

Comparative Analysis of Participatory Forest Management Systems

The four participatory forest management systems discussed in the previous section have certain common features although they differ in many respects. In the following section the similarities and differences are described in terms of policy and legal frameworks, institutional arrangements, level of decentralisation, and degree of participation.

Policy and Legal Framework

With the growing emphasis on the devolution of responsibility for management of forest resources to local communities, there is increasing realisation of the importance of an appropriate policy and legal framework (Lindsay 1999). Forest resources are also becoming a source of conflict around the world, again underlining the need for appropriate legal frameworks. State policy and law play a critical role in shaping community-based initiatives by defining the rules by which community-based institutions interact with outsiders and by delineating the limits of state power. These policies and laws protect both individual rights and societal interests as the environment changes (Ostrom 1990; Lindsay 1998). Ostrom (1990) argues that, for community-based forest management groups to organise and devise their own institutions, they need to be legally recognised. Moreover, in order for community-based institutions to function successfully, the local community should be given legitimate rights of withdrawal, management, exclusion, and alienation (Schlager and Ostrom 1992; Ribot 2002; Larson and Ribot 2004). Withdrawal rights refer to rights over a defined physical area and resource (e.g., the right to extract timber and NTFPs from a particular area). Management rights refer to the right to regulate internal use patterns and transform the resource by making improvements (e.g., the right to plant seedlings and thin trees). Exclusion rights refer to the right to determine who will have access and how that right may be transferred. Alienation rights refer to the right to sell or lease management and exclusion rights (Schlager and Ostrom 1992).

There are considerable differences among the four PFM approaches in terms of their policy and legal frameworks (see Table 1).

Social forestry in Bangladesh is supported by the Forest Policy of 1994 and Social Forestry Rules of 2004. Local people who participate in the social forestry programme are called beneficiaries. The rights and responsibilities of beneficiaries are clearly defined in the Social Forestry Rules. A management committee elected by the beneficiaries manages tree plantation and protection. However, social forestry management committees (SFMCs) have no decision-making authority. The Forest

Table 1: Characteristics of participatory forest management approaches in South Asia

Characteristic	SF (Bangladesh)	CF (Bhutan)	JFM ^a (India)	CF (Nepal)
Policy/Legal Framework	Forest Policy, 1994; Social Forestry Rules, 2004	Forest and Nature Conservation Act of Bhutan, 1995; Forest and Nature Conservation Rules, 2003	Federal Government letters of 1 June 1990 and 21 February 2000; State Government Resolutions (so far all states have passed JFM resolutions)	Master Plan for the Forestry Sector, 1989; Forest Act, 1993; and Forest Regulations, 1995
Institutional Arrangements	Social forestry management committee (SFMC) formed from participants; social forestry advisory committee comprising FD, NGOs, and participants.	Community forestry management group (CFMG); a minimum of ten households can form a CFMG and elect its management committee.	Forest management committee at the village level called forest protection committee (FPC), village forest committee (VFC), village forest protection committee (VFPC), etc	Forest user group (FUG) develops its own constitution which governs the organisational and financial management of the FUG and the duties of the executive committee and general members.
Land Tenure	No explicit tenure arrangements; participants have no rights over land they have only usufruct rights over the trees they protect.	No explicit tenure arrangements	State government land or common private land	State owns the land but usufruct rights are handed over to FUGs, initially for five years with a provision to further renew. There is no limit to the number of times the agreement can be renewed.
Management Authority	Government retains primary authority and management control and allows local people limited usufruct rights.	Government shares management authority with local people under specific rules and regulations.	Government retains main authority but shares certain responsibilities with local communities under state-specific arrangements.	Authority to protect, manage, and utilise forest and non-forest products is handed over to FUGs. Government plays the role of regulator and facilitator.
Management Unit	Nine member executive committee	The size of the committee is not prescribed; normally 7-9 persons	Village forest development/ protection committee; 10-15 persons	Executive committee of forest user groups; 7-11 people
Benefit Sharing	Benefit sharing mechanism gives 45% of final yield to participants, rest to the government and other participating organisations.	Benefit sharing mechanism is not defined clearly.	Generally, free access to NTFPs except a few NTFPs of high commercial value and sharing of net revenue 25% to 50% of sale of final harvest (varies state to state)	For mid-hills and mountains, FUGs are entitled to keep all products and income. However, 15% of the revenue needs to be given to the government if sal timber is sold to non-user groups in the Terai, Inner Terai, or Churia Hills.

Table 1: cont...

Characteristic	SF (Bangladesh)	CF (Bhutan)	JFM ^a (India)	CF (Nepal)
Rights of Communities	FD prepares all rules and regulations; participants are obliged to obey them.	Rules and regulations are jointly prepared by the FD and CFMG.	All rules have to be framed in consultation with the FD.	FUGs prepare their own rules and regulations with technical support from the DoF.
Degree of Participation	Very low	Low	Low	High
Level of Institutionalization	Projects	Pilot sites	Projects	National programmes supported by various donors.
Contribution to Governance, Access Relation and Social Development	Very low	Low	Average	High; FUGs are now empowered with greater influence over decision making through participation in planning and management, and are able to speak out on issues of forest management through their federation, FECOFUN.
^a JFM practices vary from state to state. Here the most common practices are reported.				

Department (FD) selects the beneficiaries and makes all other major decisions, while the SFMC assists the FD in implementing decisions (Khan and Begum 1997, p.263).

Community forestry in Bhutan, also called participatory forest management (PFM) or community-based natural resources management (CBNRM), is supported by the Forest and Nature Conservation Act of Bhutan, 1995 and the Forest and Nature Conservation Rules, 2003. The Act and the Rules define forest management and its related concepts, and outline the basic principles of forest management, institutional mechanisms, and the distribution of power and authority among the different government departments and the community forest management groups (CFMG). The CFMG is approved by the government and given legitimate rights (certificates) to manage and use designated areas of government reserve forest as per an approved management plan. A comprehensive manual for community forestry has also been developed which describes the steps and procedures for establishing and operating the community forest. The manual contains detailed procedures and sets out the roles and responsibilities of the different stakeholders involved in community forest management. The Forest and Nature Conservation Rules were updated in 2006; they suggest that community forest should be within the proximity of village settlements.

Joint forest management in India is based on Government Administrative Orders of 1990 and 2000. Although the National Forest Policy of 1988 realised the need for people's involvement, no common policy guidelines or legal framework was

developed to actualise the spirit of the National Forest Policy across the states. In 1990, the Ministry of Environment and Forests provided guidelines for the first time. These guidelines remain the main basis for joint forest management in India. State governments have subsequently formulated and approved resolutions laying down procedures for JFM. As a result, the policy framework for JFM varies considerably among the states. Despite this, the legal basis for JFM remains unclear to many states (Khare et al. 2000). Generally, JFMCs are not legal bodies and “barely have any legal sanctity to claim any right over the share of the benefit or produce. Even the MoUs [memoranda of understanding] are not provided due credit” (Roy 2006, p.292). JFM rules only become formally binding when the JFMC is registered under the Societies Act or Co-operatives Act (Behera and Engel 2006). Such registration is only mandatory in six states and is optional in two states (Ravindranath et al. 2000). As a result, the legal status of JFMCs also differs between states, in contrast to FUGs in Nepal which are recognised as local independent institutions and prepare their own constitutions which govern their day-to-day functioning and management (Ribot et al. 2006).

In Nepal, community forestry is supported by an appropriate policy and legal framework. The Forestry Master Plan 1989 provides the policy and planning framework. The Master Plan envisages that “...all accessible hill forests of Nepal should be handed over to user groups to the extent that they are willing and capable of managing them, and the role of the forestry staff should be changed to that of extension and advisory services”. The Forest Act 1993, and the Forest Regulations 1995, provide the legal basis for the implementation of community forestry and recognise FUGs as ‘self-governing autonomous corporate bodies for managing and using community forests’ (Kanel and Kandel 2004, p.59).

Institutional Arrangements

As institutional conditions largely shape and determine the ability of users to manage resources (Ostrom 1990), building a strong and self-sustaining community institution or organisation¹ is a prerequisite for successful PFM. It is now argued that for community-based resource management, the capacity of communities to create and enforce rules needs to be enhanced (Agrawal and Gibson 1999, p.638). There are significant differences among the four PFM systems in terms of their institutional arrangements, which specify the rules, regulations, norms, and practices related to access, use, and control of forest resources and decision-making process.

Social Forestry in Bangladesh

In social forestry in Bangladesh, institutional arrangements have been made at three levels: national, district/sub-district, and community. At the national level, the Ministry of Environment and Forest and the FD are involved in setting rules and regulations, as well as supervising and monitoring the implementation of SF. To facilitate the implementation of SF, the government announced the Social Forestry

¹ There is a difference between ‘organisation’ and ‘institution’. Institutions are defined by Leach et al. (1997) as “regularized patterns of behavior between individuals and groups in society” (p.5), whereas “organizations may be thought of as the players, or ‘groups of individuals bound together by some common purpose to achieve objectives’ ” (p. 24, quoting North 1990, p.5). The term ‘institutional arrangement’ is used here in an inclusive sense and embraces organisations involved in participatory forest management, as well as the way they behave, their norms, and culture.



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Social forestry woodlot plantation in Sripur Forest Range of Dhaka Forest Division, Bangladesh

Rules, 2004, which define and specify the roles of concerned parties, including the Forest Department, participants in SF, and NGOs involved in SF. The FD is the main implementing agency of SF and the Social Forestry Wing of the FD has been established to implement the SF programme. The divisional forest officer/sub-district forest officer is mainly responsible for implementing the programme. A provision has been made to form a three-member advisory committee at the district/sub-district level, comprising the local head of the FD, a representative of an NGO involved in the SF programme, and a representative of the SFMC, to provide the necessary support to SFMCs. At the village and community level, there is a provision for a nine-member management committee to assist the FD to prepare a management plan and to protect and manage trees (SFR 2004).

Community Forestry in Bhutan

In community forestry in Bhutan, institutional arrangements have been made at four levels: national, district, block, and community. At the national level, the Department of Forests (DoF) under the Ministry of Agriculture is responsible for developing policy frameworks and for the supervision and monitoring of the CF programme. A comprehensive manual has been developed for managing community forests (Parts I, II, III, & IV) and distributed for use by field staff. The manual describes the nine steps for establishing and operationalising a CF: the initiation of the CF process, application, review of application, acceptance of application, CF management plan preparation, submission of plan and by-laws, approval, implementation, and monitoring. Further, with the assistance of national and international partners, most of the forestry extension staff and CFMGs have been trained in various aspects of CF including planning, administration, financial management, and silviculture (Tshering 2006). A Forestry Extension Division has been established under the DoF to provide support for

decentralised forestry activities. Forestry extension offices have also been established in each dzongkhag (district) and geog (sub-district) to provide the necessary technical and financial support to local communities/authorities in the implementation of PFM activities at the field level.

At the community level, CFMGs are formed to manage and conserve forests according to their approved management plan. CFMGs take part in assessing resources, deciding the objectives of CF, formulating a management plan, and evaluating that plan. CFMGs also fix the responsibilities of group members and carry out group management.

Joint Forest Management in India

Although there is considerable variation, institutional arrangements for joint forest management in India are generally at four levels: central, state, district, and community/village. Overall policy guidelines are provided at the central level through policy and administrative orders. There is also an Expert Group at the national level to advise the government on JFM issues (SPWD 1998). In order to implement the central government's policy direction, all of the state governments in India have issued state resolutions specifying rules, regulations, and benefit-sharing mechanisms (see Box 1). These resolutions provide the institutional basis for the support of the JFM systems. West Bengal issued the first government order followed by the other states, the last being Meghalaya in 2003 (Roy 2006, p.292). Government orders specify the structure and functions of the JFMCs. As JFM is still at an experimental stage, most state governments have modified their government orders from time-to-time based on experience gained during implementation (Roy 2006, p.291). In several states, there is a state level coordination/steering/working group. Within the Ministry of Environment and Forests (MoEF) there is a JFM cell assigned the task of promoting the nationwide JFM network and coordinating the implementation process with the states.

At the community level, JFMCs (called by different names in different states) are the main institutions primarily responsible for protecting and managing forests. The legal status of JFMCs differs between states. However, in general, JFMCs are not legal bodies unless they are registered under the Societies Act or Co-operatives Act. There is regional variation in how JFMCs are formed. In the Northern, Southern, and Central regions, excepting Chhattisgarh, nearly all JFMCs are formed by the FD; whereas in West Bengal and Orissa in the Eastern region and in Gujarat in the Western region, more than 30% of the JFMCs have been formed through community initiative (Roy 2006, p.291).

Community Forestry in Nepal

In Nepal, institutions working at three levels (national, district, and community/village level) are involved in community forestry management. At the national level, the Ministry of Forest and Soil Conservation (MFSC) and the Department of Forest (DoF) are involved in setting rules and regulations, as well as supervising and monitoring the implementation of the CF programme at the national level. The District Forest Office (DFO) provides support to FUGs in implementing the CF programme. FUG executive committees (elected representatives of forest users) implement CF with the support of the various DFOs. The Forest Act of 1993 and the Forest Regulations of 1995 recognise FUGs as self-sustained independent entities (Kanel 2006, p.44). The legislation gives

Box 1: Key features of joint forest management in India

- The FD agrees to provide conditional access to specified forest products to members of an existing or specially constituted village forest institution (VFI), subject to the VFI honouring the responsibilities assigned to it by the FD.
- The terms of the (JFM) agreement unilaterally specified by the FD may, or may not, be accompanied by a written agreement or memorandum of understanding signed by both parties.
- Members of the partner VFI are expected to collectively protect their JFM forest from grazing, encroachment, poaching, fire, and timber smugglers, however they are not delegated any authority to enforce protection (only the new draft of the JFM rules of Himachal Pradesh proposes delegating the powers of a forest officer to the VFI President).
- If, in the view of the 'competent forest officer' (usually the district forest officer), the VFI members honour their protection responsibilities satisfactorily, they are entitled to free access to non-nationalised NTFPs from the forest area. However, most commercially valuable NTFPs remain nationalised in most states, which effectively implies free access only to fodder grasses, lops and tops of branches, and a few other NTFPs with low commercial value.
- After successful forest protection for a minimum of 5 to 10 years, the VFI (or its individual members) gain entitlement to 25% to 100% of the benefits (this differs from state to state).
- The organisational structure and membership norms of the VFI are prescribed by each state JFM order. Only two states (Haryana and Gujarat) permit the VFI to be an autonomous entity registered as a co-operative or a society. In all other states, the VFI is only registered with the FD and must have an FD field officer as its member secretary who is responsible for convening and recording the minutes of all VFI meetings. As a result, the accountability of VFI secretaries is to the FD and not to the general body of members of the VFI.
- Most state JFM orders also list some responsibilities of the FD under JFM. These normally include information, training, and capacity building support to partner VFIs.
- However, in practically every case, the FD retains the power of judge and jury to unilaterally cancel a JFM agreement if a VFI is considered to have violated any of its terms. In such a situation, the villagers are not entitled to any compensation for years of forest protection. In contrast, if the FD violates any of the terms of the agreement, the villagers have no power to demand accountability. Thus, JFM does not confer any rights to VFIs, either in relation to forest produce or the forest land itself.

Adapted from Khare et al. 2000, p 72.

Box 2: Key features of community forestry in Nepal under the Forest Act and Forest Rules

- Any part of a government forest can be handed over by the district forest office (DFO) to a community of traditional users of the resource. Only the right of forest management and use is transferred from the Forest Department to the users, not ownership of the land itself.
- Part of a national forest can be handed over to a forest user group, irrespective of the size of the forest or number of households in a FUG.
- The handing over of national forests to communities as community forest has priority over the handing over of such forests as leasehold forest.
- FUGs must manage the community forest as per their constitution and operational plan, which are approved by the DFO.
- FUGs are recognised as independent and self-governing entities with perpetual succession.
- FUGs are allowed to plant short-term cash crops like non-timber forest products, for example bamboo, rattan, and medicinal and aromatic plants.
- FUGs can fix prices for forest products under their jurisdiction and sell such forest products. (At present sales income is subject to 15% tax in some areas).
- FUGs can transport forest products under their jurisdiction anywhere in the county.
- FUGs can accumulate funds from grants received from the Government of Nepal and other local institutions, from the sale of CF products, and from other sources, such as fines. FUGs can use their funds for any community development work and as per their decision.
- FUGs can amend their operational plan by informing the DFO.
- In the case of forest offences, FUGs can punish members according to their constitution and operational plan.
- If forest operations deviate from the operational plan resulting in damage to the forest, then the DFO can withdraw the community forest from the users. However, the DFO must give the forest back to the FUG, once the committee is reconstituted.

Adapted from Kanel 2006, p.39-40.

full authority to user groups to manage the community forest as per the operational plan approved by the DFO (see Box 2). Other important organisations that have emerged on the community forestry scene in Nepal include the nationwide Federation of Community Forestry Users, Nepal (FECOFUN) and the Nepalese Federation of Forest Resource User Groups (NEFUG). FECOFUN has the largest network and articulates the interests of forest users. It works as a pressure group to promote good governance in CF, lobbies the government on behalf of its members, and has been instrumental in defending CF users' rights (Britt 2002).



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Level of Decentralisation

Decentralisation² has been seen as a means of promoting increased participation and the improved management of natural resources based on secure tenure and incentives for conservation. In PFM, the aim of decentralisation policies is to decentralise decision making and devolve powers to lower levels so that local people, particularly user groups, can exercise a certain degree of autonomy in management decisions including designing rules and regulations to control access to and use of resources. The overall goal is to develop governing institutions and mobilise required resources for the sustained use and management of common property forest resources (Ostrom 1990). Decentralisation is the process by which local people are given the opportunity and responsibility to manage the forest resources, define their needs, goals, and aspirations, and make decisions affecting their well-being.

There are considerable differences between the four PFM systems in terms of decentralisation (Table 1). In Nepal, the government has devolved a large group of powers to local community-based institutions (FUGs), whereas in SF in Bangladesh most of the decision-making authority is retained by the FD and very little power and authority has been transferred to local beneficiaries. Decisions regarding "... the selection of beneficiaries, choice of species, choice of sites, and the silvicultural technology are prescribed by the professional foresters" (Khan and Begum 1997, p.263).

² Decentralisation refers to the delegation of power and authority to lower level institutions in a political-administrative and territorial hierarchy by central government (Ribot 2004). Devolution of resource management generally refers to the delegation of power and authority at the local level to user groups (Tarrow 1998). Devolving powers to lower levels involves the creation of a realm of decision making in which a variety of lower-level actors can exercise a certain degree of autonomy (Booth 1985; Smoke 1993).

The role of the SFMC is only to assist the FD in implementing their decisions (SFR 2004). CF in Bhutan and JFM in India are between these two ends of the spectrum. Although the FD shares certain responsibilities and authority with local forest user groups, it retains a large degree of control over the decision-making process.

In JFM, Forest Department staff serve as member secretaries on JFMCs and are responsible for convening meetings of their executive committees. The constitution of the JFMC, including the executive committee, must be approved by the divisional forest officer concerned. In many states, working plans are prepared by the FD and harvesting decisions are also made by the FD (Ballabh et al. 2002, p.2165). In a few cases, the FD even decides the tree species to be planted (Khare et al. 2000). In most states, the FD retains the right to determine disposal procedures for commercially valuable products, including NTFPs. Above all, the FD can terminate JFMCs and dissolve executive committees without giving reasons. The beat officer from the FD is either an ex-officio member of the executive committee or, in some states, a member secretary (as in West Bengal).

The extent of centralisation of decision making in JFM can be judged from the following quotation.

“Even silvicultural decisions relating to the treatment of particular forest patches, the scheduling and harvesting are still quite centralised. Working plans are prepared by a special divisional forest officer, distinct from the territorial officer who must implement them. These plans must then be approved at regional level. Exceptions and deviations to these plans must be approved at state level” (Ballabh et al. 2002, p.2165).

This kind of highly centralised decision-making structure not only hinders the active participation of local people in management decisions, but also constrains the development of site-specific forest management plans and programmes aimed at improving forest condition, enforcing protection, and using the benefits. Moreover, the communities' ability to enforce access rights and other rules is often limited as it depends on the FD's willingness to provide support in terms of administrative and legal backing and conflict resolution between JFMC members and non-member forest users. For example, an FD official in charge of JFM announced that the committees should allow grazers access to forests. In a few instances, the FD forced committees to accommodate non-members against JFMC wishes. This kind of discretionary authority retained by the FD often violates the rights of exclusion given to communities. Moreover, the administrative nature of JFM constrains the ability of JFMC members to take any legal measures to protect their rights (Behera and Engel 2006, p.359).

Rights and Responsibilities and Decision-Making Authority

The transfer of appropriate rights and responsibilities to local communities is crucial to the promotion of participatory forest management. 'Rights' refers to the right to access and use forest products, and the right to access benefits; whereas 'responsibilities' refers to the responsibility for tasks, implementing decisions on rules, procedures, and beneficiaries, and abiding by such rules (Behera and Engel 2006, p.355). The goal of participatory forest management is to increase the participation of local people in decision making in natural resource management, including resource development and



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A joint forest management committee meeting in India

use. There are considerable differences in the management rights and decision-making authority under each of the four PFM approaches (Table 1).

In SF in Bangladesh, the decision-making process is top-down. Normally, the FD makes the decision and the local people implement it (Salam and Noguchib 2006). In practice, the Ministry of Environment and Forest and the FD are the sole authorities able to make decisions on PFM. Salam and Noguchib (2006) found that about 85% of farmers participating in the SF programmes for sal forest did not participate in any stage of the decision-making process and 37% of participating farmers did not even know the goals and objectives of the programmes. Participating farmers are responsible for protecting and maintaining planted trees and are given usufruct rights over the forest and agricultural resources. Their share of the benefits is 40% from woodlot forestry, 45% from agroforestry (from final harvesting), and 100% of any benefits from interim products (SFR 2004).

In Bhutan, members have full rights over the products of CF (CFM 2006). Members can obtain wood from community forests by applying for a local permit, which is issued by executive committee members (Wangdi and Tshering 2006, p.6). Members are responsible for tree planting, silvicultural management, and forest protection. In a study of three community forests, it was found that communities had contributed 7,524 person days, worth USD \$16,680, in three community forests. However, a recent study by Wangdi and Tshering (2006, p.5) revealed that CFMG members are concerned about the ownership rights to their CFs.

In Bhutan, local initiative is relatively low. People's subsistence forest requirements can be met from state forests and there is little market for private timber. The capacity of

local communities to design and implement forestry programmes is also low. The FD is proactively pushing and supporting community-based management. As a result, major decisions are taken by FD staff.

In JFM in India, JFMCs are not independent institutions and do not have full decision-making authority. The FD plays a major role in preparing management plans (Behera and Engel 2006). A joint working plan, or micro plan, outlining a detailed management plan is prepared by the FD in consultation with the JFMC. Under JFM, the community plays a limited role in deciding management objectives and formulating a plan to achieve them. Micro plans tend to reflect FD agendas rather than community needs and are drafted in a traditional silvicultural format (Conroy et al. 2002, p.236). A recent study (TERI 2004) found that in 9 out of 22 states, the FD retained the right to frame rules, with communities either having no rights (in five states) or only the right to assist the FD (in four states). In some cases, such as in Andhra Pradesh, the preparation of micro plans is entrusted to the local communities, but the FD must give final approval before the plan can be implemented. The distribution of benefits from the forest is another important management right. However, seven states in India did not transfer this right to communities, and in another six states the communities only had the right to assist the FD (TERI 2004)). Under JFM, members of JFMCs have the right to use several non-timber forest products from their protected forests and to keep a share of the proceeds from the sale of timber once forests are mature. However, withdrawal rights are not granted to communities for all NTFPs. In particular, rights over commercially valuable NTFPs, such as amla, sal, and tendu leaves, have not been fully devolved to communities. For example, in Andhra Pradesh a total of 22 NTFPs are leased to a state government agency called the Girijan Cooperative Corporation (GCC), thereby prohibiting collectors from the villages from selling these products on the open market, despite the fact that tribal people's livelihoods depend on many of them (Behera and Engel 2006). Some state resolutions give JFMCs the authority to punish or fine forest offenders. In a study in 1998, out of 18 states, 5 had passed a resolution to give JFMCs the authority to punish forest offenders (SPWD 1998). In most states, the FD has the unilateral right to dissolve JFMCs and to cancel membership (SPWD 1998). However, there is one important positive aspect to the involvement of the Forest Department in JFM: it ensures that different funding mechanisms available within the central and state schemes (such as funding through the Forest Development Agency) are channelled through JFM, which helps improve forest resources. There is also a better quality of silvicultural and professional management inputs into JFM due to the heavy involvement of the range and beat staff of the FD in managing JFM.

In CF in Nepal, a large part of the responsibility for the management, development, and use of forest areas has been handed over to FUGs. The forestry laws have given partial autonomy to local FUGs in matters relating to the protection, development, and use of forest resources (Gautam 2002; Kanel 2006). FUGs prepare their own constitutions with technical support from the local staff of the DoF under the broader framework of the Forest Act, 1993. FUGs also prepare forest management plans, which normally receive approval from the District Forest Officer (DFO). FUGs make major decisions on the management, marketing, and distribution of benefits. They have a formal right to forest products from their community forest and are exercising this right (Gautam 2002; Kanel 2006). FUGs also have the right to control the land, as well as to establish cooperation within communities to effectively manage communal forests and property granted by

the government. Community members have the right to share access to community forest resources, and the benefits gained from them under the provision for equal distribution of benefits and costs to a community. FUGs can legally use their forests for subsistence by cultivating non-timber forest products, growing trees, and harvesting forest products for commercial purposes and sale. They are, however, not permitted to clear the forest for agricultural purposes. FUGs also have the authority to impose sanctions on anyone who violates FUG rules (Gautam 2002). All FUG constitutions contain clear provisions for graduated sanctions, including cash fines, for violating FUG rules, although the type of punishment at each level differs widely (Gautam 2002).

Degree of Participation in Decision Making

Participation brings local knowledge into decision making and enhances 'ownership' of decisions, for example decisions about rules for resource use (Ostrom 1990). Where they have ownership, local people provide better information and engage more actively in implementing, monitoring, and enforcing rules. As participation influences outcomes, it is necessary to examine the level of participation in different forest management approaches (Michener 1998). The participation of women in forest management is an important issue as women are directly involved in the use and management of forest resources, but it would be necessary to have a differentiated analysis to understand women's participation clearly. In the following we focus on participation in general. Agarwal (2000) provides a comparative analysis of the participation of women in JFM and CF.

Participation in PFM can be broken into three levels: participation in planning, participation in protection, and participation in decision making. Although local people are involved in forest protection (watching, guarding, and patrolling) in all four systems, either directly or by contributing some payment, there are significant differences in participation in the decision making process.

As described above, participation in decision making is low in SF in Bangladesh. Participating farmers do not enjoy full rights to participation in terms of consultation, negotiation, or decisions (Table 1). The FD is the primary government agency responsible for executing project activities and receiving revenue from forest resources, which is then shared with the participating farmers. In SF in Bangladesh, participants are termed 'beneficiaries' rather than joint managers, and the approach is designed to fulfil the objectives of the FD rather than those of the villagers.

The level of participation in decision making is also very low in JFM in India. In a study in Andhra Pradesh, the entire harvesting activities (from logging to final sale) in 54 out of 55 JFM villages were carried out by the FD with little or no participation by local communities (the exception was one community where timber and bamboo were harvested for sale). The communities had no idea of the rate at which their products were sold or the amount of money received (Behera and Engel 2006, p.359). The lack of transparency in transactions for harvested timber and NTFPs often leaves communities at the mercy of the FD in relation to revenue sharing. Behera and Engel (2006, p.359) noted that "...FDs keep the harvested timber in their timber depots before negotiating with potential buyers, and the negotiation process does not involve JFMC leaders".



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Roadside plantation under the social forestry programme in Bangladesh

Even selection of species, for example, represents government choice rather than local demand (Khaire et al. 2000).

In CF in Nepal, the forestry laws have given partial autonomy to the local FUGs over matters related to the protection, development, and use of forest resources (Gautam 2002; Kanel 2006). This has facilitated the active participation of local people in forest management. The FUG members participate by making their own rules and regulations, and by determining methods of utilisation, including benefit sharing (Gautam 2002; Kanel 2006).

The degree of participation and its outcomes are influenced by many factors including incentive structure, decision-making authority, and the role of the state and the government. Participation fails in SF and JFM because the government transfers inadequate powers to local people to make their own rules and regulations. Participation makes governments more accountable to local populations and makes decision making more open and democratic. From a people-centred perspective, participation is both a means and an end. It is a means to meet locally felt needs and to redistribute scarce resources, but it also has an inherent value as a process that empowers the poor by enhancing local management capacity, increasing confidence in indigenous potential, and raising collective consciousness.