Food and Agriculture Organization of the United Nations

Forty years of community-based forestry

A review of its extent and effectiveness

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Cover photo:
Forest User Group members participate in a thinning exercise in their larch forest, Mongolia
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Don Gilmour

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Foreword

Over the past 40 years considerable attention has been paid to community-based forestry (CBF) and related forest tenure transformations, with the aim of involving communities and smallholders in forest management and governance. This period has witnessed a substantial increase in forest area under various CBF regimes. It is estimated that, to date, almost one-third of the world's forest area is under some form of CBF management. The assumption underlying the transfer of management rights to communities and smallholders is that CBF will lead to sustainable forest management and improvements in key environmental, social and economic outcomes at the local level.

The last time that FAO comprehensively documented the impact of CBF was in 2001. Since then, numerous studies, international dialogues and field programmes have produced a range of information on such topics as requirements for scaling up CBF; the importance of secure tenure rights for local communities and smallholders; capacity building; and strengthening the access of community and producer groups to markets.

While studies on forest tenure indicate a significant trend towards increased forest areas under CBF management, reports about the effectiveness of the management have been mixed. In addition, reliable data on CBF effectiveness are limited, which hinders informed decision-making at national, regional and global scales as well as the progress of CBF in general.

Building on its two previous global reviews of CBF in 1991 and 2001, FAO has conducted this review not only as an update on the status of CBF but also to assess to what extent CBF is meeting expectations and which factors – enabling or constraining – can explain successes and failures. The publication covers 40 years of experience and looks at the changes in social capital (livelihood, food security and nutrition, influence over decisions, access and control over forest resources), economic capital (employment, household incomes) and environmental capital that CBF has generated, as well as other impacts. The review also identifies key issues for the future of CBF.

This publication demonstrates that CBF is a powerful vehicle for moving towards sustainable forest management while bringing significant improvements to local livelihoods. However, many CBF regimes are still performing below expectations and could do much better if provided with the right "keys".

This report targets a range of actors, from policy-makers, practitioners and researchers to communities and civil society. It will provide them with inspiration and guidance to support local communities, indigenous peoples and family smallholders in managing the forests on which not only they, but also the rest of the world, depend for a better and sustainable future.

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Acronyms

ACIAR	Australian Centre for International Agricultural Research
ANSAB	Asia Network for Sustainable Agriculture and Bioresources
CBF	community-based forestry
CEPF	Confederation of European Forest Owners
CIFOR	Center for International Forestry Research
CSO	civil society organization
DFID	Department for International Development, United Kingdom
EU	European Union
FAO	Food and Agriculture Organization of the United Nations
FECOFUN	Federation of Community Forestry Users Nepal
FFC	Forest Farmer Cooperative
FLEGT	Forest Law Enforcement, Governance and Trade
FRA	Global Forest Resources Assessment
FSC	Forest Stewardship Council
IFF	Intergovernmental Forum on Forests
IFRI	International Forestry Resources and Institutions
ILC	International Land Coalition
IPF	Intergovernmental Panel on Forests
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
MFSC	Ministry of Forest and Soil Conservation, Nepal
NGO	non-governmental organization
NWFP	non-wood forest product
PEFC	Programme for the Endorsement of Forest Certification
PES	payment for environmental services
PFES	payment for forest environmental services
RECOFTC	Center for People and Forests (previously Regional Community Forestry Training Center)
REDD	reducing emissions from deforestation and forest degradation
RRI	Rights and Resources Initiative
SDG	Sustainable Development Goal
SFM	sustainable forest management
UN	United Nations
VPA	Voluntary Partnership Agreement
WWF	World Wide Fund for Nature

Executive summary

Community-based forestry (CBF) includes "initiatives, sciences, policies, institutions and processes that are intended to increase the role of local people in governing and managing forest resources" (RECOFTC, 2013). It includes formalized customary and indigenous processes as well as government-led initiatives. CBF covers social, economic and conservation dimensions in a range of activities including decentralized and devolved forest management, smallholder forestry schemes, community–company partnerships, small-scale forest based enterprises and indigenous management of sacred sites of cultural importance. In this review, CBF is taken to include both collaborative regimes (forestry practised on land that has some form of formal communal tenure and requires collective action) and smallholder forestry (on land that is generally privately owned).

The publication examines the extent of CBF regimes globally and regionally and assesses their effectiveness in delivering on key biophysical and socioeconomic outcomes, i.e. moving towards sustainable forest management (SFM) and improving local livelihoods. It focuses on formal CBF regimes (those that are defined by a legal framework, with rights formally recognized by governments) while acknowledging that informal regimes are widespread, are often of very long standing and can be locally effective. In the absence of a legal framework, informal (de facto) rights can be easily challenged and changed, or even extinguished, by bureaucratic discretion, and thus are not secure. Confusion and ambiguities between de facto and de jure CBF regimes are common in many countries.

CBF regimes can be categorized according to the tenure rights enjoyed by stakeholders. These rights largely determine the extent of empowerment. This information is key to assessing the effectiveness of different regimes but is rarely specified by analysts or reviewers. The spectrum of generic types of CBF (see graphic opposite), in order of increasing strength of rights devolved, includes:

- participatory conservation,
- joint forest management,
- community forestry with limited devolution,
- community forestry with full devolution,
- private ownership.

EXTENT OF CBF

During the past 40 years, the reach of formally recognized CBF regimes has steadily extended across all regions, into many countries with different political, historical, cultural and economic contexts.

Smallholder forestry is the main type of CBF regime in the global North and is expanding rapidly in countries in the global South, particularly China and Viet Nam. This expansion includes new institutional arrangements that have led to the development of new forests, as well as formal acknowledgement of pre-existing

systems. In some countries, particularly in Europe, more than 50 percent of forest land is held by smallholders, who have developed a variety of institutional arrangements to interact with markets. By contrast, in some Latin American countries smallholders at the farm–forest interface tend to operate outside mainstream markets and are largely ignored by policy-makers and development planners. Even though forest smallholders are important in the production and marketing of forest products in the region, little more than anecdotal information is available about their presence, let alone their extent.

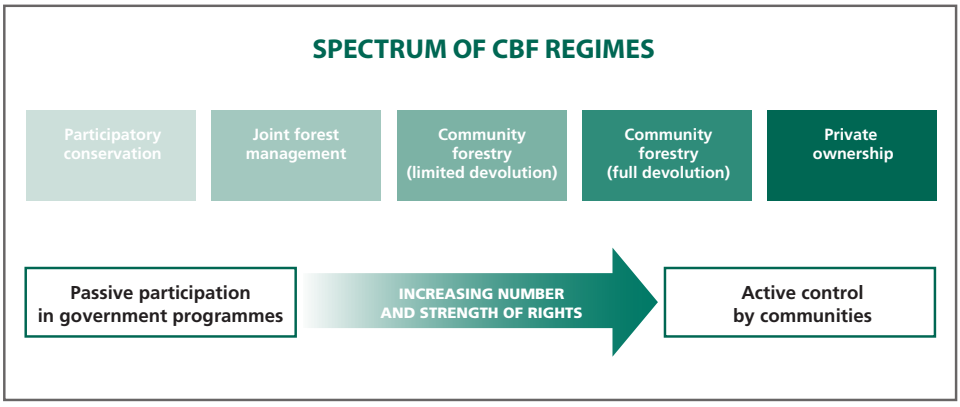
CBF regimes involving collaborative decision-making for the management of forest commons predominate in the global South. They are also emerging in Western Europe, Canada and the United States of America, but there is little documented information regarding their extent or effectiveness.

Estimates based on the literature suggest that CBF regimes encompass about 732 million hectares, or about 28 percent of the forests in the 62 countries assessed across all regions. The forest area in the 62 countries represents 65 percent of the world's forests (based on the estimate from FAO's Global Forest Resources Assessment 2015 of 3 999 million hectares of global forest cover in 234 countries and territories).

EFFECTIVENESS OF CBF

In general, policy-makers have set ambitious objectives for CBF. These objectives have been added to over time as additional issues (including payment for environmental services [PES], reducing emissions from deforestation and forest degradation [REDD and REDD+] and forest law enforcement, governance and trade) have emerged on international and national policy horizons. The inclusion of these additional objectives has augmented the complexities of implementation and the difficulties associated with judging the effectiveness of CBF.

In spite of the lack of comprehensive national-level data, evidence is mounting that CBF is a valuable forest management modality that has the potential to contribute to SFM and improve local livelihoods. Strong and effective CBF regimes are also resilient and able to withstand internal and external shocks, including the uncertain impacts associated with climate change. Overall, communities and smallholders have



demonstrated in a wide range of settings that they are able and willing to manage forests sustainably, generating significant economic and other benefits. However, the full potential of CBF has yet to be realized in most countries and there are many hurdles in the way of effective implementation. This is less the case for smallholder forestry in the global North than for collaborative regimes.

Most countries that have adopted collaborative forms of CBF have policies in place to decentralize and devolve rights and responsibilities. However, in practice, decentralization and devolution have been only partially realized and many governments retain significant authority over forest management, with the result that CBF faces major restrictions. For example, CBF is often applied only in highly degraded forests (those with least value to communities); communities rarely have access to valuable resources from community forests (commercially valuable timber, for example); emphasis is often on community responsibility for protection rather than on authority to manage; and real power (defined in terms of the right to make decisions about management objectives and processes) tends to be maintained by forest authorities rather than being devolved to communities. Without real devolution of power, the objectives of CBF will be difficult to achieve because they are premised on this transfer.

While collaborative forms of CBF have sometimes contributed significantly to improving rural livelihoods and livelihood security, they have not always done this in a way that targets the poorest members of communities; benefits have often been captured by local elites.

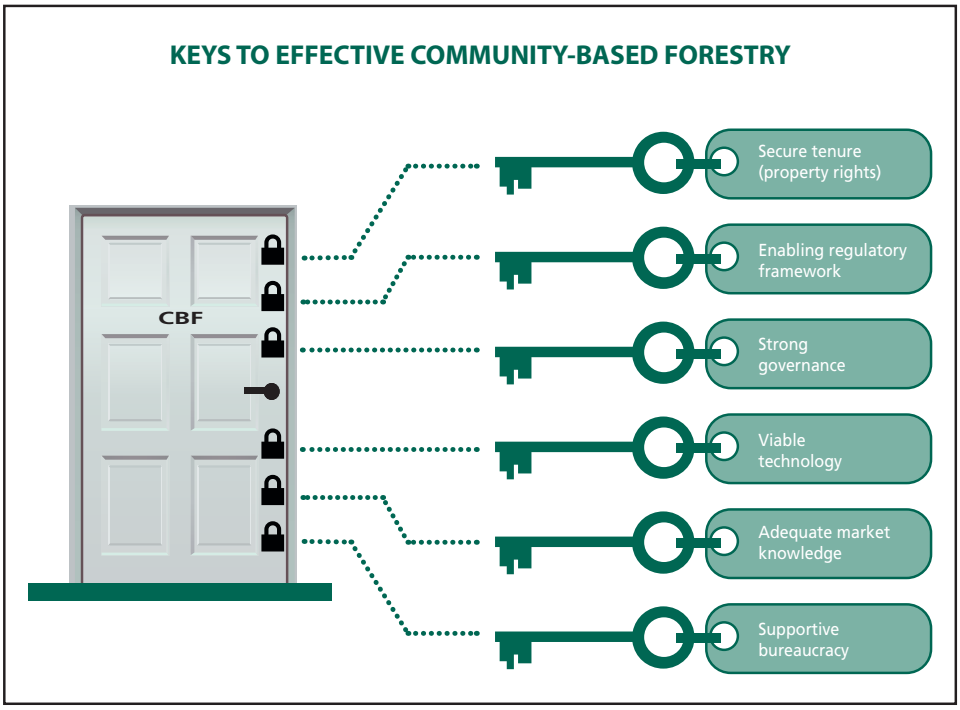
It can be generalized that largely because of internal and external constraints, collaborative forms of CBF are performing below expectations and are still fragile.

POLICY SETTINGS TO IMPROVE OUTCOMES

Research, particularly on collaborative forms of CBF, has burgeoned since the mid-1990s, much of it focusing on socioeconomic and governance aspects and what is needed to make CBF more effective. A significant body of knowledge is now available to inform both implementation (through the development of implementation guidelines) and policy processes. However, there has been less focus on the extent to which CBF has built natural, social, human and financial capital which collectively contributes to livelihood improvements. In general, there are also substantial gaps among science, policy and practice, which inhibit the widespread application of new knowledge to improve field practice and inform policy discourse.

Based on the extensive research on collaborative forms of CBF, six conditions are identified which must all be met to enable CBF to deliver fully on its objectives. CBF can be thought of as a "door with many locks" where the path to effectiveness requires applying the right "keys" to unlock the door (see graphic opposite). These keys include:

- secure tenure (property rights);
- an enabling regulatory framework (reasonable balance between rights and responsibilities);
- strong governance;



- viable technology to establish and maintain productive forests;
- knowledge of markets and market access for goods and services
- supportive bureaucratic mandate and culture.

The evidence of the past 40 years also indicates that even when CBF is given high priority in a country's development agenda and most of the conditions mentioned above are met, a long time is still needed for communities to build a sense of ownership and sufficient natural, social and human capital to deliver on their management objectives. Communities need to go through a process of learning and adaptation to improve their governance to achieve the desired outcomes.

ISSUES FOR THE FUTURE

In order to continue the momentum that has characterized CBF development over the past few decades and to position CBF to face future challenges, the following issues will need to be addressed.

- ***Application of existing knowledge to improve CBF outcomes.*** A considerable research effort has been expended in analysing what makes CBF work and how to improve outcomes, but application of that research has not kept pace. Policy-makers and practitioners need to absorb the knowledge generated from research and to apply it.
- ***Recognition of tenure rights of local and indigenous communities.*** Many countries that promote CBF are lagging in this area and need to do much more, particularly in the face of pressures associated with agro-industrial expansion, extractive industries and infrastructure development.

- ***Commercialization of CBF goods and services.*** Approaches to increase the commercialization of wood and non-wood goods and services need to be developed and promoted to enable communities and smallholders to realize the full economic benefits of their forest management. Linkages between smallholder or community groups and the private sector should also be explored, in a manner that ensures equitable benefit sharing.
- ***Recognition of the limitations of CBF.*** Policy-makers and practitioners should develop realistic expectations of CBF and not expect it to solve all forest management problems and related governance issues.
- ***Data on extent and effectiveness of CBF regimes.*** Data on the extent of CBF regimes in different countries are incomplete and fragmented. In addition, assessment of the effectiveness of CBF in terms of biophysical and socio-economic outcomes is largely nonexistent, with a few exceptions. Policy discourse at all levels would be well served by the development of national-level databases that collate data on the extent and effectiveness of CBF regimes. For this to happen there is a need to continue the development and testing of approaches, tools and criteria to assess extent and effectiveness, and to encourage their systematic application.
- ***Research.*** While considerable research has been carried out on various aspects of CBF, more is needed to address existing and future challenges. Among the most pressing needs are innovative approaches to bridge the science–policy–practice divide and to position CBF in the contemporary market-oriented global environment.

CONCLUSIONS

Three clear conclusions come from this review:

- In many examples across a range of scales (from pilot project to national) and in all regions, CBF has been demonstrated as a potent vehicle for moving towards SFM and improving local livelihoods.
- While CBF regimes are now a major modality of forest management throughout the world, they are generally performing below expectations and could do much better if all the conditions required for effective functioning are met.
- Solid data are lacking on the extent and effectiveness of CBF at a national scale for use in informed discussion and decision-making.

In general, the knowledge needed to improve outcomes for forests and people is available. What is missing in most cases is a "level playing field" and the political will to make it happen. Over the coming decade it would be encouraging to see policy-makers and others at the international and national levels make a commitment to improving CBF outcomes and make the necessary policy and other changes. An agenda to bring such a commitment to life could include the following steps:

- assessment of CBF effectiveness in countries with CBF regimes, followed by reflection on the extent to which the "keys" needed to make CBF fully effective are available and applied;

- sharing of CBF best practices and mobilization of international attention and action for its support and scaling up.

Indigenous peoples, local communities and family smallholders – women and men, young and old – stand ready to maintain and restore forests and to sustain livelihoods on a vast scale. For this to happen, political leaders and policy-makers, who hold the "keys", should open the door to unleash the potential of hundreds of millions of people to achieve SFM and improved livelihoods in a major percentage of the world's forests.

Communities benefit from sale of forest products, Malawi

Chapter 1
Introduction

WHAT IS COMMUNITY-BASED FORESTRY?

Community-based forestry (CBF) has been taken up formally in many countries and adapted to suit the local social, political, historical, cultural and bureaucratic context. As a result, many forms have emerged and many different names have been applied. This has led to a confusion of terminology and hampered efforts to develop typologies. FAO (1978, p. 1) originally adopted the term "community forestry" as an umbrella term for "any situation which intimately involves local people in a forestry activity". However, the concurrent emergence of the term "social forestry", for which no clear definition exists, began a degree of confusion that continues to the present day. "Social forestry" is used by some as interchangeable with community forestry and by others to describe a much narrower spectrum of activities such as establishment of woodlots to address deforestation and provide fuelwood (FAO, 1991).

"Participatory forestry" is also used as a generic term to denote the participation of stakeholders in forest management decision-making. FAO (2012b) has defined participatory forestry as: "processes and mechanisms which enable people with a direct stake in forest resources to be part of decision-making in all aspects of forest management, including policy formulation processes". However, this definition could be construed to include people beyond the local community, such as timber processers and those involved with corporate entities that have a direct stake in forest resources and their management.

The term "community-based forestry" (CBF) is used in this report as an umbrella description and includes both collaborative regimes (forestry practised on land that has some form of communal tenure and requires collective action) and smallholder forestry (forestry practised by smallholders on land that is privately owned). This follows the approach taken in FAO's 2001 review of 25 years of community forestry (Arnold, 2001). The basis for including smallholder forestry is that it is more aligned with collaborative forestry than with industrial forestry (Herbohn, 2000). Agroforestry, i.e. integrated farming systems including fruit, fodder and timber trees, is excluded because the focus of the assessment is on the management of forests rather than scattered trees in farming systems. However, the distinction between agroforestry and smallholder forestry is not always precise. Box 1 provides a more complete definition of CBF as it is presented in this report, based on the definition used by the Center for People and Forests (RECOFTC, formerly the Regional Community Forestry Training Center).

The major departure from RECOFTC's original definition is that the focus of this report is on formal regimes (i.e. those defined by a legal framework), whereas RECOFTC includes informal regimes in its definition of community forestry. This is not to ignore the reality that informal regimes are widespread, are often of very long standing and can be

BOX 1

Definition of community-based forestry used in this publication

Community-based forestry includes "initiatives, sciences, policies, institutions and processes that are intended to increase the role of local people in governing and managing forest resources". It includes formalized customary and indigenous initiatives as well as government-led initiatives. CBF covers social, economic and conservation dimensions in a range of activities including decentralized and devolved forest management, smallholder forestry schemes, community–company partnerships, small-scale forest-based enterprises and indigenous management of sacred sites of cultural importance.

Source: Adapted from RECOFTC, 2013

locally effective. The decision to limit the review to formal CBF regimes was guided by a desire to focus attention on the rights attached to regimes that are formally recognized by governments. In the absence of a legal framework, informal (de facto) rights can be easily challenged and changed, and even extinguished, by bureaucratic discretion, and thus are not secure. Confusion and ambiguities between de facto and de jure CBF regimes are common in many countries and are discussed later in the publication.

The use of "community forestry" as an umbrella term is avoided because in many (though not all) countries its focus on forest management by communities does not include smallholders, a group that is explicitly included in this review. Throughout the publication the acronym CBF is used wherever possible to denote generic regimes, but other terms are used from time to time in reference to country- or location-specific regimes.

RATIONALE, PURPOSE AND SCOPE OF THE PUBLICATION

Two previous reports reviewed ten years (FAO, 1991) and 25 years (Arnold, 2001) of community forestry. This publication looks back over the past 40 years of CBF implementation, reviewing the extent to which it has become a major forest management modality around the world and its effectiveness in delivering the biophysical and socioeconomic outcomes that are at its heart, i.e. moving towards sustainable forest management (SFM) and improving local livelihoods.

SFM refers to the stewardship and use of forests and forest lands in a way, and at a rate, that maintains their biodiversity, productivity, regeneration capacity, vitality and potential to fulfil, now and in the future, relevant ecological, economic and social functions, at local, national and global levels, and that does not cause damage to other ecosystems (IUCN, PROFOR and World Bank, 2004). Although a technical definition of sustainable forest management incorporates socioeconomic attributes such as livelihoods, for the sake of emphasis both SFM and livelihoods are referred to throughout the publication.

During the past decade considerable attention has been paid to CBF and related forest tenure transformations. Both FAO and the Rights and Resources Initiative (RRI) have

carried out regional and global assessments to chart these changes (see e.g. FAO, 2006a for Asia; FAO, 2008 for Africa; FAO, 2012a for Eastern Europe; White and Martin, 2002 and RRI, 2014a for global reviews). These reports have highlighted a substantial increase in the area of forest land under various CBF regimes during the past two decades. The associated transfer of power to local people inherent in CBF regimes involves various combinations of user rights, responsibilities and decision-making. There is an explicit assumption that the transfer of rights to communities will lead to SFM and improvements in key environmental, social and economic outcomes that benefit smallholders and communities (RECOFTC, 2013).

In spite of the substantial expansion of forest land under CBF regimes, the extent and effectiveness of the various types of CBF regimes around the world have never been systematically assessed. Menton and Cronkleton (2014, p. 1), following a review of CBF initiatives in the Peruvian Amazon, reached the conclusion that "even though there has been a great deal of research documenting forest use by rural people … We couldn't find any comprehensive assessments of the effectiveness of existing programmes to promote community forestry or benefit local people." This situation also applies to many, perhaps most, other countries.

Most of the literature reviewed here is in English; publications in other languages are largely excluded as primary sources. However, the report extensively references regional reviews and metadata analyses that draw on a wide range of publications, including non-English ones. Some key publications on CBF are highlighted in Appendix 1.

After this introduction, Chapter 2 provides a background to the report and includes a historical overview of CBF, tracing its emergence and evolution from pre-industrial times to the present. Chapter 3 assembles data on the diversity of commonly encountered CBF regimes (focusing on the devolved rights and level of empowerment). Chapter 4 reviews the extent of CBF regimes by region and globally. Chapter 5 distils key trends in CBF based on a synthesis across regions. Chapter 6 reviews the available literature to determine the effectiveness of CBF regimes in contributing to sustainable forest management and improving local livelihoods. Chapter 7 compiles the lessons learned from implementing CBF over the past 40 years and proposes approaches to improving its effectiveness. Chapter 8 analyses the extent to which CBF is reflected in international policy processes and the operational agendas of forest-related international organizations, as well as the impact of emerging international policies on CBF regimes. Chapter 9 considers key issues for the future, and Chapter 10 gives brief conclusions.

It is expected that the results of the review will be of value to policy-makers, practitioners and researchers with an interest in improving forest management outcomes.

A community forestry development project in Nepal raises villagers' awareness of the benefits of sustainable forest management

Chapter 2

Historical overview of the emergence and evolution of CBF

As in many developing countries today, rural dwellers in pre-industrial Europe depended on their adjacent forest commons for livelihood support and as an integral part of their traditional agricultural systems. Functional local management systems were in place to govern how these common forests were used, systems that would currently be considered community-based forestry (Rackham, 1986; Gilmour and Fisher, 1991; Jeanrenaud, 2001; Wiersum, Singhal and Benneker, 2004). However, as Europe industrialized and modernized, a series of changes gradually eroded many customary laws and institutions. Common lands were enclosed and customary rights extinguished, to the detriment of poor farmers. France and Switzerland remain the only two countries in Europe in which significant areas of the forest estate are managed through some form of communal management rights (FAO, 2010a). However, in both these countries the *commune* forests are public forests managed by local government authorities and not by discrete community groups. For this reason these forests are not included as CBF regimes in this report, even though FAO (2010a, pp. 236–237) recorded them as being forests where "communities" are the "holder(s) of management rights of public forests".

Most countries in the global South and the New World were subject to colonization by European powers from the sixteenth century onwards. A common feature of the colonial period was the annexation of forests that had previously been managed under various types of indigenous regimes. These premodern management regimes, which include those within tribal and postfeudal societies, were highly variable but also dynamic (e.g. Odera, 2004 and Couillard *et al.*, 2009 for Africa; Poffenberger, 2000 for South Asia; Poffenberger, n.d. for Southeast Asia; IUCN, 2000 for Mesoamerica).

Forest management in most colonized countries became characterized by the imposition of "scientific forestry" (Odera, 2004) where central governments assumed all rights over forest access and management and attempted to manage forests to maximize timber production for the benefit of the colonizing power and/or the State. These rights were generally embedded in new laws which often resulted in the alienation of local communities from lands and resources that had previously been part of their traditional estate, although they were frequently permitted to continue to obtain subsistence goods.

Following independence from colonizing powers from the middle of the twentieth century, many postcolonial governments adopted the forest management approaches (as well as laws and policies) of the colonial governments, so little changed in the first decades of postcolonial rule. However, by the 1970s change was on the horizon (Table 1).

During the 1970s and 1980s, smallholder and community-based forestry emerged in response partly to a perceived failure of the forest industry development model to lead to socioeconomic development, and partly to the increasing rate of deforestation and

TABLE 1
Key global forest-related developments that have influenced the evolution of CBF

Period	Events	Response
1970s	Fuelwood crisis Failure of forest industry development model to sustain forests and meet community needs	Initiation of forestry for local community development Establishment of fuelwood plantations (generally top-down); many failed
1980s	Large-scale deforestation; environmental degradation Forest sector reforms: decentralization and devolution policies	Pilot projects tested CBF modalities in different settings to address environmental concerns Emergence of "people's participation" and bottom-up development
1990s	Sustainable development paradigm Recognition of indigenous peoples' rights	Focus on SFM and livelihoods as CBF objectives Establishment of CBF regimes that formalize indigenous peoples' rights to manage forests Expansion of CBF across all regions
2000s	Globalization, trade liberalization	Growing interest in commercialization of wood and non-wood goods and services produced under CBF
2010s	Global policy focus on climate change, illegal timber and payment for environmental services	Additions to CBF objectives to address global policy interests

forest land degradation in developing countries (Gilmour, King and Hobley, 1989). It was widely acknowledged that governments acting alone would not be able to address the deforestation crisis, and efforts were made to encourage "people's participation" in government reforestation programmes. FAO (2012b, p. 41) noted that CBF emerged in the Asia and the Pacific region, in part, "in the context of failures by public forestry organizations to effectively protect and manage forests sustainably".

The importance of forests and trees to rural people, including indigenous peoples, was also increasingly recognized, having previously been neglected in programmes and policies (FAO, 1991). Much of the rural land involved was an integral part of the farming system. It was often in remote locations, and in most cases governments had limited capacity to undertake remedial measures on the scale necessary. Of particular importance was the recognition that many communities and indigenous peoples have a historical association with the natural resource base on which they depend for goods and services, and had frequently developed institutional arrangements to govern the use of their resources, although this was not always acknowledged by governments (Gilmour and Fisher, 1991).

The emergence, growth and evolution of community-based forestry as a formally recognizable modality of forest management can be traced back to the seminal paper *Forestry for local community development* (FAO, 1978). In the same year, the eighth World Forestry Congress in Jakarta carried the theme "Forests for People". By the end of the 1970s, new programmes and projects were being put in place to provide support to tree growing and forest management at both farm and community levels.

WHY CBF BECAME POPULAR

The popularity of community-based forestry as a formal type of forestry rests primarily on a narrative popularized by Ostrom (1990) that local communities, when granted sufficient

property rights over local forest commons, can organize autonomously and develop local institutions to regulate the use of natural resources and manage them sustainably. However, multiple threads have influenced the evolution of CBF (Table 1).

Tole (2010, p. 1312) noted that CBF initiatives "fit squarely within the larger economy wide and institutional reforms that many governments have been pursuing under IMF [International Monetary Fund] and World Bank conditionality lending since the 1990s. A significant condition in lending is that governments downsize their service bureaucracies in order to reduce costly public expenditures". This trend, coupled with the widely publicized failures of centralized management to control deforestation, has led governments increasingly to consider CBF as a solution to their problems. Several authors (as reported by International Forestry Resources and Institutions [IFRI] and FAO, in preparation) have noted that the policy emphasis on promoting decentralized forest management is also a response to factors that include community demands for a greater say in natural resource governance and recognition by many decision-makers that communities have the capacity to manage resources sustainably (e.g. Agrawal and Ostrom, 2001; Gautam and Shivakoti, 2004; Ghate, Ghate and Ostrom, 2013).

Over time, various forms of community-based forestry have evolved in different countries, but all have at their heart the notion of some level of participation by smallholders and community groups in planning and implementation. In many developing countries in the global South, reversing widespread degradation was a primary reason for the initial international support for community-based forestry. Improving rural livelihoods was at first perceived as a secondary (although closely related) outcome, but over time it became a dominant or codominant objective underlying continuing support from both national governments and the international community. In some countries a perceived fuelwood crisis was also a catalyst for action.

In more recent years the fundamental rights of indigenous and other local communities to exercise control over their traditional natural resources has come to prominence as a justification for CBF. The United Nations (UN) Declaration on the Rights of Indigenous Peoples (adopted by the UN in 2007) has given additional impetus to this movement. This issue has been particularly prominent in countries where settler societies largely displaced, or at least dominated, indigenous communities (including Australia, Brazil, Canada, New Zealand and the United States of America). In most of these societies indigenous rights over forests were largely extinguished as a result of the overwhelming asymmetries of the power relationships between the colonists and the indigenous inhabitants. All of these countries have seen successful legal challenges to these actions in recent decades and legal recognition of indigenous land rights claims, including claims over forest lands, has grown. Indeed, many CBF regimes have been formalized as a direct result of community movements and a struggle for the recognition of rights.

INSTITUTIONAL RESPONSE

Several institutional responses to the growing importance of CBF emerged in the late 1980s and 1990s. FAO's Forests, Trees and People Programme (FTPP), with its regional hubs, was an important platform for developing and supporting networks to exchange information and share experiences. Similarly, the Social Forestry Network (subsequently

the Rural Development Forestry Network) of the Overseas Development Institute in the United Kingdom was influential in spreading ideas and experiences to practitioners and policy-makers around the world. RECOFTC was established in 1987 in Bangkok to provide a focus on capacity building for CBF in Asia and the Pacific. All of these initiatives emphasized local control and management of existing forest resources, the multiple roles of trees in farming systems and the importance of working through local institutions to achieve sustainable forest management.

Arnold (2001), in reviewing progress with CBF over the previous 25 years, noted that "it could be desirable if there were now to be a period of consolidation, moving from promotion to critical analysis, with increased consideration of how best to address weaknesses and problems that have arisen". While expansion rather than consolidation has characterized CBF since Arnold penned those words, the second part of Arnold's call has been answered. Research interest has burgeoned, particularly focused on collaborative forms of CBF and aimed at working out how this form of forestry can be undertaken successfully. Most of this research and associated critical analysis has used examples from countries where CBF is well established, is relatively large in scale and has been integrated into national development programmes, such as India, Nepal and the United Republic of Tanzania. There is now a large body of well-documented evidence on many of the socioeconomic aspects of CBF, such as the sociology of collective decision-making, governance, equity, inclusiveness and poverty alleviation, particularly at a local scale. This body of knowledge has influenced CBF programmes in many countries. However, relatively little comparable research has been carried out on the forests themselves and how they can be managed most effectively to achieve CBF objectives, perhaps because the initial constraints to operationalizing CBF lay with a lack of sociological knowledge rather than a lack of biophysical knowledge.

EVOLUTION OF CBF IN BRIEF

The two previous FAO reviews of CBF (FAO, 1991; Arnold, 2001) provide little in the way of quantitative or even qualitative data on the extent or effectiveness of community forestry. Nonetheless, these publications were important milestones. Box 2 outlines the major issues and challenges identified in the two reports.

Both of these reviews noted the relatively slow pace of implementation of CBF and a general lack of political will to devolve effective forest management authority to local communities. Consequently many countries were reluctant to put in place an enabling regulatory framework, and many countries continue to be reluctant to do so, as outlined later in this report.

The first generation of projects and programmes that espoused collaborative forms of CBF had to address the initial stages of the process involving the establishment and formal recognition of community forests and their membership groups. Issues that had to be tackled included: identifying appropriate communities and their forest area; addressing bottlenecks related to tenure; negotiating power-sharing relationships (rights and responsibilities) between government and communities; developing enabling regulatory frameworks; preparing management plans; building strong local institutions; and in many cases rebuilding forest assets.

BOX 2

Key issues and challenges identified in previous FAO reviews of CBF

Community forestry: Ten years in review **(FAO, 1991)**

The review concluded that:

- Progress in implementing community forestry was still the exception rather than the rule.
- Weaknesses in the legal framework were common to nearly all experiences.
- Effective local or joint control required a willingness and ability of government to legitimize and empower local institutions and to help them enforce their rights. Even the most promising approaches tended to be undermined by failures to do so.
- Governments were commonly slow to amend laws or to implement them. Thus even the most robust of recent initiatives had often been threatened by their uncertain legal status.
- A major impediment to progress was the reluctance, or inability, of forest departments to devolve responsibility to the local level, particularly where they perceived that this would threaten their control over a timber resource.

Forests and people: 25 years of community forestry **(Arnold, 2001)**

The review concluded that:

- In some countries community forestry had become a well-established and integral part of the framework for management and use of forest resources. It was clear that, in the right circumstances, local or joint control does result in increases in flows of products and other benefits to local users and can bring about an improvement in the condition of the resource.
- Many countries were still at an early stage in the process of developing and introducing forms of community forestry appropriate to their situations.
- Acceptance of the importance of devolution to the local level was not always accompanied by the political, legislative and regulatory measures needed to empower those to whom responsibility was being passed. People were sometimes invited to take on more of the responsibilities and costs of managing forests without obtaining a commensurate increase in security of their rights, and they were thereby being put at risk. Initiatives to participate in markets for forest products were impeded or undermined by lack of progress in removing inappropriate restrictions and regulations.

A need was seen for better understanding of the circumstances under which local control is and is not likely to succeed, so as to avoid initiatives in situations that are not conducive to collective management.

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All forms of CBF have at their heart the notion of some level of participation by smallholders and community groups in planning and implementation (development of small-scale forest enterprise with community forest owners, the Gambia)

Lawrence (2007, p. 9) emphasized that CBF is not static. She argued that the evolutionary path of CBF "follows a trend from reductionist to systemic, from simple to complex and from planned to adaptive. On the way it passes through what can be termed the 'first generation' of structural factors, establishment of rights, roles and plans; the 'second generation' of concerns about diversity, social equity and organization; and later generations concerned with learning, silvicultural experimentation and adaptive management, towards the eternally elusive goal of sustainable systemic and adaptive relations between humans and our environment".

McDermott and Schreckenberg (2009) noted distinct differences in the way that collaborative forms of CBF regimes have evolved in the global North and South. In most countries in the South CBF has been rolled out through national policies that specify a blueprint to be replicated on a large scale (although Latin America is an exception). In contrast, in the North CBF has emerged on a smaller scale, in the form of diverse pilot projects and local innovations sprouting from the grassroots (see e.g. Cheng and Fernandez-Gimenez, 2006a).

In summary, while collaborative forms of CBF were often originally conceived to halt and reverse forest degradation, they are now generally expected to achieve an increasingly diverse set of conservation, social, economic and political objectives. As noted by Pokharel *et al.* (2008, p. 81), community forestry in Nepal "was initiated as part of an environmental movement, which aimed to conserve forests ... Later, it encompassed issues of gender, livelihoods and local institutional sustainability ... Most recently, governance, democracy and social inclusion have been brought into the ... agenda ..." Additional issues such as climate change, payment for environmental services (PES) and managing forests across the landscape have more recently been introduced into the earlier mix, leading to an increasingly complex policy and operational environment.

By contrast with the relatively recent emergence of collaborative forms of CBF, smallholder forestry is a well-established and widely accepted forest management modality in Europe and North America. However, smallholder forestry has emerged as a significant form of forest management in the global South only in recent decades, primarily as a result of major forest tenure reforms, for example in China and Viet Nam. Smallholder forestry, operating at the farm–forest interface, is also emerging as an important part of the forest industry in some Latin American countries, although it is largely overlooked by governments and remains in the margins of policy discourse (Cossío *et al.*, 2014).

Staff member of an association of small forest owners in Sweden

Chapter 3
Types of CBF

CATEGORIZING CBF REGIMES

CBF regimes have emerged from different contextual backgrounds and are thus diverse. They include adaptations of indigenous resource management systems; externally initiated systems with government or donor support; and smallholder commercial plantations and forests managed by communities for sacred, cultural, aesthetic or recreational values. This diversity makes it difficult to develop a common frame of reference for comparing them.

Neverthless, a workable approach for categorizing CBF regimes can be found in the nature of tenure reforms that recognize community rights to manage forest land for benefits that accrue to the managing communities (see FAO, 2011) (see also Box 3). In most countries the government does not relinquish ownership of the land, although there are some exceptions such as Mexico and Melanesian countries in the Pacific (including Fiji, Papua New Guinea, Solomon Islands and Vanuatu) with their longstanding recognition of community ownership rights. However, governments may devolve management rights to communities. CBF operates on the premise that communities hold tenure rights to defined areas of forest land. Tenure is generally defined as a "bundle of rights" (see FAO, 2011; RRI, 2012a) and it can take many forms. The major rights of relevance to this discussion (based on the framework described by Schlager and Ostrom, 1992 as modified by RRI, 2012a) are the following.

- Operational-level rights
  - Access: the right to enter a defined physical property
  - Withdrawal: the right to obtain "products" of a resource, e.g. to harvest timber, non-wood forest products (NWFPs) or woodfuel
- Collective choice rights
  - Management: the right to regulate internal use patterns and transform the resource by making improvements, e.g. make decisions over forest management such as to carry out silvicultural treatments[1]
  - Exclusion: the right to determine who will have access to the forest and to exclude outsiders
  - Alienation: the right to sell or lease either the management or exclusion rights or both, or to use them as collateral

[1] Cronkleton, Pulhin and Saigal (2012, p. 93) suggested that management "should be understood as a collection of decisions, practices, and concepts that involve decision-making beyond immediate resource use and with future intent. Management rights are closely tied to exclusion rights (e.g. the right to keep others out). Taking advantage of management rights entails investments for future resource use. But to assure that the investments are worthwhile and that the rights holder captures the future benefits, the manager needs the authority and ability to exclude outsiders and others who would not comply with management rules".

BOX 3

Results from a study of forest tenure regimes in 30 of the world's most forested countries

RRI (2012b) assessed 61 statutory community tenure regimes and the "bundles of rights" available to communities in 30 of the world's most forested countries, accounting for approximately half of the world's forests. Those rights include having access to forest resources; making decisions on forest management; the ability to commercially harvest timber and other forest products; and being able to exclude outsiders. The study also investigated whether the tenure regimes confer the right to lease, sell or use forests as collateral, and whether they guarantee communities due process and fair compensation if the State revokes these rights.

Through these regimes, governments have increasingly established or recognized indigenous peoples' and communities' rights to forest resources in their national legal frameworks. However, the vast majority of the regimes (58 of the 61) restrict community rights by not granting one or more of the bundle of rights or by placing time limits on those rights. Most frequently absent are the rights to exclude outsiders and to lease lands.

The study showed that Latin America has the broadest and most complex system of community forest tenure regimes, with 24 regimes identified in eight countries. In Africa, 35 percent of the regimes cannot be put into practice because the implementing regulations required by law have not been passed.

- Duration of rights, e.g. whether they are time bound or perpetual
- Rights to compensation: whether the law guarantees due process and compensation if the rights are revoked or extinguished.

It is generally hypothesized that the stronger each of the rights in the "bundle", the more effective CBF is likely to be in achieving its intended objectives.

Strong rights are those that are embedded in a country's constitution or statutory law. Weak rights are those that are contained in lower levels of the regulatory framework, such as ministerial directions, rules and regulations. Strong rights cannot be revoked easily or modified by bureaucratic discretion. Locally recognized rights that are not formally recognized by the State would be weak, even though they may be locally effective.

In most countries, communities are required to accept a range of responsibilities in exchange for the rights to manage their forests and share in the benefits. These are generally prescribed in the regulatory framework (laws, policies, rules and regulations, etc.) and can include such things as preparing management plans, carrying out forest inventories and obtaining approval from government officials to harvest, transport and/or sell forest products.

The precise form of management (particularly the level of empowerment) varies from country to country and also within countries, depending on a host of factors. Most countries have their own names for different types of CBF, which can lead to some confusion in

trying to make comparisons between countries. Each form of CBF tends to have its own package of rights and responsibilities, and hence empowerment. For example, in the Philippines, CBF regimes where communities have management rights on forest land have included Community-Based Forest Management Agreements, Community-Based Timber Enterprises, Certificate of Forest Stewardship Agreements, Certificate of Ancestral Domain Title and Protected Area and Community-Based Resource Management Agreements. Similarly, at least six different CBF regimes have evolved in Nepal, of which "community forestry" is just one (Ojha, 2014). "Community forestry" is a term used in many countries, but it can refer to varying packages of community rights and responsibilities. Hence, it is useful to categorize the distinguishing features of the different types of CBF regimes so that meaningful comparisons can be made both within and among countries.

Devolution does not usually entail transfer of the complete bundle of tenure rights. A consideration of which rights are transferred and how they are transferred is helpful in characterizing different CBF regimes. While distinguishing a precise typology of CBF regimes is difficult, different types can be categorized in terms of the rights and degree of participation, and hence potential empowerment, of communities in decision-making for such things as planning, carrying out forest management activities and benefit sharing. The spectrum of generic types of CBF (Figure 1), in order of increasing strength of rights, participation and empowerment, includes:

- participatory conservation,
- joint forest management,
- community forestry with limited devolution,
- community forestry with full devolution,
- private ownership (smallholder forestry).

Appendix 2 gives a more detailed description of each of these generic types.

In some of the discussion that follows, it is necessary to make a distinction between collaborative forms of CBF (the first four types) and smallholder forestry. Collaborative forms involve collective decision-making over management of common pool forests, while private forest ownership, which includes smallholder forestry, involves very different dynamics and decision-making processes and hence governance arrangements. The bulk of the research on CBF during the past 25 years (some of which is referenced later in this

FIGURE 1
Spectrum of CBF regimes

report) has been focused on collaborative forms of CBF. The distinction between these two forms is maintained throughout this report wherever possible, but sometimes the boundary becomes blurred. Some of the differences between these two categories will become apparent in the following sections.

In reviewing the voluminous literature on CBF it is generally very difficult to determine where on the spectrum of CBF types a particular CBF regime falls (and importantly, what rights apply). This makes it difficult to judge the effectiveness of the regime in achieving its objectives and also makes it difficult to compare regimes within and between countries.

RECOFTC (2013) made the important point that CBF regimes operate within broader processes of rural development, democratization and the implementation of global norms. CBF provides opportunities for rural people to exercise their citizenship rights by gaining a voice in public decision-making. However, RECOFTC (2013, p. 15) cautioned that CBF "may also involve people in forest management merely as passive participants", concluding that in such cases it "serves the interests of governments to strengthen their hold over remote rural areas more than communities' demands for civil and political rights". Such regimes would fall under the first two types in Figure 1 (participatory conservation and joint forest management). The distinction between active control and passive participation is critical in judging the likely effectiveness of individual CBF regimes, as indicated in Figure 1.

A WORD ON INFORMAL CBF REGIMES

Although this review is concerned primarily with formal CBF regimes, i.e. those that are legally recognized by governments, it is useful to mention informal regimes. These are widespread in many countries in Africa, Asia and Latin America. Indeed, in many countries informal regimes based on customary tenure remain the most important systems through which people regulate access to land and other resources (Atwood, 1990). Informal regimes, being adapted to specific local contexts, are highly diverse and thus difficult to categorize, which impedes efforts to judge their effectiveness.

The conventional view is that informal regimes are insecure and impede development and that therefore some system of land registration is necessary to encourage investment in land and resource development. However, a countervailing view suggests that the costs of land registration may be high and its effects may not meet expectations. In addition, many informal regimes are not insecure because they are widely accepted based on customary norms and values and are seen as locally legitimate. Nonetheless, there is frequently tension between official (government) views of land and resource tenure and local views, and many governments do not recognize the power of customary authorities to regulate and administer land and its resources. A further issue is that as commercial opportunities increase, many customary tenure systems tend to evolve towards individual rights (Atwood, 1990), with potential negative consequences for marginalized individuals and groups.

The world is changing, and many countries are granting large areas of land to private investors for large-scale agro-industrial enterprises, particularly in Africa but also in parts of Asia and Latin America (Knight *et al.*, 2012). (This issue is discussed in more detail in Chapter 8 in the section on processes to encourage sustainable forest management.) Land

grants can dispossess rural communities and deprive them of access to natural resources that are vital to their livelihoods and economic survival. It has been proposed that the rights of rural communities in such situations can be protected by passing laws that elevate existing informal (customary) land rights into formal legal frameworks and make customary land rights equal in weight and validity to formalized land rights (Fitzpatrick, 2005; Knight, 2010). Such "community land titling" has been trialled in Liberia, Mozambique and Uganda (Knight *et al.*, 2012), and proposals have been made for its wider application, which would have the effect of formalizing previous informal regimes.

The Indian Government enacted a Forest Rights Act in 2006 aimed at formally recognizing the rights of forest-dependent people to protect and manage their customary forests. RRI (2015a) reports that this is a major initiative to formalize previous informal regimes and has the potential to benefit 150 million people by recognizing their rights over more than 40 million hectares of forest land, but that barely 1.2 percent of the potential area has been recognized and registered.

In some countries local communities and indigenous people have vigorously defended their informal (customary) rights and these have eventually been recognized by the State. Well-known examples are rubber tappers in Brazil (Stevens, 1997) and Brazil nut gatherers in Bolivia (Contreras-Hermosilla and Vargas Ríos, 2002).

CBF OBJECTIVES

In order to assess the effectiveness of CBF it is necessary to identify the policy and/or community objectives for which it was put in place.

Collaborative forms of CBF

Objectives for collaborative forms of CBF (i.e. the first four types in Figure 1) are not always explicitly stated in government or other documents and, where they are, they are often couched in very general terms. Table 2 gives an overview of a range of CBF objectives reported by various reviewers.

A survey of CBF in tropical developing countries (Tole, 2010) noted that government officials considered regenerating and protecting forests as the paramount goal, while communities viewed food and income security as the most important. McDermott and Schreckenberg (2009), in a study of CBF regimes in the global North and South, commented that forest conservation is more strongly emphasized as the primary objective of CBF regimes in the South, where local people are often seen as the chief agents of degradation.

As noted previously, different stakeholders often have different perceptions of the purpose of CBF. Analysing government policy-makers' view on CBF in the Philippines, Gauld (2002, p. 229) concluded that the discourse surrounding CBF is "shaped by efforts to maintain centralized control over forest management and a political economy orientated towards commercial timber production using the principles of 'scientific management'. While timber production and the technical aspects of forest management are emphasized, social and environmental considerations remain neglected."

The above discussion focuses largely on objectives set from outside the communities, often by national governments. However, local communities frequently value forests or

TABLE 2
CBF objectives reported by numerous reviewers

Author	Geographic scope	CBF objectives
FAO/ECE/ILO Joint Committee Team of Specialists on Participation in Forestry, 2002	Global	To redress existing asymmetrical patterns and relations of power between different actors in favour of marginalized rural communities (political purpose)
Gauld, 2002	Global	To reconcile goals of social justice, equity, development, empowerment and environmental sustainability
Pretzsch *et al.*, 2014	Global	To sustain forest resources and environmental services, including the conservation and rehabilitation of forest land
		To contribute to local livelihoods, including poverty alleviation
		To protect the property rights of local dwellers
		To maintain public property rights and public control via state and government institutions
Odera, 2004	Sub-Saharan Africa	To arrest forest resource degradation
		To enhance production of multiple products
		To enable communities to have secure access to, and ownership of, the resources and their benefits, through empowerment and building of capacity for forest management
DENR, 2004	Philippines	Sustainable management of forest resources
		Social justice and improved well-being of local communities
		Strong partnerships among local communities and the Department of Natural Resources
Pagdee, Kim and Daugherty, 2006	Global	Fulfilment of local needs
		Improvement of forest conditions
		Capability to address environmental issues
		Enhancement of equitable benefit sharing
Cheng and Fernandez-Gimenez, 2006a	United States of America	To build resilient forests, communities and economies
Pulhin, Inoue and Enters, 2007	Philippines	Socioeconomic well-being, social justice and equity, sustainable forest management and a healthy environment
Beauchamp and Ingram, 2011	Cameroon	To promote participation in forest management, manage forests sustainably and alleviate poverty
RECOFTC, 2013	Asia and the Pacific	Promotion of SFM as well as the economic, political, cultural and human rights of people living in rural areas

parts of forests for cultural reasons (Odera, 2004; Liu, Zhang and Zhang, 2012) as well as for material benefits. Conservation of biological resources through religion and belief has a long history in many parts of the world; examples include a wide spectrum of sacred sites, forests and landscapes (Anthwal *et al.*, 2010; Pungetti, Oviedo and Hooke, 2012). Most sacred sites have traditional management systems in place that treat them as common pool resources (Rutte, 2011), and as a result their incorporation into more formal CBF regimes should not be problematic. Cultural, spiritual and religious values of forests tend to be locally specific. Hence the effectiveness of CBF regimes in achieving their objectives also needs to be assessed locally. It is particularly important to ensure that cultural and related values are acknowledged by governments and reflected in more formalized management objectives. Relevant indigenous technical knowledge – i.e. knowledge systems embedded in the cultural traditions of regional, indigenous or local communities (see World Bank, n.d.) – must also

be incorporated into policy formulation and implementation (Liu, Zhang and Zhang, 2012; Yuan, Wu and Liu, 2012).

In general, the policy objectives of CBF include a mix of socioeconomic and biophysical outcomes, although in some situations human rights aspects, associated with recognition of tenure, are also a major objective (FAO, 2011). It is apparent that the objectives set for CBF, either implicitly or explicitly, are extremely ambitious, and often more ambitious than those set for government forest departments or logging concessionaires in most countries. It is often overlooked that some of the objectives for CBF may be mutually exclusive, or at least require considerable trade-offs. For example, tenure reforms in Latin America over the past 20 years have often had the potentially contradictory goals of promoting local well-being and conserving forests (Pacheco *et al.*, 2012). To achieve an objective of biodiversity conservation in a protected area under CBF management it may be necessary to curtail the harvesting of certain forest products, which could lead to a reduction in the well-being of local communities. As noted by Charnley and Poe (2007, p. 325): "biodiversity conservation and community development have multiple dimensions, and trade-offs between specific aspects of one may be needed to achieve specific aspects of the other. Making trade-offs need not undermine the entire endeavour; communities and other stakeholders must consciously negotiate and choose which trade-offs to make."

Smallholder forestry

Privatization and restitution of forests in Central and Eastern Europe (discussed in detail later in the report) have been associated with strong objectives of social justice, as well as economic ones. The rapid expansion of smallholder forestry in China and Viet Nam (also discussed later in the report) has been driven by an objective to decollectivize and decentralize forest management. While the privatization process in China aimed at reinstating some degree of private rights to forests, it was also expected to serve as an incentive for farmers to become involved in forest management and to lead to an increase in forest cover and improvement in farmers' livelihoods (Liu and Innes, 2015).

A forest village in Honduras, where tree growing for timber and crop protection has helped move the population away from slash-and-burn agriculture

Chapter 4
Extent of CBF

Various estimates have been made of the number of people who depend on forests for at least some of their livelihood. White and Martin (2002) estimated that some 60 million forest-dependent indigenous people live in the tropical moist forests of Latin America, West Africa and Southeast Asia. They also estimated that an additional 400 to 500 million people depend directly on forest resources for their livelihoods in these regions. FAO (2014) estimated that 2.4 billion people, primarily in developing countries, rely directly on woodfuel for cooking, food processing and water sanitation. RECOFTC (2013) noted that forests are an integral part of the lives of more than 450 million people in Asia and the Pacific. In spite of the high numbers, only a relatively small percentage of these people have legally recognized rights to exercise decision-making over forest management, although they may exercise de facto rights.

It should be emphasized that tenure in relation to collaborative forms of CBF is often highly contested. Irrespective of the formal legal situation, many indigenous peoples and local communities who have lived in and around forests for generations argue that the forests belong to them under locally defined systems of customary tenure (Odera, 2004; FAO, 2011). Blomley (2013, p. 4) noted that "over 90 percent of Africa's rural population accesses land through customary institutions, and a quarter of the continent's land area – some 740 million hectares – is made up of communal property, such as forests and rangelands, although much of this is not officially recognized as such by African States".

In most countries governments have claimed ownership of much of the forest estate through historical processes of expropriation, and those claims have been formalized in statutory laws. While governments are increasingly recognizing local ownership and control of forests, forest tenure arrangements remain in dispute or unclear in many places, including low-, middle- and high-income countries. In most of Europe and North America, in contrast, where the dominant form of CBF is smallholder forestry, it is carried out on land that is privately owned and where tenure is generally not contested.

With the expansion (and formalization) of community and smallholder involvement in forest management during recent decades, FAO has commenced gathering data on forest tenure (forest ownership and management rights) in its five-yearly Global Forest Resources Assessment (FRA) exercises (FAO, 2010a). FAO acknowledges that official data on forest tenure are incomplete, but countries are increasingly reporting on these aspects. FRA 2015 (FAO, 2015a, 2015b) reports on ownership at the country level but only reports management rights at the global level, and then only as a bar graph with no data for management rights of communities and/or indigenous peoples.

EXTENT OF CBF BY REGION

This section provides information on the extent of CBF on a regional basis. Where possible, two indicators of extent are reported for individual countries: total area of forest

under CBF and the area of forest under CBF as a percent of the total forest area. Together, these indicators give a picture of the relative importance of CBF as a forest management regime in the country, although these data are not always readily available.

Africa

Raik and Decker (2007, p. 1) noted that CBF has proliferated throughout Africa as national governments have decentralized the administration of public forestry; it has taken different forms "depending on the assortment of land-tenure systems, forest-use norms, wood demand, and social organization, among others factors". Some CBF systems focus on conservation of forest resources, including water sources or watersheds, or rehabilitation of degraded areas, whereas others focus on "sustainable use" and may allow harvest of forest products for domestic use and occasionally for income generation and promotion of ecotourism. Blomley (2013) noted that in Africa, rights are generally a matter of government administrative discretion and thus liable to be changed or revoked. This situation differs from Latin America, where many forms of CBF are based on recognition of human rights, such as the rights of indigenous peoples to control and manage their own territories.

Reviewing CBF in countries in sub-Saharan Africa, Odera (2004) reported that by 2002, CBF was under way in over 35 countries in the region, many of which had enabling policies and legal instruments. He reported that more than 100 CBF projects were operating, involving 5 000 communities working in more than 100 national forests and 1 000 protected areas.

Odera (2004) reported that by 2002 about 16 percent of the total forest area in sub-Saharan Africa was under some form of CBF. However, data collated by FAO (2010a) indicate that less than 1 percent of the forest land in Africa is either owned by communities or indigenous peoples or designated for their use. A study of 12 African countries for which data were available (RRI, 2014a) found that only 6 percent of forests are under some

TABLE 3
Extent of CBF in Africa

Country	Forest land *(million ha)*	Forest land under CBF regimes *(million ha)*	% of forest land under CBF regimes
Angola	58.48	0	0
Cameroon	19.92	1.18	5.9
Central African Republic	22.61	0	0
Congo	21.28	0.44	2.1
Democratic Republic of the Congo	154.14	0	0
Ethiopia	12.30	1.36	10.8
Gabon	22.51	0	0
Gambia	0.42	0.05	11.9
Kenya	3.47	0	0
Togo	0.39	0	0
United Republic of Tanzania	31.35	21.00	67.0
Zambia	49.47	0	0
Total	**396.34**	**24.03**	**6.1**

Source: Based on RRI, 2014a, except for area and % of forest land under CBF in Ethiopia, which has been updated based on A. Said and T. Tadesse, personal communication, 2015

form of community tenure regime (Table 3). The large difference between the figures given by Odera and those given by FAO and RRI is likely to be due to the reality that "despite the governments' de jure management rights, customary institutions have and continue to exercise de facto rights to, and sometimes control over, forest resources covering large areas of forestlands" (Blomley, 2013, p. 4). Indeed, Alden Wily (2012) estimated that sub-Saharan Africa contains approximately 1.4 billion hectares of land under customary land tenure involving almost half a billion people. It is probable that the respondents to Odera's questionnaire were reporting on the de facto situation rather than the de jure one. This suggests a considerable amount of uncertainty over the tenure reality on the ground.

Most of the initiatives in Africa are aimed at providing communities with subsistence goods and services, and few allow for commercialization of forest products. A forthcoming exception may be the Democratic Republic of the Congo, where a recent announcement has opened the door for community concessions (FPP, 2015), although there are signs that they may be highly constrained (RRI, 2015b) (Box 4).

BOX 4

Possibility of community concessions in the Democratic Republic of the Congo

A community forestry decree was signed by the Prime Minister of the Democratic Republic of the Congo in August 2014. The decree is a significant move towards strengthening local communities' rights and has the potential to reform land tenure and the forest governance regime in the country, paving the way for a new forest governance framework.

It gives indigenous and local communities the possibility to transform part or all of their customarily occupied forest into a community-controlled and managed concession. It is an acknowledgement by the government that communities need to access and benefit from their forests. The forest concessions will be given in perpetuity and are free of charge. Forest concessions would entitle indigenous and local communities to exploit the forest in all its forms, subject to the observance of rules and practices of sustainable management.

In spite of the promising possibilities opened up by this decree, the current text has shortcomings in the form of bureaucratic constraints and red tape. In addition, the government still has to adopt subsequent implementing measures to accompany the decree, namely the ministerial order on the management of community forest concessions, meaning that effective implementation is a long way in the future.

A more recent announcement suggests that the government may roll back community rights from those originally suggested by requiring community forestry to be placed with local authorities, whose interests might not be aligned with achieving SFM or the best interests of local communities and indigenous people. Hence, the initiative may be doomed before it is given a reasonable trial.

Source: FPP, 2015; RRI, 2015b

BOX 5

Recent CBF initiatives in Africa

- Cameroon: Revisions to forest law in 1994 have enabled community associations and cooperatives to acquire the exclusive rights to manage and use up to 5 000 ha of customary forest under a 25-year contract, resulting in the creation of 147 new community forests covering a total area of 637 000 ha of humid forest.
- Ethiopia: As at 2013, various donors were supporting the establishment of Joint Forest Management (JFM) across 27 sites covering 211 000 ha. This area is expanding rapidly. More recent data (A. Said and T. Tadesse, personal communication, 2015) indicate that the area of forest under various CBF regimes in Ethiopia is about 1.36 million hectares.
- The Gambia: 10 percent (approximately 45 000 ha) of the country's forested land is managed either through community-based forest management or joint forest park management (a collaborative approach). In the 25 years since the introduction of CBF, the forest area has increased by 10.41 percent (FAO, 2015a).
- Guinea: From 1993 to 2011, communities in the Fouta Djallon highlands became involved in managing 12 forests comprising over 93 000 ha under co-management agreements between government and local communities.
- Liberia: After 14 years of civil war, a forest sector reform was carried out in 2006, which included recognition of community forestry. Community forestry was piloted at six sites covering almost 37 000 ha of forest.
- Namibia: By mid-2011, 13 community groups had secured legal rights to own, manage and use 465 000 ha of woodlands. The management of a further 6.9 million hectares of forest land by 52 community groups was in the process of formalization.
- The Niger and Burkina Faso: Commercially oriented production and harvesting of fuelwood and charcoal from dryland community forests was established from 1985 onwards and has since spread to Chad, Guinea, Mali and Senegal.
- Sierra Leone: Piloting has been carried out for three models of participatory forest management – community forests, government forest reserves and protected areas – on a total of 36 000 ha.
- United Republic of Tanzania: Over 4.1 million hectares of forests are now under direct management and ownership of village councils or under JFM agreements between government and local communities, in conformity with revisions to the forest policy and legislation introduced between 1999 and 2002.

Source: Blomley, 2013 except where otherwise noted

The rapid uptake of CBF in sub-Saharan Africa noted by Odera in 2004 has continued in recent years. The portion of forest land under CBF has expanded in the past decade, although starting from a very low base. Box 5 gives examples of some of the initiatives under way across Africa. Table 3 summarizes data for individual countries.

In summary, CBF in Africa is still considered a relatively new development. Most of the initiatives are less than ten years old, and most of the remainder are less than 15 years old. Most began as donor-funded projects, often with support from international non-governmental organizations (NGOs). Few of the initiatives have been institutionalized into mainstream government programmes, although exceptions are seen in the Gambia, Namibia and the United Republic of Tanzania (Blomley, 2013). The United Republic of Tanzania has made most progress, with 21 million hectares of its forest land (67 percent) under some form of CBF (RRI, 2014a).

Asia and the Pacific

CBF commenced in Asia and the Pacific in the 1980s in the form of local initiatives, largely in response to community demands and concerns about forest degradation (RECOFTC, 2013). An analysis of 14 countries in the region identified several recent drivers of change, including "a light breeze of democratization" (RECOFTC, 2013, p. 2) which has led to an increasingly vibrant civil society in some countries. Overall, citizens are demanding a broadening and strengthening of their civil and political rights, including the treatment of forests and other natural resources as economic assets.

Across 16 countries in the region for which data are available, a total of 185 million hectares of forest land are held under CBF management regimes, accounting for 34 percent of total forest land (Table 4). These data show considerable variation among countries.

While many countries in Asia and the Pacific have some type of CBF regime, programmes and approaches within the region are highly diverse. What most Asian countries have in common is that most forests are legally under State control and CBF regimes generally involve some form of devolution of responsibility for forest management. Sometimes, but not always, local communities have rights over forests, but in general these rights are highly circumscribed (Fisher, 2014).

In Nepal, for example, policy reforms in 1989 and 1993 enabled allocation of forest land to groups for their management, with the groups empowered to use all forest products for their benefit. Community forestry in Nepal is now a national programme, with almost 2 million hectares (23 percent of the national forest estate) under management by more than 18 000 registered Forest User Groups involving 1.6 million households (33 percent of the rural population) (CBS, 2014).

The situation in the Pacific subregion is different. In Melanesian countries in particular, customary landownership, including forest ownership, is legally recognized. However, in Papua New Guinea, in spite of strong community tenure rights, the government, by law, retains the right to issue Forest Management Agreements (the most common administrative mechanism to legitimize commercial logging) as well as to oversee harvesting operations,

TABLE 4
Extent of CBF in Asia and the Pacific

Country	Forest land *(million ha)*	Forest land under CBF regimes *(million ha)*	% of forest land under CBF regimes
Australia	123.00	41.90	34
Bangladesh	2.52	0.27	11
Bhutan	3.10	0.04	1
Cambodia	11.12	0.25	2
China	181.38	108.91	60
India	68.43	23.20	34
Indonesia	131.2	0.84	1
Lao People's Democratic Republic	18.68	5.90	32
Malaysia	18.48	n.a.	n.a.
Mongolia	12.55	3.15	25
Myanmar	20.41	0.05	0
Nepal	6.01	1.87	31
Papua New Guinea	25.33	25.08	99
Philippines	18.08	10.96	61
Thailand	17.22	0.54	3
Viet Nam	13.52	3.81	28
Total	**548.03**	**184.87**	**34**

Source: Based on RECOFTC, 2013 except for Australia (ABARES, 2013) and Mongolia (H. Ykhanbai, personal communication, 2015)

collect royalty payments and distribute a share to the communities (Gilmour, Hurahura and Agaru, 2013). Thus while communities in Papua New Guinea own the forests, they are prevented by regulatory requirements from exercising effective control over forest management.

During the past decade the Australian Government has increasingly recognized the rights of indigenous people to own and manage land, including forest land. The most recent national report on the state of Australia's forests (ABARES, 2013) recorded 41.9 million hectares under some form of indigenous CBF regime, which amounts to 34 percent of the national forest estate.

RECOFTC (2013) noted that CBF governance arrangements across the region are mainly collaborative forms ranging from active control by communities to passive participation in what are essentially government programmes. They differ in which rights are allocated, the strength of those rights and the responsibilities associated with the exercise of the rights (Box 6).

In summary, CBF is now at different stages of development across the region, ranging from long-running and relatively mature regimes in India, Nepal and the Philippines to relatively recent programmes in Bhutan and Mongolia. China has the greatest area of forest land under CBF (108.9 million hectares, or 60 percent of the country's total forest land) while Bhutan, Cambodia, Indonesia, Myanmar and Thailand all have 3 percent or less of their forest land held under CBF regimes. The rate of increase in the proportion of the region's forest land held under CBF regimes is modest, having grown from 31 to 34 percent in the decade between 2002 and 2012.

BOX 6

Differences in tenure rights and management outcomes of selected CBF regimes across Asia and the Pacific

In general, communities can only take advantage of strong tenure rights and translate them into effective forest management when regulatory restrictions and power asymmetries do not prevent them from doing so. Chinese villagers involved in collective forestry tend to own their forests and exert active control over forest management. Nepal's Forest User Groups possess tenure rights to their forests and manage them actively. Indian villagers hold only weak tenure rights to forests and enjoy only weak influence over forest management under the country's Joint Forest Management programme. However, Papua New Guinea demonstrates that strong tenure rights, even ownership, may not translate into active and effective control over forest management.

Source: RECOFTC, 2013

Latin America

Pacheco *et al.* (2012, p. 567) described how "a new wave of land reform, initiated in the 1980s, is unfolding in forest landscapes for forest-dependent people in Latin America". They postulated that the nature of forest tenure reforms in the region has been defined by three factors: grassroots social pressure, particularly ancestral claims for homelands; growing global conservation concerns that permeated national policy decision-making; and shifting political views about forest governance linked to political decentralization.-

Traditional autonomously initiated management systems predominate over enormous areas in South America, especially in the Amazon Basin forests (Hagen, 2014). In Mexico and Central America, traditional rights form the core, but externally initiated, commercially oriented CBF systems prevail, providing some of the best examples in the developing world of full community empowerment over forest resources. The diverse tenure arrangements in the region have resulted in different governance systems including indigenous territories, extractive reserves, (agro) extractive and forestry settlements and community forest concessions (see examples in Box 7).

Mexico has a long history of community forestry (Bray, Merino-Perez and Barry, 2005), with upwards of 80 percent of the country's forests under the legal jurisdiction of communities (Rainforest Alliance, 2015). Mexico arguably benefits from the best combination of tenurial rights including strong commercial rights to harvest and market timber products (Hagen, 2014). Currently, more than 3 000 communities throughout Mexico have forest management plans.

A number of recent policy and regulatory changes are relevant to CBF in the region (FAO, 2014). In 2010, Guatemala's Instituto Nacional de Bosques, the country's forest authority, established a programme of incentives for smallholder engagement in natural forest management and agroforestry. In Brazil, the creation in 2009 of the Programa de

BOX 7

Different types of CBF regimes across Latin America

In some countries, such as Mexico, all communities must conform to a standard form of local government; in others, such as Bolivia and Peru, indigenous communities are free to organize themselves according to their traditions and customs. In Bolivia, reform laws emphasizing people's participation and decentralization reversed a situation where communities were not allowed to have representation. The reforms in Bolivia in the 1990s enabled every community to be immediately represented by a locally elected grassroots organization for participation in local government budget planning and oversight. In Nicaragua, the decentralized governance established for territories titled to indigenous peoples might seem ideal, but in practice more powerful actors continue to dominate.

Source: Alcorn, 2014

Manejo Florestal Comunitário e Familiar introduced the concept of community and family forest management into the Brazilian legal system. This programme provides incentives to local groups to develop forest management plans; it is estimated that it has the potential to involve the inhabitants of almost 60 percent of the 210 million hectares of public forests in Brazil (estimated at 512 000 indigenous people, 3 500 *quilombo* communities and 545 000 settler families) (Serviço Florestal Brasileiro, n.d.). Peru has introduced the Programa Nacional de Conservación de Bosques (Programa Bosques, 2015), an incentive programme offering indigenous communities about USD 4 per hectare to engage in SFM, which indicates a policy shift toward encouraging indigenous forest management as a conservation tool.

Hagen (2014) reported that in Latin America, communities now legally manage 216 million hectares of forest, or one-third of the forest area. This estimate is in line with that of Pacheco *et al.* (2012) based on data from ten countries in Latin America (Table 5). These data indicate that forest tenure reforms in the region have recognized the rights of local and indigenous communities to about 270 million hectares, representing about 32 percent of total forest land in the region. The data show significant differences among countries in the region. For example, Colombia, Ecuador, Mexico, Nicaragua and the Bolivarian Republic of Venezuela all have 50 percent or more of their forest land area under the control of communities, whereas French Guiana and Guatemala have less than 15 percent of their forest land under some form of community control. Of the countries in the region, Brazil has the largest total area allocated to communities, 134 million hectares, which equates to about 26 percent of the total forest area in the country (although not all of the land controlled by communities would be forest land). RRI (2014a) reported similar results for nine Latin American countries, indicating that 39 percent of the forests are under some form of community tenure regime.

Most of the available information on CBF in Latin America relates to collaborative regimes. Cossío *et al.* (2014) have recently drawn attention to the gross underreporting of

smallholder forestry, which tends to operate at the farm–forest interface, for example in the Peruvian and Ecuadorean Amazon regions. Mejía *et al.* (2014, p. 9) noted that in some areas forest holdings average 15 ha and that smallholder forests are "the product of a long management process that begins with the protection of seed trees and seedlings that grow spontaneously in the fields and fallows belonging to the people ... Despite their difficulties in obtaining formal titles and authorization, (these) communities do find informal channels through which to sell timber." (See also Sears *et al.* [2014] on the silvicultural and management methods employed by smallholders.) However, Bennett-Curry (2015) noted that while smallholder farmers in the Peruvian Amazon claim a lot of forest land as theirs, in reality they have few if any formal rights to those forests.

Pinedo-Vasquez *et al.* (2001) drew attention to the changing nature of the timber industry in the Amazon region in the post logging boom era, with smallholder forestry becoming increasingly important. They noted that the smallholder forestry model is likely to be sustainable from both environmental and economic perspectives. Sears, Padoch and Pinedo-Vasquez (2007) cited examples from the eastern Amazon of smallholders and family-run sawmills operating a vertically integrated timber industry. In this setting, producers are also loggers and millers with strong social networks that are effective in transport and market transactions. However, Pokorny *et al.* (2012) warned that significant technical, institutional and financial hurdles are to be overcome before smallholders can benefit from existing market opportunities and that policies need to address the "unfair political and economic status quo to avoid inevitably reinforcing existing social and economic inequalities as the underlying reason for environmental degradation" (Pokorny *et al.*, 2012, p. 399).

Menton and Cronkleton (2014) noted that smallholders often work with species that are outside mainstream markets and are not prioritized by policy-makers and development planners. Consequently, most smallholders sell their timber through informal channels. These authors went on to suggest that "smallholders can be active players in local markets for forest goods. While the production activities of individual households may seem relatively insignificant, smallholders as a group are significant contributors to the forestry

TABLE 5
Extent of CBF in Latin America

Country	Forest land *(million ha)*	Forest land under CBF regimes *(million ha)*	% of forest land under CBF regimes
Bolivia	57.2	14.8	25.9
Brazil	519.5	134.1	25.8
Colombia	60.5	29.9	49.4
Ecuador	9.9	7.6	76.8
French Guiana	8.1	0.7	8.6
Guatemala	3.7	0.5	13.5
Mexico	64.8	38.7	59.7
Nicaragua	3.1	3.0	96.8
Peru	68.0	13.1	19.3
Venezuela (Bolivarian Republic of)	46.3	30.6	66.1
Total	**841.1**	**272.0**	**32.3**

Source: Based on Pacheco *et al.*, 2012

sector. Given their importance together with their relative marginalization from access to credit and the current lack of policy initiatives to support their inclusion, smallholder management systems merit further study" (Menton and Cronkleton, 2014, p. 1). In spite of the implied importance of forest smallholders in the production and marketing of forest products in the region, little more than anecdotal information is available about their presence, let alone their extent, and they are largely unrecognized in national policies.

In summary, several distinct collaborative forms of CBF have emerged in Latin American countries during the past few decades with very different governance arrangements. They encompass both indigenous people as well as settler communities. In recent years there has been a growing recognition of the presence of smallholder forestry operating at the farm–forest interface, particularly in Amazonia. The inference from the literature is that smallholder forestry is widespread, but few data are available on its extent.

Europe

Smallholder forestry is the dominant form of CBF in Europe; it has been an integral part of forest management in most countries in the region for many generations. For example, Hirsch, Korotkov and Wilnhammer (2007), reporting on a survey of private forestry in 23 countries in Europe (which excluded the Russian Federation), noted that private ownership accounted for almost 50 percent of forest and other wooded land, of which more than 80 percent is held by individuals or families. Herbohn (2000) noted that smallholder forestry can have significant economic impact at an aggregate level and gives the example of the Nordic countries, where smallholder foresters own about 60 to 70 percent of the forest land. In Finland, more than 600 000 family forest owners control 62 percent of the forest area.

However, the ownership structure varies greatly among countries. In Austria, France, Norway and Slovenia, privately owned forests account for more than three-quarters of the total forest area, whereas in Bulgaria, the Czech Republic, Poland and Romania they represent less than one-quarter. Several countries are characterized by a relatively even

In the former centrally planned economies in Central and Eastern Europe, land restitution and privatization has substantially increased the number of smallholdings since the early 1990s (planting by members of a forest owners' cooperative, Lithuania)

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balance between private and public forest ownership, including some in Central and Eastern Europe (Hirsch, Korotkov and Wilnhammer, 2007).

Schmithüsen and Hirsch (2010) reported that 61 percent of all private forest holdings in Europe have an area of less than 1 ha, and 86 percent of holdings are less than 5 ha. Only 1 percent of owners have forest units over 50 ha, so the predominance of smallholders is apparent. In total, Schmithüsen and Hirsch (2010) reported 4.3 million private forest owners in the nine countries they surveyed, although Hufnagl (2004) reported 15 million family forest owners across 25 European Union countries.

Since the early 1990s, significant shifts in ownership of forest land have taken place in the former centrally planned economies in Central and Eastern Europe, associated with land restitution and privatization (Hirsch, Korotkov and Wilnhammer, 2007). As a result, the number of smallholdings has increased substantially. The Russian Federation is an exception to this trend, as almost all its forests are still publicly owned and managed (FAO, 2010a; RRI, 2014a).

Traditionally, many forest smallholders in Europe were economically dependent on their forests, either for home or commercial use, but this situation is changing. Wiersum, Elands and Marjanke (2005) found that only one-third of forest owners with less than 100 ha of forest were still economically dependent on their forests, and the management orientation now has a predominantly multifunctional focus.

Data from FRA 2010 (FAO, 2010a) indicate that public administrations hold management rights over public forests across most of Europe. The major exceptions are Switzerland and France, where communities hold management rights over 72 and 62 percent of the public forests, respectively. However, these regimes are essentially forest management by decentralized government entities (communal administrations) and do not fall within the spectrum of CBF regimes discussed in this publication.

There are relatively few extant examples in Europe of more collaborative forms of CBF involving community groups managing areas of common forest, although such forms of forest management were common prior to the Industrial Revolution (Wiersum, Singhal and Benneker, 2004). These customary institutions were undermined and destroyed as they came into conflict with newly emerging State and private interests (Jeanrenaud, 2001).

Wiersum, Singhal and Benneker (2004) also noted a renewed interest in common property forest management in several European countries. Jeanrenaud (2001) examined 12 case studies across the region, although no data were available on their extent and effectiveness. Collaborative forms of CBF have emerged in the past 25 to 30 years in the United Kingdom (Lawrence *et al.*, 2009; Roberts and Gautam, 2003). Lawrence *et al.* (2009) noted the wide diversity of modalities and approaches across England, Scotland and Wales in response to very different contextual backgrounds.

In summary, smallholder forestry is prominent across Europe, representing almost half of all forest land. Switzerland and France are the only countries that retain significant parts of their forest estate under community management, but this tends to refer to management by *commune* administrations rather than collaborative governance arrangements. During the past 20 years there has been a resurgence of interest in collaborative forms of CBF across Europe, although few data are available on their extent or effectiveness.

North America (Canada and the United States of America)

As in Europe, the dominant CBF regime in both Canada and the United States of America is smallholder forestry (privately owned woodlots), which has a long history in both countries. Collaborative forms of forest management, generally referred to in these countries as either "community forestry" or "community-based forestry", are relatively recent, in contrast with Europe, where they were common in pre-industrial times.

Only 8 percent of Canada's forest is held under private ownership, with most of this (84 percent) owned by individuals (FAO, 2010a). Wyatt and Bourgoin (2010) noted that smallholder forestry in Canada covers a total of 19 million hectares across 450 000 separate properties and produces approximately 27 million cubic metres of timber per year, or 14 percent of the country's wood harvest. Smallholder forests also contribute to maintenance of watershed functions and wildlife habitat and have a disproportionate role in landscape values and recreation opportunities because they are often located close to towns.

In the United States of America, 58 percent of the country's forest estate (179 million hectares) is held by private owners (FAO, 2015a), of which 69 percent are individuals (FAO, 2010a). Some 10.3 million families and individuals own 105 million hectares of forest and contribute nearly 50 percent of the country's timber production (Zhai and Harrison, 2000; Zhang *et al.*, 2009).

While FRA data (FAO, 2010a) indicate that public administrations hold management rights to 100 percent of the public forests in both Canada and the United States of America, it is clear from the literature that various collaborative forms of CBF have become established during the past two decades. Roberts and Gautam (2003) reported growing public interest in collaborative forms of CBF as an alternative form of forest management in Canada and the United States of America, claiming that community forestry has been a success story of land management and forest regeneration during the past decade. McCarthy (2006) noted that community forestry emerged during the 1990s as a popular alternative to centralized State control and the industrial dominance of public forests. It has been argued that collaborative forms of CBF have emerged in regions where low revenues from forestry and closures of local mills have led to pockets of deprivation (UNECE and FAO, 2015). Proponents argued that community forestry could redress injustices and help rural communities to achieve economic, social and environmental sustainability.

Teitelbaum, Beckley and Nadeau (2006) recorded 116 community forestry initiatives on public land in Canada, mainly in the provinces of British Columbia, Ontario and Quebec, mostly functioning through local government organizations. Approximately 60 percent were operating on Crown land, while the remaining 40 percent were on land owned by local governments. The median area of these community forests was 4 200 ha (although the average area was 14 300 ha) and their average age was ten years. The total area under community forestry was 1.56 million hectares. Of these initiatives, 60 percent were judged to be financially self-sufficient and 9 percent involved First Nation people. Unlike the communal forests of France and Switzerland, these initiatives involved a degree of collaborative decision-making.

In the United States of America, initiatives include 13 community forestry pilot sites supported by the Ford Foundation in the early 2000s (McDermott, 2009), which have been

used to conduct a considerable amount of research (e.g. Cheng and Fernandez-Gimenez, 2006a, 2006b; Danks, 2009; McDermott, 2009; McDermott and Schreckenberg, 2009). Community forestry in the United States of America involves a diverse range of activists and practitioners working in a variety of organizational settings, but no comprehensive inventory has been carried out. Christoffersen *et al.* (2008) carried out a survey of relevant projects, organizations and initiatives and concluded that the total population, size and location of community forestry organizations is not known, although they received over 200 responses from 25 states.

In summary, the dominant CBF regime in Canada and the United States of America is smallholder forestry, but collaborative forms have emerged during the past two decades featuring various levels of community empowerment. However, there has been little systematic study of the extent of these regimes.

GLOBAL EXTENT OF CBF

Global estimates of the area of forest owned or formally managed by local communities vary greatly (Table 6).

For example, Chhatre and Agrawal (2009), quoting data from Sunderlin, Hatcher and Liddle (2008), noted that the past two decades witnessed the transfer of use and management rights over 200 million hectares of forests to local users and communities across 60 countries.

RRI (2014a) estimated that worldwide more than 513 million hectares of forests, or 15 percent of the total forest estate, are either owned or managed by communities (including

TABLE 6
Estimates of area of forest owned by, or with management rights held by, communities and/or indigenous peoples

Data source	Forest area owned by communities/ indigenous peoples/individuals *(million ha)*	Forest area with management rights held by communities/indigenous peoples *(million ha)*
Chhatre and Agrawal, 2009		200
RRI, 2014a		513
FAO, 2010a		224[a]
FAO, 2015a	505[b]	

[a] Based on 7 percent of global public forest area given in FAO, 2010a

[b] Based on communities and indigenous peoples owning 15 percent of global private forest area and individuals owning 56 percent, as given in FAO, 2015a

TABLE 7
Forest tenure in 52 countries

Ownership/use category	Forest area *(million ha)*	% of total forest area
Total forest	3 319.5	100.0
Government administered	2 409.8	73.0
Designated for indigenous peoples and local communities	96.6	2.9
Owned by indigenous peoples and local communities	416.0	12.6
Owned by individuals and firms	397.1	11.5

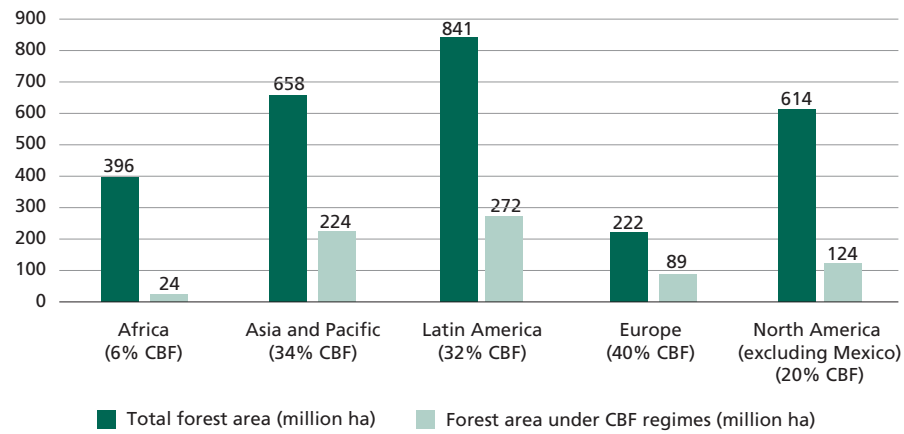
Source: RRI, 2014a

indigenous peoples) and another 11 percent are owned by smallholders and firms (Table 7). The area of forest owned or managed by communities is far greater than that managed by the forest industry, and slightly more than that held by private landholders and firms. RRI (2014a) also reported that, globally, the area of forest recognized as owned or controlled by indigenous peoples and communities increased from 11 percent in 2002 to 15 percent in 2013, while in the forests of developing (low- and middle-income) countries it increased from 21 to 31 percent over the same period. However, the same report also noted that progress in recognizing community forest rights slowed during the period 2008–2013 compared with the period 2002–2008. Globally, almost all (97 percent) of the change in the recognition of community rights over the period 2002–2013 occurred in low- and middle-income countries, with the bulk of it taking place in Latin America.

FRA 2015 (FAO, 2015b), using data from 2010, indicated that at the global level 15 percent of private forest area is owned by communities, and that communities, individuals and "others" hold management responsibilities in 3 percent of public forest (whereas the State holds these responsibilities in about 82 percent of public forest, and private business in the remaining 15 percent). Globally in 2010, 56 percent of private forest was owned by individuals, 29 percent by private business and the remaining 15 percent by local communities and indigenous peoples.

Figure 2 gives an overview of the global extent of CBF based on the information for 62 countries presented in the previous sections. It was difficult to reconcile some of the data sets and present them in a way that allows valid comparisons. For example, some sources include smallholder forestry as a CBF regime, while others do not. Despite the limitations of some of the data, Figure 2 illustrates that formalized CBF regimes now constitute a significant forest management modality around the world, present in more than 28 percent of the forest area in the 62 countries assessed, representing 18 percent of the world's forest area (based on the FRA 2015 estimate of 3 999 million hectares of global forest cover in 234 countries [FAO, 2015a, 2015b]).

FIGURE 2
Area of forest under CBF regimes, by region



SUMMARY

This chapter shows that CBF in various forms is present across all regions of the globe and continues to expand, although the rate of expansion has declined in recent years (RRI, 2014a). Smallholder forestry is the main form of CBF in most of Europe, Canada and the United States of America and has expanded rapidly in China and Viet Nam during the past decade. Smallholder forestry is also emerging as an increasingly important form of CBF in Latin America in the post logging boom era, although it is largely unrecognized in national policies. Collaborative forms of CBF, where there is communal tenure requiring collective action, are the dominant forms across most of Africa, Asia and Latin America. These forms are expanding across Europe and North America, although the area and percentage of forest involved are still relatively small.

As noted above, public ownership of forest remains the predominant ownership category in all regions. Communities and indigenous peoples own the majority of private forests in sub-Saharan Africa, although the extent is insignificant in terms of total forest area (around 1 percent of the total) because almost all forest in these countries is owned by the State. Communities and indigenous peoples also own a significant share (44 percent) of private forest (and total forest area) in Central America overall, primarily because of the situation in Guatemala and Honduras (FAO, 2015b).

A notable change at the regional level has been the increased devolution of management rights to local communities in South America (e.g. in Brazil and Colombia) and in South and Southeast Asia (e.g. in India, Nepal and the Philippines), although it is not always clear precisely what rights are devolved and what responsibilities accompany them, i.e. just where on the spectrum of CBF types the regimes sit. The countries with the largest area of public forest under community management are Brazil and Colombia, with 152 million hectares and 30 million hectares respectively (FAO, 2015b). Furthermore, it is expected that major shifts in forest ownership and management will continue as a consequence of forest tenure reform in China (in favour of private ownership by individuals and households) and possibly in Latin America. In Africa the State retains a dominant role, although some management rights have been devolved to communities, particularly in Eastern and Southern Africa (FAO, 2010a).

A conclusion from looking back over the past three decades is that community and smallholder forestry has been a key focus of policy reform in those countries where national forest policies and programmes have undergone revisions (IFRI and FAO, in preparation).

Work by FAO, RRI and RECOFTC during the past decade has gone a long way towards gathering meaningful information on ownership and management of the world's forests, particularly for key forested countries in Africa, Asia and Latin America. However, there is still some way to go to build a complete global picture. A common frame of reference for type and extent of different CBF regimes would be helpful for this task.

Commercialization of forest products can increase the flow of benefits to communities (Democratic People's Republic of the Congo)

Chapter 5
Current trends in CBF

Several trends in recent years give an indication of the trajectory that CBF is taking around the world. These include institutionalization of CBF into mainstream national development programmes in developing countries; emergence of civil society organizations to represent CBF interests; restitution and privatization of forest land (mainly in Central and Eastern Europe); expansion of smallholder forestry, particularly in Asia; commercialization of forest goods and services; connections between smallholders/communities and private companies; and incorporation of a wider range of policy objectives into CBF. Not all of these trends are apparent in all countries and regions, but they demonstrate how CBF is responding to influences from international, regional, national and local spheres. Each of these trends is discussed in turn.

INSTITUTIONALIZATION OF CBF INTO NATIONAL DEVELOPMENT PROGRAMMES IN DEVELOPING COUNTRIES

In many developing countries CBF started as a relatively small-scale policy experiment where essential inputs (such as technical skills and budget) were often provided by external agencies. Experience suggests that it often takes some years for CBF to be tested, assessed and refined to ensure it is suitable for a country's specific conditions. It is only after policy-makers reach a degree of confidence that CBF is a useful forest management modality that it is integrated into national development programmes and supported by government institutions. As noted earlier, Odera (2004) recorded that in sub-Saharan Africa, although CBF was present in one form or another in more than 35 countries, it has rarely been scaled up and institutionalized into national planning and programmes. Significant scaling up and expansion from project to programme scale requires, among other things, the development of an enabling regulatory framework. Hagen (2014) noted that scaling up is possible where governments take strong ownership, donor support is sustained, and CBF generates concrete benefits to communities. Some types of CBF have been scaled up and integrated into national development programmes in several countries, including the Gambia, Ghana and the United Republic of Tanzania in Africa; China, India, Nepal, the Philippines and Viet Nam in Asia; and Brazil, Guatemala and Mexico in Latin America. As reported by Liu, Zhang and Zhang (2012, p. 1), since the early 1990s participatory forest management in China has been "piloted at community levels, scaled to regional levels and institutionalized in policy at the national level". In China and Viet Nam, smallholder forestry has been the main type of CBF that has been scaled up and institutionalized.

In some other countries, CBF has remained little more than a series of pilot projects that are largely irrelevant to the overall national forest management agenda. For example, in Thailand numerous community forestry sites in government-designated forest land are quite successful at a local scale, but there is no security of tenure for community groups

and no enabling regulatory framework. Hence, community forestry has little potential for scaling up to become a significant contributor to sustainable forest management in the country. However, smallholder forestry, largely involving the planting of eucalypts on private farmland, has flourished in Thailand. There are numerous reasons for the failure to scale up CBF in many countries, even after many years of trials, but frequently devolution of forest revenues from government to the community level is heavily contested by powerful actors with vested interests within or connected to government (Hagen, 2014).

EMERGENCE OF CIVIL SOCIETY ORGANIZATIONS TO REPRESENT CBF INTERESTS

In some countries where CBF has become institutionalized into regular government development programmes and activities, it has made a further transition to become a people's programme that is driven to a large extent from civil society advocacy rather than from a government line agency. In such cases civil society organizations (CSOs) have emerged that represent CBF stakeholders and often act to balance community interests with those of government. Such organizations include networks, alliances, associations or federations that have a specific mandate to represent and advocate for CBF (in addition to individual CBF membership groups). The presence of such organizations is a measure of the likely resilience and effectiveness of CBF. An often-cited example is the Federation of Community Forestry Users Nepal (FECOFUN), which has chapters from local to national level that network with most of the 18 000 Forest User Groups in the country (Box 8). While this model has not been replicated in many other countries, it is an example of the way in which local CBF stakeholders can increase their political voice and act to counterbalance the interests of government stakeholders.

CBF groups or organizations in Africa have also formed networks, associations or federations that exercise strong leverage in the political sphere and in lobbying for community rights. The Greenbelt Movement in Kenya, for example, evolved to become a basis for political power (Blomley, 2013). Likewise in Mexico and Central America, federations of communities and support groups have been successful in obtaining policy reforms and opportunities to pilot ideas that support CBF (Hagen, 2014). These groups include the National Alliance of Community Forests in Guatemala and the Alianza Mesoamericana de Pueblos y Bosques (Mesoamerican Alliance of People and Forests), a regional membership organization (see www.fao.org/partnerships/forest-farm-facility).

In addition to these forest-focused CSOs, some indigenous peoples' organizations include in their remit the championing of initiatives such as CBF for their members. A notable example in Asia is the Aliansi Masyarakat Adat Nusantara (AMAN), the Indigenous Peoples' Alliance of the Archipelago, which represents 2 349 indigenous communities across Indonesia.

Large-scale restitution and privatization of forest land in Central and Eastern Europe since 1990 (discussed in detail in the next section) has given rise to the emergence of local and regional associations that assist owners in establishing contact with others having similar interests and concerns and provide them with information on suitable forest management practices (FAO, 2012a). Associations basically facilitate market access and the professional management of forests. In Norway, where forests are largely private, forest owners' cooperatives assist in the efficient management of smallholdings (Schmithüsen

BOX 8

Federation of Community Forestry Users Nepal: a civil society organization with a mandate to influence policy and governance practices associated with CBF

The Federation of Community Forestry Users Nepal (FECOFUN) emerged in 1995 and has evolved through several stages. It began as a series of locally initiated informal networks that were small and confined to Forest User Groups located close to one another. Next, projects and District Forest Officers started to use these networks for planning and information extraction. In the third stage, user groups started to cluster around specific themes or issues (such as resin networks). Finally, federation building started with the formation of an ad hoc committee, which then extended membership and facilitated the formation of district chapters.

Since its establishment, FECOFUN has been a key player in forest-sector policy development and governance practices. Along with NGO alliances, it has brought civic perspectives into policy-making processes that were previously dominated by government technocratic perspectives. Overall, FECOFUN actions have sought to:

- promote a civil rights agenda in forestry;
- create civic resistance to top-down government decisions;
- augment service delivery;
- influence policy development processes;
- influence national and international discourse on forest governance.

FECOFUN has now become an important civil society platform to augment citizen's voices in governance discourse. While it is not without problems and internal conflicts, the federation is able to resist and challenge undemocratic approaches, policies and practices and to bring people's vision and ideas to bear on considerations of the future of forestry in Nepal.

Source: Adapted from Ojha *et al.*, 2008a as quoted in FAO, 2011

and Hirsch, 2010). In Sweden, approximately 104 000 private owners are members of four private forest owners' associations, representing about 50 percent of privately owned forests. These cooperatives employ full-time staff providing technical services, and the cooperatives also assist with timber marketing. It is important to recognize that these cooperatives involve collective action in regard to privately owned forest resources. Clear tenure is important, but the governance arrangements for the private forests contribute to effective management.

Among the forest owners' organizations in Europe is the Bureau of Nordic Family Forest Owners (NSF), which represents approximately 1 million family forest owners in Denmark, Finland, Norway and Sweden. Private families in these countries own about 37 million hectares of forest land, constituting 60 percent of the total forest area.

Several overarching CSOs have also emerged in Europe to represent the interests of small-scale and family forestry, chief among them the Confederation of European Forest Owners (CEPF) (Box 9).

BOX 9

Confederation of European Forest Owners – the umbrella federation of national forest owners' organizations in Europe

The Confederation of European Forest Owners (CEPF) was founded in Luxembourg in 1996, but its roots go back to the early 1960s. It represents and promotes the common interests of family forest owners in Europe with regard to sustainable forest management, the recognition of the multifunctional role of forests and other wooded lands and the acknowledgment of ownership rights. CEPF represents 16 million family forest owners owning approximately 100 million hectares of forest land in 23 European countries. Specifically, CEPF:

- represents the interests and provides the expertise of family forest owners vis-à-vis European institutions (in particular the European Commission, the European Parliament and the European Economic and Social Committee);
- actively participates in international and global forest policy fora, including the United Nations Economic Commission for Europe (UNECE) Committee on Forests and the Forest Industry (COFFI), the FAO European Forestry Commission (EFC), the United Nations Forum on Forests (UNFF), the United Nations Framework Convention on Climate Change (UNFCCC) and the World Summit on Sustainable Development (WSSD).

Source: Hufnagl, 2004; EUSTAFOR, CEPF, FECOF and Nordic Family Forestry, 2008; de Schorlemer, 2013

The Association of Forest Communities of Petén (ACOFOP), Guatemala, assists community forest concessions in planning, timber extraction and processing

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In summary, CSOs with a focus on both smallholder and collaborative forms of CBF have emerged in all regions. They have greatly increased the voice of local stakeholders in policy discourse and in some cases have also contributed to their empowerment in interfacing with industry to obtain equitable benefits from forest management. This growing phenomenon can be seen as part of the maturing of CBF.

RESTITUTION AND PRIVATIZATION OF FOREST LAND[2]

Privatization of national forests has become an increasingly common type of tenure reform in recent years, particularly in those countries where large-scale appropriation of forests occurred in association with political events such as the establishment of the Soviet Union after 1917 and its expansion after the Second World War.

In Eastern Europe, the current reforms frequently have two aspects: restitution and privatization. Schmithüsen and Hirsch (2010, p. 43) distinguished between the two as follows: "Restitution of forests acknowledges the continuity of private ownership rights on forest land in rendering them to the former owners or their heirs and/or to local communities and institutions. The term privatization refers in the present context mainly to the process of creating new private property rights on forest land." Citing Lengyel (1999, 2002), they went on to note that:

> *… privatization in more general terms has a broader meaning and addresses the transfer of productive assets or economic rights and privileges from the State to individuals or to the private sector as a whole. Privatization increases competition and commercialization among individuals and private stakeholders by reducing the role of the public sector and is concerned, for instance, with transferring tenure and management rights to private individuals and corporate bodies.*

Much of the restitution reform in Central and Eastern European countries has been driven by special restitution legislation since the 1990s, and privatization has involved land that was not claimed by former owners as well as other State land.

Restitution and privatization have resulted in the establishment of a large number of smallholdings in many countries, and holdings have also been divided through inheritance. The resulting large numbers of forest owners present a challenge for efficient management of forests, including access to markets, with many holdings falling below the critical size for economic management (UNECE and FAO, 2015).

Privatization is always a complex procedure and consideration needs to be given to identifying many actual or potential rights holders. There are many different ways of privatizing national forest assets. These include selling (or allocating) the land or selling (or allocating) only the forest use rights to one or multiple private owners. The process could separate carbon from trees or separate hunting rights from trees. Rights could be sold (or allocated) for fixed terms or in perpetuity. Conditions of sale or licence can include exclusive use or they can be used to limit the private owner's rights by selling rights with less than exclusive use.

Where the Central and Eastern European countries have preferred the establishment of rights through the transfer of ownership entitlements on forest land, the countries in the Commonwealth of Independent States (CIS) have preferred to maintain public

[2] Part of this section is adapted from FAO, 2011.

ownership of forests and forest land while allocating use rights, e.g. for cutting timber, through leasing agreements or by reserving certain forest areas for the exclusive use of communes, agricultural cooperatives or farms. The forest law may grant private rights on public forest estates for haymaking, grazing of cattle and collection of NWFPs and woodfuel. Depending on the situation, felling and forest permits may be issued to private or collective holders as an entitlement for specific forest uses either on a long-term basis (as a concession) or on a short-term basis (Schmithüsen and Hirsch, 2010).

China has implemented one of the most widespread programmes of privatization attempted anywhere. Since the late 1970s, the country has introduced dramatic changes in the way that its natural resources are managed, primarily directed at decollectivization and decentralization. This privatization process aimed at reinstating some degree of private rights to forests that would act as an incentive for farmers to become involved in forest management and lead to an increase in forest cover and improvement in farmers' livelihoods. An indication of the scale and extent of the transition from State (collective) ownership of forests to private ownership (mainly households) in China can be seen from the data in Table 8. These show an increase of 8.6 million hectares in the area of forest owned by private entities (mainly households) over a five year period to 2008 (Liu and Innes, 2015). FAO (2014) reported that by 2011 about 88 million households in China had received certificates for their forest rights. These give farmers more freedom to manage their contracted forest land (around 0.73 ha on average) for a period of 70 years, including the right to subcontract, lease, transfer or mortgage forest plots. For the purpose of issuing these certificates to households, some 1 000 Forest Tenure Trade Centres were formed in 27 provinces. These provide a range of services including trading of tenure rights, subcontracting and market information. Many households opt to subcontract forest management or to become part of Forest Farmer Cooperatives (FFCs). By the end of 2011, some 12.6 million households had joined FFCs, many of which were created by owners of processing enterprises, village leaders and forest farmer entrepreneurs.

Similar reforms have occurred in Viet Nam, with similar results. The expansion of smallholder forestry in Viet Nam has been made possible by the issuance of Land Use Certificates (LUCs) by the government following a process of forest land allocation. Under this process, forest areas are allocated for 50 years and most owners "are entitled to a legal land use certificate", called a Red Book Certificate (Nguyen, 2006, p. 361). As of December 2010, about 1.8 million LUCs had been issued to recognize users' rights to land, covering almost 9 million hectares. The vast majority of these were issued to households, with an average holding of around 3 ha. These reforms were accompanied by government support for the formation of 115 000 FFCs (by 2012) as well as for capacity building

TABLE 8
Change of ownership of production forests in China

Ownership	6th national inventory (1999–2003)		7th national inventory (2004–2008)	
	Area *(million ha)*	Percent *(%)*	Area *(million ha)*	Percent *(%)*
State	35.36	42.4	18.14	28.3
Community	32.68	39.1	22.02	34.3
Private	15.43	18.5	24.00	37.4

Source: Liu and Innes, 2015

among forest farmers, business development and facilitation of access to finance, including provision for the use of forests as collateral for loans.

EXPANSION OF SMALLHOLDER FORESTRY, PARTICULARLY IN ASIA

Some countries, particularly in Western Europe and North America, have a long tradition of smallholder forestry, but in most of the developing world this form of forestry has not been prominent. However, Sikor (2012) posited that smallholders have driven the dramatic expansion of tree plantations worldwide, which FAO (2010a) estimated to amount to an annual rate of establishment of 5 million hectares in recent years.

As noted in the previous section, a major trend during the past decade has been the rapid expansion of smallholder forestry in many parts of Asia, particularly in China and Viet Nam. In these two countries most smallholder forestry is associated with plantation establishment; the major genera planted have been *Acacia* and *Eucalyptus*. Globally, smallholder plantings now surpass the area of forest land under corporate (although not public) ownership. Figures quoted by Lamb (2011) from FAO (2006b) indicate that smallholders had established 49.9 million hectares of plantations by 2005, whereas corporate groups had planted around 27.2 million hectares (and the public sector had established 77.3 million hectares). This disparity is more marked in East Asia, where smallholders had established 29.0 million hectares by 2005, while corporate groups had established only 0.2 million hectares (and the public sector 24.9 million hectares). Lamb points out that these figures almost certainly greatly underestimate the size of the smallholder forest resource, because of the small and scattered nature of the plantations and the difficulties associated with carrying out accurate assessments.

Precise data on smallholder forestry in China are difficult to obtain, but estimates compiled by R. Arnold (personal communication, 2015) suggest that the country has about

A small-scale sawmill in Viet Nam, where smallholder plantations have become an important source of raw materials

TABLE 9
Changes in area and ownership patterns of *Acacia* smallholder plantations in Viet Nam between 2002 and 2012

Year	Area (ha)	Ownership (%)	
		Estates[a]	Smallholders
2002	400 000	75	25
2012	1 200 000[b]	30	70[c]

[a] Most estates would be owned by government entities, such as State-owned enterprises.
[b] Still increasing at a rate of approximately 150 000 ha per year.
[c] Approximately 250 000 smallholders with less than 3 ha each.

Source: Byron, 2015

4.4 million hectares of eucalypt plantations, of which about 40 percent is in the hands of smallholders who have less than 10 ha each.

In Viet Nam, most of the forest land transferred to households has been planted with *Acacia*, which is therefore mostly in smallholder blocks (Table 9).

The trees harvested from smallholder plantations in both China and Viet Nam have become an important source of raw materials for the construction sector and furniture industries. They feed small-scale processing plants and, increasingly, large-scale chip mills and paper plants.

In both countries, the significant transformation enabled by transfer of tenure of forest land to households and community groups has been facilitated by smallholder access to markets for forest products, although, as Liu and Innes (2015, p. 6) noted for China "the hegemony of the central government limits the roles of the market".

The reforms in these two countries have undoubtedly had impressive impacts on forest cover and income generation. However, the impacts on poverty reduction in Viet Nam have been questioned (Sikor and Nguyen, 2007; Nguyen *et al.*, 2008). Nguyen *et al.* (2008) noted that forest land allocation does not specifically target the poor.

A similar trend, although on a smaller scale, is evident in Indonesia, the Lao People's Democratic Republic and Thailand. For example, contract farming of eucalypts by smallholders is now the mainstay of fibre production for Thailand's pulp industry; smallholders (comprising more than 30 000 households with on average 5 to 8 ha of plantations) produce 65 percent of all eucalypts grown in the country (Kröger, 2014).

In Indonesia some provinces have a long tradition of smallholder forestry. Several million smallholders manage more than 3.5 million hectares of planted forests across the country (Oktalina, 2015; ACIAR, 2015). The most important commercial tree species include teak (*Tectona grandis*, grown on 15- to 30-year rotations) and sengon (*Paraserianthes falcataria*, grown on 5- to 7-year rotations). Many districts in West Java have a highly successful timber industry based on logs sourced from smallholder blocks (Box 10). Maryudi *et al.* (2015) noted the large expansion of smallholder forestry in southern Java in recent decades, associated with policy and practical incentives from the government and a shift towards commercialization of tree products, but they identified significant regulatory constraints that inhibit the commercialization process. A study supported by the Australian Centre for International Agricultural Research (ACIAR) (Roshetko *et al.*, 2012) illustrated the importance of trees in spreading risk and enhancing

BOX 10

Smallholder forestry in Ciamis District, West Java, Indonesia

Incorporation of trees into farming systems has a long tradition in West Java, where "people's forests" have been an integral part of the landscape for generations. The government has supported this trend with a series of policy initiatives since the 1970s aimed at encouraging tree planting on private land. Local and national interests have come together and contributed to the evolving practice of planting trees on private land for commercial purposes, which is currently widespread in the province.

The contemporary landscape in Ciamis District is essentially a forested one, consisting of a mosaic of relatively small patches of agricultural land integrated into areas of private forest managed under both agroforestry and pure forestry regimes. The private forests represent a mature system including a range of tree ages, from recently planted seedlings to trees of more than 30 years.

Private smallholder forests now cover 32 000 ha (about 13 percent of the land area in the district) and produce an average of 360 000 m³ of logs per year. The logs are processed in more than 500 sawmills in the district (FORDA, 2008) as well as by mills outside the district. Logs sourced from government forests contribute a further 49 000 m³ to the local industry.

Source: Gilmour, Ghazali and Subarudi, 2013

livelihoods in Indonesia; it indicated that in parts of Java, 15 percent of household income is derived from the sale of trees, particularly teak, with the trees acting as a "living savings account". Trees are harvested when significant cash needs arise, such as weddings, school fees, medical expenses, periodic social commitments or emergencies.

As previously mentioned, smallholder forestry is increasingly evident in many Latin American countries, particularly in Amazonia. Forest controlled by migrant smallholders on the Amazon frontier is expanding rapidly (Merry *et al.*, 2006). However, it remains largely unrecognized by governments and data are insufficient to obtain a clear picture of the situation.

COMMERCIALIZATION OF CBF PRODUCTS

In many countries, collaborative forms of CBF initially focused on providing communities with access to subsistence goods such as NWFPs, fuelwood and timber for local construction. For a range of reasons, many communities and smallholders are now looking to commercialize their forest products to increase the flow of benefits. In Indonesia, for example, an increase in the demand for and price of timber due to a decline in industrial timber production has acted as a driver in orienting smallholders and communities towards commercial goals (Maryudi *et al.*, 2015). In many countries forests handed over to communities were in degraded condition, but effective protection has helped to restore the

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Farmers and community groups increasingly want to manage their forests for commercial purposes rather than for subsistence only (a member of a Forest User Group in Mongolia transports felled trees out of the forest)

productivity of many of these forests, making commercialization a possibility. NWFPs have historically been used to supplement livelihoods (see e.g. Kusters and Belcher, 2004 for Asia; Sunderland and Ndoye, 2004 for Africa; Alexiades and Shanley, 2005 for Latin America). However, Belcher, Ruiz Perez and Achdiawan (2005, p. 1447) noted that "if [NWFPs] are to be useful in efforts to reduce poverty – that is, to lift people out of poverty – it will have to be through increased and/or more efficient commercial production and trade"; their analysis of 61 case studies illustrates the conditions needed to support commercialization.

While commercialization of forest products is increasingly on the agenda of communities and smallholders, they face a series of market, bureaucratic and other constraints. For example, a regulatory framework that may be suitable for the establishment and formal recognition of community forests and their membership groups may need further reform to enable communities to sell forest products on the open market. Hence, the regulatory framework needs to evolve over time as CBF evolves and as communities acquire the capacity to take on increasingly complex tasks.

Commercial smallholder forestry is well developed in most of Europe and North America but still immature in much of the developing world in terms of fitting into the mainstream of national economies. A review by de Jong *et al.* (2010, p. 6) noted that in South America one of the reasons many smallholder CBF initiatives failed was that they "failed to pay sufficient attention to the importance of smallholder business organization and related capacity-building, and to product value-chain development".

Communities and smallholders have taken several approaches to commercializing their forest products. These can be thought of as falling into four categories (Gilmour, 2015):

- extracting a royalty-type payment by selling a product (generally standing timber, woodfuel or NWFPs) to an outside entity (either to an intermediary or directly to a processor);

- contracting out some aspects of the processing chain, such as tree felling and log conversion, but retaining ownership of the sawn timber and managing its sale;
- managing the downstream stages of the processing chain to add value to the products;
- moving from commercializing an initial product to developing a creative blend of varied forest-based and other enterprises.

Clearly, the more involvement communities and smallholders have in managing the downstream components of the processing chain, the greater the potential for retaining economic benefits. The shift towards commercializing forest products is a major transition, with communities moving from subsistence harvesting to primary production (producing a product for the market), to managing secondary and even tertiary production (processing and marketing the product). The extent to which communities wish to move down the value chain of harvesting and processing products from their forests will vary enormously depending on a multitude of factors, including the objectives they set in their forest management and business plans as well as their interest in and capacity for managing different types of enterprises.

Several examples illustrate how communities that began as primary producers moved further along the processing chain as their experience grew and their capacity was enhanced. For example, Molnar *et al.* (2011, p. ix) reported that:

> *In Mexico, [smallholder and community-based forest enterprises] have become major suppliers of the hundreds of thousands of small-scale carpenters who are upgrading and renovating houses with long-fiber pine and hardwoods found in community natural forests, and they supply furniture stores with finished products. In Guatemala and Honduras, such enterprises supply domestic markets with timber and non-timber forest products, and they export sawnwood and finished wood products to Europe and ornamental non-wood forest products to the United States.*

In contrast to this positive view, a survey of CBF in Guatemala, Nepal, Peru and the Sudan (FAO, 2005) gave a mixed picture of the potential of CBF to generate sustainable income opportunities, particularly beyond small-scale, internal markets. The survey revealed that microcredit is a key enabler but also highlighted the importance of capital formation and institutional and organizational conditions. The general conclusion of the FAO survey was that successful commercialization of forest products from CBF depends on more than just microcredit. Other factors were also important, such as the effective development of business services, the selection of good entrepreneurs, the transfer of technical and managerial skills to the community, the promotion of market linkages, clear and legally enshrined forest tenure rights and boundaries, transparency in lending practices, and appropriate institutional and legal structures to ensure equality and sustainable production.

Greijmans and Gritten (2015, p.1) identified three key components hindering or preventing the development of CBF enterprises:

- unsupportive legal and regulatory structures characterized by limited rights and complex regulations inhibiting equitable benefit sharing, compounded by the perception that local benefits are incompatible with national benefits, an uneven playing field regarding State, private and community forests, and weak participatory decision-making processes;

- low organizational and institutional capacities and lack of technical skills on the part of local governments and communities;
- lack of investment in CBF as a result of unclear business policies, high initial costs, undeveloped infrastructure and an untrained workforce.

Most CBF enterprises involve interaction between community groups and the private sector at some point along the processing chain, whether at the point of sale of the primary product or further along the chain. This interface can be difficult to negotiate, as different institutional values can apply on both sides. Small-scale tree growers often lack experience in marketing timber and usually depend on intermediary brokers. These intermediaries often receive a disproportionately large portion of the profits compared with that received by the growers. However, intermediaries are often indispensable in organizing the critical links between growers and the processing industry (Pretzsch *et al.*, 2014), which frequently involve a degree of rent seeking along the chain. Antinori (2005) argued for the encouragement of joint ventures between community and private-sector groups as one way to overcome the difficulties.

Based on case studies from four countries in Latin America (Bolivia, Brazil, Guatemala and Nicaragua), Pacheco (2012) argued that the economic benefits that communities and smallholders can capture from the use of forest resources, mainly timber, are mediated by two sets of factors. The first relates to the capacity of communities to interact with other actors – intermediaries and companies – in timber markets, and the second to specific conditions of the market. Interactions between these two factors "shape the ways in which smallholders and communities engage with timber markets, thereby influencing the benefits they can obtain from commercial use of their timber forests" (Pacheco, 2012, p. 114). Pacheco indicated that the monetary benefits that smallholders and communities in the case study areas obtained from logging varied widely among areas, and cited net profits in some areas of more than USD 30 000, with profits per family of USD 177 to USD 1 014.

Pacheco (2012) also noted that regulatory constraints often created additional obstacles for smallholders and communities, pushing them into informal logging. He observed that their engagement with markets tended to be dominated by patron–client relationships and asymmetrical access to information. The resulting market distortions often inhibited both the ability of communities to increase their capacity and market development, and tended to be perpetuated rather than reversed.

While numerous communities have successfully commercialized their forest products, in most cases the ability of communities to do so is heavily constrained by governments that retain power by granting limited user rights, often only to satisfy subsistence needs. As Molnar *et al.* (2011, p. ix) noted, "The persistence of antiquated approaches and regulatory frameworks in forest governance has been a major hindrance to the emergence and growth of smallholder and community-based forest enterprises and their integration into productive value chains and markets". Other authors have also commented on the complexity of regulations, which often require "a level of capacity far beyond the ability of community members and local government staff" (Gritten *et al.*, 2015, p. 3433). Box 11 summarizes some of the constraints that frequently apply to commercialization of products from CBF.

BOX 11

Examples of some key constraints applying to the commercialization of products from CBF

Regulatory

- Weak tenure rights of local and indigenous people may limit their ability to manage their forests for commercial benefits, limiting their harvesting to products for subsistence use.
- Management decisions to harvest products commercially are often limited by requirements for detailed management plans.
- Regulatory requirements for non-forest sectors (such as transport) frequently inhibit transport and marketing of forest products.
- Policies tend to favour industrial-scale logging over community-scale operations by requiring prescribed forms of forest management.
- Onerous taxes and fees to multiple agencies may apply to forest products at various stages of the value chain.
- Special permits from forest officials (who are often distant from the forest) may be required to harvest forest products, particularly trees, even if harvesting is scheduled in the management plan.
- Special permits may be required to transport goods to market, often from multiple authorities who are frequently distant from the forest.

Governance

- Weak governance often leads to lack of transparency along the value chain, with many opportunities for rent seeking and corruption, constraining the ability of community forestry enterprises to operate effectively.

Business, legal and financial

- In many village settings, business management capacity is limited.
- There is often a lack of forest producer organizations that can lobby for improvements to the regulatory framework and provide services to members.
- Communities often lack finance to fund start-up activities.
- Banks are often hesitant to loan funds for commercializing common property assets.
- Communities often have limited capacity to develop business plans and to develop and apply business skills.
- Communities may have uncertainties about how to commercialize common property resources and share benefits; how to interface with private-sector institutions; and how to address legal issues including taxation.

Continues

Box 11, continued

Market

- Remote communities often have difficulty in transporting products to markets.
- Breaking into established markets is difficult.
- Market information is often not readily available to enable communities to tailor their products to meet market requirements.
- Timber markets are often distorted (favouring political figures and other elites) and lack transparency, making it difficult for communities to operate effectively.
- Widespread corruption may limit the ability of communities to realize the full benefits from harvesting timber.

Technical

- Technical skills and equipment for basic processing and other forms of value addition are often not available, particularly in remote rural areas.

Bureaucratic

- Resistance by government officials to relinquish control over forests, even where they are required to do so under the regulatory framework, inhibits the ability of communities to commercialize their forest products.
- Demands by government officials for unofficial incentives to provide necessary permits may limit communities' returns from their products.

Source: Gilmour, 2015

In summary, individual farmers and community groups that want to move from managing their forests largely for subsistence to managing them for both subsistence and commercial purposes face major impediments. Timber markets in many countries tend to be dominated by a few companies and buyers that wield considerable influence over final prices. Furthermore, severe distortions often affect the functioning of timber markets and work against smallholders and communities, in favour of more powerful actors.

In spite of its obvious benefits to local and national economies, commercialization of forest products from CBF, particularly timber, has mainly remained on the margins of policy discourse, receiving only limited attention from both governments and donors. However, there are some exceptions. Canada, the United States of America and much of Western Europe, and increasingly China and Viet Nam, have functioning markets for products harvested from smallholder forests. Similar commercial marketing of products from more collaborative forms of CBF are not common, although Mexico has some good examples of the vertical integration of CBF into the market chain, with major benefits flowing to community groups (Antinori, 2005).

CONNECTIONS BETWEEN SMALLHOLDERS/COMMUNITIES AND PRIVATE COMPANIES

In relation to the commercialization of CBF discussed in the previous section, CBF regimes are increasingly seeking to maximize their benefits from forest management by engaging with companies. As noted in that section, lack of knowledge about how markets work and lack of entrepreneurial skills are among the constraints to commercialization of forest products from CBF regimes. In addition, communities often lack technology, capacity and finance to embark on commercial operations (Galloway *et al.*, 2014). In this regard they can benefit from associations with industry. On the other hand, the rapid expansion of CBF regimes in the past decade has led the forest industry in many developing countries to turn to forests under community and smallholder management to obtain raw materials (Hewitt and Castro Delgadillo, 2009). Hewitt and Castro Delgadillo (2009, p. 1) noted that community–company relationships "have the potential to link communities directly to the marketplace, and can lead to poverty alleviation and increased economic benefits for underserved and often isolated communities".

Mayers (2000) proposed a typology of possible institutional arrangements among smallholders, community groups and different type of companies (Table 10), which provides a useful basis for conceptualizing the possibilities.

Smallholders in Europe have developed several approaches to overcome the problems associated with a large number of small growers producing products for different markets (de Schorlemer, 2013), including the following:

- Producer groups: Small-scale private forest owners manage their properties and supply wood to the markets as a group.

TABLE 10
Typology of forestry community–company relationships

Type of company	Type of community			
	Individual landowners/tree growers	**Individual tree users**	**Group of landowners/tree growers**	**Group of tree users**
Large forest product buyer, processor and/or planter	Outgrowers Joint ventures Land rental for tree growing	Product supply contracts	Outgrowers Joint ventures Outprocessors	Product supply contracts Outprocessors
Large forestry concession or plantation owner	Access and compensation agreements	Contracts for timber or NWFP use or supply	Local development agreements Timber utilization contracts	Intercropping or grazing schemes Taungya
Large landowning and/or forest service related company	Joint ventures Ecotourism enterprises Payments for environmental services	Shared use agreements Contracts for tree growing Bioprospecting deals	Joint ventures Ecotourism enterprises Payments for environmental services	Shared use agreements Contracts for tree growing Bioprospecting deals
Small locally based processor or community enterprise	Credit or product supply agreements Shared equity	Product supply agreements	Credit or product supply agreements Shared equity	Product supply agreements

Source: Mayers, 2000

BOX 12

Factors that promote effective community–company relationships in Latin America

- Clear and consistent economic benefits, with effective distribution within the community
- At least moderate competitiveness of the community
- Adequate pricing systems incorporating real costs
- Access to financial support through viable credit or loans, not dependent on project subsidies or company advances
- Technical assistance focused on business skills development
- Shared goals of the community and the company, i.e. long-term supply
- Written agreement, clear rules and transparent negotiation
- Presence or representative of the company in the field and direct coordination with the community
- Third-party facilitation enabling the relationship but not creating dependency
- Additional benefits provided by the company, such as equipment and training

Source: Hewitt and Castro Delgadillo, 2009

- Cooperatives: Forest owners band together to operate wood processing industries (a situation that does not appear in Mayers's typology). An example is Metsä Group, which is owned by 125 000 Finnish forest owners and employs 11 500 people.

Hewitt and Castro Delgadillo (2009) analysed 14 case studies of community–company relationships in Latin America and concluded that the results of such relationships have been mixed, in terms of generation of benefits for both communities and companies. They concluded that "the key factors affecting success were: (i) the level of business skills, financial management and human capacity of the communities; (ii) the level of support for this type of relationship provided by the prevailing business and political environment; and (iii) the level of trust established between the company and community" (Hewitt and Castro Delgadillo, 2009, p. 1). They found that efforts to strengthen internal community structures also contributed to successful outcomes (Box 12).

Outgrower schemes are one of the major forms of formal collaboration between forest growers and companies, especially in the developing world. A survey of outgrower schemes in 12 countries (FAO, 2001), involving both individual growers (mostly having less than 10 ha of forest planted) and cooperatives, identified the primary benefit to growers as additional income and, to a lesser extent, diversification and employment. Such schemes also enable growers to generate income from underutilized land. The previously mentioned contract farming of eucalypts by smallholders for Thailand's pulp industry (which accounts for 65 percent of all eucalypts grown in the country) would mostly fall under the outgrower category in Mayers's typology.

A survey of 57 examples of community–company partnerships in 23 countries, covering a wide range of institutional arrangements (including farmer outgrower schemes

to supplement company-grown fibre, community intercropping between company trees, local agreements around local timber and tourism concessions, joint ventures where communities put in land and labour, plantation protection services and access and compensation agreements), found no examples of "an equitable, efficient and sustainable system that has been returning benefits to company, community and forest on a long-term basis" (Mayers and Vermeulen, 2002, p. viii). However, these authors also noted: "Where they work reasonably well, forestry partnerships can bring both the concrete economic pay-offs that tend to be uppermost among the motives of both partners and broader benefits to local livelihoods and the public good." Their final conclusion was that communities cannot afford to ignore the opportunities offered by the private sector, and that forestry community–company partnerships are worthy of support.

Macqueen (2008) emphasized the importance of small-scale forest enterprises working together in associations to offset scale disadvantages, cut costs and strengthen bargaining power. He argued that associations can "also help to reduce poverty in that they: accrue wealth locally, help to secure resource rights for local communities, empower local entrepreneurship, foster the creation of social capital, engender greater local environmental accountability and maintain cultural preferences and diversity" (Macqueen, 2008, p. v). However, he also noted that associations often struggle, particularly in weak economic contexts.

Functional arrangements between smallholders and companies are more common than those between collaborative types of CBI and companies. An exception occurs in Mexico, where many CBF groups have become vertically integrated into the timber industry and have benefited from the arrangements (Antinori, 2005).

Collecting fuelwood in a community forest near Kathmandu, Nepal

Chapter 6
Effectiveness of CBF

Despite the widespread adoption of CBF as a major forest management modality, several authors have noted that CBF outcomes remain inadequately documented, which makes it difficult to evaluate their performance in improving the condition of the forests or providing benefits to local people (e.g. Charnley and Poe, 2007; Beukeboom *et al.*, 2010; Menton and Cronkleton, 2014).

Determining the effectiveness of CBF is not easy, in part because it generally attempts to address several key issues at the same time and these are not always explicit in policy objectives (Pagdee, Kim and Daugherty, 2006). For example, the primary policy objectives may relate to improving community livelihoods and ensuring that the forests are managed sustainably, while part of the rationale of implementing CBF may be to support decentralization or to redress deforestation. Which of these objectives should be used to judge the effectiveness of CBF? In spite of these uncertainties, most observers agree that CBF aims to deliver two key outcomes: improved forest condition (moving towards SFM) and enhanced livelihoods of those managing the forests (community groups and smallholders) (Box 13). The major focus of the discussion that follows is on assessing the effectiveness of CBF in achieving these two outcomes, while acknowledging that each of them encompasses a multitude of interconnected social and other variables.

The analysis, adapting the livelihoods framework of the United Kingdom Department for International Development (DFID, 1999), focuses on the effect of CBF on major livelihood assets in terms of three classes of capital: natural, social (also referred to as "institutional") and human, and financial. Assessments of these three classes of capital are frequently reported in the literature and, taken together, provide a comprehensive picture of the most common CBF outcomes. Consideration is also given to the ability of communities to put these assets to productive use to increase their well-being by considering the transforming structures and processes (as suggested in the DFID

BOX 13

Livelihoods – more than subsistence goods and services

The term "livelihood" refers to "the ways in which people make a living" (Fisher *et al.*, 2008, p. 5). Although it is often used as if it refers only or mainly to "subsistence" livelihoods, it more correctly includes ways of living linked to markets and includes various sources of cash income. Improving livelihoods thus involves improving access to subsistence resources and to ways of increasing income.

Source: FAO, 2011

BOX 14

Case studies or metadata analyses? Trade-offs and complementarities in assessing CBF effectiveness

During recent years research on CBF has expanded substantially, addressing all aspects of its conceptualization, implementation and effectiveness. This research encompasses regional and global reviews of CBF, site-specific case studies and analyses of metadata drawn from a large number of individual case studies. Case studies and metadata studies offer trade-offs as well as complementarities (Poteete and Ostrom, 2008). A researcher's in-depth knowledge about a case can generate high-quality data and build confidence in the internal validity of the analysis. However, the generality or external validity of findings from case studies can be evaluated only through analysis of a large number of representative observations. Analysis of metadata can help with generalizing trends (e.g. Chhatre and Agrawal, 2009; McDermott and Schreckenberg, 2009; Persha, Agrawal and Chhatre, 2011; Jagger et al., 2014; Seymour, La Vina and Hite, 2014; IFRI and FAO, in preparation) but can lead to reductionism and overgeneralization.

framework), particularly those related to governance and the regulatory framework. This chapter also addresses other aspects of the livelihood framework such as equity, poverty alleviation and resilience to shocks.

The chapter draws on a wide range of general reviews, case studies and metadata analyses to arrive at conclusions on CBF effectiveness (see Box 14). Most of these resources use material from many countries across all regions, but particularly from Africa, Asia and Latin America.

In assessing the effectiveness of CBF, it is also important to take into consideration that many forests that are currently under CBF regimes commenced in a degraded condition, and it has taken several decades of protection and rehabilitation for the forests to develop to a stage where substantial benefits can be realized.

CHANGES IN NATURAL CAPITAL

Natural capital, defined in Box 15, includes forests. The impacts on natural capital are therefore of major concern when considering the effectiveness of CBF management. A recent reviewer of two of the long-running community forestry projects in Nepal (Campbell, 2012) noted that the major emphasis of the past decade or so has been on redressing social exclusion and addressing poverty reduction, and questioned whether this focus has diverted attention from the equally important issue of the resource and how it can be best managed to deliver a range of livelihood benefits.

Wollenberg *et al.* (2007) noted that although forests under CBF regimes constitute a significant proportion of the world's forests, there is little information about their condition or how they are managed. Established monitoring systems or assessments tend to operate on a national, international or otherwise large scale such as FAO's Global

BOX 15

A definition of natural capital

Natural capital is the term used for the natural resource stocks from which resource flows and services (e.g. nutrient cycling, erosion protection) useful for livelihoods are derived. There is a wide variation in the resources that make up natural capital, from intangible public goods such as the atmosphere and biodiversity to assets used directly for production, such as trees (and the products that are derived from trees) and land.

Source: DFID, 1999

Forest Resources Assessment (FRA) or the United Nations Environment Programme – World Conservation Monitoring Centre (UNEP-WCMC) biodiversity maps. Information collected on a smaller scale has tended to be short term and site specific (Colfer, 2005), with little systematic monitoring of comparable sites across countries and landscapes over time.

While there is a lack of detailed information on the effectiveness of CBF in improving forest condition and moving towards SFM, the general impression from the literature is that the uptake of CBF has resulted, in most countries, in an increase in the natural capital base (see e.g. RECOFTC, 2013 for Asia and the Pacific), generally expressed as an increase in the area of forest, its density, productive capacity and sometimes associated biodiversity. For example, Patenaude and Lewis (2014) reported a reduction in uncontrolled logging and other forest disturbances in the United Republic of Tanzania, along with a noticeable recovery of forest condition, a decrease in soil erosion and overgrazing and an associated improvement in water quality and quantity, a reoccupation of beehives and an overall increase in wildlife abundance. IFRI and FAO (in preparation), in their collation of lessons learned from 20 years' experience of CBF, note that these regimes are associated with sustainable forest outcomes in many countries and that they can also help to control illegal forest use and thereby improve forest condition. In some countries associated increases in trees on private farmland have been reported (Gilmour, 1995), but this has been hard to quantify.

Several studies have analysed the correlation between various aspects of governance under CBF regimes and improved forest condition. Seymour, La Vina and Hite (2014) carried out a comprehensive review of the literature published since 2002 to assess the evidence that strengthened community-level tenure leads to improved forest condition. They paid particular attention to findings from metadata analyses because of the large sample sizes. The review "confirmed the existence of a large and growing literature in support of the proposition that strong indigenous/local tenure is associated with forest management outcomes that are at least as good (as) or better than outcomes for areas owned/managed by the State (such as protected areas)" (Seymour, La Vina and Hite, 2014, p. 1). They found this literature to be relatively abundant for South Asia (especially Nepal), East Africa (especially the United Republic of Tanzania) and much of Latin

America (especially Mexico and indigenous reserves in the Amazon), while evidence from elsewhere in Africa and from Southeast Asia was limited.

Charnley and Poe (2007) reported on several studies that documented positive environmental effects from CBF regimes (e.g. Poffenberger, 2006 for Southeast Asia; Wily, 1999 for the United Republic of Tanzania; Nittler and Tschinkel, 2005 for Guatemala). Several studies have documented the improvement in forest area and condition throughout Nepal following the uptake of CBF (Box 16).

The recent tenure reforms in China and Viet Nam, which transferred millions of hectares of land from State collectives to households, have resulted in large-scale afforestation and

BOX 16

Changes in forest cover associated with CBF in Nepal

Niraula *et al.* (2013) assessed changes to community forests from 1990 to 2010 in the Dolakha District of the middle hills of Nepal, where uptake of CBF has included secure tenure, the development of more equitable governance arrangements and an enabling regulatory environment. The assessment made use of repeat photography and satellite remote sensing and included 111 individual community forests covering 11 100 ha.

The study showed that despite a high population growth rate of 2.3 percent per year over the 20-year period, the forest has been restored at a rate of about 2 percent per year. The rate of conversion of sparse forest into dense forest under CBF was found to be between 1.1 and 3.4 percent per year. Similarly, the rate of conversion of non-forest area into forest was found to be between 1.1 and 2.0 percent per year. Forest cover also improved in landslide-prone areas and along river banks. Niraula *et al.* (2013) concluded that CBF management has resulted in more efficient use of forest resources, contributed to a decline in the use of slash-and-burn agricultural practices, reduced the incidence of forest fires, spurred the establishment of tree plantations and encouraged the conservation and protection of trees on both public and private land.

Kanel, Poudyal and Baral (2005) reported studies documenting substantial improvement in forest condition in several other districts in Nepal. A study in four eastern hill districts showed that denuded forests had been regenerated and the condition of forests improved substantially following the introduction of the community forestry programme. The total number of stems per hectare increased by 51 percent, and the basal area of forests increased by 29 percent over a 10- to 15-year period. A separate study in two central hill districts found that shrubland and grassland had been converted into productive forests, increasing the forest area from 7 677 ha to 9 678 ha over a similar period. A further study in a mountain watershed at three different times (1976, 1989 and 2000) showed that over 25 years small patches of forest had expanded and merged, which reduced the number of patches from 395 to 175 and increased the net forest area by 794 ha.

thus a substantial increase in natural capital in terms of forest area and associated biomass (although the outcome has perhaps been limited in terms of biodiversity). However, detailed quantitative information on the increase in natural capital resulting from CBF in these two countries is not readily available. High-quality germplasm has been made available through partnerships with researchers from Australia (Midgley, 2013), but such opportunities are not available across most of the developing world.

Baynes *et al.* (2015a, p. 194) observed that in the Philippines "most smallholder woodlots produce merchantable volumes of <44 percent of their site potential due to a lack of appropriate silviculture and, as a result, financial returns are often low and many smallholders have become disillusioned with small-scale forestry". An ACIAR project in Indonesia (ACIAR, 2015) reported that improving the silvicultural skills of smallholders enabled them to produce higher-quality timber to supply a veneer market, and thus increased their prices by 16 percent. Recent work in Cambodia has indicated that in the poor-quality forests typically allocated to communities, application of simple silvicultural systems could result in substantial improvement in forest quality which is unlikely without silvicultural interventions; these improvements could translate into a return to communities of USD 400 to USD 600 per hectare over a five-year cycle, with substantial increases in the financial return in subsequent cycles (S. Dangal, personal communication, 2015).

CHANGES IN SOCIAL AND HUMAN CAPITAL

Pretty and Ward (2001) demonstrated how social and human capital (explained in Box 17), embedded in participatory groups within rural communities, has been central to equitable and sustainable management of common property resources, including forests. Essentially, they link the formation of social and human capital in rural communities with improvement in natural capital. They quoted a well-known study from India (Jodha, 1990) demonstrating that the loss of local institutions (and the associated social capital) led to natural resource degradation.

One of the early conclusions from research into CBF is that in order to generate sufficient social capital to improve the forests (the natural capital) and to convert that into improved group and individual well-being, simply forming groups is not sufficient. Groups (and individuals) also need to have the capacity and the institutional space (as well as an enabling environment) to manage forests effectively and to distribute benefits equitably (Szulecka and Secco, 2014). Other aspects that need to be considered when assessing effective functioning of groups include issues such as equity, social exclusion, asymmetric power relations, elite capture of benefits and gender.

Mazur and Stakhanov (2008, p. 410), citing many examples in Africa, reported that "rural people and communities are becoming more responsible in forest management as their rights become clearer and the benefits more significant (and this has) directly stimulated restructuring and streamlining of local governance institutions into major pillars of grassroots development". Analyses from other regions similarly report that enhanced social and human capital has led to improved local governance, particularly for those CBF regimes that have a high level of empowerment (see e.g. RECOFTC, 2013 for Asia and the Pacific; Sabogal *et al.* 2014 for Latin America).

BOX 17
Description of key social indicators

Social capital
The central premise of social capital – also referred to as "institutional capital" – is that social networks have value. Collective action (as is required in CBF management) depends on the establishment of functional social networks, which allow individuals to achieve outcomes they could not achieve on their own. Social capital is the value that comes from such social networks or groupings of people. It is a requirement for the empowerment of a group to take control of its own agenda. Social capital comprises four central aspects: relations of trust; reciprocity and exchanges; common rules, norms and sanctions; and connectedness, networks and groups (Pretty and Ward, 2001).

Social bonds and social norms are an important foundation for sustainable livelihoods. As the presence of social capital lowers the costs of working together, social capital facilitates cooperation. People will have more confidence to invest in collective activities when they know that others will also do so; they will also be less likely to engage in unfettered private actions that have negative impacts, such as resource degradation.

In CBF management, the members of the community group must work together to manage a forest sustainably and to ensure that the benefits are distributed equitably; individuals acting alone would not be able to achieve this. Hence, the building of social capital (which enhances social cohesion) is a prerequisite for sustainable forest management by community groups.

Human capital
Human capital refers to the knowledge, talents, skills, abilities, experience, intelligence, training, judgement and wisdom possessed individually and collectively by a population. These resources are the total capacity of the people and represent a form of wealth which can be directed to achieve goals and objectives. Means of increasing human capital include formal and informal training that builds the knowledge and skills related to forest silviculture, community development, organizational management and leadership development.

Continues

In Amazonian countries, de Jong *et al.* (2010, p. 12) noted that community and smallholder initiatives are adversely affected by a "limiting institutional and political environment (including) much of the legislation, policies, and regulatory bodies that affect community forestry". They also noted that the regulations and policies have been designed mainly for large corporate actors rather than small-scale community and household entities.

Considerable research effort during the past decade or so has gone into exploring social exclusion and equity associated with CBF and in promoting approaches that can improve

Box 17, continued

Equity

Equity refers to a fair share, not necessarily an equal share. Equity is understood as fairness in decision-making processes and fair outcomes of such decisions (Sunam and McCarthy, 2010). Equity can vary according to the situation and the culture, but an equitable system should not further marginalize the poor (Gilmour and Fisher, 1991). An example of equity in benefit sharing would be a situation in which poor households are explicitly identified and given special consideration such as reduction or waiver of CBF membership fees; allocation of land to cultivate NWFPs for sale; lower rates for purchase of forest products than those applying to wealthy households; and access to low-interest loans to engage in income-generation activities.

Inclusiveness

Social inclusion in CBF is the removal of barriers and promotion of incentives to increase the access of marginalized individuals and groups to the development process so that they receive an equitable share of the benefits. The poor, indigenous people, women and disadvantaged social groups are among the most common marginalized individuals and groups. Improvement in inclusiveness can come about by, for example, ensuring that marginalized people are included in key decision-making bodies and, if necessary, supporting them to obtain the skills necessary to carry out their functions.

these factors (Colfer, 2005; MFSC, 2013). However, few studies have demonstrated in concrete terms the effectiveness of CBF in generating social and human capital for successful management of forests for community and individual benefit. Most of the examples are drawn from countries with long-running and mature CBF regimes, such as India, Mexico, Nepal and the United Republic of Tanzania. For example, Valdez, Hansen and Bliss (2012) described how social networks and norms of reciprocity have facilitated cooperation for mutual benefits in the successful operation of small-scale timber enterprises run under CBF regimes in Mexico. However, most of the enterprises faced technical and professional challenges related to low levels of social and human capital.

In situations of historical and culturally constructed unequal power relations based on caste, class and/or gender, there are limitations in the extent to which CBF can change basic social inequities in isolation from changes in the wider society. However, in some situations CBF has helped to develop a more democratic and equitable society by demonstrating the benefits of more inclusive, open and transparent governance. For example, in Nepal CBF has focused on achieving proportionate representation of women and other marginalized members of society by introducing systems of public auditing, public hearings, two-way communications and vertical and horizontal information flow.

On the other hand, many authors (Agarwal, 1997; Nightingale, 2002; Khadka, 2010; MFSC, 2013) have shown that while CBF in Nepal has had generally positive environmental and social outcomes, in many cases the level of social capital has been insufficiently high to prevent inequities, particularly in participation and benefit sharing. These inequities can be

partly attributed to entrenched patterns of discrimination and marginalization in society, which often skew decision-making and benefit sharing in favour of local elites (Paudel, Karki and Paudel, 2014).

CHANGES IN FINANCIAL CAPITAL

In general, the changes to the financial capital (defined in Box 18) of groups or individuals resulting from the management of CBF regimes are difficult to assess, and the literature shows few examples where this has been done, particularly at a national level.

Probably the most comprehensive data on the impact of a CBF programme in any country comes from a large-scale survey carried out in Nepal by the Ministry of Forest and Soil Conservation (MFSC, 2013) after 35 years of CBF implementation (Box 19). It showed that in total, Forest User Groups in Nepal generate about USD 49 million per year from managing their community forests. Pandit, Neupane and Bhattarai (2014) reported that income from community forests makes up 26 percent of total household income. About 80 percent of the forest-related income is derived from timber sales.

In another example of the ability of CBF to increase financial capital in Nepal, the Asia Network for Sustainable Agriculture and Bioresources (ANSAB, 2010) reported the development of 393 enterprise-oriented Community Forest User Groups and 1 166 economic entities in remote but resource-rich parts of the country. These generated USD 6.82 million in annual monetary benefits which were distributed to 78 828 individuals.

BOX 18

Definition of financial capital

Financial capital denotes the financial resources that people use to achieve their livelihood objectives. This definition is not economically robust in that it includes flows as well as stocks and contributons to consumption as well as production. However, it has been adopted to try to capture an important livelihood building block, namely the availability of cash or equivalent that enables people to adopt different livelihood strategies.

There are two main sources of financial capital:

- **Available stocks:** Savings are the preferred type of financial capital because they do not have liabilities attached and usually do not entail reliance on others. They can be held in several forms, including cash, bank deposits or liquid assets such as livestock and jewellery. Financial resources can also be obtained through credit-providing institutions.
- **Regular inflows of money:** Excluding earned income, the most common types of inflows are pensions (or other transfers from the State) and remittances. In order to make a positive contribution to financial capital, these inflows must be reliable; although complete reliability can never be guaranteed, there is a difference between a one-off payment and a regular transfer on the basis of which people can plan investments.

Source: DFID, 1999

BOX 19

Increase in financial capital to individuals and groups from community forestry in Nepal

A survey involving 137 Forest User Groups and 2 068 households across 47 districts, supplemented by seven detailed case studies, found that forest management generates on average 640 paid person-days of work annually per Forest User Group. At an average wage of USD 2 per day, this represents the direct transfer of USD 8.5 to USD 12.8 per household per year. Forest User Groups generate substantial funds – an average of USD 3 660 per year for those managing more than 100 ha of forest. A significant proportion of this money is spent on community development, which can have a positive impact on the livelihoods of group members. The largest use of community forestry funds was for schools (mainly buildings) (30 percent), followed by poverty-reduction activities (17 percent), roads (16 percent) and other infrastructure such as electricity, temple buildings, drinking water and sanitation.

Source: MFSC, 2013

A substantial amount of donor support has gone into the development and refining of CBF regimes in Nepal, estimated at an average of about USD 8 million per year over a 30-year period (MFSC, 2013). This is an interesting example of the way that donor funds, invested over the long term, can leverage larger investments through local labour and the growth of biomass.

Beauchamp and Ingram (2011) reported that CBF groups in Cameroon obtained revenue from forest harvesting activities and used it to support community projects such as improving inhabitants' dwellings and constructing a health centre and communal market.

A review by de Jong *et al.* (2010) noted that forests provide the principal source of income for smallholder families in many parts of Latin America, with much of the income derived from the sale of timber. However, their analysis of the literature also found disappointing financial returns from community and smallholder commercial timber harvesting of natural forests, and similar low financial profitability from tree-growing operations. They concluded that "it appears that timber production can provide complementary sources of income, but cannot provide the only source of income and allow the forgoing of other land uses, except for some exceptional cases" (de Jong *et al.*, 2010, p. 8).

The extensive smallholder forests in Ciamis District, West Java, Indonesia (see Box 10, p. 45) generate substantial employment in the district and beyond, as well as significant income for smallholders, although the actual numbers employed and amount of income generated are not known.

It is estimated that Viet Nam has between 1 000 and 2 000 small sawmills, although no census has been undertaken (Byron, 2015). A sample survey in a northern province (Bui *et al.*, 2005) indicated that small-scale sawmills generated significant local employment, as well as returning cash to smallholders from the sale of logs, although again the number of people employed and income generated are not known. A typical sawmill consists of little

more than a relatively cheap (USD 500 to USD 1 000) Chinese-made bandsaw, of a kind that is common throughout East and Southeast Asia. Most use small logs from smallholder plantations (mainly *Acacia*, but also some eucalypt and rubber tree logs).

EQUITY AND POVERTY ALLEVIATION

Poverty reduction is not the same as livelihood improvement (Box 20). Benefits associated with CBF are closely linked to equity, which is generally considered to incorporate fairness and social justice (McDermott and Schreckenberg, 2009). The distributional aspects of benefits from CBF have long been of interest to policy-makers and researchers alike (e.g. Hobley, 2006; Sunderlin *et al.*, 2008). Indeed, the policy objectives for CBF in many countries often include mention of poverty alleviation (i.e. directing benefits to the poor). For example, in Cameroon, poverty alleviation is one of the three explicit goals of CBF (Beauchamp and Ingram, 2011). Many CBF regimes focus on providing benefits to the broader community, with little consideration of who got what (Blomley, 2013). In some countries where CBF is well established and where distribution of benefits has been scrutinized, efforts are being made, at least on a small scale, to ensure that poor and marginalized individuals and groups receive an equitable share of the benefits (see e.g. Dhungana *et al.*, 2007; Pokharel, 2009; NSCFP, 2011).

However, despite recognition of the positive role of CBF regimes in enhancing rural livelihoods in general, relatively little empirical evidence has been gathered on the explicit contribution of CBF to poverty alleviation. Charnley and Poe (2007), in reviewing the results of CBF in the Americas, noted that the equity and social welfare outcomes of CBF regimes are difficult to evaluate, a task complicated by a lack of conceptual clarity about

BOX 20

Livelihood improvement and poverty reduction: a distinction

Poverty, broadly speaking "can be thought of as a state of reduced or limited livelihood opportunities" (Fisher *et al.*, 2008, p. 5). It is sometimes measured in income terms such as falling below the threshold of USD 2 per day. However, it can also be thought of in more qualitative terms. The World Bank (2001) has described poverty as involving lack of assets, powerlessness and vulnerability.

Income generation is an important aspect of livelihood improvement and poverty reduction. Reforms that enable people to gain income from forest products are obviously relevant to improved livelihoods. However, income generation is not the same as poverty reduction, and it should not be assumed that income generation automatically leads to poverty reduction. Poverty reduction generally requires a targeted set of arrangements and activities directed towards identified poor people. It is not achieved by increasing the total income of a population from forests, unless the poor receive a significant portion of the income. Targeted support may be especially important for reducing poverty for women and children.

Source: FAO, 2011

key measures such as poverty. However, this is not universally true. In some countries in Asia, conceptual and practical issues associated with evaluating poverty and equity in benefit distribution have been clarified thoroughly (NSCFP, 2011).

In Indonesia, CBF has been promoted as a strategy to tackle rural poverty. Maryudi and Krott (2012) analysed the economic outcomes of a CBF programme in Java and concluded that it had yet to fulfil its promise of providing forest users with genuine escape routes from poverty. Instead of alleviating poverty, the programme was implemented in a way that essentially condemned people to an ongoing subsistence lifestyle.

The MFSC (2013) study in Nepal is one of the few that includes a nationwide assessment of the impact of CBF on poverty. In Nepal, government rules and regulations that prescribe how community forestry should be implemented (MFSC, 2009) require that it be pro-poor (Box 21). It is mandatory to invest about 35 percent of the income generated from CBF activities into pro-poor programmes (Bhattarai, 2012). Actions should be carried out to "improve the social and economic condition of the poor, Dalits, indigenous people and ethnic groups through livelihood improvement programmes" (MFSC, 2009, p. 14). While the effectiveness of the provisions shown in Box 21 is variable (MFSC, 2013), this approach has achieved positive poverty alleviation outcomes across a wide range of conditions (Box 22). However, Schreckenberg and Luttrell (2009, p. 233) argued that external facilitation was crucial in achieving these outcomes, and that "the success of the … user groups in targeting activities specifically at the poorest … is likely to be in large part due to the governance and empowerment focus of the supporting NGO projects".

Apart from Nepal, few countries address poverty alleviation through their CBF programmes by putting in place regulatory and institutional mechanisms to specifically identify the poor and marginalized, and to direct benefits to them.

Patenaude and Lewis (2014) reviewed four CBF regimes in the United Republic of Tanzania and reported two negative and two positive poverty-alleviation outcomes. In one of the regimes with positive outcomes, timber and other sales provided some community income. However, most benefits from the sales accrued to the community as a whole and not to individual poor members or marginalized groups, so poverty alleviation was limited. The authors noted that a major factor influencing this outcome was the absence of formal guidelines and mechanisms to identify and target the poor and marginalized.

McDermott and Schreckenberg (2009) analysed a series of 33 case studies exploring equity in CBF regimes, using results from a wide range of settings in Kenya, Nepal, the United Republic of Tanzania and the United States of America, with additional cases from the United Kingdom and Asia. They identified four fundamental findings that applied generally across all cases:

- CBF reduced social inequity only when it explicitly targeted the poor and marginalized; similarly, CBF significantly reduced poverty only when poverty alleviation was adopted as an explicit goal.
- CBF expanded the decision-making opportunities available to community members, thereby enabling them to sow change and reap multiple benefits.
- The poor and marginalized were able to enlarge their share of benefits by gaining entry and actively participating in those decision-making opportunities.
- Poor and marginalized households were more likely to share in benefits delivered by CBF to the community as a whole than to gain from it individually.

BOX 21

Conditions included in guidelines for implementing community forestry in Nepal to specifically identify and benefit poor and marginalized individuals and groups

Identification of poor and marginalized individuals and groups

- Carry out participatory well-being ranking. Social, economic, physical, natural and human resources should be the basis of well-being ranking. Those with limited access and control over resources are identified as poor groups. Guidelines are included for how well-being ranking should be done.

Pro-poor livelihood

- The annual plan should include material as well as financial support to be provided to poor households. Details are given on how this should be done.
- A livelihood plan should be prepared based on the material, financial and other resources available to the poor. Their potentialities, abilities, interests and skills and the market should also be assessed.
- The user group should provide material as well as financial support to implement the livelihood plans of poor households.
- The support provided to the poor, women, Dalit, indigenous people and ethnic groups through the livelihood improvement programme should be monitored and evaluated, and a report should be provided to the District Forest Office and other supporting agencies.
- The programmes intended for the poor, women, Dalit, indigenous people and ethnic groups should be able to uplift the socioeconomic status of these groups in the long run.

Strengthening good governance

- A public hearing as well as public auditing should be conducted at least once a year to inform users about group programmes, income, expenditure, sale and distribution of forest products, group decisions and implementation status.
- Users should be informed about income, expenditure, programmes and decisions of the group on a regular basis through posting of information in public places.
- The decision-making process should include poor, women, Dalits, indigenous people and ethnic groups, and special attention should be given to developing leadership of these groups. There should be provision for positive discrimination for these groups such as special consideration for their representation in the committee and special opportunities for capacity development.
- Achievements and investments received by the poor, selected on the basis of well-being ranking, should be reviewed and analysed at least every six months.

Source: MFSC, 2009

BOX 22

Positive impact of targeting poverty reduction in Nepal

In Nepal, most of the manual labour employment opportunities generated from CBF activities are targeted towards the poor and extreme poor, and mainly to excluded groups such as low castes. The targeting was corroborated by the results of a Forest User Group survey which indicated that 80 percent of the employment days were taken up by poor and extremely poor households. Extremely poor households obtained on average 3.48 days of employment per year (mostly as forest watchers), while upper-class households obtained 1.37 days per year.

Pro-poor targeting of services provided by the user groups to individual members was seen to result in private capital accumulation, including support to income-generating activities, revolving funds and access to community forest land for private use.

Benefits were also targeted on the basis of exclusion (related to gender and caste/ethnicity). Women consistently benefited more than men across all caste/ethnic groups, and lower-caste people received a higher proportion of the benefits from services and funds than those of higher castes.

A relatively low use of revolving funds was recorded in the survey. For example, most households had not taken a loan over the past five years. However, the extreme poor were the most likely to have taken a loan, with about 25 percent of households indicating that they had done so. Households headed by women are also more likely to take loans (29 percent, as compared with 14 percent of households headed by men).

Source: MFSC, 2013

Many analyses of benefit distribution from CBF claim that local elites commonly capture a major share of the benefits (Iversen *et al.*, 2006; Kamoto *et al.*, 2013; Lund and Saito-Jensen, 2013). This is of concern not just because of the inequity in benefit sharing, but also because such inequity can lead to a breakdown of the socially accepted rules and norms that underpin CBF governance and to institutional instability. For example, Kamoto *et al.* (2013) gave examples of elite capture and other negative CBF outcomes in Malawi associated with the imposition of institutions of governance that were incompatible with existing local institutional arrangements (detailed in the next chapter in Box 28 [p. 85]).

Agarwal (2001) demonstrated from extensive fieldwork in South Asia that seemingly participatory institutions such as CBF regimes have sometimes excluded or marginalized significant sections of the community, such as women. ACIAR (2015) reported that in Indonesia, where women are often responsible for selling forest products, they rarely receive market information and support from extension staff, which compromises their ability to negotiate fair prices. Agarwal (2015) noted that women's inclusion or exclusion has significant implications not only in terms of fairness but also for conservation outcomes. She found that CBF groups with a high proportion of women in the management committee

(about one-third at least) produced significant improvements in both forest condition and distributional equity. Older committee members, especially older women, also made a particular difference. She attributed women's beneficial impact on conservation outcomes especially to their contributions to improved forest protection and rule compliance. She noted that opportunities for women to use their knowledge of plant species and methods of product extraction and women's greater capacity for cooperation were also likely to be contributory factors (Agarwal, 2009).

ABILITY OF CBF TO ENHANCE RESILIENCE AND REDUCE VULNERABILITY TO SHOCKS

Resilience is an important concept for social-ecological systems such as CBF, as it enables them to withstand internal and external shocks. Puettmann (2011) defines resilience as the capacity of a system to absorb recurrent disturbances and to maintain essential structure, processes and feedback. The concept of resilience is a holistic one that embraces uncertainty, risk management and adaptation in a rapidly changing and unpredictable world (Curtin and Parker, 2014).

Among the shocks and disturbances that can affect communities and their natural resources are natural events such as floods, fires and earthquakes and human-influenced ones such as climate change, wars, political upheaval, industrial-scale concession logging and large-scale economic land concessions. If groups lack resilience they are likely to become weakened or to collapse in the face of internal or external shocks. In CBF such a loss of group functioning can represent a threat to the integrity of the forests.

Well-functioning CBF regimes can increase social and human capital, particularly for small farmers (as shown earlier in this chapter), and can contribute to diversified livelihoods. These attributes increase resilience and the ability of groups and their members to withstand internal and external shocks. Improved resilience is thus one of the rationales for embracing CBF – to empower local people to capitalize on local resources and to build social structures that help them to face a rapidly changing world with confidence. RECOFTC (2012) argued that CBF can provide an opportunity to strengthen national resilience to climate change through diversification of rural livelihoods, increased food security, leveraging of social capital and knowledge, disaster risk reduction and regulation of microclimates.

An insightful illustration of how CBF has enabled groups to be resilient in the face of armed conflict, from a case study from Nepal (Box 23), provides many lessons of how social capital can be mobilized to maintain group institutions and natural assets in the face of great adversity (Nightingale and Sharma, 2014).

The authors of this case study emphasized that while the user group institutions and the structure and design of the programme played a part in group resilience during the conflict, these features were not adequate in themselves. The most important finding was that Forest User Group members displayed remarkable creativity and commitment, and it was only through their daily practices and the use of the institutional features that the structure was able to be meaningful in promoting resilience. In addition, many groups appear to have become stronger as a consequence of the pressure caused by the conflict (Nightingale and Sharma, 2014).

BOX 23

A case study of resilience in the face of armed conflict

Many community Forest User Groups in Nepal continued to function successfully during the ten-year armed civil war in the country from 1996 to 2006. Several factors contributed to their resilience. Although the reasons were different for different groups, there were some common patterns.

First, the design of community forestry as a national programme was central in helping to generate its image as a neutral, inclusive, pro-poor and just process of forest management. The decentralized nature of community forestry and its emphasis on public and transparent systems of governance were the most important structural aspects. This image was fundamental for groups to claim the right to operate and, in many instances, claim the "moral high ground" when negotiating with the conflicting parties. Both the national army and rebel groups found it very difficult to contest a user group's right to access and control its resources if the user group could demonstrate that it was operating correctly. Furthermore, as a result of good governance and capacity building within the group, individual members had well-developed negotiating skills that they employed confidently with both sides in the conflict.

Second, user groups were resilient because they had financial and physical resources. Financial resources were extremely important, as they gave groups bargaining leverage. The rebels seeking to tax user groups to finance their war effort could not seize the entire revenue of a group, as they did with many private individuals and landlords, perhaps in part because the funds were collective rather than individual. Control over resources also gave groups a reason to stick together and to engage in dialogue with the conflicting parties if their access to and control of the resources was threatened. In particular, the user groups sought to maintain access both to their cash funds and to their forest resources, even if this required relinquishing some control over them.

Third, the user groups showed a tremendous capacity for learning and adaptation, which was attributed at least in part to the other two key reasons identified: the sound structure of community forestry and the ability to retain control over resources. The user groups employed a wide variety of creative strategies to maintain access to and control of both their resources and their committees, including identity cards; changing the context or the timing of their meetings; negotiating with the parties to the conflict; and giving up some control of their processes in order to keep the group and its physical and financial resources intact.

User groups were most vulnerable when they did not have a sound structure, especially when their use of funds was not transparent. In such cases their own members were often complicit in undermining the group's resilience owing to a sense of exclusion from both decision-making and resources. Groups were also vulnerable when the compromises that they were forced to make were too great, particularly if they relinquished large amounts of cash. In such situations groups saw a decrease in resilience, and many of them continue to struggle in the post-conflict setting.

Source: Nightingale and Sharma, 2014

The Nepal case study illustrates the importance of social and human capital and good governance, i.e. incorporating flexible and adaptive institutions that value open, transparent, inclusive and equitable processes. The agency and power of rural residents demonstrated in the case study can apply in other situations where internal and external shocks occur. It contrasts with narratives that paint rural dwellers simply as victims (Nightingale and Sharma, 2014).

OVERALL, HAS CBF BEEN EFFECTIVE?

Most observers agree that the potential for benefits from CBF is considerable, but most also agree that in most countries the potential is far from being realized because of many, mostly external, constraints. Sikor (2006) commented that CBF has been successful in the sense that it has become an integral part of government policy and programmes in many countries. However, whether it has been successful in achieving its policy objectives is another question. Many reports document the limited and disappointing impact of CBF (see examples in Table 11). Patenaude and Lewis (2014) noted that while the rhetoric of CBF promotes positive outcomes for the environment and poverty alleviation, case studies show that achieving both benefits simultaneously can be a challenge. Beauchamp and Ingram (2011) concluded that the rights and responsibilities of local communities are currently insufficient to guarantee a significant level of improved livelihood from community forestry. In general, it has proved "much more difficult than expected to bring about effective and equitable transfer of authority and power" (Arnold, 2001, p. 95). The incomplete devolution process fails to empower rural populations due to its inconsistencies, lack of representation and transparency.

Nevertheless, most analysts also point to many positive outcomes, particularly with appropriate governance arrangements (NSCFP, 2011; RECOFTC, 2013), and emphasize that there are compelling reasons why CBF should not be discarded in favour of returning to more centralized regimes of forest management.

TABLE 11
Summary of effectiveness of CBF assessed by a range of reviewers

Reference	Country/region	Assessment of effectiveness
Shackleton *et al.*, 2002	Global	CBF reflects rhetoric more than substance.
Odera, 2004	Africa	CBF has failed to live up to its promise.
Charnley and Poe, 2007	Americas	Major gaps remain between CBF in theory and CBF in practice. Devolution of forest management authority from States to communities has been partial and disappointing, and local control over forest management appears to have more ecological than socioeconomic benefits.
Tole, 2010	Tropical developing countries	Many programmes have failed to achieve many (if any) of their intended outcomes.
de Jong *et al.*, 2010 Pacheco *et al.*, 2012	Latin America	CBF regimes have not always reached their potential for delivering either the livelihood or the forest conservation results desired.
Hagen, 2014	Global	The flow of benefits to communities, especially monetary benefits, is much less substantial than might have been expected, and benefits have been especially limited where externally initiated CBF has focused on conservation outcomes.

A World Wide Fund for Nature (WWF) assessment of the status of CBF in 11 countries showed many positive benefits but a number of challenges which result in slow progress (Box 24). In a review of the outcomes of CBF in 14 countries in Asia and the Pacific, RECOFTC (2013, p. 27) reported that, in general, CBF regimes have "generated environmental, economic and political benefits where communities have forest tenure rights and exercise active control over forest management". The review noted improvements in forest condition, with positive effects on indicators of forest quality such as wood volume, tree density, vegetation cover and species diversity. It concluded that in situations where communities have been able to exercise effective control over forest management, improved livelihood outcomes and grassroots democracy have followed.

The thorough country-level study by MFSC (2013) in Nepal found that Community Forest User Groups have built substantial natural, social and financial capital which has led to a series of household benefits and private capital gains. Thoms (2008), however, noted

BOX 24

Results of a WWF assessment of CBF in 11 countries

The World Wide Fund for Nature (WWF) assessed the status of CBF in 11 countries (Albania, Bhutan, Brazil, Cameroon, Indonesia, Kenya, Kosovo, Mozambique, Nepal, Papua New Guinea and Peru) using a questionnaire supplemented with case studies and a review of the literature. In addition, ten case studies were carried out in Cameroon, Indonesia, Mozambique and Nepal.

While most of the country studies, case studies and other literature reviewed reported scarce quantitative data, most reported improved livelihoods as a consequence of CBF. For some communities the main benefit was better access to resources such as fuelwood, water and medicinal plants for local use. Others succeeded in generating income locally, in the region and even through international sales.

Positive ecological impact was also reported in some studies, mostly described as an increase in forest cover. This included reductions in illegal logging, poaching and fires. In a few instances a decrease in forest cover was reported, but the authors of the assessment noted that this may have been related to population pressure rather than to CBF management. In general CBF was judged a suitable approach in landscapes containing national parks, buffer zones and sustainably managed areas.

The studies indicated that CBF faces many challenges and progress has often been slow. Challenges have come from both within (e.g. lack of technical, financial and marketing skills) and outside (e.g. high population pressure, illegal logging and poaching and unrealistic expectations of donors and governments). The authors concluded that some of the key issues for successful implementation of CBF programmes are: an enabling regulatory environment, clear ownership and land use rights, positive government attitudes, financial skills, organization and leadership.

Source: Beukeboom *et al.*, 2010

that the contribution of community forest management to livelihoods and food security in Nepal could be substantially increased.

Charnley and Poe (2007), based on their extensive review of CBF experiences in the Americas, reported that the available evidence demonstrates that CBF regimes on State and communal lands can have positive environmental outcomes (reduced rates of deforestation, maintained or increased forest cover and maintained forest vegetation density) where effective local-level institutions for forest management exist, especially when local people play a meaningful role in developing these institutions. However, the social and economic benefits associated with local control over forest management have been mixed and unequally distributed, influenced by the degree to which devolution and decentralization have occurred and by what has been devolved or decentralized. A review of a comprehensive five-year CBF demonstration programme across the United States of America found that "the impact … on people's lives is small in scale but significant to those individuals, families, and communities" (Cheng and Fernandez-Gimenez, 2006a, p. 3). It noted that the building of social and human capital gave people a sense that there are still quality options for working on the land and making a decent wage, especially compared with the situation before CBF became operational.

Few comparisons have been made of the relative performance of CBF and government management regimes or corporate concessions in terms of improved forest condition and enhanced livelihoods, although several have come to light. A comprehensive review by Seymour, La Vina and Hite (2014) concluded that a large and growing body of literature supports the proposition that CBF regimes have better environmental outcomes, when measured by forest cover, than State-managed forests. IFRI and FAO (in preparation), for example, show that communities can manage forests under CBF regimes as effectively as, or more effectively than, central governments or private owners. In a country-specific

In Latin America, tenure reforms represent a necessary step for enhancing the livelihoods of smallholders and communities and for improving forest management (Ecuador)

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example, Pearce (2015) presented evidence that indigenous peoples have often provided a stronger bulwark against deforestation than State management in Brazil. The 300 or so indigenous territories created in the Brazilian Amazon since 1980 are now widely held to have played a key role in a dramatic decline in rates of deforestation in the region. Recent studies have shown that sustainably managed community forests in Mexico have been more effective than protected areas at conserving forest land and safeguarding associated environmental services (Rainforest Alliance, 2015).

The general conclusions reached by Pacheco *et al.* (2012) in their review of five different CBF regimes in four Latin American countries are mirrored in the results of studies in other regions, and provide a useful summary of the overall effectiveness of CBF in enhancing local livelihoods and improving forest condition. They concluded that granting rights through tenure reforms represents a necessary step for enhancing the livelihoods of smallholders and communities, and for improving forest management. However, these reforms in some cases have failed to recognize local decision-making and in other cases have failed to provide market incentives and technical support to communities. This has led to ambiguous outcomes.

CBF regimes sometimes start with a burst of enthusiasm but then decline after several years, particularly if donor support is withdrawn. For example, the initial high donor enthusiasm for integrated conservation and development projects (ICDPs) during the 1990s waned when most projects failed to deliver the promised trade-offs between biodiversity conservation and livelihoods. Continuing community support for CBF is contingent on community members receiving sufficient benefits from their involvement to outweigh the costs incurred. Many, but not all, benefits have an economic value, although it is not always easy to assign a monetary value to them.

SUMMARY

Lack of data on the effectiveness of CBF in improving forest condition and enhancing local livelihoods limits the ability to make definitive judgements. Most reports rely on qualitative information and anecdotal observations, and there is a dearth of quantitative data. However, there are sufficient case studies and other analyses to discern the trends. Most reviewers report improvements in forest condition (forest area, density, productive capacity and sometimes species diversity) over large areas as well as a reduction in threats such as illegal logging and wildfires. These trends indicate that, overall, natural capital is improving under CBF regimes.

Relatively few analyses indicate specific improvements in social and human capital, perhaps partly because of methodological difficulties. Most reports draw on individual case studies, and it is difficult to judge the extent to which reported changes are widespread. There are some documented examples of CBF regimes displaying substantial resilience to withstand internal and external shocks as a result of enhanced social cohesion associated with improved social and human capital and improved local governance. Similarly, few studies have analysed and quantified increases in financial capital. Those that are available tend to rely on a small number of case studies. An exception is a large-scale assessment in Nepal (MFSC, 2013) which reported increases in financial capital accrued to individuals and community groups over a wide area.

Poverty alleviation is often mentioned as one of the benefits associated with CBF, and it is sometimes an explicit government objective. However, documented evidence of the effect of CBF on poverty is mixed. Improving livelihoods of the general community is not the same as alleviating poverty. Poverty can be alleviated only when poor people are identified and benefits are specifically targeted towards them (Schreckenberg and Luttrell, 2009; Patenaude and Lewis (2014). This is a situation that rarely occurs, and there are numerous reports of benefits from CBF management being captured by elites.

McDermott and Schreckenberg (2009) concluded overall that CBF can be effective in both the global South and North as a strategy to improve the welfare of poor communities while conserving or restoring forests. However, their analysis suggests that, in general, although the poorest and the most marginalized share in benefits, they do not necessarily experience a relative improvement in their individual welfare. CBF improved conditions for poor communities as a whole more than for the poorest within communities. Schreckenberg and Luttrell (2009) concluded that rights to commercial use of the forest (accompanied by sufficiently robust institutions) are needed if CBF is to generate sufficient income to contribute to poverty reduction beyond simply sustaining flows of subsistence products.

An important conclusion is that if poverty alleviation is an objective of CBF, then a positive outcome is most likely when a pro-poor emphasis is embedded in both the regulatory framework and the implementation procedures of the country. A similar argument applies to gender equity. Finally, while CBF cannot itself fix all the structural inequities in countries that perpetuate poverty and marginalization, it can begin to equip communities with the resources and capacity to come together to challenge them. Cheng and Fernandez-Gimenez (2006a) observed that in order to reduce inequity, community-based organizations must make equity an explicit target.

In spite of many positive trends, there is widespread reporting that CBF regimes are performing well below expectations and could do much better. There are many reasons for underperformance. The following points summarize several of the key issues.

- Local stakeholders have embraced CBF on the promise that the forests will be theirs to manage and they will receive substantial benefits. However, the partial approach to empowerment (particularly regarding devolution of rights) that has characterized most national implementation has meant that benefit flows have been limited. If this situation is not greatly improved, CBF could be considered by local stakeholders as not worth the effort needed to remain engaged.
- Just allocating rights and then letting communities get on with managing their forests is an approach that tends to deliver suboptimal outcomes. The social processes that are an integral part of CBF regimes (particularly those leading to functional local institutions and strong governance) require a considerable period of time to work through. In addition, adoption of these processes benefits from mediation and facilitation by NGOs, CSOs or external projects, and forest agencies tend not to excel at mediating and facilitating.
- In many cases degraded forest assets have to be restored, and in most settings this takes several decades. In such situations CBF regimes cannot be expected to deliver substantial economic benefits in the short term.

- In the last FAO global review of CBF (Arnold, 2001), a call was made to carry out "critical analysis" on how to address "weaknesses and problems" associated with implementing CBF. Since that time a huge amount of research and analytical effort has gone into determining what is needed to make CBF effective. Partly as a result of this increase in knowledge, progress is being made in some countries, but it is patchy, and it is clear that while many governments have adopted various forms of CBF, they have shown a reluctance to make the changes needed for it to be fully effective. Thus in many situations CBF is a community-based regime in name only. In some cases it appears that powerful vested interests prevent CBF regimes from functioning effectively.
- Underperformance in some situations may also be partly explained by invoking a hypothesis suggesting that "if the development industry attempts to extend rights which host nation governments are not prepared to enforce, the result will not be a rejection of the industry's programmes. Rather they will be welcomed, but channelled to places where those rights do not make a difference" (Biddulph, 2011, p. 2). This idea emphasizes the importance of national governments taking ownership of CBF initiatives and institutionalizing them into national development programmes.
- "Lack of political will" is often invoked to explain poor performance of CBF even after several decades of concerted efforts. An improved understanding of the political economy surrounding CBF, particularly an exploration of the way that dominant power holders obtain access to and benefits from forest resources, could help to explain the origin of this lack of will.

Community-level basket-weaving enterprise using bamboo, Bangladesh

Chapter 7
Lessons learned from analysis of CBF experiences

SOME RECENT ANALYSES

A considerable effort has been expended in analysis of CBF in many countries and operational environments to determine conditions that contribute to successful outcomes. This section summarizes the results of several of the most recent analyses.

Anderson and Mehta (2013) carried out a global analysis of community-based natural resource management (i.e. not just forests) and proposed a framework to consider constraints to improving performance based on three groups of issues: nature (technical), wealth (economic) and power (governance). They proposed approaches to overcome the constraints in each of these groups.

Sabogal *et al.* (2014) analysed five CBF regimes (involving communities and smallholder associations) in Latin America with different management objectives to determine the enabling conditions that contributed to SFM. They grouped the conditions under three broad categories: policies, institutions and governance; forest resources, capacities and cultural and socioeconomic aspects; and technological development, research and monitoring.

Baynes *et al.* (2015b) analysed success factors in CBF, drawing on extensive literature from Mexico, Nepal and the Philippines, supplemented by experiences in other countries in Africa, Asia and Latin America. They described a set of socioeconomic or cultural conditions in which community forestry may thrive and identified five interconnected success factors: socioeconomic status and gender-based inequality; secure property (tree and land) rights; intracommunity forest group governance; government support for community forest groups; and material benefits. They used concepts of "bonding social capital" (communities' ability to work together towards a common aim) and "bridging social capital" (the ability of communities to liaise with the outside world) to integrate the many ways in which CBF regimes can improve the state of these five factors. They emphasized that "failing to appreciate both the complexity and interaction of the various influences may lead to project failure" (Baynes *et al.*, 2015b, p. 226).

Persha, Agrawal and Chhatre (2011) analysed a set of social, ecological and governance data compiled by IFRI (a collaboration of 13 research centres in 11 countries, focusing on local forest governance and forest resource outcomes in diverse sociopolitical, ecological and institutional contexts) from a wide range of representative forests in human-dominated tropical landscapes. Based on 84 cases drawn from six countries in East Africa and Asia (Bhutan, India, Kenya, Nepal, Uganda and the United Republic of Tanzania), they emphasized the importance of formal participation of local forest users in rulemaking aspects of forest governance as a means of increasing the probability of positive social and ecological outcomes. However, the authors noted that this conclusion rests on an

assumption that synergies can be achieved across multiple forest outcomes, an assumption that is not necessarily valid.

IFRI and FAO (in preparation) analyses key findings during the past 20 years from 499 IFRI publications on CBF spanning 20 countries across all regions. This analysis, the most comprehensive of its type, attempts to explain a range of forest management outcomes – social, institutional and ecological. The major focus is on institutions and governance, although forest condition, livelihoods and biodiversity also feature. The report identifies "success factors" that, individually and in combination, are associated with improvements in livelihoods and forest conditions, and whose absence is associated with reduced likelihoods of successful governance and less chance of improving livelihoods and forest condition. These success factors, grouped in five categories – forest resource system; social groups and their members who depend on forests; institutional arrangements; market, demographic, cultural and historical features of the context; and biophysical context – are elaborated in Appendix 3, with policy guidance for their successful adoption.

The RECOFTC (2013) review of CBF in 14 countries in Asia and the Pacific concluded that CBF can make significant contributions to local livelihoods under three conditions. First, communities need access to forests that can provide goods and services of value to them. (In fact, this rarely occurs in Asia because forest departments tend to allocate highly degraded or barren forest land to communities. For this reason, CBF in Asia has not generated major local incomes.) Second, communities need to have genuine empowerment so that they can make their own decisions to balance forest conservation with socioeconomic development. (Involvement as passive participants in what are essentially government programmes can result in negative outcomes on subsistence and/or cash incomes.) Third, the regulatory framework needs to be enabling rather than constraining. (Complex and rigid regulations abound, but are particularly prevalent in relation to the harvesting, transport, processing and sale of timber.)

Pagdee, Kim and Daugherty (2006) carried out a metadata analysis of the factors contributing to the success of collaborative CBF regimes, drawing on 69 case studies, mostly in developing countries. They concluded that achieving ecological, economic and social success at the same time is difficult and complicated, and few of the case studies addressed all of these indicators. They found that the three factors most frequently associated with successful outcomes were well-defined property rights, effective institutional arrangements and community interests and incentives. However, they cautioned that success or failure was likely to be case specific, depending on the ecological, social and economic context of the local community.

The comprehensive literature review of Seymour, La Vina and Hite (2014) concluded that improved forest outcomes are associated with, among other things, security of tenure regardless of form; community-level management (local involvement/autonomy in rule making); strong and established local institutions; positive economic incentives to justify the investment in forest management; support from NGOs; and supportive national policy. They also reported a broad consensus that tenure insecurity is a significant driver of deforestation and degradation.

While some fairly consistent generalizations have emerged from reviews and studies across all regions, every one of them is subject to numerous caveats and conditionalities. Generalizations can obscure the complex and dynamic nature of the linkages between the

BOX 25

Knowledge of the local context is important in interpreting CBF outcomes

Some communities have received strong rights on forests, while others have been assigned heavy responsibilities in combination with limited rights. The economic and environmental values of the forests allocated to local people have varied significantly. In some instances, devolution has empowered existing community organizations and customary sources of authority. In others, devolution has undermined existing institutional arrangements by creating new community-level organizations and extending the reach of State authority.

Sources: Ribot, 2002; Edmunds and Wollenberg, 2003; Kamoto *et al.*, 2013

biophysical, socioeconomic and political realms in which CBF is situated, and for this reason they must be interpreted with caution in policy formulation and application (see Box 25). The better-quality analyses have attempted to improve understanding of causal inferences, but this is not easy because of the nature of the interactions involved.

REQUIREMENTS FOR EFFECTIVE CBF

The "success factors" identified in IFRI and FAO (in preparation) (Appendix 3), in combination with conclusions drawn from the earlier discussions, have been distilled to identify a set of preconditions necessary to enable communities to build their social and human capital and to use this to transform their natural capital into improved well-being.

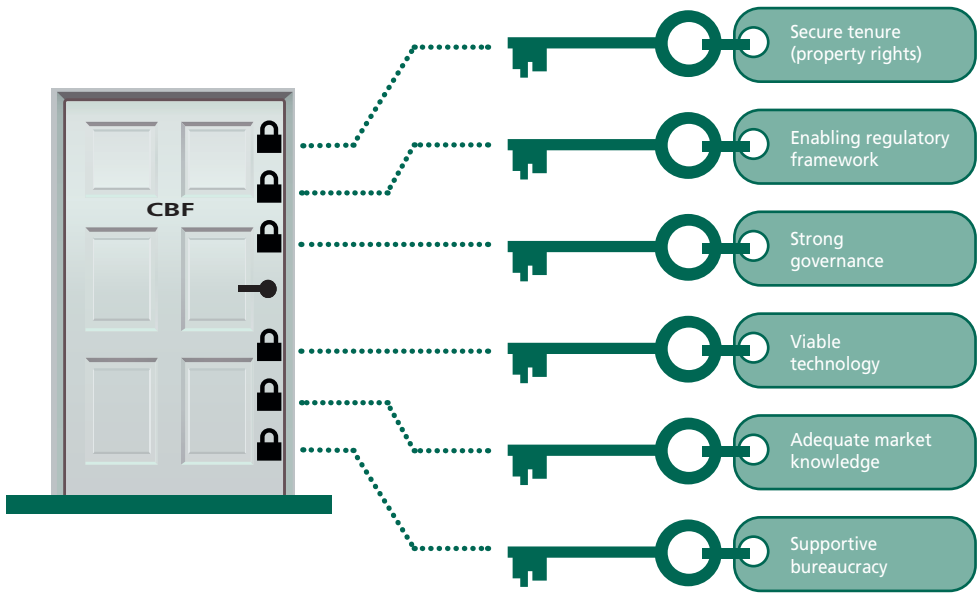
Adopting a metaphor used by Byron (2001), effective CBF can be described as a door with many locks, where each lock represents a major impediment (Figure 3). A brief summary of the issues associated with applying each of the keys needed to open the locks follows. The full potential of CBF can only be realized when all the locks are opened; focusing on providing a key for one or two of the locks will not enable communities and smallholders to pass through the doorway. In many countries some of the locks may be open but not others. For example, communities may have secure property rights to manage forests and receive benefits from their management efforts, but complex compliance procedures may make it impossible for them to fully exercise their rights.

This is a somewhat reductionist view of a very complex set of issues and situations which are often context specific, and substantial overlap and interaction are evident among the different "keys". Nonetheless, the doorway provides a workable framework for discussion, particularly with policy-makers and practitioners.

Secure tenure (property rights)

There is a strong correlation between secure tenure and improvement in forest condition (Seymour, La Vina and Hite, 2014; Gray *et al.*, 2015). Conversely, insecure tenure tends to be associated with forest degradation and deforestation. For example, in a study of 80 CBF regimes in ten countries across Asia, Africa, and Latin America, Chhatre and Agrawal (2009, p. 567) found that: "larger forest areas and a high degree of community

FIGURE 3
Keys to effective community-based forestry (CBF)



autonomy in decision-making are all associated with both high carbon storage and livelihood benefits. Conversely, local users with insecure property rights extract resources at unsustainable rates."

Secure tenure means that the associated rights should be "hard" rather than "soft" (i.e. they should be embedded at high levels in the regulatory framework (such as laws or decrees) so that they cannot be changed easily by bureaucratic discretion (Gilmour, O'Brien and Nurse, 2005).

While governments are often prepared to give away degraded forest to communities, they frequently try to regain control (by introducing taxes, imposing overly detailed requirements for management planning or other measures) when they realize that the forests have become valuable assets after the communities have spent several decades in restoring them to a productive condition (FAO, 2004). This emphasizes the importance of embedding access and usage (tenure) rights as "hard" rights in the regulatory framework.

There is a strong correlation between secure tenure and improvement in forest condition. Conversely, insecure tenure tends to be associated with forest degradation and deforestation.

Globally, forest tenure rights of local and indigenous people remain weak, and this limits their ability to manage their forests for the full range of benefits, including commercial benefits (FAO, 2011; RRI, 2014b). Accordingly, considerable international attention has been focused on the importance of secure tenure in contributing to sustainable forest management and delivering benefits to local and indigenous communities. For example, Gray *et al.* (2015), using cost-benefit analysis, demonstrated that securing community forest tenure is a low-cost, high-benefit

investment in Brazil's Indigenous Territories and community concessions in Guatemala's Maya Biosphere Reserve.

Strong tenure is necessary, but by no means sufficient for CBF regimes to deliver the biophysical and socioeconomic outcomes expected of them (Pacheco *et al.*, 2012; RECOFTC, 2013). While securing tenure rights is an important first step for advancing forest-based development, to achieve better outcomes for people and forests these reforms must be accompanied by an enabling regulatory framework and good governance systems, including policy incentives and measures to reverse market imperfections (Pacheco *et al.*, 2012).

These issues are generally addressed during the early stages of community forestry establishment but frequently need to be revisited if management objectives shift from subsistence to commercialization or if additional objectives (such as carbon sequestration) are added. In this context, the *Voluntary guidelines on the responsible governance of tenure of land, fisheries and forests in the context of national food security* (FAO, 2012c), adopted by the Committee on World Food Security in 2012, present principles that have the potential to contribute to increased security of forest tenure and better governance, with an emphasis on vulnerable and marginalized people.

Enabling regulatory framework

The importance of an enabling regulatory framework is a recurrent theme in virtually all analyses of CBF. In most countries, even when community rights are secure, multiple and complex compliance procedures (often part of the regulatory framework) imposed by public forest and other government agencies place significant impediments in the path of communities and smallholders that effectively prevent them from managing their forests to deliver their full potential. Some of these are discussed in Chapter 5 in relation to commercialization of CBF products.

Larson *et al.* (2008, p. viii) noted, "the bundle of rights granted is sometimes overwhelmed by an accompanying bundle of responsibilities". These can include requirements for detailed management plans, complex inventories and special permits, often from multiple authorities, to harvest, transport and process forest products. In Latin America, de Jong *et al.* (2010, p. 6) reported that "Obtaining legally valid documents and permits, usufruct rights in the form of forest concessions or extractive reserves, as well as constituting formal smallholder organizations involved lengthy processes with high transaction costs, even more as government norms and regulations often were relatively difficult to comply with". Paudel, Paudel and Khatri (2014) noted that in Nepal, while the Forest Act and supporting regulations are very enabling, the actual regulatory environment faced by Forest User Groups is disabling because of constraints placed in their way by government officials. For example, smallholders in Nepal are required to go through at least 14 steps involving four separate government agencies to obtain approval to harvest and transport trees from their land, a process that takes a minimum of three months (Amatya *et al.*, 2015). It is little wonder that smallholders and communities step outside the formal process when seeking to access the market.

Regulatory frameworks for CBF need to be enabling rather than constraining so that the rights associated with managing forests are not overwhelmed by onerous responsibilities.

Another disincentive is heavy and cumbersome taxes and fees. In China, for example, before the tax on forest products was eliminated by tax reform in 2005, the high taxes and

a complex tax system were serious disincentives for tree planting and forest management and had negative social and environmental effects. In addition, more than ten official types of taxes and fees were charged on timber and wood commodities, not to mention unofficial forestry charges (Liu and Edmunds, 2003; Liu and Landell-Mills, 2003). More recently, Liu and Innes (2015, p. 6) noted that "forestry continues to suffer from a disproportionate burden of taxation and inappropriate management policies".

Suzuki, Durst and Enters (2008), in a review of the benefits of small-scale harvesting and processing of timber from CBF regimes, pointed out that the transaction costs arising from regulatory requirements around harvesting and transport are often very onerous. The regulatory framework should attempt to minimize transaction costs that communities incur in complying with regulations (see Box 26).

Another constraint is the lack of a "level playing field" for all forest management entities in a country (RECOFTC, 2013). CBF regimes often operate under constraints that do not apply to corporate entities, such as restrictions on having timber processing equipment in or close to forests. Such requirements constrain the ability of CBF enterprises to operate efficiently and compete with private-sector entities.

Regulatory frameworks outside the forest sector that are not necessarily explicitly related to forest management or forest policy may nonetheless have direct impact on CBF regimes. For example, people may have formal rights under the forest law to collect NWFPs

BOX 26

Transaction costs

Transaction costs refer to the costs (financial and other) involved in transacting business. Transaction costs associated with CBF can include the time spent at meetings and in negotiations, as well as direct costs such as contributing labour to tree planting and other forest activities. Economic consequences associated with transaction costs are often severe, particularly for poor people who might have to forgo income-generating activities in order to participate in CBF activities. For this reason some analysts argue that, unless implementation agents are very careful, poor people can be made both absolutely and relatively worse off by participating fully in CBF activities.

In some cases governments include in the regulatory instruments the need for communities to commit to a high level of bureaucratic record-keeping and reporting, and this inevitably increases transaction costs. Much of this reporting may be to satisfy the government's own needs rather than those of the community, yet the community is required to pay the transaction costs. However, minimizing reporting and record-keeping has to be balanced with the need for openness and accountability of the institutions involved (government as well as community).

Obvious equity considerations are associated with transaction costs.

Source: Gilmour, O'Brien and Nurse, 2005

and woodfuel but may be prevented from getting the products to market and selling them by transport, market or other regulations. In other words, their ability to operate within one law is constrained by another law. Consequently, regulatory frameworks from other sectors that impinge on CBF operations need to be taken into consideration.

Box 27 summarizes the key aspects of an enabling regulatory framework.

BOX 27

Key aspects of an enabling regulatory framework for CBF

Regulatory frameworks generally consist of a law plus several levels of subordinate legal instruments (policy, rules and regulations).

The law should:

- define and enable CBF;
- clearly specify the jurisdiction and accountability mechanisms for each level of the institutional hierarchy responsible for CBF;
- establish tenure rights or specify the means by which rights to forest resources under CBF programmes will be allocated, including by recognition of traditional uses and rights;
- provide for economic valuation of wood and non-wood resources;
- establish the right to receive benefits from managing forests;
- enable equitable benefit sharing;
- enable dispute resolution mechanisms;
- establish the right to compensation if tenure rights are revoked or extinguished;
- provide penalties for violations.

Subordinate legal instruments should provide for:

- specific rights of all institutions, groups and individuals involved in CBF, including incorporation of traditional uses and rights (if not already done in the law);
- specific responsibilities of all institutions, groups and individuals involved in CBF;
- applying economic values of the wood and non-wood resources involved to ensure equitable benefit sharing, incentives sufficient to encourage compliance and penalties sufficient to deter violations;
- decision-making mechanisms that balance interests of government and needs of communities;
- locally appropriate dispute resolution mechanisms.

These subordinate legal instruments generally include:

- rules and regulations for implementing CBF (to provide the legal basis to operationalize the law and policy);
- guidelines to assist government staff and NGOs in working with communities to re-establish or strengthen traditional institutional arrangements for managing forests and to merge these arrangements with government policy requirements of sustainability and equity;

Continues

Box 27, continued

- guidelines for preparing management agreements – simple operational plans agreed between government and community partners to define and legitimize CBF management (e.g. set management objectives, agree on protection, harvesting and benefit-sharing arrangements, establish sanctions for those who violate the rules);
- any additional requirements, such as registering village Forest User Groups as legal entities (e.g. so that they can operate bank accounts);
- recognizing the situation where CBF groups and their forests cross political or administrative boundaries.

Source: Adapted from Gilmour, O'Brien and Nurse, 2005

Strong governance

The importance of strong governance in achieving CBF outcomes was emphasized by Charnley and Poe (2007) in their review of CBF in the Americas. They concluded that effective institutions, rather than specific forms of property rights, are what is important for achieving sustainable forest use, and emphasized the importance of effective local-level forest management institutions in contributing to positive environmental outcomes. Similarly, Szulecka and Secco (2014) pointed out that local institutions are critical for anchoring social capital and storing forestry knowledge in communities. The importance of institutions in this regard is now widely recognized, and this recognition has led to a huge research interest in the topic (e.g. Gibson *et al.*, 2000; Ojha *et al.*, 2008b).

Strong local governance and effective institutions are critical for achieving sustainable forest management and improving livelihoods.

Kamoto *et al.* (2013) provided examples from Malawi where institutions designed by outsiders were imposed on communities without paying any attention to the presence of existing institutional arrangements for resource management, resulting in a range of negative and damaging outcomes (see Box 28 for details). They noted that "policy that seeks to change institutions needs to be built on clear understanding of the often complex nature of existing local institutions and of how they may influence possible outcomes" (Kamoto *et al.*, 2013, p. 299). Wong (2013) argued that strategies to tackle elite capture need to pay attention to the historical, socially embedded and negotiated nature of resource governance arrangements that are often present in local institutions.

In a similar vein, de Jong *et al.* (2010, p. 12), following an analysis of experience in forest-based societies in the Amazon, warned that "externally proposed forestry development models do not last unless they are rooted in the local social structures, economies, and value systems". Fisher (1994, p. 78) emphasized the importance of going beyond just sponsoring new organizational structures: "it is also important to recognize the need for external interventions to include a process of consensus building rather than merely concentrating on formation of new organizational structures such as committees".

These examples emphasize the importance of good institutional analysis associated with development of governance arrangements for CBF. Arrangements built on existing social

BOX 28

Example of negative consequences associated with imposing a forest policy from outside

A new forest policy was developed in Malawi that imposed new institutions on local communities and failed to take account of existing local institutional arrangements for resource management. The results of the new policy were that:

- Village Natural Resource Management Committee structures (required under the new policy) failed;
- Village Forest Areas were cleared of trees;
- communities were denied resources that belonged to them;
- conflict was heightened within communities and families;
- institutions were undermined and social capital was eroded.

Immediate damage was done to community members' natural resource base, as they were denied resources to which they previously had access, income that was owed to them was taken by people in positions of power, a school was closed, and in some cases individuals were criminalized by overzealous forest guards. Self-serving institutions that facilitated elite capture of benefits were strengthened, while long-term damage was done to established institutions that controlled natural resource management and, more widely, to trust and relationships necessary to provide a safety net for vulnerable community members. The breakdown of trust and relationships undermined social capital. In this way the harm has had the most impact on the poorest members of the community, as it is they who rely most on traditional institutions for information, guidance, help and support and gain most from developing social capital.

Source: Kamoto *et al.*, 2013

relationships are likely to have a good chance of being sustained. Box 29 gives a successful example from Nepal.

Strong governance is characterized by meaningful participation of local communities and other stakeholders, transparency of decision-making, accountability of actors and application of the rule of law. It is also associated with efficient and effective management of natural, human and financial resources, and fair and equitable distribution of benefits to community members (Paudel, Karki and Paudel, 2014). Conversely, weak governance often leads to lack of transparency, with many opportunities for rent seeking and corruption. Many observers have found that the development of strong governance in CBF regimes frequently requires intensive facilitation and regular support over many years (NSCFP, 2011).

Processes of deliberation among key actors involved in governance are increasingly seen as a fundamental component of meaningful participation leading to transparent decision-making and strong governance (Rantala and German, 2013) (see Box 30). Further, empowered deliberation can contribute to social learning and democratization

BOX 29

The importance of recognizing existing social relationships and building on local institutions for strong CBF governance – an example from Nepal

In Nepal, local (indigenous) forest management systems were widespread but largely unrecognized by the government. Some of these were formal (e.g. forest management committees, recording of meetings and decisions, forest watchers appointed to ensure rules were followed) and some were informal (e.g. locally accepted norms and patterns of behaviour). When a new national forest policy was adopted in 1989, it built on existing social relationships and recognized local institutional arrangements as the building blocks for the national community forestry policy. As a result, the Community Forest User Groups in Nepal are not aligned with the local political and administrative boundaries, but operate within the forest boundaries recognized by the indigenous institutions. This has had important consequences in terms of their strength, resilience and sustainability in the face of many political and social upheavals (including revolutions and a ten-year civil war) during the past 25 years.

Source: Gilmour and Fisher, 1991

BOX 30

Deliberation in governance

Deliberation – enquiring, arguing and learning together, including persuasion free of coercion – is crucial for direct participation in decision-making. It is what distinguishes influential and meaningful participation from token participation. When, in a democratic context, alternative actions have been transparently and carefully considered from various relevant angles, with arguments for and against them, the decision is more legitimate, even if it is not necessarily unanimous.

Source: Rantala and German, 2013

of institutions (Ojha *et al.*, 2008b; Ojha *et al.*, 2008c). However, deliberative governance tends not to emerge by itself, but requires mediating institutions such as NGOs or CSOs to facilitate the necessary processes. In practice the application of deliberative processes has tended to be the exception rather than the rule.

CBF has many stakeholders and in some situations their interests may be incompatible. In this sense, control of forest management is inherently political. Sustainable outcomes can be achieved by mediating between conflicting agendas and reaching workable compromises (Fisher, Prabhu and McDougall, 2007).

Governance of CBF regimes may need to change over time, although this is not often recognized. For example, near the end of the start-up phase of CBF operations, governance arrangements may need to be adapted to changing political, economic, social and environmental conditions (Taylor and Cheng, 2012). Change may also be needed if CBF regimes are influenced by outside agencies to take on additional objectives such as payment for environmental services (PES) or reducing emissions from deforestation and forest degradation (REDD+) (see Chapter 8). Hence, the institutions of governance need to be adaptive and flexible and to have built-in processes that value and sustain these characteristics (Fisher, Prabhu and McDougall, 2007). Much work has been done to explore how CBF governance can be modified to embrace these characteristics (see for example Prabhu, McDougall and Fisher, 2007). The needed changes involve fostering processes where the key actors engage in mutual learning and use the learning to adapt to changing internal and external circumstances. Where such processes have been successful, the results are CBF regimes that demonstrate a high level of resilience to both internal and external shocks.

Viable technology to establish and maintain productive forests

Smallholders and community groups need technical skills and knowledge to enable them to establish and manage their forests and forest products sustainably. In situations where new forests are established, access to high-quality germplasm is critical to maximize productivity.

Smallholders generally (but by no means always) want to manage their forests for financial benefits, but community groups frequently have a wider range of objectives, including the sustainable provision of subsistence goods and services (Guariguata *et al.*, 2008). Silvicultural knowledge is needed to manage forests sustainably to produce the range of goods and services that smallholders and communities require. Conventional silvicultural practices have been developed in Western industrialized countries for application in large-scale industrial forestry aimed at producing high-value commercial timber, rather than the multifunctional forestry that characterizes most CBF. There have been some attempts to adapt these practices for use in CBF regimes, but uptake has been limited.

Access to adequate technical skills and knowledge – including high-quality germplasm and appropriate silvicultural knowledge – is necessary for communities and smallholders to establish and manage forests sustainably and optimize productivity.

An international seminar on silviculture for community forestry in 1998 noted that, for a variety of reasons, silviculture had been largely ignored by community forestry practitioners and researchers alike (Victor and Barash, 2001) and that "the forestry profession has failed to bring its greatest strength – the understanding of the scientific principles of forest ecology and the protocols of forestry research – to bear on the development of more productive silvicultural systems for natural forests under community management" (Donovan, 2001, p. 3). Although there have been some exceptions (e.g. Gilmour *et al.*, 1990; Campbell, Rathore and Branney, 1996), little has changed since 1998 in terms of focused research on silviculture for CBF (for planted as well as natural forests). Much more work is needed to identify best practices and

technology applicable at the scale and intensity of most smallholder and community operations.

For natural forests, silvicultural questions that need to be addressed include the following:

- What type of silvicultural system is most appropriate to achieve the management objectives set by the community (which often include a range of wood and non-wood products and services)?
- How can adequate regeneration be ensured after harvesting of wood and NWFPs?
- What form of harvesting is (silviculturally) most appropriate for both wood and NWFPs?
- How can overharvesting of wood and NWFPs (especially of favoured species) be avoided?
- What data are needed to enable commercialization of forest products (or to prevent owners from being taken advantage of by buyers)?

For planted forests, the questions include:

- How might communities manage thinning operations?
- How can thinning from above (which can lead to gradual stand degradation) be avoided?
- Is it better to clear-fell and replant, or to move gradually to uneven-aged stands managed by selection harvesting?

As mentioned previously, CBF in many parts of the world is moving towards commercialization of forest goods and services. As this process unfolds further, it will be important to develop and apply appropriate technology at all stages of production, harvesting, processing and marketing of NWFPs, woodfuel and timber.

Knowledge of markets and market access for goods and services

As described in Chapter 5, access to markets and insufficient knowledge of market functioning are recurrent problems and major obstacles to commercialization of CBF goods and services. A complicating factor is that CBF enterprises, at least at the outset, often deal with small quantities of forest products, so breaking into established markets is a major challenge.

Communities and smallholders require considerable knowledge to assess markets for goods and services so that they can tailor their products to fit market requirements. They need information on market trends, prices and value chains – information that is generally lacking.

Knowledge of market mechanisms and access to markets are essential if communities are to commercialize their forest products and maximize their financial returns.

Associations that represent communities and smallholders can play an important role by acting as a conduit to market information for their members and by advocating for market and regulatory reform, as happens for example with forest owners' associations in Norway and Sweden (Schmithüsen and Hirsch, 2010) and Mexico (Taylor, 2005). In many situations NGOs and CSOs can play a similar role. Developing community–private partnerships has also been shown to be a way of overcoming some of the market-related problems faced by individual communities and smallholders (Antinori, 2005).

Supportive bureaucratic mandate and culture

There is a strong link between creating an enabling regulatory framework for CBF and creating a bureaucratic environment that can support communities and smallholders to implement CBF. The relationships between bureaucrats and communities and individuals are often ignored or marginalized in considering requirements for implementing CBF effectively. When government officials resist relinquishing control over forests, even if they are required to do so under the regulatory framework, communities and smallholders cannot obtain full benefits from their forest management efforts. Some authors have pointed out that the power of authorities can be more important than tenure in determining benefit distribution (e.g. Ribot, 1998; Klooster, 2000).

In their review of case studies from Latin America, de Jong *et al.* (2010) emphasized the importance of a supporting bureaucratic culture in a setting where forest-based societies have their own practices, values, preferences and priorities. They argue that one of the reasons for underperformance of externally sponsored initiatives is incompatibility between the local and sponsored cultures and institutions and the failure of forestry development experts to understand local realities.

Adoption of CBF generally requires key actors such as government officials, smallholders, community groups and individuals to adopt new roles. Additionally, the relationships between key actors are often changed dramatically. For example, government officials may need to shift from active forest management, which may have involved a high degree of command and control, to participatory forest management, where they are required to assist and support smallholders and community groups to manage forests for their own multiple benefits rather than the State's direct economic benefit. This implies a fundamental change to the organizational culture of agencies which is very difficult to achieve. Such changes of attitude and approach cannot come about by fiat and invariably need a great deal of support. Merino-Perez and Segura-Warnholtz (2005, p. 55) noted that in Mexico during the 1970s and 1980s, "Although the communities were recognized by the State as the true forest owners, at the same time government institutions exercised direct control over these resources and, in some cases, they appropriated most of the benefits". A similar situation was reported from Nepal, where an analysis of case studies across all major ecological zones in the country revealed that even though local rights of access and usage were guaranteed in national policies and laws, "a latent hesitation exists among government field officers to fully transfer the rights to communities" (Paudel, Banjade and Dahal, 2008, p. 27). It is worth keeping in mind that bureaucratic power and processes tend to reproduce themselves (which creates problems with strongly hierarchical organizations sponsoring participatory entities), with the result that policies and practices can easily reinforce existing social hierarchies and divisions.

Reluctance by government officials to relinquish control over forests, even where they are required to do so under the regulatory framework, inhibits the ability of communities to exercise their rights.

CONSIDERATIONS FOR IMPLEMENTATION OF CBF

Having identified the key needs for successful CBF outcomes (i.e. what needs to be done), this section considers some of the lessons learned on how to meet these needs, based on

BOX 31

Stepwise approach in implementing community forestry in the Gambia

Following intensive field testing, community forestry was implemented in the Gambia in three phases:

- a start-up phase during which forest management by local communities was prepared;
- a preliminary phase during which communities built and demonstrated their capacity in forest protection and management (also seen as an important step towards creating a sense of forest ownership);
- a consolidation phase during which communities gained further managerial and technical forestry skills aimed at self-management for the long term.

The impressive commitment of concerned villagers convinced government authorities not to limit ownership rights to a fixed period but to grant permanent ownership rights as long as the conditions of the final agreement are not abused.

For the development of confidence between a participating community and the Forestry Department, it has been found necessary to develop a mutually agreed simplified Preliminary Community Forest Management Agreement for the preliminary phase and a more detailed Community Forest Management Agreement for the consolidation phase.

The same approach has been used successfully in Mongolia with Forest User Groups.

Source: Reeb, 1999; FAO, 2008

experiences in implementing CBF. This is not to suggest that there is one blueprint that must be followed, but rather to indicate some of the issues that need to be taken into account in most situations.

As an approach to forest management, CBF differs radically from government-controlled, centralized approaches or corporate private-sector management, which it frequently replaces. Among the aspects that need to be addressed when access and use rights are transferred to communities are:

- building relationships of trust between communities, smallholders and staff of forest administrations (often replacing previous relationships characterized by mistrust that resulted from the alienation of rural people from their customary land and forest resources);
- ensuring that genuine participation of all rights holders characterizes group formation and institutional arrangements so that issues of social inclusion, gender, equity, pro-poor outcomes and rights-based approaches are addressed;
- building communities' or smallholders' sense of ownership of the forests and self-confidence in their ability to manage their forest sustainably and benefit from their endeavours (FAO, 2008) (although many local communities, and indigenous peoples in particular, do have a strong sense of ownership of their traditional forests);

- ensuring that a "level playing field" operates for all forest management entities, as CBF regimes often operate under constraints that do not apply to corporate entities.

Some of these elements are social in nature and cannot be easily addressed through technical fixes. Developing and institutionalizing fundamentally new relationships require time and good will on all sides, but the effort must be made.

The attitudes and actions of national governments must also be considered. If CBF initiatives are largely externally driven by NGOs or donor agencies and the government has limited, or sometimes no, buy-in, the initiatives are unlikely to succeed; in such cases CBF is unlikely to be institutionalized into mainstream government programmes and budgets, with consequences for its long-term effectiveness and sustainability. This situation is not uncommon in some African countries (Kamoto *et al.*, 2013) and has also been reported in South America (de Jong *et al.*, 2010). Kamoto *et al.* (2013, p. 299) reported that in Malawi, for example, "weak government buy-in to [community-based natural resource management] initiatives is likely to translate into a 'business as usual' top-down sectoral approach to natural resource management".

It has been suggested that a stepwise approach (Box 31) can be helpful to build the gradual recognition that transfer of access and use rights has really taken place and is meaningful (Reeb, 1999; FAO, 2008). As mentioned earlier, a good deal of social learning has to occur as new forms of governance are put in place. Outside facilitation and mediation (for example, from NGOs, CSOs or donor-supported projects) can often be of considerable help.

In most situations capacity building of all stakeholders is an essential ingredient of success, as all parties to the new agreements have to take on new and different roles that require different skill sets.

Sale of products from a community forest, Cameroon

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Chapter 8
CBF in the international arena

INCORPORATION OF CBF INTO INTERNATIONAL FRAMEWORKS

Following the United Nations Conference on the Environment and Development in 1992, the Commission on Sustainable Development (CSD) endorsed the role of local communities, indigenous peoples and other stakeholders in pursuing SFM. CSD initiated the Intergovernmental Panel on Forests (IPF) in 1995 to seek a global consensus for action supportive of participatory and sustainable forest management.

Commencing in 1996, the International Union for Conservation of Nature (IUCN) established a Working Group on Community Involvement in Forest Management and produced a series of five regional reports (covering Southeast Asia, South Asia, Meso-America, Western Europe, and Canada and the United States of America) plus a summary document (Poffenberger, 1996). These were used between 1996 and 2000 to advocate for CBF in international discussions on forests through input to IPF and its successor, the Intergovernmental Forum on Forests (IFF). The purpose was to channel the lessons learned from successful local experiences into global policy discourse, promote decentralization of forest management and emphasize the potential of CBF to contribute to SFM.

The main challenges at the time were seen as facilitating devolution of authority to forest-based communities while minimizing conflicts, and supporting new partnerships among communities, government and the private sector to ensure the satisfaction of community needs, forest resource conservation and sustainable use. It was argued that clarifying forest use rights and responsibilities and creating adaptive policies and programmes could lead to more sustainable forest management (Poffenberger, 1996).

The successor to IPF and IFF, the United Nations Forum on Forests (UNFF), incorporated the IPF/IFF Proposals for Action into its Multi-Year Programme of Work. Among the major themes of the 2007–2015 Programme of Work were community-based forest management; social development and indigenous and other local and forest-dependent communities, including forest land tenure; and social and cultural aspects (UNFF, 2007). A new Strategic Plan and associated work plan for 2017–2030 is currently under consideration.

Subsequent to these and related efforts, policies and programmes that support community involvement and decentralization in forest management are being embraced worldwide. CBF in its various forms has become an integral part of international discussions and the work programmes of most international organizations that are concerned with forest conservation and management (see Box 32).

IMPLICATIONS OF CONTEMPORARY GLOBAL POLICY INITIATIVES FOR CBF

CBF regimes have been proposed as appropriate vehicles for delivering benefits to local, national and global communities in the context of several important forest-related policy

BOX 32

Examples of integration of CBF into international fora and research on SFM

In the multi-point declaration adopted at its eleventh session, UNFF (2015) recognized the importance of collective action by indigenous and local communities in advancing sustainable forest management.

The Collaborative Partnership on Forests (CPF, 2011) called for governments across the globe to increase the role of communities in forest management.

The Center for International Forestry Research (CIFOR, 2008) has included "Improving livelihoods through smallholder and community forestry" as one of the six research domains in its 2008–2018 strategic plan.

The International Tropical Timber Organization (ITTO, 2014) has included Community Forest Management and Enterprises as one of its five thematic programmes.

The Conference of the Parties of the Convention on Biological Diversity has adopted a target under one of the five goals of its 2011–2020 strategic plan involving respecting and fully integrating traditional knowledge and practices of indigenous and local communities related to sustainable use of biodiversity into the implementation of the Convention (CBD, 2010).

FAO, through its new Strategic Framework, is revamping its programme on community-based forestry to contribute to its five Strategic Objectives, in particular to rural poverty alleviation, food security and nutrition and the sustainable provision of goods and services from natural resources (FAO, 2013).

initiatives that have emerged on the global stage during the past decade. These initiatives include in particular the 2030 Agenda for Sustainable Development and the Sustainable Development Goals; payment for environmental services (PES), particularly related to carbon sequestration and storage; and approaches to encourage SFM (certification schemes for goods produced from CBF and processes for forest product legality).

2030 Agenda for Sustainable Development and the Sustainable Development Goals

In September 2015 the United Nations adopted a set of 17 Sustainable Development Goals (SDGs) which provide an overarching policy framework to guide the world's development agenda until 2030 (UN, 2015). This is an important initiative with far-reaching consequences for the future of humanity. The goals have a strong emphasis on poverty eradication as well as gender equality and the empowerment of women and girls. In particular, they emphasize integration of the economic, social and environmental dimensions of sustainable development. This emphasis is also central to the objectives of CBF in most countries, so it is clear that CBF has a potential role in the attainment of the SDGs in a large proportion of the world's forests. CBF can contribute most directly to SDG 15.2, which states: "By 2020, promote the implementation of sustainable management

of all types of forests, halt deforestation, restore degraded forests and substantially increase afforestation and reforestation globally". The 2030 Agenda for Sustainable Development offers a real opportunity to support the scaling-up of CBF worldwide and enhance its effectiveness. Promoting CBF as a vehicle to achieve the SDGs, by ensuring that CBF is reflected in regional policy frameworks and national policies and action plans, could help the forest sector as a whole to achieve higher visibility.

Payment for environmental services

With increased recognition of the value of services afforded by healthy ecosystems and the contributions made by local and indigenous communities in keeping forests standing, the PES concept has attracted growing interest in recent years "as a mechanism to translate external, non-market values of the environment into real financial incentives for local actors to provide environmental services" (Engel, Pagiola and Wunder, 2008, p. 663). The basic idea behind PES is that the beneficiaries of environmental services make direct, contractual and conditional payments to local landholders in return for adopting practices that secure ecosystem conservation and restoration. Wunder (2005) gives examples of four types of PES arrangements:

- carbon sequestration and storage (e.g. a northern electricity company pays farmers in the tropics for planting and maintaining trees);
- biodiversity protection (e.g. conservation donors pay local people for setting aside or naturally restoring areas to create a biological corridor);
- watershed protection (e.g. downstream water users pay upstream farmers for adopting land use practices that limit deforestation, soil erosion, stream sedimentation and flooding risks);

CBF has a role in achieving the Sustainable Development Goals, as it integrates the economic, social and environmental dimensions of sustainable development (in Indonesia, a community prepares to plant Aquilaria trees, whose resinous heartwood, agarwood, is a valuable source of income)

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BOX 33

Payment for forest environmental services (PFES) in Viet Nam

In 2010 Viet Nam institutionalized a nationwide policy on requiring the users of forest environmental services to make payments to suppliers of these services (VNFF, 2014). The government has identified forest environmental service users as water supply companies, hydropower plants and tourism companies; and suppliers as forest owners (individuals, households, communities or organizations that hold titles to forested land). Many of these suppliers of forest environmental services would be smallholders and community groups involved with CBF regimes.

The central government established fixed payments for two specific forest environmental services: watershed protection and landscape beauty protection. Payments are collected under contract by provincial governments which release them to service providers.

Guidelines and procedures have been developed for calculation of the forest environmental service payments to apply to buyers and providers of the services. Buyers must pay a fixed amount, equivalent to about USD 0.001 per kilowatt hour produced for hydropower plants, USD 0.002 per cubic metre of clean water produced for water supply companies, and 1 to 2 percent of gross revenue for ecotourism companies (Pham *et al.*, 2013). To calculate the per-hectare payment to be given to service suppliers, the management fee (10 percent of gross revenue) and reserve fund contribution (5 percent) are deducted from the total before it is divided by the number of hectares in the forest area under contract to provide environmental services.

Since its inception in 2009, PFES has generated a total revenue of more than USD 162 million (VNFF, 2014), most of which comes from hydropower companies (Pham *et al.*, 2013). In several provinces, payments to individuals, households, communities and companies exceed the normal financial support (of about USD 9 per hectare per year) provided by the government to forest owners for forest protection and development through the State budget (VNFF, 2014).

However, Pham *et al.* (2013) noted that payments for watershed protection services under PFES policy are too small to cover the forgone economic gains from clearing forest, particularly for conversion to high-value agricultural land uses. They saw this shortcoming as a threat to the long-term sustainability of the scheme. Pham *et al.* (2013, p. 5) also emphasized that PFES schemes in Viet Nam "deviate from classic definitions of PES in that the level of payment is set by the government rather than being a voluntary transaction between buyers and suppliers; as such, PFES payments effectively function as a water and electricity use fee or tax".

- landscape beauty (e.g. a tourism operator pays a local community not to hunt in a forest being used by tourists for wildlife viewing).

In most cases payments are made directly to landholders, which can include individuals, community groups, cooperatives and indigenous communities.

Many practical difficulties are associated with operationalizing a PES system. The direct link between the service to be provided and the vegetation or land-use change is tenuous and there are major auditing issues. In most cases surrogate or proxy measures (such as area of marginal land reforested or a prescribed increase in tree or vegetation density) will need to be agreed on to determine compliance.

To date, payments to protect ecosystem services are rare in CBF projects and programmes (Charnley and Poe, 2007). Box 33 gives an example of one of the few PES schemes that has been adopted nationally for which information is available on the extent of payments and the mechanism by which payments are directed from service users to service providers (many of whom are managing forests via CBF regimes).

Sam and Shepherd (2011) identified several concerns associated with incorporating PES into CBF regimes, based on a review of the literature:

- research has not indicated if local people in developing countries have actually benefited;
- local issues may arise with such a top-down prescriptive programme that benefits larger landowners and/or those with secure tenure;
- there is currently little understanding about when and under what circumstances PES is best applied;
- monitoring and evaluation involve high transaction costs which may prohibit the inclusion of smallholders.

A conclusion from an international PES forum held in 2014 noted that most PES schemes have been small in scale and, by and large, have not fulfilled the expectations that have been claimed for them in terms of contributing to reduced tropical deforestation, providing additional income to forest owners and increasing the economic competitiveness of sustainable forest management (Muller, 2014).

Reducing emissions from deforestation and forest degradation. The concept of reducing emissions from deforestation and forest degradation in developing countries (REDD or REDD+), developed to apply post Kyoto Protocol (i.e. post 2012), involves paying people to avoid deforestation and forest degradation – that is, not to remove trees or damage forest quality. The "+" in REDD+ highlights the explicit incorporation of sustainable management of forests and the conservation and enhancement of forest carbon stocks (UNFCCC, 2007).

REDD+ is a specific case of PES where it is hoped that local forest users will choose forest conservation if they receive higher compensation than they would obtain from alternative uses of the forest. The World Bank has developed a Forest Carbon Partnership Facility to prepare developing countries to participate in a carbon offset market for forestry projects. The facility is designed to act as a broker between buyers and sellers of forest-related carbon offsets and will also provide funding to countries to build their capacity to develop projects. A large number of projects have been implemented during the past few years to test the application of REDD+ on the ground (see for example Angelsen *et al.*, 2012; Sills *et al.*, 2014).

Chhatre and Agrawal (2009, p. 17667) observed that:

> *Forests provide multiple benefits at local to global scales. These include the global public good of carbon sequestration and local and national level contributions to livelihoods for more than half a billion*

users. Forest commons are a particularly important class of forests generating these multiple benefits. Institutional arrangements to govern forest commons are believed to substantially influence carbon storage and livelihood contributions, especially when they incorporate local knowledge and decentralized decision making.

Hence, CBF regimes have a potentially important role to play in operationalizing REDD+ initiatives.

Reporting on an extensive multicountry metadata study, Chhatre and Agrawal (2009, p. 17669) noted that: "the decentralization of management authority over public forests to local communities is not only about forest governance – it is equally about development and climate policies". They found that larger forest size and greater rule-making autonomy at the local level (as can apply under CBF regimes) are associated with high carbon storage and livelihood benefits. They concluded that the transfer of ownership over larger patches of common forests to local communities, coupled with payments for improved carbon storage, can contribute to climate change mitigation without adversely affecting local livelihoods. They did note, however, that their conclusions should be interpreted with caution, since their statistical treatment required great simplification and thus loss of nuance with regard to local autonomy in rule-making and community versus State ownership.

The conclusion of Chhatre and Agrawal (2009) suggests that there is potential for smallholders and community groups to become serious players in REDD+ (Gray *et al.*, 2015). For example, Stevens *et al.* (2014) estimated that globally, 37.7 billion tonnes of carbon stock are held in the living biomass of the 513 million hectares of government-recognized community forests – about equal to the carbon in all the forests of North America (see also Box 34).

However, REDD+ also has potential for negative impact on CBF. It is possible that the carbon storage aspects of forests could become more dominant in REDD+ policy than the rights and interests of indigenous peoples and local communities, and this is a serious concern; the tail could wag the dog. In addition, REDD+ is increasingly being advocated as having pro-poor benefits. As has been pointed out for PES generally (Fisher *et al.*, 2008), the pro-poor benefits of REDD+ are not automatic, and REDD+ would need

BOX 34

Higher carbon storage in indigenous community forests in the Brazilian Amazon

In Brazil, from 2000 to 2012, deforestation in forests under control of indigenous communities was less than 1 percent, compared with 7 percent outside them. The higher deforestation outside indigenous community forests led to 27 times more carbon dioxide emissions than were produced from deforestation in indigenous community forests. Further, indigenous community forests contain 36 percent more carbon per hectare than other areas of the Brazilian Amazon.

Source: Stevens *et al.*, 2014

CBF regimes have a potentially important role to play in operationalizing REDD+ initiatives (involvement of a forest community in the development of a REDD+ project in Dolakha, Nepal)

to be carefully targeted to make it pro-poor (in the same way that CBF itself needs to be specifically targeted if it is to be pro-poor). At the same time, if tenure security is not guaranteed as an essential prerequisite, REDD+ has the potential to further undermine livelihoods and increase poverty.

Another concern relates to the possibility that REDD+ interventions could have inequitable impact on women. Larson (2014) commented: "If we don't take a gendered approach, we're likely to do more harm than good for women .... In the REDD+ context, if the status quo is inequitable then interventions that don't understand and address those inequities from the beginning are doomed to perpetuate them."

In a review of 23 REDD+ initiatives across six countries (from a total of 300 subnational initiatives), Sills et al. (2014) suggested that local livelihoods could be placed at risk unless local people are offered alternatives to forest conversion for agriculture, which is the primary income source for many smallholders. Their surveys noted that smallholders were concerned about whether they will receive tangible (income-related) benefits and whether REDD+ interventions could have negative impact on their incomes. While Chhatre and Agrawal (2009) found a strong correlation between forests under CBF regimes and above-average carbon storage, trade-offs and synergies between carbon storage and livelihood benefits will need to be further explored.

In practice, there is no clarity about how to "engineer" landscapes to optimize carbon budgets. If money is to flow from international or industry sources to national governments in exchange for guaranteed increases in carbon capture and storage, then carbon forestry has the potential to recentralize power if national governments control the management agenda. This could change the dynamics of devolved forest management rights inherent in CBF regimes. In particular, the deliberative, adaptive, reflective process that is central to effective CBF governance could be distorted or even destroyed. Thus

many of the beneficial effects of decentralizing and devolving forest management could be negated. Sills *et al.* (2014, p. 4) reached the overall conclusion that there are now "equal measures of hope and discouragement" concerning the capacity of REDD+ to fulfil its multiple goals, and Angelsen *et al.* (2012, p. xvii) concluded that "we will probably need another 3–5 years before we can really know if REDD+ works".

It is therefore imperative that relevant governmental and non-governmental organizations engage in the climate change debate to influence the rules of engagement, particularly to protect community rights. From a purely practical perspective, incorporating explicit carbon sequestration objectives (which are perceived to be important internationally) into the existing mix of local or national CBF objectives will greatly increase the operational complexity.

Angelsen *et al.* (2012), in their review of the first generation of REDD+ projects, recommended giving priority to three sets of actions, one of which was to implement "no regrets" policy reforms that can reduce deforestation and forest degradation but that are desirable regardless of climate objectives. Such reforms include the removal of perverse and costly subsidies and strengthening of tenure and governance. This recommendation sits well with many of the findings of this review, in particular the widespread evidence that CBF regimes are performing well below their potential.

The relatively recent emergence of carbon markets also has the potential to provide a mechanism for smallholders and communities to receive an additional stream of revenue in exchange for demonstrably increasing the carbon stocks in their forests. Durschinger (2014) conceptualized several scenarios, based on case studies, of how such markets might operate. Among the implications for designing carbon market programmes, she emphasized the importance of having clear and enforceable land tenure and securing carbon rights (particularly as the entity holding land tenure is not always the same as the holder of carbon rights).

Processes to encourage sustainable forest management (SFM)

Certification. Certification of sustainable production is often proposed as a way of increasing market access and obtaining a price premium for forest products from forests managed by communities and smallholders. It is an example of the growing interface between global policy processes and local forest governance (Wiersum, Humphries and van Bommel, 2013). However, it is generally only relevant where products from CBF management are destined for a market that puts a premium on price for proven sustainability. By 2010, 4.2 million hectares of community forests worldwide were certified by the Forest Stewardship Council (FSC) (Crow and Danks, 2010). Quite a few of these forests are in the global North, although Mexico has the largest area and number of CBF enterprises certified (Gerez-Fernández and Alatorre-Guzmán, 2015). As of 2011, 23 community forestry enterprises in Mexico held FSC certificates (Rainforest Alliance, 2015).

The effectiveness of certification in providing a price premium for certified products is open to question. Based on a large number of case studies from around the world, but particularly from Latin America, Galloway *et al.* (2014) concluded that, overall, certification has not led to price premiums but has helped to foster a more comprehensive understanding of SFM and is seen as important in ensuring access to important markets.

A high cost is associated with compliance, both for initial certification and for recurrent audits. To date FSC certification for CBF is only viable where an external project or sponsor covers costs (Maryudi *et al.*, 2015). Hence, it is likely to have only limited value for most CBF regimes in the short to medium term. As some CBF regimes move further in commercializing their products, certification schemes could become more relevant, especially if community groups develop cooperative approaches to forest management and build the economies of scale that could make certification more financially viable. This is the situation that prevails in the northeastern United States of America (Crow and Danks, 2010).

ANSAB (2010) has developed a toolkit to aid community groups in obtaining FSC's group forest management certification. This approach certifies a pool of forest management units under a single certificate and distributes the cost among them.

The Programme for the Endorsement of Forest Certification (PEFC) was founded in 1999 in response to the specific requirements of small, family-owned and community forests as an international umbrella organization providing independent assessment, endorsement and recognition of national forest certification systems. This initiative has attempted to overcome some of the difficulties faced by smallholders and community groups in complying with FSC certification requirements. For example, the programme has recently launched an online forest certification system in the United Kingdom to help small and medium-sized private forest owners obtain PEFC certification simply and at low cost (PEFC, 2015). PEFC also offers group certification and is currently exploring its application to community groups in Africa, Europe and South and Southeast Asia.

Forest product legality.[3] During the past two decades some countries in the global North have shown growing interest in ensuring that timber is harvested legally. Some countries have taken unilateral action to prevent import of illegally harvested timber. For example, the United States of America has added provisions to the Lacey Act of 1900 (which regulates trade in wildlife, fish and plants) to ban commerce in illegally sourced timber and wood products (i.e. timber harvested in contravention to the exporting country's laws).

Concerns about the impact of illegal logging and associated trade led the European Union (EU) to adopt the Forest Law Enforcement, Governance and Trade (FLEGT) Action Plan in 2003. The EU's FLEGT process is centred on Voluntary Partnership Agreements (VPAs) between the EU and countries that produce or export timber. These agreements aim to ensure that any exports of timber from partner countries are accompanied by a licence demonstrating that the timber has been legally harvested (Brazill and Broekhoven, 2009). It is widely recognized within the FLEGT process that tenure insecurity is often a cause of illegal logging activities. Hence, clarification of tenure issues is an essential aspect in developing VPAs, along with consultation with a wide range of stakeholders, improved governance and supportive regulatory frameworks.

As of 2014, FLEGT VPAs had been signed with six countries and others were being negotiated (Saunders, 2014). Some of these are countries where CBF regimes are reasonably well established, and models of engagement are being considered that can offer incentives that would be of value to CBF actors (both smallholders and communities, including indigenous peoples). This may be particularly relevant where significant areas

[3] The first part of this section is adapted from FAO, 2011.

of production forest are owned or managed by communities or smallholders engaged in small-scale production for export of certified NWFPs and increasingly timber (Saunders, 2014). However, as with REDD or REDD+ initiatives, compliance costs may be too high for small groups, resulting in their increased marginalization and exclusion from export markets in EU countries. Similar considerations may apply for smallholders and community groups interested in supplying products to markets in the United States of America.

Considerable additional barriers hinder communities and smallholders from becoming involved in VPAs. As Saunders (2014, p. 11) commented: "In order for the needs of community and small-scale forest actors to be represented effectively in a government-to-government negotiation, it will be necessary for them to have a relatively high degree of consensus, organization and the capacity to understand the political opportunity represented by the VPA and to communicate, lobby and hold their decision-takers to account throughout the process." The capacity of CBF actors to operate in this manner is rare, and it seems unlikely that FLEGT processes will provide any substantial benefits to them in the near future.

Implications of the above initiatives for CBF

The adoption of the 2030 Agenda for Sustainable Development and the SDGs provides a framework for global development policy into the future. The emphasis on integrating economic, social and environmental aspects of development plays to the strengths of CBF and provides an opportunity for the forest sector to promote CBF as a viable approach for meeting the SDGs in a large percentage of the world's forests.

While the issues discussed above relating to PES (including REDD+), certification and FLEGT have the potential to add to the ability of CBF to deliver benefits to communities and smallholders, they also entail significant risks and transaction costs (Lee and Mahanty, 2009). The incorporation of such policy objectives into CBF regimes assumes that the governance systems are capable of addressing additional objectives beyond improving forests and enhancing local livelihoods. This is a major assumption, and there is little evidence that most CBF regimes can in fact do this. Further, these additional objectives tend to be introduced from outside and rarely originate from within the community to satisfy local needs. Certain questions should be asked and answered before local communities are encouraged to incorporate additional objectives into their regime, including the following:

- Is it in the best interests of the community to become engaged?
- Does the community have sufficient social and human capital plus sufficiently strong governance to take on additional objectives?
- Are the benefits from taking on additional objectives (and their associated activities) likely to exceed the costs involved in a reasonable time frame?

It is particularly important to introduce a more nuanced debate on issues associated with introducing REDD+ and similar initiatives into CBF management without creating yet more blockages to effective governance and delivery of outcomes.

As shown in Chapter 6, the literature suggests that in most countries CBF regimes are performing well below their potential because of numerous internal and external constraints, of which the most critical are lack of empowerment, lack of secure tenure rights and weak governance. It would seem to be axiomatic that until CBF regimes are

operating efficiently and effectively there is little point in burdening them with additional activities. This sentiment is endorsed in the report of the second Asia-Pacific Forestry Sector Outlook Study (FAO, 2010b, p. 192):

> *The enthusiasm for various topical issues in forestry – poverty alleviation, devolution, climate change, FLEGT – can overwhelm the importance of on-the-ground forestry activities. Often the reality in the field is that forest management cannot keep pace with developments in national and international dialogues; at times this may be ignored or go seemingly unnoticed. While theory, science and policy may advance; at the grassroots local levels – where the trees are and where demand for livelihoods, wood and ecosystem services are increasing – lack of capacity and knowledge are often highly constraining.*

Indeed, there is a very real danger that incorporating additional policy objectives into CBF regimes could overload them and making them even less efficient. This could lead to a breakdown of internal governance and a loss of clarity about why communities are engaged in collective action. The advice proffered by Arnold (2001, p. 113) in a previous review of community forestry is still relevant today: "there is also a risk of overloading community forestry. It is important to recognize the limits to how much change can be achieved within the framework of forest-oriented programmes, and to keep community forestry in perspective."

LARGE-SCALE LAND ACQUISITIONS IN THE GLOBAL SOUTH

Concerns have been raised about recent large-scale land acquisitions in the global South and their implications for sustainable rural development (FAO, 2010b; Messerli *et al.*, 2014). Such acquisitions generally involve large companies or corporations. RRI (2012c) reported that in 2011, Oxfam and the International Land Coalition (ILC) estimated that more than 200 million hectares had been bought or leased by agribusinesses since 2001. RRI also reported that most of the acquisitions were State lands, including pastures, forests and wetlands, most of which were the customary property of communities and managed under informal regimes. Two-thirds of the reported land acquisitions were in Africa, where nearly 700 million people live on land that is customarily owned but has insecure tenure under statutory law. Knight (2012) reported that across Africa, more than 57 million hectares of land had been granted or were the subject of negotiation. Box 35 gives some additional examples of the scale of some of these acquisitions and the implications for local communities. Concerns have focused particularly on issues of food security, land governance, agricultural transitions and access to resources.

Land acquisitions can have impact on CBF regimes. For example, ILC (2011) reported that the area of land allocated to large-scale timber concessions is much larger than the forest land under community ownership or administration in many parts of Africa and Asia (although not in Latin America). Consequently, there is potential for considerable overlap between land under forest concessions and that under local community management, although it is extremely difficult to find nationwide data on the extent of overlap. Where overlap does occur, large-scale agribusinesses are in competition with multifunctional smallholder farming and community management regimes. Given the vastly unequal power relations involved, communities and smallholders are likely to be the losers.

It is still too early to judge the extent to which CBF regimes are under threat from large-scale land acquisitions, but it is likely to be substantial. Many of the affected regimes are

BOX 35

Potential adverse impacts on local and indigenous communities associated with large-scale land grabbing

Throughout the tropics, staggering amounts of land have been designated for natural resource extraction – as much as 40 percent of Peru, 30 percent of Indonesia and 35 percent of Liberia. However, much of this land is already in use and is inhabited by local communities and indigenous peoples. While it is possible for the same land to support both livelihoods and resource extraction, when local communities are not consulted in this exchange conflict may erupt. Such conflict can make communities vulnerable to loss of livelihood and can cause irreparable damage to the forests on which they rely (RECOFTC, 2013).

Source: Kimbrough, 2014

informal, and proposals have been made to formalize them through community land titling (as discussed in the section on informal CBF regimes in Chapter 3) to give communities greater certainty of tenure and improve their bargaining power.

MAJOR CBF INITIATIVES AND OPPORTUNITIES FOR REGIONAL COOPERATION

Donor interest in forestry in general waned during the 1990s but has picked up recently with the increasing interest in the potential of forests, including those managed under CBF regimes, to contribute to carbon storage and hence climate change mitigation. However, many international organizations, such as CIFOR, FAO, ITTO, RECOFTC and the Tropical Agricultural Research and Higher Education Center (CATIE), have kept CBF high on their agendas. This is important, as they can use their convening power to raise awareness of key issues among their constituency and inform policy dialogues. In addition, they can continue to document successful CBF outcomes and the lessons learned from analysis of case studies; provide a platform to promote opportunities for sharing of information and experiences; provide technical support to countries undertaking policy reforms and implementing CBF; and support capacity building of all CBF stakeholders.

In early 2015 IFRI announced the establishment of the Forests and Livelihoods: Assessment, Research and Engagement (FLARE) network, a community of practice with the aim of advancing the state of knowledge regarding forest-based livelihoods. The intention is to bring together representatives of key stakeholders "to share and advance cutting edge knowledge and conversations on forest-based livelihoods. Ultimately, the goals of FLARE are to generate usable information and methodologies for collecting [this knowledge]; develop, promote and share the findings of the group; and implement such tools, knowledge, and methods to improve monitoring efforts and, ultimately, the efficacy of forest-dependent livelihood interventions around the world" (IFRI, 2015). This network could go some way to advancing the agenda outlined in the previous paragraph.

In the past, collaborative forms of CBF (as well as smallholder forestry in some countries in the global South) relied largely on donor funding to develop and demonstrate workable modalities, provide technical inputs, support necessary policy reforms and build the capacity of communities and government officials. As illustrated throughout this report, there is ample evidence that CBF has the potential to generate substantial economic benefits for communities and smallholders and at the same time contribute to SFM. Hence, once the enabling regulatory framework and other supportive government and market mechanisms are in place there should be little need for external financial support. However, there are serious constraints preventing this from occurring. In particular, governments in many countries have shown a marked reluctance to remove all of the "locks" that prevent communities and smallholders from managing their forests effectively and efficiently and receiving economic benefits that adequately compensate them for their efforts. In realizing the potential, international, regional and national networks and organizations will continue to be of great importance.

Villager with fruits of Ancylobotrys capensis, *Central African Republic*

Chapter 9
Issues for the future

This review has made it possible to identify several issues that will need to be addressed in order to continue the momentum that has characterized CBF development over the past few decades and position it to face future challenges. These are discussed in this chapter.

APPLICATION OF EXISTING KNOWLEDGE TO IMPROVE CBF OUTCOMES

Different countries are at different stages of CBF development, and their future needs are specific to their particular circumstances. However, some generic issues can be addressed to improve outcomes. There is now a solid body of knowledge on what is required for CBF to increase the amount of natural, social and financial capital of communities and smallholders, but underperformance is widely reported. What is lacking in many countries is the commitment and political will of governments to apply the lessons learned over the past several decades so that CBF can deliver on the policy objectives that have been set.

What can be done to encourage governments to undo the "locks" that continue to inhibit the realization of the full potential of CBF to enhance local livelihoods, contribute to local and national economies and move towards SFM? Among the actions that would assist are:

- ensuring that relevant national, regional and international policy fora keep CBF at the forefront of their agendas and recognize it as a viable form of forest management that has the potential to achieve substantial biophysical and socioeconomic outcomes in an increasingly decentralized world;
- increasing political will among national governments and other key stakeholder groups to apply existing knowledge by encouraging exchange of information and experiences in regional gatherings;
- making the existing knowledge on potential benefits of CBF more widely available and distilling it into formats that are suitable for a range of policy and practitioner audiences;
- converting the lessons learned on how to undo the "locks" that constrain CBF from reaching its potential into policy briefs and "how to" documents for wide circulation;
- incorporating CBF projects and programmes into national development planning and budgeting frameworks to institutionalize them in mainstream activities.

RECOGNITION OF TENURE RIGHTS OF LOCAL AND INDIGENOUS COMMUNITIES

One of the main "locks" constraining CBF from reaching its potential is the lack of formal recognition of the rights of local and indigenous communities to manage their forests. A large amount of work has been carried out to address this issue in the past decade. It is evident that recognition of tenure rights is a necessary (although not sufficient) condition for CBF to function effectively in most settings. Much more effort is needed in this area,

particularly in the face of pressures associated with agro-industrial expansion, extractive industries, infrastructure development and urbanization.

COMMERCIALIZATION OF CBF GOODS AND SERVICES

Despite some successes, major limitations to the commercialization of CBF goods and services exist in most countries, hindering their potential to improve local livelihoods. This is particularly the case for collaborative forms of CBF. Unsupportive regulatory frameworks, low organizational and institutional capacities of local governments and communities, lack of investment and limited access to markets are common constraints faced by communities and small-scale forest enterprises (summarized in Box 11, p. 49). A major need for the future is the development and promotion of approaches to increase the commercialization of CBF goods and services (particularly wood and non-wood products) to enable communities and smallholders to realize the full economic benefits of their forest management. The precondition for this development is the enactment and implementation of regulatory frameworks that enable communities to move from managing forests primarily for subsistence purposes to managing them for commercial purposes. Along with improved governance, capacity building and access to technical skills, credit and markets are other necessary building blocks. It is also necessary to explore and develop linkages between smallholder or community groups and the private sector through targeted marketing and/or certification schemes in a manner that ensures equitable benefit sharing.

RECOGNITION OF CBF LIMITATIONS

The policy objectives that are set for CBF tend to be very ambitious, often much more ambitious than those set for public forest management agencies and private-sector companies. It is doubtful whether CBF can live up to these lofty expectations. Importantly, CBF cannot be expected to resolve all of the problems that currently beset forest management or to address all of societies' socioeconomic and poverty reduction objectives.

Arnold (2001) warned that there is a risk of overloading CBF and that it is important to recognize its limits. This risk is just as relevant now as it was in 2001. There is also a danger that communities can suffer "burnout" if they are repeatedly faced with additions to their management objectives.

DATA ON EXTENT AND EFFECTIVENESS OF CBF REGIMES

There has been little concerted and coordinated effort to collect relevant national-level data on the extent and effectiveness of the various regimes. FAO has made a start by collating some data on the percentage of national forests managed by public, corporate and community entities (FAO, 2010a), and RRI has been collecting and collating similar data since 2002. However, estimates made by different organizations about the area of forest owned and/or managed by communities and indigenous peoples are not comparable. More precise information is needed, and it would be helpful if agreement could be reached on what data to collect to create a common basis for comparison.

Challenges also exist in deciding the most relevant types of data needed to judge the effectiveness of CBF regimes, particularly indicators related to socioeconomic outcomes,

in order to inform policy debate at all levels. FAO is preparing and testing a framework for assessing the extent and effectiveness of CBF regimes, intended to be suitable for application at the national level.

RESEARCH

The huge amount of research carried out on CBF during the past 30 years has greatly increased knowledge related to the conceptualization, implementation and effectiveness of CBF. The overall scientific debate has become increasingly sophisticated over time as research has drilled down into the sociological fundamentals of CBF in its various forms. Issues such as governance, equity, inclusiveness and gender have been high on the research agenda, and this research will doubtless continue.

It has become clear during the course of carrying out this review that knowledge about the impediments to improved functioning and effectiveness of CBF is largely available, but the application of that knowledge is lacking. Hence, bridging the science–policy–practice divide is an important research topic in its own right, and one that can yield much needed benefit in the short term.

CBF has become a mainstream form of forest management in many countries where globalization and particularly commercialization have extended their reach into previously remote rural areas. As understanding of the many interactions within CBF deepens, new issues are emerging that need to be addressed by focused research. Many of these issues are concerned with the role of CBF in the contemporary globalized and market-oriented world. A selection of possible research issues and questions is given in Appendix 4.

Small-scale forest enterprise, the Philippines

Chapter 10
Conclusions

Three clear conclusions come from this review. The first is that in many examples across a range of scales (from pilot project to national) and in all regions, CBF has been demonstrated as a potent vehicle for moving towards SFM and improving local livelihoods. These positive examples are all characterized by an operating environment where most of the "locks" impeding effective implementation have been opened using the right "keys" and where communities can exercise a high level of empowerment. The second conclusion is that while CBF regimes are now a major forest management modality globally, they are performing below expectations because of numerous constraints, and they could do much better. The third is that solid data are lacking on the extent and effectiveness of CBF on a national scale for use in informed discussion and decision-making.

It is reasonable to conclude that more time and effort are required for CBF to reach its potential in most countries. In addition, more evidence-based analysis of its effectiveness is needed to assess its overall contribution to SFM and enhanced local livelihoods. However, since formal CBF regimes have evolved over the past two decades and are now operational in 18 percent of the world's forests, it is imperative to ensure that they are as effective as possible.

Despite the knowledge gaps, the knowledge base is sufficient to move ahead with embracing CBF as a mainstream form of forest management in many countries, subject to undoing the "locks" that inhibit effective implementation. The "keys" for doing this are:

- ***secure tenure,*** which is strongly correlated with improved forest condition;
- ***enabling regulatory framework*** so that the rights associated with managing forests are not overwhelmed by onerous responsibilities;
- ***strong governance*** and effective local-level institutions;
- ***viable technology*** to establish and manage forests sustainably and optimize productivity, including access to high-quality germplasm and appropriate silvicultural and managerial knowledge;
- ***adequate market knowledge and access*** to enable communities to commercialize their forest products and maximize their financial returns;
- ***supportive bureaucratic culture*** in which government officials willingly relinquish control over forests, allowing communities to exercise their rights.

Much of the knowledge needed to improve outcomes for forests and people is available. What is missing in most cases is a "level playing field" and the political will to make it happen. Over the coming decade it would be encouraging to see policy-makers and others at the international and national levels make a commitment to improving CBF outcomes and make the necessary policy and other changes. An agenda to bring such a commitment to life could include the following steps:

- development and application of approaches, tools and criteria to assess the effectiveness of CBF in achieving its objectives of SFM and improved local livelihoods;
- assessment of CBF effectiveness in countries with CBF regimes, followed by reflection on the extent to which the "keys" needed to make CBF fully effective are available and applied;
- sharing of lessons learned from this assessment with countries contemplating adopting CBF, to assist with piloting and scaling up.

Indigenous peoples, local communities and family smallholders – women and men, young and old – stand ready to maintain and restore forests and sustain livelihoods on a vast scale. As these groups stated at a "Building momentum" event before the XIV World Forestry Congress in South Africa in September 2015 (Forest and Farm Facility, 2015):

> *We know the forest, and the forest knows us! It's time to listen to indigenous peoples, local communities and family smallholders, who manage a third of the world's forests and, together, are the world's largest investors in forests. Given our commitment and scale, without us it will be impossible to achieve food security and nutrition, respond to climate change, conserve biodiversity, and reduce poverty. We are ready to work with everyone, and insist on playing our part. Major obstacles continue to stand in our way, however, which could be removed with sufficient political will.*

For this to happen, political leaders and policy-makers, who hold the "keys", should remove the "locks" and open the door to unleash the potential of hundreds of millions of people to achieve SFM and improved livelihoods in a major percentage of the world's forests.

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Appendixes

Appendix 1
Ten key publications on CBF

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Appendix 2

Spectrum of generic types of CBF based on level of rights, responsibilities and empowerment

1. DELEGATED

Generic description: Participatory conservation

Key characteristics:

- Some community responsibility to protect forests, but little authority to make decisions; very few (or no) rights for local communities to access and use forest products
- Pressure on use of forest products reduced by application of integrated conservation and development (ICD) approaches managed from outside, often in buffer zones of protected areas; includes encouraging alternative livelihoods and enforcing protection through external agents or delegation of protection functions to local people; limited collection of NWFPs and woodfuel sometimes allowed

Indicative rights:

- Access – Rights to access forest
- Withdrawal – Sometimes limited rights to harvest prescribed NWFPs and woodfuel
- Management – No rights to make forest management decisions
- Exclusion – No rights to determine who will have access to the forest
- Alienation – No right to sell or lease management and/or exclusion rights or to use them as collateral
- Duration of rights – No defined term
- Rights to compensation – No rights to obtain compensation if rights are withdrawn

2. SHARED

Generic description: Joint forest management

Key characteristics:

- Shared authority: limited and highly prescribed rights for local people to access and use forest products
- Forest products and related benefits from government-owned forests shared between government and local communities to encourage communities to protect the forest; employment in forest management activities sometimes available

Indicative rights:

- Access – Rights to access forest

- Withdrawal – Generally rights to harvest NWFPs and woodfuel but rights to harvest timber held by government agencies
- Management – Rights to make forest management decisions held by government agencies
- Exclusion – No rights to determine who will have access to the forest
- Alienation – No right to sell or lease management and/or exclusion rights or to use them as collateral
- Duration of rights – Possibly a defined term fixed by a management plan
- Rights to compensation – No rights to obtain compensation if rights are withdrawn

3. PARTLY DEVOLVED

Generic description: Community forestry with limited devolution

Key characteristics:

- Limited rights for defined local communities to manage forests and access and use forest products; significant government authority and oversight
- Rights to manage forests and use some forest goods, usually NWFPs and subsistence products, devolved to local communities, generally subject to the development of a management plan; rights generally do not include selling timber on the open market, but selling NWFPs and woodfuel may be allowed

Indicative rights:

- Access – Rights to access forest
- Withdrawal – Rights to harvest NWFPs and woodfuel (may be subject to a management plan)
- Management – Rights to make forest management decisions held by government agencies
- Exclusion – Limited rights to determine who will have access to the forest
- Alienation – No right to sell or lease management and/or exclusion rights or to use them as collateral
- Duration of rights – Generally a defined term fixed by a management plan
- Rights to compensation – No rights to obtain compensation if rights are withdrawn

4. FULLY DEVOLVED

Generic description: Community forestry with substantial or full devolution

Key characteristics:

- Significant rights for defined local communities to manage forests and access and use forest products; generally some government authority and oversight
- Rights to manage and use forests devolved to local communities, generally subject to the development of a management plan; rights include harvesting of timber and sale of forest products on the open market

Indicative rights:

- Access – Rights to access forest
- Withdrawal – Rights to harvest NWFPs, woodfuel and timber (generally prescribed in a management plan)

- Management – Rights to make forest management decisions (generally prescribed in a management plan)
- Exclusion – Rights to determine who will have access to the forest
- Alienation – No right to sell or lease management and/or exclusion rights or to use them as collateral
- Duration of rights – Generally a defined term fixed by a management plan
- Rights to compensation – No rights to obtain compensation if rights are withdrawn

5. OWNED

Generic description: Private forest ownership

Key characteristics:

- Most rights to access and use forest products held by forest owners; government may or may not exercise authority over some aspects of forest management, including harvesting and marketing of forest products
- Ownership and use rights held by individuals, households, groups or communities for managing forests and receiving benefits; includes smallholder forestry

Indicative rights:

- Access – Rights to access forest
- Withdrawal – Rights to harvest NWFPs, woodfuel and timber
- Management – Rights to make forest management decisions
- Exclusion – Rights to determine who will have access to the forest
- Alienation – Rights to sell or lease management and/or exclusion rights or to use them as collateral
- Duration of rights – Generally perpetual
- Rights to compensation – Possibly rights to obtain compensation if rights are withdrawn

Appendix 3

Factors that contribute to success of CBF regimes* and policy guidance for their successful adoption

Categories of success factors	Factors generally contributing to successful CBF management	Policy guidance	
		Design of CBF governance	Location of CBF governance
Resource system characteristics	Medium to large community forests	–	Assign control to communities over forest patches that are larger than 100 ha
	Well-defined, easily monitored boundaries	Support efforts to mark and maintain boundaries	Ensure low-cost monitoring by creating clear boundaries
	Predictable benefit flows	Encourage local rule-making for regular harvests of forest products	–
	Value of the resource	Assign benefits to multiple forest products	–
User group			
Sociopolitical	Small to medium-sized group (facilitating face-to-face interactions)	Create user groups that are larger than 50 and smaller than 500 households, taking into account local income and wealth	Create user groups that are larger than 50 and smaller than 500 households, taking into account local income and wealth
	Interdependent	–	–
	Homogeneous	–	–
Economic	Relatively well-off	–	–
	Moderate dependence on resources	Enable harvests of multiple forest products	–
Culture and history	No sudden shocks in resource demands	–	–
	Past experience with forest management	–	Encourage formation of user groups in areas with past management experience

* In terms of improved livelihoods and forest condition

Categories of success factors	Factors generally contributing to successful CBF management	Policy guidance	
		Design of CBF governance	Location of CBF governance
Institutional arrangements	Rules are easy to understand and enforce	Permit flexibility in design of rules at the local level for managing forest resources in areas where decentralization policies are being implemented	–
	Rules are locally devised		
	Rules take into account differences in violations		
	Rules help deal with conflicts	Encourage users towards simplicity of rules	
	Rules hold users and officials accountable	Support broad inclusion in rule-making, particularly along gender and income lines	
	Effective local enforcement and sanctions	Ensure accountability of officials	
		Create conflict resolution mechanisms	
		Support effective enforcement	
	Tenure security	Recognize collective tenure formally	–
	Capacity to exclude outsiders	Permit local managers to exclude users, together with providing grievance resolution forums	–
Socioeconomic context			
Demographic	Stability of demographic conditions	–	Avoid decentralization in highly volatile or rapidly changing demographic and market conditions
Market	Stability of market conditions	–	–
Macro-political	Stability of policy conditions	Adopt policy changes deliberatively	–
	Government support to reduce costs of collective action	Support local decision-making	–
		Support local institutions for management, monitoring and enforcement	
Other	Openness to local institutional innovations	–	–
	Stability of technological conditions	–	–
Biophysical context	Elevation	–	Recognize trade-offs between improved livelihood benefits and higher pressures on forest commons if they are sited in areas of low elevation, high rainfall, moderate temperatures and high soil fertility
	Rainfall		
	Temperature		
	Soil fertility		

Note: – = No policy guidance given.
Source: IFRI and FAO, in preparation

Appendix 4
Research issues and questions emerging from the CBF review

Issue: A great deal of knowledge is available on many aspects of CBF, but there is often a disconnect between the scientific, policy and practitioner communities.

Question: *What innovative approaches can be developed to bridge the science–policy–practice?*

Issue: CBF is embedded within a broad social, economic and political context involving the local, national and international levels.

Question: *What are the impacts on CBF of long-term changes in context?*

Issue: Rapid changes are under way in many countries as they modernize. One of these changes is migration from rural to urban centres, which is changing the nature of rural communities and the nature of people–forest interactions. (This is a specific aspect of the previous issue.)

Question: *What are the impacts of rural to urban migration on CBF regimes, particularly on their governance structures, and how can CBF adapt to such changes?*

Issue: CBF, as a locally based forest governance institution, is situated within a wider system of governance. The interface between the local and wider systems can be problematic.

Question: *How can CBF be part of a wider system of democratic governance while retaining independent and accountable power structures at the local level?*

Issue: Lack of political will is often cited as a major reason for underperformance of CBF.

Question: *What aspects of the political economy, particularly those related to the role of dominant power holders in obtaining access to and benefits from forest resources, influence political will to support CBF?*

Issue: Much of the CBF-related research over the past several decades has focused on socioeconomic and governance aspects, and the forests have been largely ignored. In particular, silviculture for CBF has received little attention.

Question*: What are the options for forest management within CBF regimes to meet the multiple objectives of the various stakeholders?*

Issue: CBF regimes in developing countries have been promoted as institutions through which REDD+ (and other PES initiatives) can function to the mutual benefit of local,

national and international communities. However, the mechanisms by which this can occur without undue transaction costs and dangers to the integrity and sustainability of CBF regimes are not clear.

Question: *What are the trade-offs and synergies between provision of a service, such as carbon capture and storage, and livelihood benefits associated with REDD+ and related initiatives in CBF regimes?*

Issue: Large-scale land concessions (often referred to as land grabbing) have become common features of natural resource exploitation in some tropical developing countries, and these can have negative impact on communities and smallholders, particularly because of the massive power asymmetries involved.

Question: *How can the negative impact of land grabbing on communities and smallholders (and their forest management regimes) be minimized?*

Issue: Smallholder forestry is emerging as a major form of CBF in the global South, but in many countries, particularly in Latin America, it is largely in the informal realm and on the margins of policy discourse.

Question: *What is the extent of smallholder forestry in countries where it is carried out at the farm–forest interface, and what can be done to bring it into the mainstream of policy discourse?*

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Forty years of community-based forestry

A review of its extent and effectiveness

Since the 1970s and 1980s, community-based forestry has grown in popularity, based on the concept that local communities, when granted sufficient property rights over local forest commons, can organize autonomously and develop local institutions to regulate the use of natural resources and manage them sustainably. Over time, various forms of community-based forestry have evolved in different countries, but all have at their heart the notion of some level of participation by smallholders and community groups in planning and implementation. This publication is FAO's first comprehensive look at the impact of community-based forestry since previous reviews in 1991 and 2001. It considers both collaborative regimes (forestry practised on land with formal communal tenure requiring collective action) and smallholder forestry (on land that is generally privately owned). The publication examines the extent of community-based forestry globally and regionally and assesses its effectiveness in delivering on key biophysical and socioeconomic outcomes, i.e. moving towards sustainable forest management and improving local livelihoods. The report is targeted at policy-makers, practitioners, researchers, communities and civil society.

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