

THE ROLE OF CERTIFICATION IN COMMUNITY-BASED FOREST ENTERPRISE

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INTRODUCTION

This paper examines the interaction between market-oriented certification and community-based forest enterprise (CFE), using experience in Latin America as a point of reference. This region has seen the greatest expansion of CFE certification (a trend that shows no signs of diminishing). Not only are there more certified CFEs in Latin America than anywhere else in the world, but also a Mexican CFE has the distinction of being the first enterprise ever to adopt certification.¹

This paper is based on three case studies of certified CFEs in Bolivia, Honduras and Mexico. These enterprises have been selected to reflect the range of experience with CFE and certification in Latin America. Each case study examines the driving forces and expectations behind certification, the conduct and outcome of the inspection and verification processes, and the effects of certification on the environmental, social and economic status of the enterprise. Detailed background information on each case study, as well as details of case study methodology, can be found in Markopoulos (2000).

This paper is organised as follows:

- Part 1 provides a brief overview of the mechanism and purpose of certification.
- Part 2 provides an overview of CFE in Latin America, its nature and distribution, and the main social, political and economic challenges that it faces.
- Part 3 introduces and discusses the main elements of the debate about market-oriented certification of CFEs. The chapter surveys the status of CFE certification in Latin America and identifies some of the key issues arising from regional experience with certification.
- Part 4 presents the case studies of certified CFEs in Latin America. The case studies in this paper are condensed versions of the original case study reports. Fuller versions of each case study can be found in Markopoulos (2000).

¹ The Society of Ejido Forestry Producers of Quintana Roo (SPFEQR). See Table 1 for full details of certified CFEs in Latin America.

- Part 5 begins by discussing the findings from the case studies. Naturally, these findings are context-specific, but there are common themes that are addressed. The discussion places particular emphasis on the correspondence between the demands and opportunities of certification and the capabilities and needs of the enterprise. The chapter concludes by identifying the conditions under which certification could support sustainable CFE development.

1 CHARACTERISING CERTIFICATION

Certification independently verifies that the wood in a product originated from a forest (or forests) managed in accordance with certain standards. It is conceived as a voluntary procedure which buyers may choose to specify and which producers may choose to adopt. By providing information about the origins of a traded forest product, certification attempts to link market demands for products produced to high environmental standards with producers who can meet such standards. As such, it has the potential to act as a market incentive for better forest management.

In so far as certification relies on financial incentives to improve forest management, it may be characterised as a market-based instrument (MBI). MBIs are thought capable of internalising the costs of environmental protection with greater efficiency (and legitimacy) than traditional administrative regulation. In practice, however, the distinction between certification and a regulatory regime based on performance standards may be extremely fine (Markopoulos 1999). Both regimes offer producers a straightforward choice between meeting previously defined targets or facing possible penalties. In the case of certification, such penalties are exclusively financial (e.g. the possible loss of competitive advantage); in the case of regulation, they are mainly administrative or judicial.

If the costs of environmental protection (i.e. improved forest management) are to be internalised through the market, producers must be able to transfer the costs of certification to consumers through higher product prices or increased volume of sales. The available evidence suggests that price rises will not be significant and that increased market share will become the main mechanism for internalising costs. At this stage, however, it is uncertain how far such increases will be accommodated by the competitive reallocation of existing market demand between certified and non-certified producers (or between different classes of certified producers), or by the expansion of demand if certification restores consumer confidence in the sustainability of the international timber trade.

Although certification is nominally an MBI, the environmental objectives it encapsulates are determined not within a closed market system, but by open and participatory public debate. The market can, and does, signal which system of certification it prefers, but the underlying standards of forest management are determined by multiple independent stakeholder groups (including groups which may not participate formally in the market, or which may be isolated from the political mainstream). This contribution to the “democratisation” of forest policy processes is often portrayed as one of certification’s main non-market benefits.

2 BACKGROUND TO CFE IN LATIN AMERICA

Characterising CFE

Community-based forest enterprise, or CFE, is a subset of the activities usually encompassed by the term “community forestry”. These include the collection of fuelwood and construction materials, the provision of food and environmental stability for food production, and the generation of income and employment through the collection and sale of timber and non-timber products (Arnold 1992). In the case of CFE, the main focus of activity is defined as the collection and sale of timber products, possibly in conjunction with non-timber products.

CFEs differ widely in terms of their social and cultural context, systems of organisation, level of development and degree of market integration. The most advanced enterprises are large, vertically integrated operations that employ hundreds of full-time workers (Sánchez Pego 1995). Other enterprises may employ only a handful of part-time workers in a small portable mill operation. It is possible, however, to identify certain general characteristics that define CFEs and distinguish them from industrial harvesting systems (Padoch and Pinedo-Vasquez 1996; Salafsky et al. 1997):

- Resource rights are either owned by or assigned to the community (or a subset of its members). In industrial systems, forest lands or harvesting rights are held by companies whose owners or shareholders may live far away from the actual site.
- Members of CFEs typically live near the site of their enterprise, depend on the forest for other goods and services and place timber harvesting in the context of a wider land-use framework. In industrial systems, those involved in the logging effort may live either near the forest or far away from it.
- Harvesting by CFEs is generally on a smaller scale and less capital intensive than industrial systems. CFEs tend to rely more on labour than machinery and other capital-intensive technologies. These characteristics can give CFEs greater flexibility to change their production objectives and management patterns in response to fluctuating market prices, opportunities and problems.
- CFEs often seek to add value to raw materials on or close to the harvesting site. Industrial timber harvesting enterprises generally harvest logs which are transferred to large, centralised processing mills in cities or even abroad.
- The capital and profits of a CFE tend, of necessity, to be invested locally, whereas those of an industrial enterprise are easily moved to other localities or sectors of the economy. CFEs consequently have a greater incentive to maintain their forest stocks, although they may be more vulnerable to changes in interest rates and other macroeconomic fluctuations.

Brief overview of CFE in Latin America

In the past two decades, community-based forest enterprise has been recognised as a promising approach to forest conservation and rural development in the tropics (Rodríguez

et al. 1993; Ascher 1995). Support for this approach is based on two main assumptions. The first is that unless people living in or near the forest can obtain a satisfactory livelihood from it, and so value it above other uses, the agricultural frontier will continue to encroach into opened-up forest. The second is that CFEs, compared with their industrial counterparts, can generate proportionately greater social and economic benefits for rural communities (Arnold, Chipeta and Fisseha 1987; Brunton 1987; Blair and Olpadwala 1988; Richards 1993; Silva 1997).

Many CFE initiatives have been established in Latin America in recent years on the basis of these assumptions. The evidence from these initiatives shows that there have been both positive and negative experiences. Some projects have performed poorly in commercial terms, owing to financial, technical or managerial constraints. In other projects, particularly those involving indigenous peoples, the introduction of market pressures has given rise to social and cultural tensions (Chase Smith 1995; Gram 1997). Where forest enterprise has enjoyed commercial success, for example among the forest *ejidos* (agrarian communities) of south-eastern Mexico, the main contributing factors have been a high standard of technical assistance, aggressive marketing and processing strategies, local political support, strong community organisations and the development of an autonomous institutional framework (Richards 1997a).

The evidence from Latin America shows that CFE can be successful, given the necessary support and recognition. It is also evident, however, that CFE efforts have been watched more for the light they shed on matters of decentralisation, community participation and strengthening of civil society than on matters related to achieving sustained local growth. Consequently the economics of CFE as a business have been neglected and the importance of sound business and marketing strategies often underestimated (Alatorre 1992).

Social, cultural, political and economic aspects of CFE

Economic activity in many communities is organised at the family level. The extent to which individual and family interests can be merged to permit collective activity such as forest enterprise depends heavily on a community's endowment of social capital (Toulmin 1997). Strong leadership is also a crucial factor in fostering cooperation (Blair and Olpadwala 1988; Cabarle 1991).

The rules and institutions that a community establishes for forest enterprise may be based on new or traditional structures, or a mixture of both. Perceived weaknesses in existing decision-making procedures often lead to the creation of new structures, although traditional structures may carry greater authority and legitimacy. In the long-term, however, traditional structures may be overwhelmed by the demands of market enterprise. In a number of Mexican forest communities, the traditional political structures of general assembly and community commission have, through corruption and factionalism, lost control of forest enterprise to work groups and small production cooperatives (Wexler and Bray 1996; Merino and Alatorre 1997; Zabin and Taylor 1997; Maynard and Robinson 1998).

The root cause of many of the internal tensions engendered by enterprise development is the distribution of costs and benefits. If income generation is the main goal of CFE, profits may be divided among community members. If employment is the main goal, profits may be used to create jobs in the enterprise. Few communities invest all of their profits in enterprise growth. Income generation goals in particular can undercapitalise the enterprise, reduce salaries to uncompetitive levels and cause tension between the enterprise and the wider community (Oksanen and Rijssenbeek 1987; Snook 1987; López and Gerez 1993; Merino 1997; Zabin and Taylor 1997).

Supportive policies and a favourable political environment are crucial to CFE, but often lacking (ODA 1996; Poffenberger 1996; Richards 1997a). Weak, unstable or repressive governments, restrictive legislation and a policy bias towards industrial interests are among the factors that constrain development of CFE. Even where support for small-scale forestry is enshrined in national law, as in Honduras' Social Forestry System, governments may do little to support communities because their primary concerns are elsewhere, for example overseeing large-scale commercial logging (Ascher 1995). In such cases, donors and non-governmental organisations (NGOs) may be left to fill the resulting gap.

Among the elements of a supportive regulatory framework for CFE are secure property rights, appropriate business regulations, tax regimes, licensing requirements and financial services. Support for business associations is also necessary if CFEs are to be able to defend their interests in the political arena and participate in policy formulation. In Latin America, many of these elements are still either absent or underdeveloped because the economic policies of the past two decades have tended to favour large businesses over small ones (Holden 1996).

The status of CFE in Mexico, which arguably has the largest community-controlled forestry sector in the world, illustrates some of the economic constraints faced by Latin American forest communities. First, production and transport costs are high (Madrid 1993; USDA/FAS 1998). Second, the sector's industrial base suffers from over-capacity and obsolescence (Merino 1997). Post-war policies of import substitution and market protection removed the need for producers to make regular investments in production technologies. Third, CFEs lack business development or marketing strategies and make little effort to consolidate or expand their sales channels (Alatorre 1990; Madrid 1993). Last, a lack of cooperation with the private sector further reduces efficiency and raises costs (Zabin 1995).

Many of these problems can be attributed to a lack of technical or managerial expertise, or to internal organisational problems. The lack of investment in production or marketing also reflects an inherently risk-averse, needs-oriented business culture (Alatorre 1990; Garcia et al. 1994; Thoms and Betters 1998). Most CFEs, to use the terminology of Simon (1959, cited by Hornby, Gammie and Wall 1997), may be described as "satisficers" rather than "maximisers" - that is, they are conservative in their business objectives and strategies and do not continuously seek ways of improving performance and increasing returns.

3 EXPERIENCE TO DATE OF CFE CERTIFICATION

Potential costs and benefits of certification for CFEs

On the supply side, the uncertain economic status and conservative business goals of most CFEs would suggest only a limited constituency for a relatively new and untested market instrument such as certification. On the demand side, the nature of most CFE trading relations (either with price-conscious local markets or, more rarely, with socially conscious overseas markets) would suggest a limited need for the rigorous environmental accountability provided by certification.

Such considerations notwithstanding, certification of CFEs in developing countries has attracted a great deal of attention and support, and CFEs have been among the earliest participants in some certification programmes. Many of these early adopters, however, have been donor-supported development projects rather than free-standing enterprises. Support for certification of CFEs under the market-oriented FSC model has been based on several assumed benefits (Laban and van der Werf 1995; Heaton and Donovan 1996; von Kruedener 1997; Marijnissen 1998; Irvine 1999; Guillén 2000):

- **Improvements in markets.**

Certification can create new, possibly more valuable, opportunities in international markets, and so allow communities to increase the profitability of their forest operations, escape exploitative trading relations in local markets or avoid involuntary disposal of their forest assets to competing industrial interests.

- **Increased efficiency of management.**

The processes of inspection and verification can - even if a CFE fails to win certification - offer ideas or practical suggestions for improving management practices and administrative procedures. Certification can also provide a mechanism, or strengthen existing mechanisms, for monitoring, evaluating and reporting management impacts.

- **Leverage for finance and technical assistance.**

Certification can attract support from NGOs, donors or other parties to address technical improvements, training or other issues that arise from the certification process.

- **Instrument to prove responsible resource use.**

Certification can demonstrate responsible forest management to entities that may require such evidence, for example governments (if a community is managing public forest land), investors (if a community is seeking business partners) or environmental groups (if a community has to defend itself against anti-logging campaigns).

- **Increased political weight and bargaining power.**

The process of standards development can offer a public platform for communities to influence the development of certification programmes and, potentially, government policies. At the enterprise level, certification can lead to dialogue and negotiation with

other stakeholders, and so help communities to resolve forest-related conflicts or improve local attitudes towards forest-based enterprise.

The foregoing benefits are counterbalanced by a number of possible disadvantages (Blair and Olpadwala 1988; Laban and van der Werf 1995; Elliott and Viana 1996; von Kruedener 1997; De Camino and Alfaro 1998; Marijnissen 1998; Tolfts 1998; Scrase 1999; Thornber, Plouvier and Bass 1999):

- **Generic drawbacks of business intensification/reorientation.**
Any change in the complexity, sophistication or market outlook of forest enterprise (such as might be expected under certification) can put severe strain on traditional beliefs, authority systems and the compromises between farming and forestry work cycles and demands. Export activities can displace economic activities of more immediate importance, such as subsistence cropping, and may involve the substitution of capital for labour.
- **High costs of certification.**
The costs of certification include the direct costs of inspection and administration, and the indirect costs of improving management practices and gathering the information needed for verification (Simula 1996). To these may be added the costs of any promotional or marketing activities related to certification. Weak economies of scale mean that most CFEs are less able to absorb these costs than their industrial counterparts.
- **Inaccessibility of certified products markets.**
Most CFEs lack the specialist expertise and technical economies of scale needed to identify and serve international certified products markets. Consequently they will depend heavily on market intermediaries (such as producer cooperatives or business associations) to share the costs and risks of exporting. Such intermediaries, however, often do not exist or suffer themselves from a lack of resources, expertise or political support.
- **Limitations of certification standards and procedures.**
CFE across much of Latin America is still in its formative stages. Even in Mexico, forest communities are still working towards an autochthonous definition of sustainability (Jaffee 1997). Until such definitions crystallise, current CFE efforts will continue to evolve through multiple social and organisational forms. In this context, the practicality of defining, applying and verifying management standards for CFEs, or of maintaining those standards as enterprises mature, is open to question.
- **Lack of clear linkages between standards development and public policy processes.**
It is still unclear how any contribution to the standards development process from CFEs will filter into formal policy-making for CFE, or how governments will be able - given previous regulatory failures - to enforce and monitor any pro-CFE regulatory reforms that are based on certification.

In summary, the available literature suggests that certification could be of benefit to CFEs, but that only the largest and most advanced enterprises will have the necessary financial resources, business experience and market linkages to exploit this benefit. Other, less developed enterprises may find that the demands of certification exceed their ability to comply and their capacity to manage change.

Status of CFE certification

By May 2001, 22 certificates covering 600,378ha had been issued to CFEs in Latin America by FSC-accredited certification bodies (see below, Table 1). With only two exceptions (CICOL in Bolivia and FUNDECOR in Costa Rica) these certificates are all in Mesoamerica and were all issued by the Rainforest Alliance's SmartWood programme. The two leading countries, in terms of both number of certificates and certified forest area, are Mexico (9 certificates for 409,564ha) and Guatemala (6 certificates for 100,026ha). Certified operations in these two countries range in size from 2,693ha to 243,349ha, with a median value of 12,217ha¹.

Certified CFEs in Latin America exhibit a variety of organisational forms, ranging from concessions on public forest land in Guatemala to rural development projects in Honduras and free-standing enterprises in Mexico. In several cases, multi-community entities such as unions and cooperatives have been certified, although there is no evidence that such groupings were formed specifically for certification, or that they are becoming more prevalent. To judge from the limited evidence available, CFEs are using certification opportunistically, either in response to overtures from private companies or, more commonly, as part of NGO or donor programmes of support. The distribution of certified CFE, therefore, does not accurately reflect market demand or enterprise capacity to meet this demand.

In many cases, the expectation that certification would provide access to profitable international markets has not been matched by experience (De Camino and Alfaro 1998; Irvine 1999). Irregular demand, or a lack of capacity to meet existing demand, have affected many certified enterprises (IRG 1999). Closer analysis suggests that support for CFE certification has concentrated too heavily on issues of supply, rather than demand, and that more attention should be paid to market and customer needs (Thornber and Markopoulos 2000).

Irvine (1999) asserts that certification has allowed communities to streamline their administrative and managerial procedures, with long-term economic benefits in some cases. This claim is hard to corroborate given the lack of detailed, long-term economic studies of certified CFEs. Certainly the CFEs that have been certified for several years or more have made few economic gains. Inefficiency and corruption, for example, forced several members of SPFEQR to disband their enterprise and form work groups in the mid-1990s (Maynard and Robinson 1998).

¹ The median value is a more accurate indicator of individual community size than the average value because some certificates cover more than one community.

Table 1: Status of certified CFE in Latin America. Source: FSC 2001; public summary reports. (Part 1)

CERTIFICATE HOLDER	CERTIFIER	ISSUE DATE ^a	FOREST TYPE	AREA (ha)
<i>Bolivia (1 certificate)</i>			<i>Subtotal</i>	<i>52,000</i>
Central Intercomunal Campesina del Oriente de Lomerío (CICOL)/APCOB	RAlliance ^b	19/2/96	Natural	52,000
<i>Costa Rica (3 certificates)</i>			<i>Subtotal</i>	<i>18,132</i>
Asociación San Migueleña de Conservación y Desarrollo (ASACODE)	RAlliance	1/10/98	Plantation/Semi-natural	81
Fundación para el Desarrollo de la Cordillera Volcanica Central (FUNDECOR)	SGS ^c	14/2/97	Plantation/Natural	17,551
Fundación Tierras Unidas Vecinales por el Ambiente (TUVA)	RAlliance	1/4/97	Natural	500
<i>Guatemala (6 certificates)</i>			<i>Subtotal</i>	<i>100,026</i>
Asociación de Productores de San Miguel (APROSAM)	RAlliance	1/5/99	Natural	7,039
Comité Pro-Mejoramiento de La Pasadita	RAlliance	1/5/99	Natural	18,217
Cooperativa Bethel, R.L.	RAlliance	1/5/99	Natural	4,149
Cooperativa Integral de Comercialización "Carmelita", R.L.	RAlliance	15/12/99	Natural	53,797
Cooperativa La Técnica Agropecuaria	RAlliance	1/5/99	Natural	4,607
La Sociedad Civil de Impulsores Suchitecos	RAlliance	1/12/98	Natural	12,217
<i>Honduras (3 certificates)</i>			<i>Subtotal</i>	<i>20,656</i>
Cooperativa Regional Agroforestal, Colón, Atlántida, Honduras Ltda. (COATLAHL)	RAlliance	1/7/97 (1991)	Natural	8,750 ^d
Paya y Copén, Colón	RAlliance	1/2/99	Natural	5,898
Proyecto de Desarrollo del Bosque Latifoliado (PDBL)	RAlliance	1/7/97 (1991)	Natural	6,008

Table 1: Status of certified CFE in Latin America. Source: FSC 2001; public summary reports. (Part 2)

CERTIFICATE HOLDER	CERTIFIER	ISSUE DATE ^a	FOREST TYPE	AREA (ha)
Mexico (9 certificates)			Subtotal	409,564
Comunidad Indígena De Nuevo San Juan Parangaricutiro	RAlliance	2/00	Natural	14,300
Ejido Echeverría de la Sierra	RAlliance	1/5/98	Natural	3,000
Ejido El Encinal	RAlliance	1/11/99	Mixed-natural/ Plantation	7,161
Ejido Mil Diez	RAlliance	1/11/99	Mixed-natural/ Plantation	4,750
Ejido Pueblo Nuevo	RAlliance	1/12/00	Natural	243,349
El Ejido El Centenario	RAlliance	9/1/98	Natural	2,693
El Ejido Noh Bec	RAlliance	1/4/99 (1991)	Natural	23,100
Sociedad Civil de Productores Forestales Ejidales de Quintana Roo (SPFEQR)	RAlliance	1/8/95 (1991)	Semi-natural	86,215
Union de Comunidades Forestales Zapotecas-Chinantecas (UZACHI)	RAlliance	22/4/96	Natural	24,996
TOTAL (22 certificates)				600,378

^a This refers to the initial certificate from an FSC-accredited certification body. If applicable, the issue date (year) of an earlier certificate is given in brackets.

^b Rainforest Alliance SmartWood programme.

^c SGS Qualifor programme.

^d The published figure of 7,970 ha for COATLAHL is inaccurate because it omits one of the cooperative's member groups.

Political benefits from the certification process have so far been limited. Some CFEs have achieved quasi-political goals after certification, but the extent to which certification was a contributory factor is unclear (see below, Chapter 4). Other communities have participated in national standards development processes: their contributions are reflected in the resulting standards and institutions of certification, but otherwise have had little discernible impact on formal policy for CFE or small-scale forest enterprise. Certification has enabled some community groups to press for the recognition of their customary rights as a precondition for the certification of industrial concessions on community lands (Irvine 1999). This is a positive development, albeit one of limited relevance to communities that have chosen to manage their forest lands.

The role and influence of external groups

The experience to date with certification of CFE highlights the uncertain nature of any associated benefits. Although it is too early to judge the long-term impact of certification on

enterprise growth and development, its short-term financial, technical and administrative demands constitute a serious obstacle. A further obstacle is the uncertain nature of certification itself, which is still developing through political and commercial interaction, and which still carries a heavy burden of risk.

Those CFEs that have already been certified have benefited from several measures to spread the associated costs and risks. Some enterprises have used the group certification system, which unites groups of forest owners or managers under a single certificate and can create economies of scale in organisation, administration and inspection (FSC 1998). Other enterprises have benefited from subsidised fees, training courses and other forms of support offered by certification bodies such as SmartWood (Guillén 2000). In most cases, however, donors, NGOs and, to a much lesser extent, private companies have financed the certification process and borne much of the risk themselves.

These and other options for supporting certification of CFEs, such as special funds to defray costs, raise two important questions. First, what is the underlying rationale for supporting certification instead of legal reform, institution building, business development or any other action vital to CFE interests? Second, is the purpose of such support to strengthen CFE, or to promote certification? Put another way, does the high level of interest in community forest certification reflect a genuine belief in its importance to CFE, or it does it reflect the self-interest of the certification industry and the current priorities of donors?

These questions aside, the effect of external support on the priorities and performance of recipient enterprises continues to give cause for concern. Such support may enable communities to win certification, but in doing so it may obscure market signals and thereby distort the incentives for forest-based enterprise. Pressure from external sources may also force enterprise growth and encourage excessive risk-taking in the drive to meet certification standards. A case in point is the Sociedad Civil de Impulsores Suchitecos in Guatemala. With the help of a regional forestry development project, this group obtained a concession, began forestry operations and won certification all in the same year, 1998 (Rainforest Alliance 1999). Given that CFEs in neighbouring Honduras have taken up to 15 years to develop (Richards 1997b), the ability of the Suchitecos to manage a business, let alone cope with the demands of certification, must necessarily be limited.

4 THE EXPERIENCES OF INDIVIDUAL ENTERPRISES

The Lomerío Community Forest Management Project, Bolivia

Background

Situated in eastern Bolivia, in the Department of Santa Cruz, the canton of Lomerío is home to 25 Chiquitano communities with an estimated population of 5,300. Since 1986 these communities, under the direction of their umbrella organisation CICOL (Inter-Communal Peasant Central of Eastern Lomerío), have participated in the development of a vertically integrated sawmill enterprise designed both to generate material benefits and to secure legal recognition for long-standing territorial claims. Financial and technical support for this

undertaking has been provided by the NGO APCOB (Support for the Peasants-Indigenous People of Eastern Bolivia) and, latterly, by the Bolivia Sustainable Forest Management Project (BOLFOR). In February 1996, the Lomerío project was certified as “well-managed” by the Rainforest Alliance’s SmartWood programme.

Summary of certification’s impacts

High standards of management within the project, as well as new forest legislation that has imposed strict standards for inventories, plans and other tools of management, have limited the impact of certification on forest management practices. However, as part of a more general emphasis on conservation management, certification has obliged the project to prepare a protected forest area plan and take steps to reduce human disturbances such as fire-setting and hunting.

Certification identified debilitating faults in the social and institutional relations of the project. In addressing these weaknesses, the project has refocused attention on the community, rather than CICOL or any other entity, as the basic socio-political unit of forest management. Certification has also led to a redefinition of community roles and responsibilities in forest management and enterprise administration, and has emphasised the central role of the community in project decision-making. Indeed, without certification, it is likely that the conflicts engendered by enterprise development would have received far less attention.

Two of the Lomerío project’s main expectations of certification were higher prices and greater market security. With support from BOLFOR and several wholesalers and secondary processors (both in Bolivia and abroad), the project has found new export markets and substantial price premiums for several lesser-known timber species. However, several caveats apply to Lomerío’s market success. First, higher timber prices have not led to significantly higher community incomes, owing to the financial demands of the undercapitalised communal sawmill. Second, the administrative and managerial capabilities of the sawmill enterprise are limited, and the demand for certified timber is being met only with difficulty (Stocks 1999). Third, the extent to which higher prices are the result of certification *per se*, rather than BOLFOR’s market development work, is open to question.

Another of the project’s expectations of certification was that it would strengthen Lomerío’s petition for a forest concession (which had been refused on several occasions by the Bolivian authorities) by demonstrating the superior standard of forest management at Lomerío compared with competing private operators. Despite the apparent circularity in this reasoning (certification as a means of acquiring rights that are themselves required for certification), SmartWood decided to award certification on the condition that legal action was taken to obtain secure long-term exploitation rights.

To a large extent, this condition was overtaken by events in 1996. These saw the introduction of new forest law that guarantees exclusive harvesting rights to indigenous groups on duly recognised communal lands, or *tierras comunitarias de origen* (TCO). The project’s demand for a concession, therefore, was subsumed under a wider campaign for the designation of Lomerío as a TCO. In July 1997, the Bolivian government unexpectedly

acceded to Lomerío's TCO demand. The Chiquitano of Lomerío are now working through the legal requirements for formal registration of their TCO.

Although there is no direct link between certification and Lomerío's TCO demand, the board members of CICOL consider that the international publicity and goodwill generated by certification favourably influenced the outcome of their demand. Certification has certainly shown indigenous forest management in a positive light, and has given CICOL (and by association other indigenous organisations) a degree of moral superiority over private competitors (Kopp and Domingo 1997). The lessons learned during the course of enterprise development and certification at Lomerío will also be of value to other indigenous organisations in lowland Bolivia.

Conclusions

There can be little doubt that, without certification, the Lomerío project would now be in a critical state, or possibly even moribund. Certification has been instrumental in focusing attention on internal conflicts and organisational weaknesses, and has promoted the search for appropriate solutions. It has created new market opportunities for some of Lomerío's lesser-known timber species, and has placed the communal sawmill enterprise on a more stable economic footing. In the wider political context of indigenous control of forest resources, certification appears to have helped the Chiquitano of Lomerío in their long-standing struggle for legal rights and recognition.

These benefits, however, must be weighed against a number of actual and potential drawbacks. Lomerío is passing through a period of rapid change. The project's commercial expectations of certification are balanced by its expectations of improved relations with government and the recognition of land claims. If, and when, these claims are eventually satisfied, the priorities of the Chiquitano may change. Secure tenure may encourage the expansion of sustainable forest management but, equally, it may remove an important motive for such management (Laban, Lette and van der Werf 1996).

The way in which certification has brought social and organisational benefits also has its drawbacks. The problems of passive community involvement in the project were themselves tackled passively - not by Chiquitano institutions with their own resources, but by an externally financed foreign expert. Indeed, the Chiquitano had no choice but to agree to the intervention of a foreign expert, as it was requested by SmartWood and formed part of the certification process. Notwithstanding its short-term benefits, this type of passive interaction with certification may not necessarily foster a long-term commitment to change and improvement.

Campesino Forestry Groups, Honduras

Background

The *campesino* (peasant farmer) forestry groups that are the subjects of this study operate in the Atlántida Forest Region on the north coast of Honduras. Ranging in size from five to 50 active members, each group manages an area of publicly-owned forest under a usufruct agreement with the state forestry service (AFE-COHDEFOR). As part of this agreement,

the groups are expected to prepare and implement a five-year plan for the sustainable production of timber. Some of the groups market their timber through COATLAHL, a second-order cooperative established under Honduras' Social Forestry System. Other groups sell directly to local buyers with the support of the Broadleaf Forest Development Project (PDBL), a long-standing supporter of *campesino* forest management in the region.

Despite the high species diversity of the tropical broadleaf forests in the Atlántida Region, the groups concentrate on a small group of commercially-valuable timber species, including mahogany, redondo and Spanish cedar. Past attempts to promote the use of lesser-known timber species have been frustrated by a lack of product development and marketing capacity, competition from illegal logging and the domestic timber market's traditional preference for pine. The desire to create new export markets for lesser-known species was one of the main motives for pursuing certification. In 1991, the groups were certified as "well-managed" by the Rainforest Alliance's SmartWood programme. The groups were recertified in 1993 and 1996 (again by SmartWood). At present, 12 groups managing almost 14,000ha of forest are certified as "well-managed".

Summary of certification's impacts

Certification has served to consolidate, rather than raise, forest management standards. All of the groups have received external support for improving their management practices and planning procedures. Honduras' Agricultural Modernisation Law of 1992 also introduced minimum standards for management planning, which were reinforced by technical guidelines introduced in 1996. Certification has highlighted the lack of monitoring of management impacts on the forest ecosystem. SmartWood has called for growth studies to be implemented, but this demand is beyond the capacity of most groups and must be met by external research. Under the conditions of certification, the groups are also required to incorporate non-timber forest products into their management plans.

The lack of community participation either in group decision-making or in the distribution of income from timber sales was heavily criticised by SmartWood in 1996. All of the groups are now required to prepare and implement community participation plans. The issue of community participation was acknowledged by the main forest stakeholders before certification, but the exclusive nature of the usufruct agreement between AFE-COHDEFOR and the groups hampers any attempt to broaden community participation. Closer analysis also suggests that the assumptions underlying the certifier's demand for forest management to be opened up to the wider community are not supported by present social conditions. The *campesino* communities in the Atlántida Region lack the social cohesion necessary for successful communal resource management. Furthermore, any reduction in group control over forest management may jeopardise the many benefits offered by the groups, including their ability to function as an engine of local economic development.

The main driving force behind certification in 1991 was the desire of a local furniture export company to secure a source of sustainably produced raw materials for its markets in the United States. This led to the first certification evaluation and the creation of a commercial relationship between the company and the *campesino* groups that persists to the

present day. In terms of direct export marketing, however, the groups have never been able to exploit certification because they lack the capacity to process and market timber according to international standards. Only three shipments of certified timber have been exported since 1991. All were commercial failures characterised by long delays, high rates of wastage and the diversion of resources into satisfying restrictive export regulations. These failures have focused the groups' attention on consolidating their domestic markets and exploring regional markets.

Until the early 1990s, none of the groups had received legal recognition of the usufruct rights granted to them under Honduras' Social Forestry System. In order to rectify this situation, PDBL developed the concept of a legally-binding usufruct contract between the groups and AFE-COHDEFOR. Anecdotal evidence suggests that the eventual endorsement of usufruct contracts by government was prompted by the certified status of the groups.

In 1996, a forestry funding scheme established by PDBL to support group costs was frozen by a legal challenge from elements of the Honduran timber industry opposed to financial support for *campesino* groups. After the 1996 certification inspection, SmartWood called for the legal problems blocking funding to be resolved. An inter-agency committee convened by PDBL to examine other funding options subsequently obtained approval for a new municipal-level forestry funding scheme in 1998.

Conclusions

Despite some minor improvements in the legal and commercial aspects of forest management, certification has made little contribution to the main constraints faced by the forestry groups. Many of the effects of certification have either overlapped with donor work programmes or been duplicated by new regulatory measures. Several conditions have substantially increased the complexity of management planning and the corresponding reliance of the *campesinos* on external assistance. In particular, the demands for growth and regeneration studies, and management of non-timber products, seem excessive. In view of their limited capabilities, the groups can only be expected to use the best information that is available to them. Even if there are gaps in the understanding of broadleaf forest dynamics, it is unclear why the groups should be required to fill these. It is also unclear why the omission of non-timber products should be considered a weakness of management, particularly if such products are neither harvested nor damaged by tree felling.

The commercial relationships established with certified timber buyers have not always worked to the *campesinos*' advantage. Owing to their limited production and marketing capacity, the groups have derived little benefit from direct exports of certified products. Instead, they have provided a secure supply of certified timber to larger companies with the capacity to exploit overseas demand. PDBL and COATLAHL appear to have assumed (mistakenly) that certification in itself would create export markets for lesser-known species. Consequently, they have paid little attention to product or market development needs. This preoccupation with certification's commercial potential has diverted attention from its potential to enhance local management capacities. The groups have been isolated from the certification process, and lack a clear understanding of its associated costs and benefits.

SmartWood's call for forest management to be opened up to the wider community reflects a concern for the form, as much as the outcome, of such management. However, the call fails to acknowledge the legalities of usufruct contracts, and assumes a capacity for collective action that many *campesino* communities still lack. The question of an appropriate institutional base for forest management is a complex one, but the present group system appears to sit well with social differences and the institutional matrix within which forest resources are owned and managed. SmartWood's demand seemingly owes more to an internal vision of social improvement than it does to the realities of *campesino* society.

Given the limited resources of COATLAHL and PDBL, and the focus of both organisations on the domestic market, the rationale for continuing with certification is unclear. A more appropriate course of action would be to put forest management on a sound economic footing in the domestic market, and then allow the groups to decide whether to reapply for certification. Contrary to popular belief, there is evidence from Honduras that well-managed forest products operations can be profitable in a domestic market context (P. Martins, personal communication, 1998). The domestic market offers an opportunity for the groups to develop their skills and expertise, and improve their products, so creating a more secure economic base from which to consider exporting.

The Union of Zapotec and Chinantec Forestry Communities (UZACHI), Mexico

Background

The four Zapotec and Chinantec communities that constitute UZACHI ("the Union") manage almost 22,000ha of temperate pine and mixed pine-oak forests in the Sierra Juárez mountains of northern Oaxaca. Between 1956 and 1981, these forests were concessioned to a private (later nationalised) pulp and paper company and selectively exploited for pine. The communities regained control of their forests in the early 1980s, but were left with extensively degraded pine stocks. In 1989, they formed the Union to deal with a number of common forestry-related issues, one of which is forest restoration.

The initial driving force behind certification came from Rural Studies and Assistance (ERA), a local NGO and long-standing supporter of the Union. The leader of ERA (who has gone on to play a pivotal role in Mexico's national certification standards development initiative) recommended certification as a way of avoiding price competition from the cheaper pine imports expected under the North American Free Trade Agreement (NAFTA). In particular, he suggested that certification would allow the Union to develop markets for commercially less vulnerable, but lesser-known, broadleaf species. The Union decided to pursue certification on the strength of this recommendation, but was aware that certification could enhance its professional status and credibility and provide feedback on its management practices. In September 1996, the Rainforest Alliance's SmartWood programme certified the Union as "well-managed".

Summary of certification's impacts

SmartWood found no major faults in the Union's management scheme. The conditions of certification imposed on the Union are designed mainly to consolidate existing practices. However, SmartWood asked the Union to suspend pine regeneration fellings in mixed pine-oak forests because of the high wastage of oaks and other broadleaf species which lack local markets. The Union has failed to comply with this condition, not only because it conflicts with the organisation's primary objective of restoring pine stocks, but also because the expected markets for broadleaf species have failed to materialise (see below). The Union now sees certification mainly as a tool for monitoring and evaluating management impacts.

SmartWood's inspection found that the accountability and transparency of the community institutions involved in forest enterprise were generally good. However, the traditional practice of rotating managerial positions, although intended to increase training opportunities and prevent corruption, has added to inefficiencies in enterprise management. SmartWood asked that managerial staff remain in their positions for at least two to three years, but this condition has been poorly received. With only a few exceptions, all positions are still subject to regular rotation (which can be as frequent as once a year).

Internal constraints and changing market conditions have not only limited the Union's ability to penetrate certified markets, but also eliminated much of the early economic rationale for certification. The Union hoped that certification would create markets for lesser-known broadleaf species but, in the event, was obliged to find such markets as a condition of certification. Under a programme financed by the Good Wood Alliance, the Union developed a small range of office products made from oak. However, this effort failed to generate more than sporadic market interest and regular production ceased in 1997 when the programme ended.

The Union has also had little success in marketing certified pine timber. By early 1999, only three small orders for pine timber had been completed by members of the Union. One of the main reasons for such poor performance is local market growth. In Oaxaca, the impact of trade liberalisation under NAFTA was cushioned by the high costs of transport to southern Mexico and the devaluation of the Mexico peso in 1994-95. The expected price competition lasted only a short time before demand and prices for local pine timber started to rise. Fuelled by strong economic growth (more than 5% per year since 1995), this upturn in the local market has removed any need the Union may have had to find new market opportunities.

Technical limitations have also contributed to the Union's lack of marketing success. In truth, there has been no shortage of sales inquiries for certified timber. Market promotion by local organisations and a listing in SmartWood's directory of sources has generated interest from buyers in the United Kingdom and the United States. The problem, however, is that the Union does not have the capacity to meet this demand. Its members lack the drying and milling facilities needed to prepare timber to export standards. They also cannot afford the investments needed to open and maintain sales channels to overseas markets. Most importantly, however, they have neither the consistency nor the volume of production needed to satisfy current market demands. The Union is receiving sales inquiries for up to

3,000-4,000m³ of timber each month, yet its production is limited to less than a third of this amount by an internal aversion to environmental and market risk, and by a desire to satisfy only internal welfare needs through forest enterprise (profits are not distributed among community members).

The Union and its supporters believe that certification has had a favourable impact on its external relations, particularly those with government and donors. Certification does appear to have strengthened the Union's relations with Mexico's environment ministry, which oversees forestry development. For example, the ministry has poached the Union's technical director to head the field office of a regional World Bank project (on a part-time basis), and has asked the Union to give seminars on forest management and certification as part of the same project. The Union has also secured financial and technical support from several donors since winning certification, and has played an important role in Mexico's certification standards development initiative. Although the true impact of certification can be questioned (Union members have always worked hard to cement their external relations), it has undoubtedly enhanced the Union's image and confidence as a leading local CFE.

Conclusions

In terms of the sophistication of its management practices, the amount of external support that it has received, and the strength of its commitment to sustainable forest management, the Union is unlike many other community forestry organisations in Oaxaca. It is these factors, however, that have contributed to the Union's status as a certification pioneer. Its relatively advanced management system has allowed the Union to meet the requirements of certification without major adjustments. The external support has removed much of the cost and risk of certification. Lastly, the Union's commitment to high standards has sustained its faith in certification despite limited financial benefits.

Such considerations may explain why, out of 73 CFEs in Oaxaca with temperate forest holdings², only the Union is certified. Other elements of the Union's experience, however, may be more relevant to the question of certification in Mexico. First, certifiers have shown a willingness to intervene in traditional practices such as the rotation of managerial posts. Such traditions may carry the legitimacy of customary law, but may fail to meet the criteria of efficiency dictated by certification standards. Second, certifiers have seen fit to address issues that, strictly speaking, lie outside their remit (SmartWood imposed two conditions that call for the development of promotional materials and a marketing strategy for certified products). Third, and perhaps most important, certification has created market demands that conflict with local production philosophies. The Union might be able to meet the demand for certified timber if it harvests 100% of its potential yield, yet for social and cultural reasons it is unwilling to countenance such a level of production.

The only way for the Union to overcome its production constraints - without compromising its production philosophy - is by cooperating with other forest communities or with private enterprises. In fact, the Union is planning to expand its membership in the

² According to the World Bank (1997), 236 communities in Oaxaca have enough pine-oak forest to sustain commercial exploitation. Of these, 43 harvest timber and 30 harvest and process timber in their own sawmills. The remainder either sell standing timber or do not manage any commercial extraction.

near future, but for political, not economic, reasons. From the point of view of certification, cooperation has the added disadvantage of requiring each partner to meet the certification standard before it can contribute to production. The question of private partners is also an extremely sensitive one, given the independent nature of the Union and the adverse experiences of its members during the concession era. Nevertheless, some of the community members interviewed for this case study expressed an interest in forming a joint venture with a private enterprise if it could reduce the associated risks of production and marketing.

5 CONCLUSIONS

Which communities?

The evidence collected in Bolivia, Honduras and Mexico, although it provides only limited opportunities to generalise, does suggest that CFEs in Latin America may have little use for certification oriented towards export markets, given their characteristic business goals and market linkages. The case studies portray enterprises that have generally failed to capture the added value represented by certification, either because they lack the skills or resources to penetrate certified markets or, as is the case with UZACHI, they are prevented from taking the necessary steps to enter such markets (e.g. increase production) by social and cultural considerations.

If enterprises such as UZACHI, which have access to external finance and technical support, derive few commercial benefits from certification, the outlook for the rest of Latin America's CFE is not promising. Notwithstanding the availability of outside support, it does seem likely that only the largest and most highly capitalised enterprises will have the necessary capacity or motivation to compete in certified markets. However, even in a country such as Mexico, where CFE has grown most rapidly, such enterprises account for no more than 5-10% of the total number of active CFEs.

A number of options exist to improve community access to certified markets, one of the most promising of which is sector-level cooperation. Cooperatives, associations, joint ventures and other forms of collective enterprise may be able to amass the capital and expertise needed to enter certified products markets. The collective approach, however, has certain implications. First, it must be driven by demand if it is to create concrete market opportunities. Second, the positive effect of sector-level cooperation on the competitive status of CFEs argues for its adoption as a general measure of support, not one confined to certified enterprises. The same observation can be made of any measure to improve community access to certified products markets. If the measure can improve market competitiveness, then why not adopt it for all CFE initiatives, certified or otherwise?

The influence of outsiders

The influence of outsiders is apparent at every stage of the certification process, from planning and inspection to compliance. There is no reason to believe that this influence will diminish as certification develops. Few CFEs are able to respond to certified market

demands without the aid of outsiders. In fact, few CFEs respond predictably to price signals or any other type of external incentive. The economic behaviour of most enterprises is governed not by the market, but by the internal structures and social relations of the community. For these reasons, donors, NGOs and other third parties are likely to play a important part in introducing and driving certification of CFEs for some time to come.

As the case studies show, outside support for certification can have unintended consequences. Where outsiders have had almost complete control over the certification process, as in Honduras, their influence has skewed local perceptions of the costs and purpose of certification. In Bolivia, external intervention has reduced the heuristic value of the certification exercise, and has encouraged community members to accept passively the process of compliance.

As noted in Chapter 3, CFEs have been among the earliest adopters of certification, even though it carries significant risks. The case studies confirm that CFEs have been able to lead in this field because much of the risk associated with early adoption has been borne by third parties. The drawback to this approach, however, is that it introduces an element of moral hazard. Any community would be willing to embark on a risky venture if it knew that, should the venture fail, the investment of a third party would be lost, not its own.

Apart from the questionable practice of expending limited development funds on high-risk measures such as certification, there is also the question of whether communities should be encouraged to take excessive risks. Of course, with enough outside support, a CFE could achieve almost anything. The point, however, is not what an enterprise *could* do if it had the support, but what it *should* do. Notwithstanding the enthusiasm of many donors and NGOs for certification, the truth is that it may not necessarily be the best or the most appropriate course of action for many CFEs.

If external assistance for CFE certification is to be offered, then it should at least be based on loans and other types of conditional finance, rather than subsidies. Subsidies are sometimes justified by portraying communities as “victims” in need of special support. This and other pro-subsidy arguments ignore two important facts. First, many communities are prevented from exploiting their forests not by external injustices, but by internal conflict and poor organisation. Second, subsidies work against efficiency and quality control, both of which are common weaknesses of CFE (and the former, as the case studies show, is a recurring theme of certification inspections).

Capacity for self-help and continuous improvement

Certifiers have imposed a large number of conditions on the enterprises in this study. Many of these conditions have exceeded local capabilities and have necessitated external intervention. Notwithstanding the intentions behind such conditions, their effect has been to reinforce the dependence of the enterprise and degrade its capacity for self-help. Certifiers, ideally, should encourage CFEs to find their own solutions to management problems, and avoid making demands that necessitate outside support. This approach to compliance would increase the flexibility of certification, and perhaps reduce its indirect costs.

Political and economic context

The findings of the case studies suggest that certification may offer indirect political benefits to CFEs, primarily an increase in their status and credibility, and consequent bargaining power. Such benefits, however, may not be enough in themselves to justify the cost of pursuing certification. At the national level, certification initiatives can provide a forum for public consultation on forestry issues. This forum, depending on the concerns or ambitions of a CFE, may offer a suitable platform from which to influence the opinions of other forest stakeholders. UZACHI, for example, has figured prominently in Mexico's national certification initiative.

The role of certification in political and legal reform aimed at strengthening CFE, and the effect of certification compared with the effect of such reform, are difficult to gauge on the basis of this study alone. In a country such as Honduras, where public forest policy processes are virtually moribund, a national certification initiative could create space for stakeholder dialogue and learning. Elsewhere, however, the role for certification is less clear. In Mexico, for example, CFEs hold significant economic power and are well represented in state and federal forest policy fora. From the narrow standpoint of CFE interests, therefore, a national certification initiative may not be the most effective means of pursuing further political and legal change.

Although the importance of certification will differ from country to country in Latin America, the importance of political and legal reform remains constant. The first priority of the international development community, therefore, must be good forest policy. Donors must guard against overenthusiastic promotion of certification, or any moves to tie development assistance to certification. Such moves could create the potentially divisive impression that certified CFE is "good" and uncertified CFE is "bad". In fact, all attempts at sustainable CFE development, certified or otherwise, deserve equal support and recognition.

REFERENCES

- ALATORRE, G. (ed.) (1990) Memoria segundo taller de análisis de experiencias forestales. programa pasos. México. DF.
- ALATORRE, G. (ed.) (1992) La empresa social forestal. Tercer taller de análisis de experiencias forestales. Programa Pasos. México. DF.
- ARNOLD, J. E. M. (1992) Community forestry: ten years in review. United Nations Food and Agriculture Organisation. Rome.
- ARNOLD, J. E. M., CHIPETA, M. E. AND FISSEHA, Y. (1987) The importance of small forest-based processing enterprises in developing countries. *Unasylva*, 39(3,4):9-16.
- ASCHER, W. (1995) Communities and sustainable forestry in developing countries. Institute for Contemporary Studies Press. San Francisco.

- BLAIR, H. W. AND OLPADWALA, P. D. (1988) Planning for appropriate forestry enterprises: lessons from rural development experience in third world countries. *New Forests*, 2:41-64.
- BRUNTON, P. D. (1987) Financing small-scale rural manufacturing enterprises. In FAO, *Small-scale forest-based processing enterprises*. Forestry Paper No. 79. United Nations Food and Agriculture Organisation. Rome.
- CABARLE, B. J. (1991) Community forestry and the social ecology of development. *Grassroots Development*, 15(3):3-9.
- CHASE SMITH, R. (1995) The gift that wounds: charity, the gift economy and social solidarity in Indigenous Amazonia. Paper prepared for the Symposium on Community Forest Management and Sustainability in the Americas. 3-4 February 1995. University of Wisconsin. Madison.
- DE CAMINO, R. AND ALFARO, M. (1998) Certification in Latin America: experience to date. Rural Development Forestry Network Paper No. 23c. Overseas Development Institute. London.
- ELLIOTT, C. AND VIANA, V. M. (1996) Potential inequalities and unintended effects of certification. In Viana, V. M., Ervin, J., Donovan, R. Z., Elliott, C. and Gholz, H. (eds.) (1996) *Certification of forest products. Issues and perspectives*. Island Press. Washington, DC.
- FOREST STEWARDSHIP COUNCIL - FSC (1998) Group certification: FSC guidelines for certification bodies. Document 3.6.1. Forest Stewardship Council. Oaxaca.
- FOREST STEWARDSHIP COUNCIL - FSC (2001) Forests certified by FSC-accredited certification bodies. Document 5.3.3 (May 31st 2001). Forest Stewardship Council. Oaxaca.
- GARCIA, M., MALDONADO, R., BETTERS, D. R., AGUIRRE, C., IGLESIAS, L. AND DOMINGUEZ, L. A. (1994) Ecosystem management for northern Mexico: landowner perspectives at El Largo Madera. In Aguirre, C., Eskew, L., Villa-Salas, A. B. and González-Vicente, C. E. (eds.) *Partnerships for sustainable forest ecosystems management*. USDA Forest Service General Technical Report RM-GTR-266. Rocky Mountain Forest and Range Experiment Station. Ft Collins.
- GRAM, S. (1997) Indian forestry in Latin American rain forests. *Sustainable Development*, 5:21-29.
- GUILLÉN, A. (2000) Bringing equity to certification: SmartWood's Role. SmartWood Program. Richmond.
- HEATON, K. AND DONOVAN, R. Z. (1996) Forest assessment. In Viana, V. M., Ervin, J., Donovan, R. Z., Elliott, C. and Gholz, H. (eds.) *Certification of forest products. Issues and perspectives*. Island Press. Washington, DC.

- HOLDEN, P. (1996) The enabling environment for Latin American business. *Small Enterprise Development*, 7(3):28-36.
- HORNBY, W., GAMMIE, B. AND WALL, S. (1997) *Business economics*. Addison Wesley Longman. London.
- IRG (1999) *Agilizando el acceso al mercado para productos maderables certificados de centroamérica y Mexico*. Prepared for US Agency for International Development by International Resources Group, Ltd. (IRG). Washington, DC.
- IRVINE, D. (1999) *Certification and community forestry: current trends, challenges and potential*. Paper prepared for the World Bank/WWF Alliance Workshop on Forest Certification/Verification Systems. 9-10 November 1999. Washington, DC.
- JAFFEE, D. (1997) *Confronting globalisation in the community forests of Michoacán, Mexico: free trade, neoliberal reforms and resource degradation*. Paper prepared for the 20th International Congress of the Latin American Studies Association. 17-19 April 1997. Guadalajara.
- KOPP, A. AND DOMINGO, T. (1997) *Organizaciones indígenas en el manejo de recursos forestales: CIDOB-CICOL*. Centro de Servicios Agropecuarios. La Paz. Bolivia.
- LABAN, P. AND VAN DER WERF, E. (1995) *Desk study on certification of tropical wood commissioned by SNV and HIVOS (Volume 1)*. ETC Foundation. Leusden.
- LABAN, P., LETTE, H. AND VAN DER WERF, E. (1996) *Desk study on certification of tropical wood commissioned by SNV and HIVOS (Volume 2)*. ETC Foundation. Leusden.
- LOPEZ, A. R. AND GEREZ, F. P. (1993) *The permanent tension. The forest communities of Oaxaca blend communal traditions and urban-industrial production*. *Cultural Survival Quarterly*, 17(1):42-44.
- MADRID, S. (1993) *Obstáculos y oportunidades de los ejidos y comunidades forestales en México*. Draft report prepared for the World Bank. Washington, DC.
- MARIJNISSEN, C. (1998) *Certification as a tool towards livelihood sustainability: is it possible?* International Institute for Environment and Development. London.
- MARKOPOULOS, M. D. (1999) *A DFID approach to certification*. Revised draft. Department for International Development. London.
- MARKOPOULOS, M. D. (2000) *The role of certification in supporting community-based forest enterprise (CFE) in Latin America*. Unpublished D.Phil. thesis. Oxford Forestry Institute. Oxford.
- MAYNARD, W. AND ROBINSON, D. (1998) *Quintana Roo forest certification case study*. Draft. *Ethical Trade and Sustainable Rural Livelihoods Case Studies*. Natural Resources Institute. Chatham.

- MERINO, L. (1997) Organización social de la producción forestal comunitaria. In Paré, L., Bray, D. B., Burstein, J. and Martínez, S. (eds.) Semillas para el cambio en el campo: medio ambiente, mercados y organización campesina. Instituto de Investigaciones Sociales. UNAM. México. DF.
- MERINO, L. AND ALATORRE, G. (1997) Las condiciones de los aprovechamientos forestales en los casos de distintas comunidades de México. In Merino, L. (ed.) El manejo forestal comunitario en México y sus perspectivas de sustentabilidad. Centro Regional de Investigaciones. UNAM. México. DF.
- ODA (1996) Sharing forest management. Key factors, best practice and ways forward. Overseas Development Administration. London.
- OKSANEN, T. AND RIJSSENBEEK, W. (1987) Promoting communal small-scale forest-based processing enterprises: lessons from a project in Peru. In FAO Small-scale forest-based processing enterprises. Forestry Paper No. 79. United Nations Food and Agriculture Organisation. Rome.
- PADOCH, C. AND PINEDO-VASQUEZ, M. (1996) Smallholder forest management: looking beyond non-timber forest products. In Ruiz Pérez, M. and Arnold, J. E. M. Current issues in non-timber forest products research. Centre for International Forestry Research. Bogor. Indonesia.
- POFFENBERGER, M. (ed.) (1996) Communities and forest management. A report of the IUCN working group on community involvement in forest management with recommendations to the intergovernmental panel on forests. The World Conservation Union. Washington, DC.
- RAINFOREST ALLIANCE (1999) Resumen público de certificación de sociedad civil impulsores suchitecos. SmartWood Program. Rainforest Alliance. New York.
- RICHARDS, E. M. (1993) Lessons for participatory natural forest management in Latin America: case studies from Honduras, Mexico and Peru. *Journal of World Forest Resource Management*, 7:1-25.
- RICHARDS, M. (1997a) Common property resource institutions and forest management in Latin America. *Development and Change*, 28:95-117.
- RICHARDS, M. (1997b) COSPE: Conservación y manejo forestal comunitario del bosque latifoliado de la Costa Norte de Honduras (B7-5041/1/95/016). Overseas Development Institute. London.
- RODRÍGUEZ, S., VARGAS, A., DEDINA, S. AND STANFIELD, D. (1993) Latin America. In Messerschmidt, D. (ed.) Common forest resource management: an annotated bibliography. Community Forestry Note 11. United Nations Food and Agriculture Organisation. Rome.

- SALAFSKY, N., CORDES, B., LEIGHTON, M., HENDERSON, M., WATT, W. AND CHERRY, R. (1997) Chainsaws as a tool for conservation? A comparison of community-based timber production enterprises in Papua New Guinea and Indonesia. Rural Development Forestry Network Paper No. 22b. Overseas Development Institute. London.
- SÁNCHEZ PEGO, M. A. (1995) The forestry enterprise of the indigenous community of Nuevo San Juan Parangaricutiro, Michoacán, Mexico. In LTC and IES, case studies of community-based forestry enterprises in the Americas. Prepared for the Symposium on Forestry in the Americas: Community-Based Management and Sustainability. 3-4 February 1995. University of Wisconsin. Madison.
- SCRASE, H. (1999) Certification of forest products for small businesses: improving access - issues and options. Final report to Forestry Research Programme. Pre-project ZF0083. Department for International Development. London.
- SILVA, E. (1997) The politics of sustainable development: native forest policy in Chile, Venezuela, Costa Rica and Mexico. *Journal of Latin American Studies*, 29:457-493.
- SIMULA, M. (1996) Economics of Certification. In Viana, V. M., Ervin, J., Donovan, R. Z., Elliott, C. and Gholz, H. (eds.) (1996) Certification of forest products. Issues and perspectives. Island Press. Washington, DC.
- SNOOK, L. C. (1987) Community forestry in Mexico's natural forests: the case of San Pablo Macuiltianguis. In *Current Topics in Forest Research: emphasis on contributions by women scientists*. USDA Forest Service General Technical Report SE-46. Southeastern Forest Experiment Station. Asheville.
- STOCKS, A. (1999) Iniciativas forestales indígenas en el trópico boliviano: realidades y opciones. Technical Document No. 78. Bolivia Sustainable Forest Management Project. Santa Cruz.
- THOMS, C. A. AND BETTERS, D. R. (1998) The potential for ecosystem management in Mexico's forest ejidos. *Forest Ecology and Management*, 103:149-157.
- THORNBER, K. AND MARKOPOULOS, M. D. (2000) Certification: impacts and prospects for forests, stakeholders and markets. Community Forestry Summary Report. International Institute for Environment and Development. London.
- THORNBER, K., PLOUVIER, D. AND BASS, S. (1999) Certification: barriers to benefits. A discussion of equity implications. International Institute for Environment and Development. London.
- TOLFTS, A. (1998) How appropriate is certification for small-scale timber producers in melanesia? Rural Development Forestry Network Paper No. 23d. Overseas Development Institute. London.

- TOULMIN, C. (1997) Participatory management of communal resources. Paper prepared for DFID Natural Resources Advisors' Conference. July 1997. Sparsholt.
- USDA/FAS (1998) Mexico forest products annual report 1998. GAIN Report No. MX8124. US Department of Agriculture Foreign Agricultural Service. Washington, DC.
- VON KRUEDENER, B. (1997) The potential of certification as an instrument to enhance recognition of the management capacity of forest communities. FTTP/RECOFTC. Bangkok.
- WEXLER, M. B. AND BRAY, D. B. (1996) Reforming forests: from community forests to corporate forestry in Mexico. In Randall, L. (ed.) Reforming Mexico's agrarian reform. M. E. Sharpe. Armonk.
- WORLD BANK (1997) Mexico community forestry project. Staff Appraisal Report No. 16134-ME. Latin America and Caribbean Regional Office. World Bank. Washington, DC.
- ZABIN, C. (1995) Free markets and forests in Mexico: community-based forestry in the era of neoliberal reform. Paper prepared for the 19th International Congress of the Latin American Studies Association. 28-30 September 1995. Washington, DC.
- ZABIN, C. AND TAYLOR, P. (1997) Quintana Roo forestry management project. Report prepared under assignment to the Overseas Development Administration. London.

ACRONYMS, ABBREVIATIONS & DEFINITIONS

AFE-COHDEFOR	Administración Forestal del Estado-Corporación Hondureña de Desarrollo Forestal (State Forestry Administration-Honduran Forestry Development Corporation)
APCOB A	Apoyo Para el Campesino-Indígena del Oriente Boliviano (Support for the Peasants-Indigenous People of Eastern Bolivia)
APROSAM	Asociación de Productores de San Miguel (San Miguel Producers Association, Guatemala)
ASACODE	Asociación San Migueleña de Conservación y Desarrollo (San Migueleña Conservation and Development Association, Costa Rica)
BOLFOR	Bolivia Sustainable Forest Management Project Campesino peasant farmer
CFE	Community-based forest enterprise
CICOL	Central Intercomunal Campesina del Oriente de Lomerío (Inter-Communal Peasant Central of Eastern Lomerío)
COATLAHL	La Cooperativa Regional Agroforestal, Colón, Atlántida, Honduras Ltda. (Regional Agroforestry Cooperative of Colón and Atlántida, Honduras Ltd.)
Ejido	form of tenure constituting a land grant for usufruct to a population

	group (Mexico)
ERA	Estudios Rurales y Asesoría Campesina (Rural Studies and Assistance, Mexico)
FSC	Forest Stewardship Council
FUNDECOR	Fundación para el Desarrollo de la Cordillera Volcanica Central (Foundation for the Development of the Central Volcanic Mountain Range, Costa Rica)
ha	Hectare
m3	Cubic metre
MBI	Market-based instrument
NAFTA	North American Free Trade Agreement
NGO	Non-governmental organisation
PDBL	Proyecto de Desarrollo del Bosque Latifoliado (Broadleaf Forest Development Project, Honduras)
SGS	Société Générale de Surveillance
SPFEQR	Sociedad Civil de Productores Forestales Ejidales de Quintana Roo (Society of Ejido Forestry Producers of Quintana Roo, Mexico)
TCO	Tierra Comunitaria de Origen (Indigenous Territory, Bolivia)
TUVA	Fundación Tierras Unidas Vecinales por el Ambiente (United Lands for the Environment Foundation, Costa Rica)
UZACHI	Union de Comunidades Forestales Zapotecas-Chinantecas (Union of Zapotec and Chinantec Forestry Communities, Mexico)