Forestry: Canadian Model Forest Experience; Common Property Forest Management; Forest and Tree Tenure and Ownership; Joint and Collaborative Forest Management; Public Participation in Forest Decision Making; Social Values of Forests.

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Joint and Collaborative Forest Management

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Introduction

With the increasing recognition over the last 30 years that forestry is a pluralistic enterprise with a wide range of legitimate stakeholders, new arrangements for sharing management decisions among local forest users and professional forestry services are emerging under various titles including 'participatory forest management,' 'collaborative forest management' (CFM), and 'joint forest management' (JFM).

In many parts of the world CFM is a relatively new idea. Despite widespread use of the term, and 20 years since its inauguration in India and Nepal, CFM in many ways remains an experimental process.

Consequently, CFM often takes the form of adaptive management with objectives and activities gradually being adjusted to both the experiences learned as well as the evolving needs of the resource and the stakeholders.

Since the 1990s many countries have introduced CFM programs and policies (**Table 1**), usually with strong donor support, and encouraged by international post-Rio forest dialog supporting National Forest Programs. There are high expectations for CFM. Different stakeholders hope that it will:

- benefit the rural poor who depend on forests for their livelihoods
- contribute to sustainable resource use and reduced forest degradation (through strengthened ownership)
- reduce the cost of forest management by the state.

The diversity of CFM models, stakeholders, objectives, forms of community organization, and partnerships with professional forestry organizations makes it hard to generalize about the impact of CFM, particularly in relation to forest conservation and social aspects factors. Similarly, the factors contributing to success are open to interpretation. Whilst tenure, institutional arrangements, and local organizational strengthening have often been highlighted, the effects as experienced by forest users are rarely considered.

In this article we first look more closely at the various terms used, and take an overview of the way CFM has developed around the world, before discussing the issues that are implicated in its success or failure.

Definitions and Main Characteristics

The involvement of nonforesters in forest management has taken off to such an extent that there is now a plethora of terms to describe it (**Table 2**).

'Collaborative forest management' refers to an explicit partnership between professional forestry organizations and communities or defined groups of local forest users. The objective of this strategy is to manage forests to provide sustainable benefits for a range of stakeholders. It has been emphasized that CFM is an intervention by outsiders (public forest services, donors, and nongovernmental organizations (NGOs)), and therefore contrasts with traditional forest management practices.

The term 'participatory' has become so widely used that there is a risk of its being misunderstood. Participatory is understood to refer to a range of relationships between professionals and local people,

Table 1 Examples of countries implementing CFM to a significant level

Region/country	Policy and date introduced (with amendments in parentheses)	Type of partnership	Estimated numbers of communities involved	Area of forest under CFM (ha)
South Asia				
Nepal	**1976 – National Forestry Plan**. Allowed land to be handed over to local users, with technical assistance provided by the forest department.[b,o]	Forest User Groups supported by District Forest Office	6022[b] to 13 000[a] Forest User Groups	400 719[b]–850 000[a]
	1978 – Panchayat Forest and Panchayat Protected Forest Regulations. (1980) CFM enacted.[o,u] (1988 – Adopted concept of Forest User Group, 1990 – Panchayats replaced by Village Development Committees.[o])			~12% of Nepal's forest lands
	1982 – Decentralization Act.[o,u] Formalized duties and responsibilities of village panchayats and ward committees, empowering them to form people committees for forest conservation and management.[u] (1984)			
	1987 – Decentralization Act.[u] Introduced the concept of User Groups for local administration.			
	1988 – Community Forestry By-Laws.[o] (1989)			
	1989 – Master Plan for Forestry Sector.[b,o]			
	1993 – Forest Act.[b] FUGs clearly defined, and clear implementation guidelines produced. Provides the legal basis for CFM implementation.[u] (1999 – provisions for FD to impose penalties on offenders at request of FUG if they are unable to enforce themselves.)			
	1995 – Forest Regulations.[b] Procedural guidelines for implementing the Forest Act of 1993.			
	2001 – Forest (Second Amendments) Bill.[u]			
India	**1988 – Forest Policy**. The launch of JFM. Followed by State JFM Resolutions.[e]	State forest department with village forest committees or forest protection committees	30 000–35 000[o] (2000)	10.24 million ha in 22 states[d]
	1990 – Guidelines for JFM issued by Ministry of Environment and Forests.[e,o]			
	1994 – Draft Forest Act.[e]			
	1998 – Formation of **JFM Standing Committee** by the Ministry of Environment and Forests.[o]			
	2000 – Guidelines for JFM revised to include forests with over 40% canopy cover.[v]			
	2002 – Guidelines for JFM revised.[v]			
Pakistan	**1996 – Hazara Protected Forests Rules**[o] (modification of the Forest Act of 1927). Mandates the formation of JFM committees, including operational guidelines and production sharing arrangements with provincial FD.[o]	Provincial Forest Departments with Forest Management Committees		

Southeast Asia			
Philippines	**1982 – Integrated Social Forestry Programme** established.[P]	Villagers and local government representatives work together.[P]	550[c]	700 000 ha (potential area 1.5 million ha)[c]
	1987 – Constitution. Recognized the importance of the environment and rights of indigenous people.[P]			
	1990 – Indigenous people's rights to ancestral lands and domains recognized.[P]			
	1994 – Social Reform Agenda.[P]			
	1996 – Community Based Forest Management Program formulated.[c,P] Guidelines included community mapping.			
	1997 – Indigenous Peoples' Rights Act. Gave indigenous communities title to ancestral domain and land claims.[c,P]			
	1999 – CBFM program put on hold.[P]			
Laos	**1994 – National Leading Committee** for Decentralized Rural Development (1996, 1998).[c]	Forest departments and villages		
	Village forestry is a key element in the **National Forestry Action Plan**, and policies are being adopted that foster local people's participation in forest management, including the allocation of access and use rights of forest resources.[c]			
Thailand	**1993 – Forestry Master Plan**.[P] Extends forest areas under conservation.			
	1992 – Tambon Administration Organization Act (TAO). Strengthens role of village governments in forest use and planning decision-making.[P]			
	1997 – Constitution. Traditional communities granted the right and duty to manage resources where they live. However, without enabling CFM laws, current conservation policies are at odds with the community rights provisions listed in the Constitution.[P]			
	Pending – New **Ministry of Natural Resources Bill**, formalizing CFM. Deferred for approval to 2003.[f]			
Vietnam	**1991 – Tropical Forestry Action Plan**, the Forest Resources Protection Act, the National Forest Policy. Private households replace state forest enterprises as new units for forest management, with appropriate guidance from the state.[P]	Private households with state guidance.[P]	1203 communes[c]	
	1993 – Land Law gives local inhabitants extensive user rights over agricultural and forest land.[P]			
	Recent amendments restrict rights and limit role of local people as forest custodians.[P]			
Meso-America				Over 2 602 425 ha (14.5% of forest cover)[g]

Table 1 Continued

Region/country	Policy and date introduced (with amendments in parentheses)	Type of partnership	Estimated numbers of communities involved	Area of forest under CFM (ha)
Mexico	**1917 – Constitution**. Ancient land use customs clarified and applied to land tenure. The reforms enabled indigenous communities to obtain property titles for their lands via presidential decree, and to reclaim usurped land if they could legally show when and how it was taken.[s]		Approximately 8 000 ejido village communities.[s]	80% of Mexican forests owned by ejidos.[s]
	1992 – Ejido property laws were reformed. Allow lands to be rented by ejidos to anyone from farmers to multinationals. Ownership assigned to ejidos already managed communally, allowing them to be sold for the first time.[s]			
	The National Forest Commission developed the **New Community Forestry Plans**. This provides loans for development and management of non-timber resources in Community and Ejido Forests.[s]			
South America				
Bolivia	**1996 – Forestry Law** recognizes that communities may be better stewards of the land than large, private concessionaires. Communities given preferential rights to use forest areas on properties that they possess.[h]	State forest department and communities		
Brazil	**1965 – Forestry Code**, Law No. 4.771/65 (the Code). Establishes woodland zones that are subject to 'permanent preservation management.'[r]			
	1988 – Federal Constitution clearly recognizes indigenous rights over lands that they have traditionally occupied. Extraction is allowed, but only after zoning and an inventory of exploitable land has been done.[r]			
Africa		State forest department and communities[i]	45 000 rural communities in 30 countries[i]	At least 3 million, 1% of forest area of Africa.[i]
Cameroon	**1994** – Community forests can be formed from National Forests by a community official entering into an agreement with the Ministry of Environment and Forests. Forest products from those forests are the exclusive property of the community for the duration of the agreement, but the forest is not owned by the community.[j]	Ministry of Environment and Forests and communities	35[k] to 40[i] community forests allocated	1 000 000[i]
Tanzania	**1998 Changes in Forest Policy**. Include Guidelines on the development of CBFM and JFM.[l]	Forest departments and villages or communities	500 village forest reserves; 100 community forest reserves (groups); 30 pilot comanagement of forest reserves[i]	500 000[l]

The Gambia	**1990 – The Forest Department introduce Community Forestry**	Between the local community and the forest department on behalf of the government.[m]	300[m] to 500[i] villages involved	39 000[i] to 50 000[n]
	1994 – The Gambian Forest Management Concept.[m] Forest park management and CFM merged into one framework.			
	1995–2005 – New Forest Policy. Aims to transfer ownership thus encouraging local participation for sustainable forest management as well as advancing decentralization within the country.			
Europe	International policy frameworks supporting CFM in Europe: **1992 – Agenda 21** **1992 (in force 1995) – Convention on Biological Diversity** **1992 – The UNCED Forest Principles** **1999 – The Forest Stewardship Council's Principles and Criteria** **1998 (in force 2001) – European Aarhus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters**.[q]			
Belgium	**1990 (1999) – The Government of Flanders Act on Forest**. Requires local forest managers to consult the local people when drafting management plans.[q]	Forest Department and local stakeholders		
Finland	**1997 – new Forest Act**. Requires public participation in forest planning and management. Usufruct rights of the Saami people have not been recognized.[q]	Forest Service and local stakeholders		
Ireland	**1996 – Strategic Plan for Forestry**. Involves a broadly based consultation procedure.[q]	Forest Service and forest owners, farmers and local communities		
Portugal	**1996 – new National Forest Act**. Participatory planning required at regional levels.[q]	National Forest Service and forest owners, local community-owned forests, forest industries, and hunters		
Spain	**2000 – National Forest Strategy**. Based on a public participation process lasting several years.[q]			
UK	Clear policy statement on multiple use forestry. **1995 – Rural White Paper**. The government wish to enhance the contribution forestry can make to sustainable communities	Forest Commission and rural communities		

Table 1 Continued

Region/country	Policy and date introduced (with amendments in parentheses)	Type of partnership	Estimated numbers of communities involved	Area of forest under CFM (ha)
North America				
USA	**1994 – Federal Advisory Committee Act**. This law has thwarted many CFM initiatives, and remains a barrier.			
Canada	**1992 – Canada Model Forest Programme**. Funds given to local communities, and all rights devolved to them as a pilot study.[t]	Between Forest Industry and local communities, environmental NGOs and First Nations Groups		
	Different provinces have different laws. Quebec has the richest history of CFM in Canada.[t]			

[a] Ojha ZW and Bhattarai B (2003) Learning to manage a complex resource: a case of NTFP assessment in Nepal. *International Forestry Review* 5(2).

[b] http://www.panasia.org.sg/nepalnet/forestry/comm_forestry.htm

[c] http://www.recoftc.org/01country/home.html

[d] Sharma RC (2000) *Indian Forester* 126(5): 463–476.

[e] Hobley M (1996) *Participatory Forestry: The Process of Change in India and Nepal*. London: Overseas Development Institute.

[f] Daniel R (2002) Thailand: Forests communities to renew struggle for rights. *World Rainforest Movement Bulletin* 63: 24–25.

[g] http://www.forestsandcommunities.org/central-south-america.html

[h] http://www.forestsandcommunities.org/Country_Profiles/bolivia.html

[i] Alden Wiley L (2002) The political economy of community forestry in Africa: getting the power relations right. *Forests, Trees and People Newsletter* 46: 4–12.

[j] Watts J (1994) Developments towards participatory forest management on Mount Cameroon (The Limbe Botanic Garden and Rainforest Genetic Conservation Project 1988–1994). *Rural Development Network Paper* 17(d): 1–19.

[k] Research and Action Centre for Sustainable Development in Central Africa (2002) Cameroon: developments of community forests. *World Rainforest Movement Bulletin* 63: 14–16.

[l] Moshi E, Burgess N, Enos E, *et al.* (2002) Tanzania: joint and community-based forest management in the Uluguru Mountains. *World Rainforest Movement Bulletin* 63: 16–17.

[m] http://www.dfs-online.de/cfo.htm

[n] http://www.statehouse.gm/budget2002/9.htm

[o] Poffenberger M (ed.) (2000) *Communities and Forest Management in South Asia*. Gland, Switzerland: IUCN.

[p] Poffenberger M (ed.) (1999) *Communities and Forest Management in South East Asia*. Gland, Switzerland: IUCN.

[q] Jeanrenaud S (2001) *Communities and Forest Management in Western Europe*. Gland, Switzerland: IUCN.

[r] http://www.forestsandcommunities.org/Country_Profiles/brasil.html

[s] http://www.forestsandcommunities.org/Country_Profiles/mexico.html

[t] http://www.forestsandcommunities.org/Country_Profiles/canada.html

[u] Springate-Baginski O, Blaikie P, Dev O, *et al.* (2001) Community forestry in Nepal: a policy review. http://www.york.ac.uk/inst/sei/prp/pdfdocs/nepalpolicy.pdf

[v] http://www.rupfor.org/jfm_india.htm

Table 2 Different terms for joint and collaborative forest management

Abbreviation	Term in full
CBF(R)M	Community-based forest (resource) management
CF	Community forestry
CFM	Community forest management or collaborative forest management or collective forest management or community involvement in forest management
JFM	Joint forest management
PFM	Participatory forest management
VJFM	Village joint forest management

Table 3 Typology of meanings of 'participation'

Type of participation	Characteristics
1. Passive	Participants are treated as sources of information, and/or are told about decisions already taken. Information being shared belongs only to external professionals.
2. Consultative	Participants are consulted about their opinion, but does not necessarily lead to those views being taken into account when decisions are made, usually by non-participants.
3. Functional	Participants contribute knowledge and skills to meet predetermined objectives (such as forest management goals). Often seen as helping to reduce costs of outside agents.
4. Collaborative	Although the initiative is usually taken from outside, participants share goal-setting and analysis, development of action plans and any follow-up activities.
5. Active (self-mobilization)	Participants take the initiative, and develop contacts with external institutions for resources and technical advice they need, but retain control over goals and resource-use.

Source: Adapted from Biggs (1989) and Pretty et al. (1995).

Table 4 Forest User Group (FUG) formation, Nepal

1. Forest Department (FD) officials identify forest area and users.
2. FD conducts meetings with community leaders and key informants.
3. Forest User Group (FUG) assemblies are called to discuss rules for the management of the community forest and of conflicts.
4. A committee is formed. This is generally between eight and 13 people, and has representatives from all groups (including women and low caste groups).
5. The FUG constitution is prepared.
6. The FUG is approved by the District Forest Office (DFO).
7. The FD and FUG survey the forest, and produce an operational plan (OP) (management plan). This usually focuses on timber value only.
8. The OP is approved by the DFO.
9. The FUG implements the OP with monitoring, support, and strengthening activities by the field staff of the FD.

Source: Hobley M and Ojha H, personal communication.

from consultation to joint decision-making and power-sharing (**Table 3**). Within the context of CFM participation refers to the active involvement of local people in goal-setting, planning, implementation, and monitoring of forest management activities on forest lands that are legally under public authority.

Although CFM is based on the principle of active participation of local people in managing state forest lands, the public forest services have the final authority over the forest lands. Through CFM, they delegate management authority to local people under the proviso that the management activities are in accordance with the general forest management policy. Thus, CFM is in essence based on an approach of decentralization and collaboration rather than an approach of devolution as is the case in the legal recognition of common property management regimes.

Schemes may be differentiated according to the type of forest lands involved (e.g., any forest lands of interest to local communities, only degraded lands but no commercial forest lands, or buffer zones around conservation areas). They can also be differentiated according to the level of involvement of the defined forest users in planning and implementing management. The management plan is always approved by the state forestry department or its equivalent, but in different contexts may be drawn up by the forest user group and submitted for approval, or drawn up by the foresters and approved by the forest users.

Global Overview

This section discusses CFM as it has developed around the world.

Nepal

Nepal has been heralded as a world leader of CFM. In the process termed 'community forestry,' the Forest Department (FD) retains some control over forest management (**Table 4**). Management plans, known as Operational Plans (OPs) in Nepal are developed with advice from the FD, in line with national legislation. Once the OP is approved, the forest is formally handed over to the Forest User Group (FUG), which then carries out the activities

with advice from the FD only if sought. OPs generally span a 5-year period, and any alterations to them within this time require further approval from the FD.

CFM in Nepal has been strongly supported by donor organizations, and in the 1990s, the newly democratic government supported the devolution of management rights to FUGs. Transfer of rights has accelerated since then.

The relatively long history of CFM in Nepal has provided some important lessons regarding equity and benefit distribution. Wealthier members of communities are favored by a strong focus on timber species; women, scheduled castes, and poor people are marginalized when communities 'manage' forest solely by protecting it. Probably only 30% of FUGs are functioning according to democratic principles in decision-making. Claims that CFM is intended to support poverty alleviation are undermined by the slow expansion of CFM to the forest-rich Terai lowlands, where 50% of the country's population is underrepresented by only 2% of the country's FUGs.

Nevertheless Nepal continues to develop CFM by acting on lessons learnt, leading to continuing policy and implementation challenges such as the Forest Regulations (1995) requiring a detailed forest inventory by the FD before handover to the FUG. However, the FD is underequipped to meet the demand for inventory, and both new and established FUGs are suffering as a consequence.

India

CFM in India is known as Joint Forest Management (JFM) (**Table 5**), under a model whereby the forest is not handed over to the community, but is jointly managed by a Village Forest Committee (VFC) and the state Forest Department (**Table 6**). The earliest recorded case of JFM was in Arabari, West Bengal in 1972. Earlier attempts such as the 1948 and 1956 Industrial Policy Resolutions, which introduced the need for participatory management, were unsuccessful due to conflicting priorities and historical antagonism between local communities and the government. In 1988, the National Forest Policy explicitly emphasized the participation of local

Table 6   Village Forest (Management) Committee (VF(M)C) or Forest Protection Committee (FPC) formation, India

1. The FD hold a preliminary meeting in the village to explain the concept of JFM.
2. A VFC/FPC will be constituted if a minimum of 50% of adults pass the resolution for its formation.[a]
3. The VFC may be made up of all voting adults in the village, but more generally is made up of a certain percentage of them. Different resolutions have rules about the number of women and lower caste people that need to be in the VFC.
4. An executive committee of the VFC/FPC is elected (seven to 15 members), and generally must contain specified numbers of women, lower castes, and landless people.
5. A microplan is suggested by the FD after a survey conducted by them. This will set levels for harvesting firewood, etc.
6. The VFC/FPC can ask to be registered and boundaries to be demarcated.

[a]The different States of India have different JFM Resolutions; accordingly while some form VFCs, others form FPCs. The formation of VFC or FPC depends on the state, due to the differences in JFM Resolutions. Generally the formation follows the pattern above.
Source: Hobley M (1996) *Participatory Forestry: The Process of Change in India and Nepal*. London: Overseas Development Institute and Kinhal G, personal communication.

Table 5   Definition of Joint Forest Management

Definition	Structure	Products	Purpose
Joint Forest Management (JFM) is a forest management strategy under which the Forest Department and the village community enter into an agreement to jointly protect and manage forest land adjoining villages and to share responsibilities and benefits.	The village community is represented through an institution specifically formed for the purpose. This institution is known by different names in different states (e.g., Vana Samaraksha Samitis in Andhra Pradesh and Hill Resource Management Societies in Haryana) but most commonly referred to as Forest Protection Committee or FPC. In some states, panchayats can also enter into JFM agreement with the Forest Department.	Under JFM, the village community gets a greater access to a number of Non Timber Forest Products (NTFPs) and a share in timber revenue in return for increased responsibility for its protection from fire, grazing and illicit harvesting. The details vary from state to state as each state has issued its own JFM resolution/rules.	The essential difference between 'social forestry' and JFM is that while the former sought to keep people out of forests, the latter seeks to involve them in the management of forest lands. JFM also emphasises joint management by the Forest Department and the local community.

Reproduced from: Resource Unit for Participatory Forestry (http://www.rupfor.org/jfm_india.htm)

people in the management and protection of forests, signifying the birth of JFM, later interpreted at state level where each state forest department has control over forest policy (**Table 5**).

JFM in India was, until recently, reserved for degraded forest lands. Guidelines passed in 2000 allow JFM to be implemented in forests with over 40% crown cover. The 1988 National Forest Policy is federal law, but is adapted by each state, so that the exact arrangements of JFM Resolutions differ between states. Twenty-two of India's 26 states have implemented JFM resolutions, and both the minutiae of the Resolution and the motivational levels of each state forest department influence its success.

JFM has been criticized for transferring too little power to community members. The language of many JFM resolutions is seen to reflect continuing control of VFC by FDs. Due to historical exclusion from forest reserves, and the state enforcement of their lack of rights to land, rural people have deep-founded mistrust of the state forest department and regional forest offices. In some cases, JFM is seen as a means for the FDs to organize local labor to improve public lands. Others note a tendency for JFM to be imposed on tribal people without consultation or consideration of their rights. Although results vary between states, JFM has achieved many of its goals, and has succeeded in increasing awareness about resource fragility, arresting depletion of forests, and the regeneration of degraded forests.

Elsewhere in Asia

Because of the wealth of many of the remaining forests in Southeast Asia, forest legislation still favors commercial logging. However, communal systems of forest management have existed for centuries, and an emerging peoples' movement forms the context for community-based resource management, whether of forests, national parks, or coasts. For example, Community Based Forest Management is a promising approach in the Philippines, but critics point to heavy dependence on donor support with little financial or political support from central government. Despite the enormous popularity of participatory methods among development organizations, by trying to build on incipient civil society initiative before any supportive national institutional change had been instated, at times the donor agenda has swamped the national reform process and, it is sometimes suggested, left indigenous people less empowered than before. The region is particularly supported in CFM by the presence of the Centre for International Forestry Research (CIFOR) (which has its international headquarters in Indonesia) and their

innovative work on adaptive collaborative management, in developing the social learning processes essential for successful CFM.

Central Asia has recently undergone radical change with the collapse of Soviet rule in 1990. Kyrgyzstan is the only republic that has adopted democracy and decentralized administration, and with this new form of governance, has also embraced the system of CFM. The Swiss government has facilitated the introduction of CFM in Kyrgyzstan, and its influence has been high due to the decrease of state funding for forestry. One condition that may promote the success of CFM in this republic is the strong preference of the government for long-term leases of state forest land, with tenants managing the forests, and receiving the benefits of nontimber forest products (NTFPs) from their plots.

Africa

Despite its short history in Africa (less than 10 years), CFM policies exist in over 30 countries, with forestry administrations preferring collaborative arrangements to more devolutionary regimes such as community forestry. As in other parts of the world, the reluctance of governments to review forest tenure arrangements is one important reason for slow progress.

Different countries within Africa have adopted different strategies of CFM. Some, including Zambia, Cameroon, and Burkina Faso, have followed India and Nepal in only allowing CFM in 'poorer' forest areas. Other countries (e.g., Uganda, Guinea, and Ethiopia) support CFM within National Forest Reserves. Most other countries have no restrictions on the type of forest eligible for CFM activities.

As in the Philippines, critics warn against the dependency on community forest policy formulated by external organizations (donors or NGOs), with little knowledge of local social and environmental conditions. It has been argued that policies made in this way have a tendency to benefit Western donors and NGOs more than the rural communities who have to deal with the consequences. Most argue that sincere governmental support is essential for the success of CFM.

Latin America

Latin American nations are currently witnessing a high level of grassroots mobilization, and are calling for forest resources to be used for the benefit of local communities. However, policies remain centralized, and communities lack the capital and capacity to develop economically sustainable forest management models.

Land tenure is a key issue in Latin America. Failure of the state to uphold secure tenure management systems limits the potential for community management models, and many Latin American nations are in the midst of an ongoing debate over the nature of land ownership. Many indigenous common property management regimes are being eroded through central tenure legislation, the reality being that most state models do not recognize indigenous land use systems. Agrarian reforms have attempted to return land to campesinos (peasants, or rural farmers), but the late twentieth century has seen a state- and industry-led desire to privatize land in order to promote foreign investment. However, some innovative and exemplary policy changes in Bolivia and Colombia have created new opportunities for recognized indigenous groups to manage their land and forest collectively.

Latin America is characterized by the distinctiveness of indigenous people and their association with tropical forest communities, and the role of forest-dwelling communities in conservation is beginning to be valued. A number of countries in South America have CFM policies, but contradictory policy and legislation in other sectors is delaying implementation.

North America

Forest management in North America has been influenced strongly by the environmental movement of the 1980s. Most initiatives and developments arising from this influence emphasize the need for more collaborative and participatory approaches to forest ecosystem management. Both the USA and Canada are gradually developing policies that provide a framework for small forest-dependent communities and civil society at large to participate in public forest land management decision-making. Critics are concerned that if local communities are empowered with public forest decision-making responsibilities, they may not reflect the values of more distant stakeholders. Others point out that NGOs and policy-makers tend to be city-based, so the views of city-dwellers are more often represented, with rural communities marginalized in the decision-making processes.

In the USA, the CFM movement is still in its infancy, but it is growing in numbers and in its ability to influence forest policy and management. Forest policy-makers and public forest managers are increasingly drafting laws and management prescriptions that are sensitive to the needs of forest-based communities. Forest organization personnel show strong support for collaborative planning, but in some cases the public feel that their participation is inadequate in decision-making processes, and are unwilling to engage in the process, often choosing to meet their objectives through a reactive, conflict-based means.

In Canada, 96% of the forest area is state owned. The state leases its forest land-base to timber companies who manage the area under agreed provincial regulations. The federal government is limited to influencing forest policy indirectly, with the 13 provincial governments controlling their own legislation concerning forest management. Many jurisdictions have now passed regulations that require public and local community input to forest operations through structured committees that provide advice during the planning stages and/or comanagement during the implementation and operational stages. In general, current forest enterprise responses to the environmental movement and to indigenous peoples' issues have been proactive, and companies are aware of the need for a 'social licence to operate' (i.e., public acceptance of their management strategies). Both of these have contributed to the frequency with which public consultations are made before forest operations are carried out.

Europe

In Europe, as in the USA and Canada, governments are moving towards more pluralistic forms of planning and management, but in a context of forest decline and recovery, the changing values of a largely urbanized society, and declining rural social institutions. The governments of most countries in Western Europe support multiple-use forestry, and, as in North America, many new CFM initiatives have been motivated by environmental concerns. Two types of participation prevail: with the public, concerning state forest lands, and private forest owners in processes organized by themselves. The few European indigenous groups are also significant players in some European countries, although they too have had to prove their customary rights in judicial courts.

The high proportion of privately owned forests in Western Europe provides a special context for CFM. In most cases private ownership limits public access and influence over the land. However, it has provided opportunities for new patterns of collaboration such as the evolution of associations of small forest owners, e.g., in Austria or Finland. These have often been supported by governments through subsidies and tax reductions, and by providing technical support via the state forest agencies. Owners also benefit from overcoming the disadvantages of small size, and in addition, the Pan European Forest

Certification (PEFC) scheme is tailored towards all the private forest owners in an area working in collaboration.

The Impact of CFM

In general CFM is considered a promising forest management strategy, as it is believed to be able to contribute on the one hand to forest conservation and sustainable forest use, and on the other hand to livelihood improvement of local communities. Much aid, and aid-related research, is linked to the search for compatibility between conservation and sustainable livelihoods, or poverty alleviation, and CFM is one of its principle vehicles. In reality, different stakeholders often have their own distinctive aims for being involved in or stimulating such strategies (**Table 7**). These aims and aspirations may not be made explicit to all stakeholders, and may in fact be incompatible (see 'Social Aspects' below).

Potentially conflicting goals complicate the evaluation of 'successful' or 'sustainable' CFM, and leave supporters and skeptics alike with confusing evidence. Notably, the evaluations and impact assessments that are published tend to reflect the views of the institutional stakeholders and the voices of the local forest users are little heard. There is also very little documented evidence of the impact of CFM on biodiversity or livelihoods. Given the

Table 7 Summary of the different achievement goals that different stakeholders expect from CFM

Stakeholder	Goal
Donors	Poverty alleviation
Policy-makers	Reduced deforestation
	Poverty alleviation
Forest Departments/ governments	Reduced pressure on forest resource
	Reduced pressure on Forest Department
	Improved regeneration
	Improved quality of forest resource
	Devolution of decision-making
	Transition in roles and power
NGOs	Empowerment of rural poor/ forest-dwelling communities
	Equitable distribution of benefits
Local communities/rural poor	Securing livelihood resource
	Stabilization and improvement of livelihoods
	Development of income
	Control over culturally important resource
	Decreased vulnerability to shocks
	Increased control over life

propensity for donor funding it is essential not to confuse inputs, or management outputs, with successful outcomes.

It is beginning to be recognized that more participatory approaches must be developed to make sure that local stakeholders have a say in how impact is achieved and measured.

Factors Contributing to Success

This lack of evidence of the success of CFM does not negate emerging patterns of factors contributing to successful CFM, as judged by the participating stakeholders themselves. The case study approach taken by the World Conservation Union (IUCN) series on CFM is particularly valuable in this regard. For example, the very different approaches in Bangladesh (lowest forest cover, high population density, distinction between tribal and lowland communities, and the rise of private nurseries) contrast with Sri Lanka (long tradition of agroforestry management in home gardens, recent history of conflict). These summaries are given credibility by drawing on interviews and on government, NGO, and academic sources to present a realistic view, pointing to ecological, social, economic, political, and institutional factors.

Ecological Factors

Ecological factors include the original forest type, as well as its condition when CFM is initiated. While it is widely accepted that CFM improves ecosystem functioning and the quality and quantity of forest area and products, this remains to be demonstrated on a general scale. Studies in India have shown that CFM can improve diversity of tree species, although general impacts on biodiversity conservation have yet to be proved. More CFM has worked in sub-humid and semi-arid forests than in high tropical forest. The widespread tendency to hand over poorer-quality forest for local management is currently being addressed by advances in forest policy in Nepal and India (see above).

Social Aspects

Stakeholder analysis CFM often assumes the ideal of a 'community.' Contrary to idealized assumptions, communities are often culturally heterogeneous, governed by top–down approaches rather than historical customs and traditions, and have few or no regulations relating to resource use. Stakeholder analysis is essential for successful CFM, as rapid and participatory rural appraisals (RRAs and PRAs) often do not identify the most vulnerable and poorest

members of the community, or understand local political dynamics. For example, women are often the most regular forest users, but, due to cultural barriers and traditions, are often not consulted on forest management decisions.

Indigenous or 'tribal' people are often culturally more closely linked to forests than their immigrant neighbors, and are (often correctly) perceived as more likely to conserve their ancestral lands. However, the breakdown of respect for traditional social structures and resource management techniques heralds the need for more CFM, social learning, and adaptive management.

Conflict management Inevitably, working with such an array of stakeholders, the goals, ideas, and values of forest management often vary considerably between (and within) groups. This plurality often requires high levels of conflict management, a technique that has developed in synchronization with CFM. In general, experiences with CFM have increased respect for indigenous forest management systems, knowledge systems, and modes of organization, although the often-traditional forestry sector is at times slow to accept and initiate change. Foresters may feel that CFM initiatives are a reallocation of their former powers and, despite training programs, may remain unconvinced by CFM.

Civil society The emergence of civil society can add support to CFM, as shown by the effect of campaigning by the educated middle classes in the Philippines and Indonesia, and the increasing popularity of CFM in Kyrgyzstan in post-Soviet rule. Nevertheless, while quality timber still exists in these forests, the power of logging companies and corrupt officials is enough to frustrate many attempts at CFM.

Economics

In order to become established, CFM needs short-term benefits for local participants as the rural poor are unable to invest labor or funds into long-term management. Interest and motivational levels decline markedly if financial rewards are not seen within the first few years of CFM. Benefits depend on local markets for products that can be harvested regularly and to an acceptable quality. Information about markets and good access to them are important factors of successful CFM, and many local groups say that these are the biggest constraint to success. However, financial aspirations can also undermine sustainability, although a management plan can help to prevent overharvesting for instant monetary gain.

Organizations and Institutions

Local organization and power structures Experience particularly highlights the importance of incorporating existing local organization and power structures, with or without NGO support, and of forming partnerships and coalitions. Success in individual cases can be linked to the attitude of individual professionals, and to local people with strong leadership qualities.

In both India and Nepal, success of CFM has often been attributed to the formation and functioning of the core management team (VFC/FUG). Guidelines suggest that for these groups to be effective, numbers should be limited to 30–40 participants, members should be as socially homogeneous as possible, and membership should include representatives of all user groups (including women, landless poor, and lower caste members).

Sometimes community structures that appear to be 'participatory' can in fact be very top–down, with decision-making rights unfairly distributed to the elites of the group. However, if existing rules in the user groups are strong and fair, and methods for dealing with common problems and rule-breaking are in place, the rate of success tends to be higher.

Government As mentioned above, government forest departments can be reticent in their acceptance of CFM approaches. Often successful CFM is dependent upon one key official with undivided support for the venture. Even if extensive training is provided, the remit of foresters changes considerably with the introduction of CFM.

In most cases the government is responsible for providing technical support for the CFM ventures. The amount of technical support for management activities varies depending on the needs of the user group, and respect for local knowledge of how to manage the resource; recognition of when scientific knowledge is needed and appropriate is a key determinant. For example in severely degraded forests, the government will most likely be needed to play a major role in forest regeneration activities before user groups can be given more power.

Developmental agencies and NGOs The influence of international development agencies and/or NGOs in pioneering CFM systems is evident particularly in countries such as Pakistan, that have no policy mechanisms to support CFM. However, strong interest and availability of funding from these agencies may reduce support of the CFM process by national government.

Networks A key to successful CFM development is the learning-by-doing approach, which engages user groups in forest management activities, creates a sense of ownership of the process, and can empower users through their new knowledge. Regular formal and informal meetings between forest officials and locals can help to create trust and understanding among stakeholders. Study tours enable horizontal exchange of experience (farmer to farmer, forester to forester). NGOs, networks, and collaborations between user groups provide useful routes for information exchange (**Table 8**). The more links between communities, NGOs, and governments that exist, the more likely it is that CFM will be successful. Links are particularly beneficial for mutual learning, encouraging synergistic relationships with respect to resource management, and

enhancing efficiency and effectiveness of the CFM program.

Policy and Governance

Flexibility of policy processes are an important aspect of successful CFM; India and Nepal, having the longest experience in CFM, have demonstrated the value of adapting forest policy in response to experience. Policy factors affecting success can be seen as external and internal constraints. External aspects are under the control of national and local governments, and global markets: forest tenure, tax burdens, and market development for forest products. Factors internal to the community of forest users include organization, transparency of resource management, participation by the community (or

Table 8 CFM networks and organizations

International organizations	Area-specific organizations
The International Network of Forests and Communities.	Asia
Works internationally to provide and enhance networking between stakeholders.	RECOFTC (The Regional Community forestry training center for Asia and the Pacific)
network@forestsandcommunities.org	Supports work in Cambodia, China, India, Indonesia, Laos, Nepal, Philippines, Thailand, Vietnam.
	http://www.recoftc.org/index.htm
The UN FAO Forestry Program.	Members of RECOFTC include: Nepal–UK Community Forestry
Addresses how to use forests to improve people's economic, environmental, social, and cultural conditions while ensuring that the resource is conserved to meet the needs of future generations. There is an exhaustive list of links on the programs website, including government agencies, nongovernmental organizations, and research projects.	Project (NUKCFP), Nepal–Swiss Community Forestry Project (NSCFP), and Nepal–Australia Community Resource Management Project (NACRMP).
www.fao.org/waicent/faoinfo/forestry/forestry.htm	Resource Unit for Participatory Forestry (RUPFOR).
	A neutral stakeholders' forum promoting interaction among various stakeholders in participatory forestry in India.
The UN FAO Community Forestry Program.	http://www.rupfor.org/jfm_india.htm
Provides information including topics covering communal management, decentralization and devolution, gender, market analysis and development, participatory processes, rural learning networks.	Federation of Community Forest Users of Nepal (FECOFUN)
www.fao.org/waicent/faoinfo/forestry/FON/FONP/cfu/cfu-e.stm	Europe
	Confederation of European Forest Owners (CEPF)
	http://www.cepf-eu.org/
Forests, Trees and People Program.	
This is designed to share information about improving community forestry activities and about initiatives of interest to its members. Links CFM initiatives throughout the world.	South America
	Central American Community Agroforestry Network (Agroforesteria comunitaria en Centroamericana)
Rural Development Forestry Network (Overseas Development Institute's Forest Policy and Environment outreach group).	Indigenous and Peasantry Coordinator for Community Agroforestry in Central America (CICAFOC)
Disseminates information to over 2000 members around the world.	
http://www.odifpeg.org.uk/network/index.html	North America
	National Network of Forest Practitioners (NNFP).
The Community-Based Natural Resource Management Network (CBNRM).	Aims to strengthen the efforts of individual groups to achieve a common vision of sustainable economies and healthy ecosystems.
Aims to enhance and provide networking opportunities worldwide.	http://www.nationalcommunityforestrycenter.org/presearch.html
http://www.cbnrm.net/	Canada's Model Forest Programme.
	http://www.nrcan.gc.ca/cfs-scf/national/what-quoi/ modelforest_e.html

user group) as a whole, and attention to equity issues.

CFM illustrates the importance of looking beyond explicit policy objectives to examine implicit policy, and requires the mixing of different policy disciplines. For example, rural development policy bears on the traditionally separate domain of forest administration.

Tenure Perhaps the most effective policy tool is change in tenure. Most CFM is initiated in state or community forests, and is most successful when the tenants or owners have long-term leases or secure land rights. In countries where communities have no access rights to forest land or products, encroachment and conflict is common; in contrast CFM in Nepal has created a legislative process whereby communities can acquire the right to manage their forests, and across Southeast Asia legislation to recognize ancestral lands of indigenous groups has encouraged those groups to formulate management plans. Little CFM has been recorded on private land, and the incidence of CFM on 'open access' land is low.

Devolution of rights and responsibilities In the devolution of rights and responsibilities to the user group, it is essential that customary rights as well as legal rights be recognized. There is often confusion as to whether the community is being involved as a forest user or a forest manager, and for success, rights and responsibilities need to be clearly defined. Case studies show that motivation of communities for management is highest when power-sharing is most complete and implemented within management regimes that define the community as a whole as the source of decision-making. For community interest and participation to be maintained, it is important to ensure they feel a sense of 'ownership' of the process.

Reduction of poverty Development advisers question whether CFM can be successfully implemented with the rural poor if their basic development needs are not met first. Interest and motivation levels decline if local people have to wait several years to see any returns, and success is related to markets and benefits linked to labor inputs. Donor-funded CFM ventures often include the double and difficult remit of improved livelihoods and conservation.

Governance A number of international, pan-European, and national policies and treaties are beginning to support sustainable forest management and to provide a more enabling context for CFM. The Convention on Biological Diversity addresses forests through its work program on forest biological diversity, implemented by the United Nations Food and Agricultural Organization, the UN Environment Programme, the Global Environment Facility, the UN Framework Convention on Climate Change, the UN Forum on Forests, and the Centre for International Forestry Research. The program emphasizes the ecosystem approach, socioeconomic considerations, conservation and sustainable use. Objective 3: Goal 4 in the Forest Work Programme approved at the 6th meeting of the parties to the Convention on Biological Diversity reads:

> Enable indigenous and local communities to develop and implement adaptive community-management systems to conserve and sustainably use forest biological diversity.

The Aarhus Convention on 'Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters' also supports CFM initiatives.

Future Directions

For CFM to continue its success, supportive legislation and policy need to be developed and enacted at institutional, organizational, and ground levels. Foresters need to be trained in how to impart technical knowledge to forest users about forest management. With regular contact and trust-building exercises, there should be a reduction of the exploitation of communities. Forest departments should clarify the benefits for them of the devolution of forest management responsibilities, to make it easier for professional foresters to accept and advocate the new CFM approach.

Many practitioners and planners do not have access to information because of poor dissemination or because it is presented without lessons being sufficiently distilled to convey general principles across cultural boundaries. There is also a strong sense that 'knowledge cannot be transported directly' but that there is a need to create the conditions in which knowledge can be generated. Thus more and more detailed case studies, with particular attention applied to documentation of community experience, should be encouraged, along with greater dissemination and information exchange.

CFM has great potential in linking with participatory monitoring and evaluation (PM&E) and adaptive management. By personally assessing their

impact on the forest, communities become more aware of the need for sustainable management, and motivation levels increase as a sense of ownership of the process develops.

See also: **Landscape and Planning**: Perceptions of Nature by Indigenous Communities. **Social and Collaborative Forestry**: Canadian Model Forest Experience; Common Property Forest Management; Forest and Tree Tenure and Ownership; Social and Community Forestry; Social Values of Forests.

Further Reading

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Forest and Tree Tenure and Ownership

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What is Social and Community Forestry?

Community forestry is a set of institutional arrangements in which communities are involved wholly or in part in decision-making and benefits and contribute knowledge and labor to achieve healthy forests and social well-being. Social forestry encompasses both multiple forms of locally initiated and implemented forest management as well as externally initiated social forestry projects. It ranges from formal, legally recognized arrangements such as comanagement agreements between communities or individual citizens and government forest bureaucracies, to:

- community management of government forest land
- the cumulative effect of tree planting and management on individual parcels
- forest commons
- communities that without government sanction management government forest land as a *de facto* commons.

Social forestry is a development strategy to stimulate community forestry. Analysis of property and land and tree tenure arrangements enable us to understand the distribution of costs and benefits of social forestry as well as the pitfalls that may befall it.

Basic Concepts in Property and in Land and Tree Tenure

Although people often think of property as a thing or the possession of a thing by someone, it is better understood as social relations between people