

4. Forests as a Source of Livelihood: Perspectives of Forest Dwellers

Forests have the potential to improve the livelihoods of forest dwelling people, particularly tribal people, who are among the most disadvantaged groups in Indian society. For JFM to better address the livelihood needs of forest dwellers and contribute to broader rural development, it is important for implementing agencies to understand community and tribal institutions and capacities, livelihood patterns, interactions between JFM institutions and local institutions, and whether or not current systems for rural development address the needs of these communities.¹⁷ Field surveys and literature reviews from the three states studied provide a useful perspective from forest dwelling people and raise a number of issues that need attention. Given the high proportion of tribal people living in forest-based communities and their role in JFM, much of the focus of this chapter is on tribal people as forest dwellers.

Characteristics of Forest Dwellers in Assam, Jharkhand, and Madhya Pradesh

Assam, Jharkhand, and Madhya Pradesh are poor, and their Human Development Indices are well below the national average. Small average landholdings, the low productivity of agriculture, and limited opportunities to earn nonfarm income from other resources, such as forests leads to migration as an important coping strategy for people in many rural areas.

About 742 million people, or 72.2 percent of India's population, live in rural areas. Of these, 89 million belong to scheduled tribes. The scheduled tribes are concentrated in the so-called Tribal Belt of central India, with a second concentration in the Northeast. The Tribal Belt represents a distinct geocultural region and is home to the main tribal groups in India (the Gonds, the Santhals, the Oraons, the Mundas, and the Khonds) as well as hundreds of subtribes, each with its own dialects, customs, and traditions. Tribal people generally dwell in forested and hilly areas. They depend on forests for their cultural, spiritual, and to varying degrees, economic needs.

The tribal communities in Assam, Jharkhand, and Madhya Pradesh are among the poorest groups in India. The higher incidence of poverty in tribal regions is related to tribal people's low bargaining capacity, their lack of proportional political representation, the poor quality of local governance, and their constrained access to forests, land, and water (Shah and Sah 2004). Regardless of wealth and social position, tribal people are not fully integrated into the community unless they own land in the area; only land ownership and farming seem to give the feeling of a full integration into the community (Van Exem 1991).

Traditional sociopolitical systems extend from the village to the cluster and regional levels. Clusters of 10–20 villages constitute the next level of sociopolitical organization. Tribal people have a long tradition of tribal-governance systems, which conflicts with the conventional wisdom of recognizing them as a homogenous group. Government devolution programs to panchayat raj institutions through PESA or sector-driven programs such as JFM do not usually recognize the unique characteristics of tribal people.

¹⁷ Livelihoods in forest communities relate to improvements in financial, natural resource, human, social, and physical capital. (see appendix 5).

Results of Focus Groups and Community Surveys

Focus groups and community surveys of forest dwellers were conducted in eight villages in Assam and six villages in Jharkhand. For Madhya Pradesh, previously conducted case studies and other research were reviewed to obtain the perspective of forest dwellers. (More details on the case studies are provided in appendix 5.)

Livelihood patterns in the three states vary. Tribal communities have a strong spiritual and economic relationship with the forest and a strong perception of their historic land and forest rights, even if these are not recognized under current legislative frameworks. Tribal groups have been living in and around the forests for centuries, practicing hunting and gathering activities, fishing, shifting cultivation, and more recently, settled cultivation, as primary means of subsistence. Although farming is now the chief source of livelihood for most settled tribal people, agriculture has not given them a sense of security. The main reasons include the small size of their farm holdings; low productivity, due to inefficient agricultural methods and lack of water for two crops; and the constant threat of wild animals (such as elephants). To avoid starvation, the most destitute may clear forest patches or engage in seasonal cultivation (slash and burn), even though they realize that the size of forest resource upon which they depend for subsistence needs is limited.

In Jharkhand, smallholder farming dominates, with forests serving as a safety net. Tribal people account for 80–100 percent of the population in all but one of the six villages studied. Inadequate provision of water for drinking and irrigation is a common feature in all the villages. The livelihood system is mainly agrarian, complemented by income from wage labor. On average, agriculture is the primary occupation in 60 percent of all households, and another 32 percent of households work as paid labor in agriculture and elsewhere. In some villages, as a result of the availability of alternative opportunities (particularly wage labor), many people have shifted away from the use of forests as a primary occupation. All of the communities use the forest, but they do so mainly for subsistence fuelwood and fodder. Fuelwood supplies an average of 86 percent of energy needs. Fodder from the forest provides about 55 percent of input requirements for domestic livestock. Gross values are Rs2,356 for fuelwood and Rs8,507 for fodder per household per year. Nontimber forest products are used mainly for subsistence purposes, although some villages report periodic sales of a few products in local markets. Commercial sales of forest products are minimal, due in part to poor access to markets as a result of degraded roads, community isolation, low levels of forest production, and poor awareness of markets outside of local trading areas.

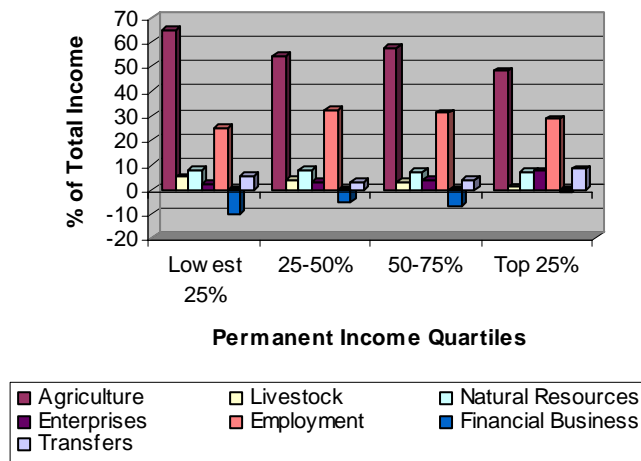
In Assam, smallholder farmers and shifting cultivation are dominant. The eight villages surveyed include a mix of smallholder farmers, people engaged in shifting cultivation, and landless people. Tribal people live in only five of the eight villages surveyed. The level of infrastructure and development is similar to that in Jharkhand, although villages have only about a third as many people. Across the eight villages, 76 percent of households report agriculture as the primary occupation, significantly higher than in Jharkhand. All eight communities use the forest, primarily for subsistence fuelwood and fodder. Fuelwood supplies an average of 79 percent of energy needs. Fodder from the forest provides about 64 percent of the feed requirements for domestic livestock. Gross values were Rs2,440 for fuelwood and Rs10,992 for fodder per household per year. Poles play a minor role in forest livelihoods; the gross value of bamboo is almost nine times that of poles for domestic construction. Most communities collect a variety of nontimber forest products, mainly for subsistence use.

In Madhya Pradesh dependence on the forest is low across income groups. Forest-based communities, in particular tribal communities, are among the poorest and least developed in the state. A survey of 40 villages in Krishna and Kurnool found that tribal people constitute 68 percent of the village population, well above the rate in Assam and slightly higher than the communities surveyed in Jharkhand (Alsop and others 2002). About 55 percent of the villagers surveyed have no education. Agriculture, forests, and labor constitute the primary livelihood systems, with livestock and fish-rearing closely integrated into the farming systems. Service provision, small-scale processing, and marketing also play important roles among a number of artisan castes and tribal groups.

A seminal study by Narain and others (2005) in the Jhabua district measures specific components of annual household income and subsequent dependence on natural resources, including forests. As household income increases, the share of income from agriculture declines, offset by increases in wage employment and home enterprise income (figure 4.1). For the lowest quartile, which includes the poorest marginal farmers and landless people, agriculture accounts for more than 60 percent of permanent household income; employment accounts for another 25 percent. The share of permanent income from natural resources is fairly stable across the four income quartiles, at 7–8 percent. As a percentage of income from natural resources, income from fuelwood declines as household income increases (figure 4.2). This is due largely to the fact that other forms of energy (liquid propane gas, electric generators) become more

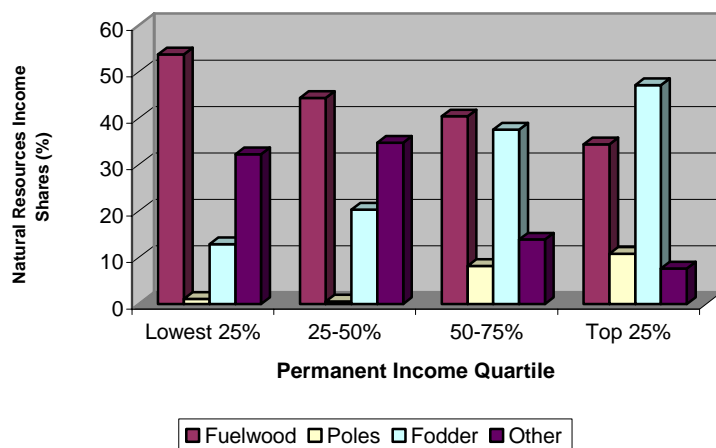
affordable as income increases and the opportunity cost of the time spent collecting fuelwood becomes too high. A similar pattern is found for other natural resources, including nontimber forest products. For the most part, these products require intensive collection efforts to yield what is, in

Figure 4.1. Sources of Permanent Income in Jhabua 2001



Source: Narain and others (2005)

Figure 4.2. Share of Permanent Income of Selected Natural Resources in Jhabua 2001



Source: Narain and others (2005)

the absence of value addition and access to more efficient markets, usually a low-value product. The share of fodder income from natural resource income increases with household income largely because richer families own more assets in the form of livestock.

Vedeld and others (2004) synthesize research case studies on forest dependency in Asia, East Africa, and Latin America. Their results show that the average share of environmental income out of total household income ranges from 5 percent to 42 percent (table 4.1). The Jabhua case study in Madhya Pradesh finds a share of permanent natural resource income from total household income of 7–8 percent, slightly above the lower values suggested in table 4.1. The forest environmental income in the lower case of \$173, equivalent to about Rs7,800, is far above the values found by Narain and others (2005) in the Madhya Pradesh studies.

The livelihood opportunities in forest communities varies.

Agriculture, forests, and labor all contribute to rural livelihoods in forest fringe areas in Assam, Jharkland, and Madhya Pradesh. The degree and nature of dependence on forests and livelihood options

differs from one community to another. Villages closer to towns tend to rely less on forests for livelihoods and more on agriculture and wage labor. Villages in more remote areas tend to rely more on agriculture and forestry. Communities examined in this study earn very little cash income from forests. Subsistence products, in particular fuelwood and fodder, are the main contributors to local livelihoods from the forest.

Sustained and legal timber harvesting could yield significant revenues to some communities (box 4.1). Timber is not a major contributor to household income in any of the communities studied. In all three states, the livelihood potential of forests remains underutilized, and the forest offers little hope of escaping poverty.

Improving forest livelihoods in most communities in India must be integrated into broader rural livelihood initiatives, such as agriculture intensification and marketing. Lessons can be learned from other Asian countries, such as China, where community/farm forestry has been very successful. In 158 counties in southern China, farmers earn as much as 40 percent of their total income through commercial sales of timber, poles, and pulpwood (People’s Daily Online 2004).

Table 4.1. Characteristics of households deriving low, medium, and high proportion of income from the forest

<i>Item</i>	<i>Share of Total Household Income from Forest Products</i>		
	Low (5%)	Medium (19%)	High (42%)
Annual forest income (US\$ PPP)	173	743	837
Education levels (years)	6.4	4.8	4.4
Distance to market (kilometers)	22	7.9	34.7

Source: Vedeld and others (2004).

Box 4.1. The Unrealized Potential of Timber for Increasing the Income of Forest Dwellers

Given a high-quality sal forest under sustained management and a selective harvesting system, a community could likely remove five cubic meters a year of sawlogs, even under conservative assumptions about forest productivity. With just 20 hectares under production, a community could earn annual gross revenues of Rs750,000, based on an average market price of Rs7,500 per cubic meter. Shared among 100 households, this represents additional income of Rs7,500 a year.

Source: Background studies, author’s calculations

Community-Based Forestry Institutions in India

Community-based forestry in India is characterized by three broad types of institutional approaches (Ghate 2003). The first is based on self-initiated or self-governed traditional community institutions, which manage surrounding forests without government interventions. Tribal communities often have a long-standing traditional body that responds to external threats to the local forest. These institutions normally encompass the major users of local forest resources in making and adapting rules concerning inclusion or exclusion of community members, appropriation strategies, obligations of participants, monitoring and sanctioning, and conflict resolution (Ostrom 1997). This approach is based on a common understanding of forest conditions and sustainable forest use. The second approach is based on community support organizations from outside the community that work with a community to build on local institutions to improve sustainable forest management. Before formal JFM programs were established, community support organizations worked with many communities through various donor-funded programs to build social capital through social mobilization, group formation and training. In some cases, the community support organization could act as an intermediary with government. The third approach is JFM, under which the government engages with communities to improve forest conservation. Local leadership appears to be a strong factor to support institutional change under JFM.

While no “best” model exists, lessons can be learned from studies of community institutions associated with forest management in India (see appendix 6 for details). Self-initiated groups can increase understanding of rules and regulations, particularly if the rules and regulations are developed by the group and not by outside interests. Assistance from community support organizations seems to be critical in building local institutions and confidence to deal effectively with government over local forestry matters. Technical and financial assistance may best be provided by government.

Of the 14 communities surveyed in Assam and Jharkhand, 8 had a registered JFM committee. Of these, three JFM committees replaced an existing self-initiated committee. The six communities without JFM committees were managing local forests through a traditional governance system, often led by a headman or village head, in some cases with the support of a small committee or village council. Some of these institutions had been working for more than two decades. These findings complement a number of global studies that have found examples of effective self-initiated community forest management through internal institutions, with equitable allocation of benefits over long time periods (Mckean 1992; Ostrom 1992a, 1992b; Agrawal 1999; Tang 1992; Baland and Plateau 1996; Sunderlin and others 2005; Wade 1994).

Not all cases of self-initiated community management have been successful. Traditional community institutions can break down in the face of economic change, rent capture by elites, and external pressure on the forest. In villages in which a traditional tenure system is still prevalent (no JFM), villagers are often reluctant to share the management of forest resources with the forest department. Under JFM traditional village heads may not retain their perceived traditional power if the forest department exercises effective control over the committee and most forest management decisions. Defining community forest boundaries is another critical factor. Where boundaries are not clear, encroachment issues can more easily arise. Lack of contact with forest department field staff may also contribute to failure. In a recent pilot survey of service delivery in Jharkhand, only 34 percent of respondents in rural communities had interacted with a forest guard or ranger in the past two years (Public Affairs Foundation 2004). Where the traditional self-initiated forest management system has become less effective over the years due to various factors, people often look for support and resources from outside agencies to help protect their forests. In the case of state-controlled land, improved access of forests, either through self-initiated efforts of the village

or through subsequent recognition in the JFM, has been a common motivator for people to protect forests. This is not a reflection on the status of forests or their management, as it was found that self-initiated protection institutions originated primarily in response to the degraded state of the forests, in both state-controlled and community-managed forests.

Forest management with communities in India will remain a huge challenge (Ghate 2003). Although JFM offers one approach for improved forest management—and on many counts has been successful in fostering forest conservation—it appears to be overly rigid in terms of addressing social and institutional conditions across different communities. The uniform application of a single JFM model that fails to account for geographical variations, tribal people, social and economic inequalities, decentralization, traditional community institutions and governance systems, and differing cultural backgrounds among communities is not likely to succeed in addressing long-term forest sustainability and poverty reduction. More flexible models based on general guidelines are needed that allow for significant decentralized approaches in actual field implementation with communities.

Local Perspectives on JFM in the Three Focal States

Forest dwellers in Jharkhand have several serious concerns about JFM. Community member cite the lack of involvement of the tribal population in JFM meetings and activities and the lack of awareness by villagers about JFM guidelines, rules, and regulations and development work being implemented in their villages. Tribal-dominated communities expressed a number of concerns about the process through which JFM committees are formed. There is a common perception that JFM creates rules that neglect existing and prudent uses of natural resources, local knowledge, and cultural contexts. There also appears to be a lack of consultation with tribal people in the process of JFM formation. Many villagers view JFM as a top-down, nonparticipatory process. Participation in the micro-planning process is weak, with villagers' needs not fully acknowledged in the preparation of micro-plans. In some villages surveyed, people had no idea that a micro-plan had even been prepared, let alone any knowledge of what was in it. Villagers were aware of the lack of legal status of JFM committees, which can, in theory, be dismantled at any time by the forest department. Suspicion prevails with regard to sharing of information, sharing of benefits, and maintenance of minutes, records, and accounts. In mixed villages, tribal people fear that the process of restricting access to “outside” users and regulating forest use among a defined group of people will further marginalize them. The process of JFM formation can exacerbate existing social tensions between tribal people and nontribal people, among tribal people, and between JFM and non-JFM villages. In general, the case studies seem to confirm Kumar's (2002) finding that JFM may reflect the preferences of nontribal people.

Villagers in Assam are more positive about JFM. JFM is new to Assam and is being implemented in only a few divisions. Support for JFM in the villages surveyed is strong. Villagers believe that the program will facilitate participation, collaboration with the forest department, and a greater degree of resource ownership. They also believe that youth employment and income generation options will reduce the illegal harvesting of forest resources and improve sociopolitical conditions. Villagers note the need for mass awareness campaigns to facilitate participation and support for JFM. Also needed is coordination among stakeholders (local people, the forest department, the district administration, and community support organizations). Villagers believe the program is effective in reducing intervillage conflict, as conflict resolution requires the presence of a key leader and appropriate support structure. JFM would facilitate and strengthen the collaboration between the village headman and the forest department, thus forming the basis for effective authority to resolve conflicts. In villages in which micro-plans are being formulated and

entry point activities are being carried out, there seems to be high degree of support. Villagers, however, have a low level of understanding about benefit-sharing mechanisms and management of the JFM committee fund, probably because the system was in its initial stages at the time of the interviews. They expressed the need for forest conservation with government assistance to counter the impact of smugglers and timber mafia.

Institutional processes and transparency in Madhya Pradesh are mixed. In their study of 40 JFM villages in Madhya Pradesh, Alsop and others (2002) found that only half of committee members attended meetings regularly. Primary reasons for the low turnout included lack of advance information about the meeting and lack of time to participate. Among people who did regularly attend meetings, more than 90 percent indicated that they had opportunities to participate in discussions. The majority of members were unaware of how group funds were used. More than two-thirds of respondents had no awareness of the availability of funds through JFM, the amount of funds available, or what they were spent on. More than half of members surveyed indicated that they had no knowledge of JFM rules governing group business. Respondents also expressed concern about the equitable distribution of forest benefits. They noted that many villagers participated in user groups in order to receive individual benefits, not as a means of facilitating collective action for conservation or development. This raises the question of whether the JFM model of co-opting all adult villagers rather than creating a user group made up only of interested and committed villagers leads to sustainable local institutions. The study suggests that there are significant differences in the social capital value of organizations depending on whether the organizations are externally motivated or evolve locally. Social capital is a complex concept; formal government-sponsored organizations such as JFM committees often do not make up the appropriate mix of community associations and networks.

A World Bank study (2005b) of 30 JFM villages in two districts supports some of the findings of Alsop and others. Focus groups suggest that information availability and awareness of JFM is low, particularly about funding arrangements and transparent accounting. Singh and Sinha (2004) surveyed legislators for their perceptions of JFM as expressed by rural constituents. The legislators found that among villagers who were aware of the JFM committee, less than half attended meetings regularly, due to lack of time or information. Women tended to be marginalized in meetings and decision making processes. A fairly high proportion of people were aware of the JFM program in their community however, particularly where the Bank had been providing support.

There are no state-level institutions to represent communities involved in JFM. In the three states surveyed, communities did not have a state-level association that could represent common interests with government agencies and legislators. A broad and effective association could help level what is clearly an uneven playing field with government agencies with respect to JFM as it continues to evolve. Tribal groups are represented to some degree; a tribal association exists in Jharkhand, for example, but it represents communities in scheduled areas rather than people in all forest fringe communities.

These results are not unique to the three states studied. Pingle (2004) reviewed communities and JFM in one forest division in Andhra Pradesh. The author found notable successes, such as some sharing of timber revenues, empowerment of women, and creation of community assets such as check dams. But the program also suffered from lack of transparency of accounts, lack of trust between villagers and the forest department, and excessive control by the forest department.

Forest Livelihoods and Linkages with Rural and Tribal Development in the Three Focal States

Forest-based communities are not benefiting from integrated rural development. Most forest-fringe communities depend primarily on agrarian-based economies, with forests playing an important supporting role by providing subsistence fuelwood, fodder, and limited nontimber forest products on a seasonal basis for some people and serving as a safety net for others. Until communities are able to access better quality forests for timber and commercial nontimber products, either from standing forests in the short term or as degraded forests mature in the intermediate term, agriculture development will be vital to lifting the poorest segment of the population out of poverty.

Agriculture and forest development initiatives in remote forest fringe communities must be complemented by infrastructure development (roads, electricity); health and education improvements; and development of social capital in communities. Field surveys suggest that rural development agencies other than the forest department do not always reach remote forest fringe communities or provide service in an effective manner. While state forest departments do have a field presence (albeit thinly spread) in remote forest areas, they lack the mandate, resources, and training to deliver broader rural development programs. Field evidence suggests that forest departments are gradually building trust and respect in more remote forest areas through FDA programs that include modest entry point development activities. Villagers participating in JFM expect some tangible economic returns from the forests in the near future. Most villagers do not distinguish between organizational boundaries; they see the local forest officer as the representative of the government and expect him to help in local development needs (Tiwary 2004). State agencies with a clear mandate for rural development have the required expertise and larger budgets than forest department, but they do not provide effective service in remote areas.

Two parallel systems exist for rural service delivery, with forest communities in the middle. Compounding the service delivery issue is the sometimes poor integration between forest departments and more traditional rural development agencies. Forest development to remote forest communities (on state forest land) is handled through the FDA system. Agriculture and rural development funds flow to communities on revenue land in less remote areas mainly through the District Rural Development Agency system. In the Forest department, staff expressed concerns about the limited involvement of rural development agencies within the FDA structure. Rural development agencies express similar concern that collaboration with the forest department is not as strong as desired. Having in essence two parallel systems for rural development imposes major transactions costs and limits communities from accessing investment funds and expertise for broader rural development that includes both forestry and nonforestry initiatives.