest products. Since the colonial era, forest dwellers and traditional stakeholders, including tribal populations have been deprived of forest ownership and usufruct rights by exclusionary, hierarchical 'command and control' management. Since 1970s there has been an awakening and advocacy for thwarting exclusionary forest management and conservation through the involvement of local people. An analysis of policy transformation in forestry governance in India over the last four decades reveals a wide gap between the actual outcomes and the expectations of people. The research paper attempts to highlight the causes of this gap and puts up reasoned arguments recommending possible integrated structural, institutional and socio-cultural solutions.*

## Introduction

Forests in India are mostly state owned and cover an area of 67.71 million hectares, corresponding to 20.60 percent of the total geographical area of the country. Nearly 100 million people reside in forests and another 275 million live on the periphery and earn their livelihood from forests. The livelihoods of approximately 370 million people who directly or indirectly depend on forest products and services are therefore mired in poverty. Centralized operations with a focus on industrial forestry, have led to the neglect of customary livelihood rights and privileges of the forest dwellers. The protection of India's forest tracts has become a difficult task, seeking to reconcile the needs of the communities while conserving the depleting forest resources.

In developing countries, forests provide livelihood and subsistence needs that are necessary for survival. Forest resources are especially vulnerable to the "tragedy of commons", resulting from over-exploitation of the resource by individual self-interest and the lack of effective institutions to govern the resource (Hardin, 1968; Ostrom, 1990). Common property resources (CPRs) such as forests have two important characteristics: a) exclusion or the control of access of potential users is difficult, and b) each user is capable of subtracting from the welfare of all other users (Feeney et al., 1990). The history of forest governance in India is replete with conflicts between traditional rights of forest users and decades of colonial legacy of 'command and control' forestry. Thus, a change from state ownership of forests to increased community access could lead to contradictions with regard to ease of access and entry into the forests. While excludability or control of access is an important characteristic of the commons, new institutional

arrangements involving community management have become critical for the protection and management of forests. Consequently, exclusion of beneficiaries (users) through physical and institutional means becomes especially costly (Ostrom et al., 1999) and leads to a clash of interests between users and non-users.

In pursuance of India's new forest policy of 1988, the central government issued broad guidelines for encouraging people's participation in forest management. By 2001, 25 of the 28 states came out with their own program of partnership and usufruct<sup>1</sup> sharing mechanisms with people, popularly known as the JFM program. The Joint Forest Management (JFM) program is described as "a forest management strategy under which the government represented by the Forest Department and the village community enter into an agreement to jointly protect and manage forestlands adjoining villages and to share responsibilities and benefits" (Government of India, 2002). The 1988 National Forest Policy laid the foundation for the preponderance of conservation over commercial forestry and people's participation throughout the decades of exclusionary regime in India. The 1990 resolution of the Ministry of Environment and Forests on JFM was a blueprint for devolution, intended to guide participatory forest management in different states of the country.

In view of a shift in paradigm in natural re-source governance across international boundaries, the JFM program in India was a laudable effort towards devolution and decentralization in forest administration. An increasing focus on people-centered policies, bottom-up planning processes, and decentralized governance are some of the key characteristics of this new paradigm (Ostrom, 1990). Beginning in 1990, the

JFM program in India is one of the biggest co-management efforts of the world that acted as a policy vehicle for resolving forest resource conflicts. Recent data indicate that 99,000 registered JFM committees are involved in managing 214,300 square km of forests in 28 states of India involving 13.8 million families, 28.75 percent of which are tribal (MOEF, 2005).

Over the years, socioeconomic and cultural conflicts for forest livelihoods have inflicted a heavy toll on the state's transaction costs and created several extreme social movements that oppose the State. Though the JFM program is welcomed as a beginning for socioeconomic sustenance of forestry governance in the country, its qualitative and quantitative achievements are highly debated nationally and internationally.

Community forest conservation has historically been a guiding principle in the village code and livelihood of rural India. JFM thus marked the official beginning of a common property regime in natural resource management. A review of the JFM program can help to explain the changed perspective of forestry management and design a logical matrix for analyzing policy interventions in this domain. The analysis of JFM program is based on the chain of events that started with the emergence of scientific forestry in British India (1890-1947) to the enactment of the 2006 Forest Dwellers (Recognition of Forest Rights) Act by the Indian Government, which conferred land rights to millions of forest dwellers. Tribal unrest against state ownership and management of the forests since the British era, agrarian reforms and conflicts since Indian independence (1947), are still evident even in the present dispensation. The recent spurt in extremist movements of the Maoists in 23 States of India is an important externality that merits consideration in drawing a roadmap for future forestry governance in India.

During the 1970s and 1980s, most of the states of India implemented social forestry projects funded externally by several donors including the World Bank and DFID. The outcome of "people's face of forestry" has been adequately captured by the respective organizations and NGO's in their terminal appraisals and evaluation documents. A review of such documents reflects the structural, institutional and technical shortcomings of policy interventions and also gives an idea of the contemporary development perspectives that existed in the international arena during that period. The gaps identified between program outcomes and the people's expectations in implementation of JFM over the last three decades in India has to be analyzed with regards to the rationale of public policy in managing public goods.

Weimer and Vining (2004) state, "In the case of common property, the limiting of access to a defined

set of persons opens the possibility of self-governance among them that reduces or eliminates inefficiencies. In the case of open access, however, the threat of new entrants effectively eliminates the possibility of self-governance. Even in cases of common property, individual rational behavior by members of the defined group can lead to inefficiency in a way that may end up being indistinguishable from open access, in such cases common property results in a common property resource problem" (pp. 86-87).

This research paper uses a literature review and field experiences in the different states of India to explore the structural and institutional problems encountered in the JFM program. Weimer and Vining (2004) define these problems as "structural (where aspects of the goods preclude economically feasible exclusion mechanisms) and those that are institutional (where economically efficient exclusion mechanisms are feasible but the distribution of property rights precludes their implementation)" (pp. 90-91).

## Review of JFM

### *Context and origin of JFM*

During the British period, the sole purpose of forest management was oriented towards the redistribution of economic gains to the Empire (Kant & Cooke, 1999). This was achieved by commercialization of timber, restriction of the rights of local people and resulted in large-scale deforestation (Gadgil & Guha, 1983). The change in ownership rights and the exclusion of local people disrupted the forest based livelihoods, further alienating the people who depended on the forests. This led to violent and non-violent resistance against the state by forest dwellers and dislodged tribal groups. The British government ultimately conceded to forest-based community forest management for some forest areas in the Himalayas. These took the form of van panchayats (forest villages) in Uttar Pradesh and Forest Cooperatives in Himachal Pradesh (Guha, 1983). Thus, the British period created large-scale conflicts among forest managers and the local people, which marked the beginning of the breakdown of a symbiotic relationship between many communities and the forests in which they were situated.

After independence, the central government tried to redefine social-utility and social-welfare functions, but the emphasis of forest management regimes continued to be on commercial timber exploitation and the exclusion of local people (Kant & Cooke, 1999). In 1988, state ownership of forests rose by 50 percent to cover an area of 67 million hectares through blanket notifications of forests by the government. The prevailing customary rights of forest dwellers, who were mostly tribal, were sidelined in an endeavor to expand state ownership of the forests. This was seen as a

continuation of the existing authoritarian, exclusionary management. Gadgil & Guha (1983) argues that there have been a number of notable similarities between colonial and post-colonial forest policy. This demonstrates that the national forest policy of 1952 upholds the fundamental concepts of its predecessor, the forest policy of 1894, and it reinforces the right of the state for exclusive control over forest protection, production, and management (Hannan, 1999).

Since the 1970s, there has been an awakening and advocacy for thwarting exclusionary forest management and conservation of forests through the involvement of local people. This was primarily due to conflicts in land ownership and rights over forest produce simmering all across the country. The states were also experiencing a resource crunch in meeting the cost of planting and protecting the forest. The 1970s and 1980s also marked deficit budgeting in most of the states and a shift of the Indian economy towards liberalization. This was also the period when most Indian states were dependent on external funds to support the forestry plantations. This external funding amidst natural resource management conflicts was responsible for shaping “people’s face of forestry”, alternatively called “Social Forestry”.

In the Indian context, an adversarial relationship between the forest department and the people reflected the historical realities of past centuries. This led to the call for reorientation and attitudinal changes not only in the forest departments but also in the communities. As Sunder (2000) noted, officials “worn out by constant conflict between recalcitrant villagers and beleaguered forest staff in which both sides had been known to lose lives and limbs ... [felt] there was no alternative but to run from coercion to consent, at least in certain areas” (p. 256, as cited by Castro & Nielsen, 2001). The *Chipko* protest movement (1973) in the state of Uttaranchal was testimony to the people’s movement to reestablish a relationship between man and nature over the state’s exclusionary management perspectives. In the *Chipko movement*, a female peasant uprising in which protesters embraced trees was successful in reclaiming the peasant’s forest rights and stalling the felling of trees by contractors of the forest department. Few individual successful efforts made in the states of West Bengal (Arabari Village, 1972), Haryana (Sukhomajri Village, 1976), and Rajasthan (Gopalpura Village, 1986) to develop rural livelihoods and regenerate forests through co-management in 1970s also caught the attention of foresters, India’s politicians, as well as, international environmental activists.

### **The Joint Forest Management Program**

The JFM program is a co-management regime for protection, regeneration and development of degraded forests where the role of NGOs was to act as a bridge

between the State and the people dependent on forests. Forest areas under consideration would be protected and managed jointly by the local community and Forest department, but ownership of the forests would lie with the government. An important feature of the JFM program regarding ownership relates to forests being included in the concurrent list of the Constitution of India and jointly governed by the state and federal governments where federal authority prevails in case of any controversy.

The present level of 20 percent forest cover in India is a result of population pressure and poverty, which further compounds the loss of forest cover and rural livelihood. Without external funding it was impossible to meet the transaction costs of the state for protection and conservation of the forests. International organizations also preferred people’s participation in natural resource management as requirement for extending financial support (Saxena & Farrington, 2003). In the face of mounting evidence, the 1992 UN Conference on Environment and Development (UNCED) agreed under Agenda 21 to emphasize the importance of rethinking the ‘blueprint’ approach to environmental management in favor of one that involves people’s participation and accommodates indigenous knowledge and local values and interests (Kapoor, 2001).

In lieu of participation in forest management, people were given access to forest areas under JFM for collection of non-wood forest produce and a percentage share of final tree harvests under a specific usufruct-sharing mechanism between the two partners. A memorandum is to be jointly signed in this regard by the state and the Village Forest Committee (VFC). A VFC is formed under chairmanship of Gram-Pradhan (Elected Village Chief) with other elected members of village self-government for the respective village including women members. The Secretary of the VFC is a forest department functionary. VFC takes up activities recorded in a site-specific micro-plan prepared jointly by the forest department and VFC on a 10-year scheme basis. VFC receives funding mostly from the forest department and gathering funds from other agencies is also encouraged.

It is relevant to mention that the basic organizational structure of the Forest department involves a hierarchical multi-tier organization comprising the Indian Forest Service at the Central level and Provincial Forest Service at the state level. The present dispensation has changed little and is seen as a continuum of colonial management, that persisted with exclusionary ‘fortress forestry’ institutions.

### **Strategies for JFM**

The roots of JFM lie in the innovative experiments of 1972, which encouraged people’s involvement in forest

protection at Arabari, a village situated in the state of West Bengal. The institutional arrangement for JPM varies in different states, based on variations in the nature and extent of forest cover, as well as, differences in the socioeconomic conditions of the village areas. There is great variation in the composition of the lower most management unit in the states, comprising of a single village (states of Gujarat and Madhya Pradesh) to a hamlet/cluster of villages (state of Andhra Pradesh) or even whole panchayats.<sup>2</sup> Some resolutions specify an entire watershed as a management unit like in Maharashtra, while in the state of Tripura, the area of management specifies 500 ha for natural regeneration and 300 ha for plantation. JFM schemes in most states are limited to degraded forests, excluding Madhya Pradesh where committees are formed in high forest areas. Membership norms and benefit sharing also deviate considerably.

JFM has largely been implemented in a project mode as a major requirement of loans from the World Bank and other external donor agencies. Nearly 48 percent of open forests have been afforested under JFM in states that received assistance compared to 16 percent of open forests in those states that did not receive assistance (Murali et. al., 2002). A large difference in the rate of growth of JFM has been observed between states that have received assistance and those that did not. Spread of JFM was remarkable in the states of Kerala, Madhya Pradesh, Andhra Pradesh and Uttar Pradesh. The World Bank funded the Kerala Forestry Project from 1998 to 2003 for a total USD 45 million; the Madhya Pradesh Forestry Development Project from 1995 to 1990 for USD 55 million; the Andhra Pradesh Community Forest Project for USD 108 million; and the Uttar Pradesh Forestry Project (1999-2003). The Japan Bank for International Cooperation (JBIC) has funded JFM projects in Tamil Nadu (Tamil Nadu Afforestation Project, 13,324 million yen), Punjab (Punjab Afforestation Project 1997, Phase-I at 6193 million yen and Phase II at 5054 million yen), while the UK Department for International Development (DFID), has funded projects worth 6030 million rupees in Karnataka.

There are also state specific variations with respect to composition of committees and the participation of women and other groups of society. In almost all the states, Joint Forest Management Committees (JFMCs) have full rights over all the non-timber forest products (NTFPs)<sup>3</sup> except the nationalized Minor Forest Produce, that is, tendu (*Diospyros melanoxylon*) leaves, sal (*Shorea robusta*) seeds, cashew (*Anacardium occidentale*) and others. In the state of Andhra Pradesh, 50 percent of the net proceeds from the sale of tendu leaves are shared with JFMCs. In the states of Madhya Pradesh and Chhattisgarh, 100 percent of net profit goes to the collectors of NTFPs. The majority

of the states allow about 50 percent of net benefits obtained from final felling of trees to JFMCs.

The underlying strategy of JFM in India is to empower local populations in their livelihood practices through self-sustaining local environmental governance and achieve the goals of national forest policy of 33 percent forest cover. This in turn facilitated the resolution of conflicts over ownership of forestland, as well as rights of the tribal and rural poor over forest products.

## **An Analysis of Effectiveness of Joint Forest Management**

### *Impact of JFM*

JFM acted as a vehicle for process change in the forest department, which was widely perceived as a continuation of the British legacy and structure advocating exclusionary forestry. Training programs and meetings between foresters and villagers in the new model have contributed to a decrease in negative attitudes and served as a channel for effective conflict resolution. This helped to clear the pervading mistrust and opened up communication channels between state and non-state partners in managing common property resources. It has sensitized forest bureaucracy through training, seminars, workshops and informal appraisals about the obsolescence of a traditional exclusionary approach. Changes in the forest management regime also attracted additional funds for core forestry and environmental activities from international organizations funding poverty alleviation and livelihood improvement programs.

JFM has helped in reducing information asymmetry in natural resource management between the local people and forest department. JFM also helped in the decentralization of decision-making by empowering the Village Forest Committee politically and socio-economically. Process documentation of 40 JFM committees in the World Bank aided Madhya Pradesh Forestry Project, revealed that tribal women are participating in decision making (IIFM, 1999). In Bhawarpiparia and Somkua, women in the committees under the Jhabua Forest Division used the JFM platform to impose prohibition and prevent wife-beating (Prasad and Kant, 2003). In the Kachala Forest Protection Committee (FPC), local people in collaboration with government have been able to fight the menace of criminals who take shelter in forests (Sharma and Ramanathan, 2000). It has made possible the building up of grass root institutions, strengthening a bottom-up approach for a self-sustaining model in natural resource management.

JFM has not only contributed to the better status of degraded forests, but has also contributed to sustainable human resource development. "In the jurisdiction of Badwani JFM committee, the number of plants have

increased from 153 plants/ha, before JFM, to 900 plants/ha after 6 years of JFM operation. Prior to JFM the under-storey comprising of bamboos had disappeared, but under a JFM committee, the number of bamboo clumps increased from 78 bamboo saplings to 322 clumps/ha over a six- year period. As a result, community based institutions have become the accepted institutional arrangements for sustainable human resource development in India” (Prasad and Kant, 2003, p. 359).

One of the most positive outcomes of policy change is the increased participation of NGOs in protecting and raising plantation even in government forests, and has yielded exceptional results. A recent study states, “Evidence gained from an examination of the work of three NGOs based in Dehra Dun (often seen as the NGO capital in India) in the regional state of Uttar Pradesh, point toward the fact that, by and large, they have began to replace the Indian Forest Service as the key State Actor involved in the implementation of JFM” (Hannam, 1997, p. 229).

### **Quantifiable impacts of JFM**

Murali and colleagues (2002) opine that, “In the 1960s and 1970s imperatives for industrialization caused a great deal of ecological distortion where exotic fast growing species like eucalyptus were planted on a large scale in forest areas. JFM accommodated the preferences of VFC for indigenous species over exotic and non-timber forest species. During the year 1993-1999, assessment of JFM and non-JFM plantations shows that nearly 66 percent of the stems in non-JFM plantation are firewood species where as in JFM plantation it was 47 percent” (p. 516).

Monitoring the change due to JFM in different indices can help assess ecological impact. The impact varied from state to state, also with type of forests, condition of forests, political regime and forest livelihood patterns. A study to estimate the impact of JFM in the state of Gujarat, three divisions viz., Baria, Rajpipala and Sabarkantha covering 24 villages were selected. Vegetation parameters such as species richness, density of trees, basal areas, Shanon Weiner's diversity index, woody biomass and mean annual increment (MAI) were observed and compared with control plots in a non-JFM village. Stem density, species richness, species diversity, basal area, biomass and mean annual biomass increment were higher in JFM forests as compared to controls. This study also indicates that JFM forests are meeting substantial biomass needs of the community and contributing towards achieving sustainable forestry.

There have also been improvements in human resource development (HRD) within the forest administration through participatory workshops and study tours at all levels of the hierarchy. VFC executive

members and frontline staff of the forest department could gain substantial technical knowledge on rapid rural appraisal, participatory rural appraisal, and preparation of site-specific plans that incorporated local knowledge and traditional wisdom. Training of village women, skill development training for value addition to forest produce, knowledge in medicinal plants management and marketing are a result of human resource development impact of JFM. It also brought into effect, several organizational developments in the form of Forest Management Information System in the Forest Department together with capacity building of NGO's and village level institutions.

In spite of the huge coverage of 21.44 million ha or 28 percent of total forest area in the country under JFM, rural livelihood over the last decade did not show any tangible improvement. One of the field studies on livelihood impact has shown that JFM activities have produced only a marginal increase in physical, natural and human capital, with substantial increases in financial and social capital in Ambua and Keli villages in Rajasthan (Pandey 2005). In forest villages of Betul in Madhya Pradesh, collection and sale of NTFPs have not led to improved forest-based livelihood opportunities for traditional tribal stakeholders (Canadian International Development Agency's Project, 2005). This can be attributed to the over-exploitation of forest resources, as well as the low prices paid to the collectors in rural areas by middlemen and traders.

Social unrest over forestland—mainly tenurial issues—rose to its peak and the government of India tried to undo the historical injustice to its tribal population living in forests by enacting the Scheduled Tribes and Other Forest Dwellers (Recognition of Forest Rights) Act in 2006. This resulted in increased access and rights over forestland and usufructs for tribal groups.

### **JFM policy and its Outcomes**

JFM acted as an embodiment of the contemporary international and national paradigm in environmental governance favoring co-management of natural resources in India. JFM served as a vehicle for the reestablishment of customary relations and livelihood rights of people over forests. In the words of Prasad and Kant (2003), “it recognized the rights and concessions of the communities living within and around forest areas, specifically the tribal people ... it suggests that the holders of customary rights and concessions in forest areas should be motivated to identify themselves with the protection and development of forests from which they derive benefits. Hence, this policy re-introduced the concept of community-based forest management institution” (p. 357).

One of the negative impacts of JFM policy is the informal institutionalization of right of access to forests for the rural non-poor which gave them an edge over the poor and land-less groups. Dominant groups within villages have benefited disproportionately from the regenerated forests in the state of Orissa and have been able to impose their perspectives on how forests should be protected and utilized upon the poorer and marginalized groups (Sarin, 1998). JFM reinforced local inequalities, despite the fact that the poorest women depended on forests for their subsistence. In Surguda, a village in Orissa, harijans (lower castes) actively participated in forest protection. As the forests regenerated, “the higher castes majority community appropriated control over management decision making. As a result, forests were opened up for extraction for only a few days, allowing the higher castes households—who could hire labor and forego their own income earning activities in a way the harijans could not—to take full and unfair advantage of extraction” (Sarin, 1998).

In spite of the poor being dependent on forests for supporting their day-to-day needs, there is no arrangement in JFM to empower them or accommodate their concerns. JFM as a formal institution is mostly represented by elected members of panchayat, a result of the 73rd Constitutional Amendment which provides for a three tier local government at the village level. Most panchayat members are influential members in the village represented by caste, creed, religious and political affiliations. Thus elite office bearers tend to dominate over the landless laborers, women and other poorer sections of the society stripping them of their access to firewood, non-timber forest produce from forests and seriously disrupting traditional livelihoods.

In this regard Kumar (2002) observes, “the income generated from the user fee is deposited in a common village fund managed by the VFC leaders. Very often these funds are used for purposes—such as temple building or community feasting—that offer little by way of compensatory benefit to the poor, but which help to reproduce the cultural and political capital of more influential people” (p. 12). He further observes that “It shows that the JFM regime reflects the social preference of the rural non-poor, and the poor are net losers over a 40-year time horizon” (Kumar, 2002, p. 1).

Despite a modification of JFM policy in 2000 that paved the way for the inclusion of land-less people and women in management committees, there are still bottlenecks because of the hierarchical, rigid and top-down approach of forest administration. On a social level, the lack of access to forest resources has caused the tribal people and the poorest of the poor to establish links with Maoist extremists indulging in unlawful activities against the state. In the political context, the recent enactment of the 2006 Forest Dwellers (Recognition of Forest Rights) Act by the

Indian Government conferring land rights to million of forest dwellers, can be seen a progressive legislation aimed at undoing historical injustices to the poor and tribal people.

### Shortcomings of JFM Program

#### *Shortcomings in JFM policy*

The JFM policy does not contain any guidelines for the attitudinal change of organizations concerned with the implementation of JFM policy. As a result, a hierarchical bureaucracy with the colonial legacy of exclusionary forestry has persisted instead of an organizational design suited to participatory management. In this respect Kapoor (2001) writes, “often these changes are not happening, or if they are, they are severely compromised by corruption and other unaccountable political and administrative barriers... government commitment to, and structures facilitating, participation and decentralization exist, but bureaucrats have little incentive (e.g. because of a loss of discretionary power) to advertise or implement them” (p. 273).

The institutional machinery for implementation of JFM, including the village level elected body (village panchayat), hampers involvement of poorer sections of society. This body is largely a political entity, divided along the lines of caste, religion, haves and have-nots. Forest administration, using panchayat institutions as its extended arm, has caused lower levels of involvement of the rural poor. Sarin (1993) records the transition of panchayat as “after independence the panchayat was transformed from a system of local governance to one of the state regulated representative democracy. The former legitimacy of local leadership and the tradition of collective decision making were abolished: in their place, a new institution, which continued to be referred to as panchayat, took over.” Subsequent to this shift of power to an increasing neo-middle class population, JFM has stifled voices and opportunities of marginalized rural populace from their traditional livelihood rights.

JFM has been widely viewed as an alternative to support central tendency of governance enjoyed by pre and post Independence bureaucracy, in the name of decentralization. Kapoor (2001) explains “in the mainstreaming participatory environmental management, in the replacement of old with new, lies the danger of substituting one orthodoxy for another. There is the risk of bureaucratic encrustation, where plurality is unified and complexity is simplified” (p. 276). Another policy failure is technical incompatibility of JFM vis-à-vis existing special acts including the Indian Forest Act 1926, Forest Conservation Act, 1980, and rulings of the Supreme Court of India and its Empowered Committees on forest conservation. Moreover, because the potential gains from JFM

fluctuate widely over time, there is little incentive for poorer social groups to put a high premium on future incomes, or to mobilize themselves for secure ownership of the scheme, as has happened in some poverty alleviation programs in India (Joshi, 2000).

#### *Failure of JFM to target particular vulnerable groups*

India still lives in her villages and the heterogeneous construct of society makes it more challenging for co-management of open access resources. Panchayat is an institution of the rural elite that does not represent the vast majority of landless agricultural laborers, forest dwelling tribal population, and land-less migrant laborers. JFM could not empower those sections of society that, to a great extent, depend on the forest to make a living. Hannam (1998) in his study of JFM in the state of Andhra Pradesh states "JFM was seen to work in smaller villages with more homogeneous populations but not in the larger more heterogeneous villages where there is a greater scope for a clash of interests" (p. 228).

Thus the policy remained more or less a management tool in the hands of government and never transformed into a genuine people's movement for forest conservation. The National Forest Commission Report (Government of India, 2006) provides a very critical review of the JFM program. It notes poor participation of women in JFM, weak legal and organizational framework of JFM, ambiguous legal status of JFM committees, perception of JFM as a forest department program. The review also found a lack of synergy between panchayats, JFM and other programs, together with a lack of adequate resources for conservation and regeneration. It states that the government should subordinate the objectives of forestry management to accommodate the needs of the local people'. This is largely the failure of government authorities to address the concerns and rope in energies of marginalized sections.

### **Recommendations**

#### *Shifting foci of implementation to an organic village community*

The gram panchayat or grass root representative institution at the village level is the nodal agency for developmental programs and is vested with decision-making authority. The heterogeneity in communities and politicization of the panchayat institutions hinder effective collaboration and cause further polarization of groups that have livelihood dependence on the forest resource and others that are not dependent. Replacing VFC with an organic institution comprising all sections of society, particularly marginalized poor people, landless laborer, NGOs, environmental activists and women will ensure that the livelihood concerns of the most disadvantaged sections of the societies are taken care of.

In the Makalu-Barun national park and conservation project in Nepal the success can be attributed to the existence and development of multiple institutions (panchayats, 'user groups', multiple community consultation processes) to respond to diverse community groups (Kapoor, 2001). Re-modeling requires plurality and complexity blended into an organic entity. This also supports the mitigation of 'Common Property Resource Problems' by removing information asymmetry between all stakeholders, as well as containing agency losses.

#### *Redesign of organizations*

The organizational design needed for implementing 'people centered' policies stands in marked contrast to the contemporary bureaucratic form of public agencies, and shows that old-style bureaucracies need to become more flexible, democratic, and effective organizations. The top-down hierarchical approach needs to be replaced by open channels of communication between all stakeholders. The public management literature also indicates that bureaucracy—under which superiors determine the way work is to be performed—is negatively related to innovativeness and decentralization, and is increasingly seen as an obstacle to collaborative public management (Ramprasad and Kant 2003). The recruitment procedure and training methods of the Indian Forest Service (IFS) cadre have essentially remained unchanged since the colonial era. The training methods instill a hierarchical and rule-bound culture (Hannam 2000) among members.

For the successful implementation of JFM, organizational structure and culture have to be reoriented through the empowerment of staff and personnel, collaborative decision making, and increasing emphasis on discretion over hierarchical rules. Training local communities to build local capacity to make them self-reliant and equipped with basic skills of co-management, is very important. Awareness amongst different stakeholders helps to create advocacy for favorable political will and enhances fund availability for forestry and rural development projects. Public managers in the department should develop a flexible approach and make innovative efforts to increase political will, and overcome the dominant top-down role of rural development agencies over their natural resource management counterparts.

#### *Building social capital through social re-engineering*

A modification of policy should initiate a social re-engineering to provide a platform for mainstreaming marginalized sections of society in order to mitigate social conflicts over rights on land and usufruct sharing. This in turn will prevent further spread of extreme social movements (Maoist Movement) in forest-dominated districts where most tribal and rural poor reside. The 2006 Scheduled Tribes and Other Forest

Dwellers (Recognition of Forest Rights) Act, which distributes 2 hectares of forestland to forest dwellers is expected to resolve to a great extent the social conflict currently simmering in the country. However, the legislation cannot offer a permanent sustainable solution, unless social capital is built up through community empowerment involving NGOs and Civil society.

Cooperative interaction on any aspect of social or economic activities of community members leads to development of norms, networks, associations and trust as people tend to cooperate for common welfare (Putnam, 1995). An optimum level of social capital of a community, state, and market is a precursor for effectiveness and self-sustainability of any policy or program. Particularly for a co-management program like JFM, social engineering through inclusion of traditional pluralistic norms, instilling trust and precedence of informal institutions over village panchayat are indispensable components. This can be achieved by assigning a stronger role for local NGOs, women and village self help groups. The functioning of JFM Committees under the Co-operative Societies Registration Act would improve the time bound implementation of forestry activities which is otherwise absent due to the low political priority attached to forestry activities by the village panchayat.

#### *Economic Orientation of policy*

Forestland ownership in India is more or less an exclusive right of the state. There also exists an adverse relationship between growth of population and forest products in the absence of matching technology infusion. As a result the forest—a common pool resource—has become relegated to de facto open access resource supporting the livelihood of millions of people. The high transaction costs associated with protecting the forests in an exclusionary management scenario, amidst simmering social conflicts for forestland rights and livelihood support for 375 million rural people, inevitably lead to a “tragedy of the commons”. Such externalities of information asymmetry and ‘agency-losses’ can be offset by a uniform government policy.

Poffenburger (2000) also mentions the existence of a large number of “paper committees”. He described these committees as JFM committees formed consequent to a target driven approach and hierarchical pressure to obtain loans from the World Bank and other donor agencies. So the policy should be economically re-oriented after careful analysis of the transactional costs through a social cost benefit analysis. Due cognizance of transaction costs and optimum allocation of budget to JFM Committees is presently missing. In the long run the miss-match between transaction costs and allocation of an optimum budget may cause depletion of forestry resources, leading to a

vicious cycle of poverty. This problem can be overcome by a budget allocation based on an ecological footprint analysis at the level of the District Planning Committee. Fiscal auditing, monitoring and accountability are also needed to minimize corruption and rent seeking behavior.

#### *Biodiversity and technical orientation of policy*

Exclusionary management for commercial forestry has been perpetuated over the years in the organizational culture, which encourages long gestation commercial timber species. Poor people require short duration firewood and non-timber forest produce to support their immediate livelihood needs. Forest working plans, which are a written scheme of forestry operations for 10 years for a forest division, prescribe only scientific commercial forestry. The Supreme Court’s ruling has made the working plans sacrosanct and a non-violable document. Thus forestry activities prescribed in a working plan are at logger heads with the livelihood demand of the poor people. This calls for a thorough overhauling of most of the working plans to incorporate the guidelines of JPM. This is a herculean task considering the enormity of the preparations for working plans and the concomitant resource crunch for extensive revision. Long gestation timber crops also become non-viable options considering the availability of imported timber from Malaysia and other South-eastern Asian countries at cheaper prices. So the conflict of species choice between the rural elite, marginalized landless people and forest department poses another hurdle. The resistance of the bureaucracy to accept new management practices is also a major problem. This problem can be overcome by re-organization of the Working Plan Unit in the State Forest Department along with an optimum allocation of resources to conceive the principle of collaborative management and equitable rights of usufructs.

#### *Renewed NGO and civic orientation of policy*

NGOs and other civic bodies should be treated as non-state equal partners, not only as facilitators but also in implementing projects in government-owned forests. This has been tried on a very limited scale and has had great success. Few successful and replicable examples of protection and management of forests by non-state players exist in places like Dehra Dun in the state of Uttaranchal and in the state of Orissa.

#### **Lessons for other countries**

Developing countries, particularly Pakistan, Bangladesh, Nepal and Sri Lanka have resource management conflicts more or less similar to India. The region's population of 1.3 billion all share varying levels of dependence on the forest, and this will grow with increased consumption as the population expands to 2

to 2.5 billion by the year 2025 (Poffenberger, 2000). A vast majority of the teeming millions on the Indian sub-continent include the rural poor who survive on less than a dollar a day and are dependent on forests for their livelihoods. Degradation of the forests affects the rural livelihoods, mostly those at the bottom of the socioeconomic scale (Dürr, 2002)

The present status of forests is predominantly the outcome of a colonial legacy, involving state control of the forest administration. The growing openness of governments to reconsider who is best positioned to be managers of the public forest domain are beginning to allow fundamental questions regarding tenure rights and responsibilities to be addressed (Poffenberger, 2000)).

To have sustainable and effective policy, management should take into consideration the existing social-capital in the community so that it blends perfectly with national ethos to reduce conflicts at the grass root level. Policies should have a component of social engineering to connect people with the state and market. People have to be central to planning, considering that the vast majority of the teeming millions have little access to basic needs for survival. The conservation focus needs to incorporate development programs for expanding the role of community institutions. Growth is not the only route to the security of livelihoods, and aspects related to distribution of assets (for example land), vulnerability and human development are proving equally important (Hobley, 1987).

The roles and responsibilities of government, the private sector and civil society are being realigned and the relationships between them are changing (FAO, 2001). Bangladesh, Pakistan and Nepal have over the past two decades, implemented social forestry programs through the involvement of the people. Collaborative management has resulted because of the inability of governments to unilaterally control public forest resources. Nepal is now ahead of other countries in community forestry, largely due to informal institutions like forest user groups, federation of forest protection committees, NGOs, women's groups in large-scale pilot projects for resource conservation. Pakistan did not have successful forest policy initiatives partly because of unstable political setups that frequently changed policy and scant attention was paid to livelihood concerns of the forest dwellers (Poffenberger, 2000).

In order to strengthen and enhance people's participation in forest conservation and management, country specific policies can support the transition to new forms of institutions that involve a greater role for people in decision making. In the long run, the sustainability of such efforts will offset the unreliable funding mechanisms in developing countries. Adaptations to challenges encountered in implementing of policies in India can be used as benchmarks for replication of best practices in other countries. The

recent policy changes in India include registration of forest protection committees under the co-operative societies act, and extension of JFM to high forest areas. Such measures have strengthened the need to address issues relating to tenurial rights and ownership of forest areas under participatory management.

To make communities more self-reliant, dependence on investment needs to be cut back (Saxena & Farrington, 2003). Capacity building of community institutions can increase effectiveness and sensitize local people and motivate them for long-term protection and management of resources. Monetary incentives like provision of funds for village development funds, income generating activities and training for marketing of cottage industry products will ensure lasting commitment and not just be donor driven activities. The implementing agencies including state departments and NGOs have to work as facilitators in addition to providing technical inputs. Monitoring and evaluation of programs provides valuable assessments of the extent of fulfillment of community's needs and aspirations. This baseline information can help tailor programs and policies to mainstream natural resource management into rural development and people centered programs.

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## Endnotes

- <sup>1</sup> 'Usufruct' is the legal right to use and enjoy the benefits and profits of something belonging to another.
- <sup>2</sup> 'Panchayats' are grass root democratic institutions for local self government in India.
- <sup>3</sup> 'Non-timber forest products' (NTFP) include honey, resins, gums, medicinal plants, bamboo that are collected from forests and are an important source of livelihood for the forest dependent people.