

# ETHICAL TRADE AND SUSTAINABLE RURAL LIVELIHOODS – CASE STUDIES

## Quintana Roo Forest Certification Case Study

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Comments and information;

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**This document is one of a series of studies about ethical trade initiatives and their impact on local livelihoods. It is available on line at: <http://www.nri.org/NRET/nret.htm>**

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## ACRONYMS

AFP / PFA	Area Permanente Forestal (Permanent Forest Area)
AMA	Acuerdo Mexico - Alemania (the Mexican-German bilateral agreement)
AMACUP	Asociación Mexicana de Arte y Cultura Popular (Mexican Association for popular art and culture)
Campesino	Someone who lives off the land. A small farmer or peasant.
CCMSS	Consejo Civil Mexicano Para la Silvicultura Sostenible (Mexican Committee for Sustainable Silviculture)
DFID	Department for International Development
Ejido	a) an area of land under a specific collective land tenure. b) the community of people with collective land rights and settlement where they live.
Ejidatarios	Heads of household with shared land rights in an ejido.
ESCNACIFOR	Escuela Nacional de Cienecias Forestales (National Forestry School, Siguatepeque, Honduras)

FSC	The Forest Stewardship Council
GATT	General Agreement on Trade and Tariffs
GTZ	Deutsche Gesellschaft für Technische Zusammenarbeit (German Technical Assistance Agency)
INEGI	Instituto Nacional de Estadística, Geografía e Informática (National Institute for Statistics, Geography and Information)
MIQRO	Maderas Industrializadas de Quintana Roo, S.A. de C.V.
ODA	Overseas Development Administration
NAFTA	North American Free Trade Agreement (TLC in Spanish)
NGO	Non-governmental Organisation
PEF	Plan Estatal Forestal
PPF	Plan Piloto Forestal
PIQRO	Pisos Industrializados de Quintana Roo (Quintana Roo Flooring)
Red MOCAF	Red Mexicana de Organizaciones Campesinas Forestales (Mexican network of campesino forestry organisations- a branch of UNORCA)
SARH	Secretaría de Agricultura y Recursos Hidráulicos (the ministry for agriculture and water resources ) Now no longer functioning.
SEDESOL	Secretaría de Desarrollo Social. Federal ministry for Social Development

SEMARNAP	Secretaria de Medio Ambiente, Recursos Naturales y Pesca The Federal Natural Resources ministry
SIMAP	Secretaria de Infraestructura, Medio Ambiente y Pesca The State Natural Resources department
SPFEQR	Sociedad de Productores Forestales Ejidales de Quintana Roo
TMFT	Tropical Forest Management Trust
UNOFOC	Unión Nacional de Organizaciones en Forestería Comunal
UNORCA	Unión Nacional de Organizaciones Regionales Campesinas Autónomas
WARP	Woodworkers Alliance for Rainforest Protection
WWF	World Wide Fund for Nature

# CONTEXT

## INTRODUCTION

This case study looks at forest certification as a form of ethical trade and addresses the impact of certification on the livelihoods of the various stakeholders. It examines four *ejido* owned forests in the State of Quintana Roo, south-east Mexico, in the Yucatan peninsula. The *ejidos* are Caoba, Petcacab, Noh Bec, and Tres Garantias. The total area of forest certified is 100,500ha and the number of members who have a direct ownership stake in the forest management system (*ejidatarios*) is 836. The total population within the four *ejidos* is approximately 4550.

This study sets out to examine the effects of forest certification on the livelihoods for those most closely associated with the process. As far as possible the certification tries to be a neutral player offering third party independent verification of the quality of forest management. However hard the people involved in the process try to remain impartial, the context in which the assessment is taking place does serve to influence the situation. It has been hard to draw a definitive line around the activities that particularly have a potential bearing on forest management. In setting out the broad context in which the certification has taken place the paper hopes to allow the different social, political, economic and ecological pressures being exerted on the process to be shown. Within this peripheral issues such as Federal and State incentives for migration into Quintana Roo may be felt to have marginal implications on the certification, but in setting out the context such things have been mentioned because of the possible impact on the natural resource base.

## BACKGROUND AND DEFINITIONS

The four communities or *ejidos* with forest certification are some of the largest in the State of Quintana Roo in terms of their natural forest endowment. An *ejido* is both an area of land under a collective tenure system, defined and given over to specific land uses (agriculture, permanent forest and settlement), and a legally constituted community which owns it.

An *ejido's* membership comprises heads of specific household known as *ejidatarios*. Each head of household, usually male, has a stake in the common property resource and a vote in the assembly, which has absolute management control over the resource. Much of this control is usually exercised by a small number of core posts (*comisariado*, secretary, treasurer and vigilance committee) which tend to rotate annually. Due to this rapid rotation of key posts there is a very short institutional memory which has tended to lead to a heavy reliance on advisory staff in the Societies which provide technical support. Other members of the communities are non-*ejidatarios*. All their usufructuary rights and access to resources are determined by the assembly of *ejidatarios*, and different rules apply between *ejidos*.

There are over 50 other communities with forest cover within the State, although there is a great range in the extent and quality of the resource. In the 1980s the majority became members of Forestry Producer Organisations called Civil Societies, formed to offer technical, organisational and political support to the management of their forest resources, which had until then been managed by private concessions or parastatal companies. All four of the *ejidos* covered by this study were members of the same Civil Society, the Sociedad de Productores Forestales Ejidales de Quintana Roo (SPFEQR), at the time of the original certification, but one *ejido* has recently detached itself and become independent.

## Forest Certification

Forest certification is a scheme under which a defined area of an audited forest management regime is recognised as being well managed and working towards sustainability within the current state of knowledge. This is carried out through third party independent process. In this case the certification was carried out in 1995 under the Forest Stewardship Council (FSC) system<sup>1</sup>. This comprises a forest certification scheme based on the (10) FSC principles. These were adapted by Smartwood, an accredited certification body which carried out the field assessment in conjunction with their Mexican partners, the Consejo Civil Mexicano para la Silvicultura Sostenible (CCMSS).

The basic principles of the FSC were designed by international agreement using a tripartite system and comprise chapters concerned with social, ecological and economic aspects of good forest management. The principles were originally designed to be generic and applicable to all forest types although it was always intended that these global principles would be adapted to local conditions<sup>2</sup>. From these Principles the certification body has drawn up its own set of guidelines to help the assessors in the field. At the time of the assessment in Quintana Roo the field team were using a generic set of guidelines.

The end result of this process is the award of a certificate which allows the sale of forest products from the given management unit bearing the FSC/Smartwood/ Rainforest alliance logo; indicating well-managed status. This certificate has a duration of 5 years, during which there will be a number of planned and random inspections. This is accompanied by a summary document which outlines the main findings of the report.

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<sup>1</sup> Most of the actors interviewed gave different dates for when certification took place. There was a certification visit in 1991 by Smartwood and the Green Cross Programme before international standards had begun to be discussed, but the main certification assessment was that of 1994, written up in 1995, and with certificates officially presented in 1996. Several *ejidatarios* thought that they were yet to be given a reference number which would facilitate certified timber sales

<sup>2</sup> Mexico as many other counties and regions, is currently in the process of adapting its own national set of FSC Principles to local conditions.

It is important to note that the certification process carried out in Quintana Roo was the first to be arranged in Latin America, it was therefore part of a learning process for all those involved. According to members of the assessment team great weight was given to the social cohesion of the communities managing the forest resource. Because of this the team allowed a fairly loose interpretation of the environmental and silvicultural management of the forest. This was done partly in the expectation that by implementing the certification scheme the forest managers would be given an incentive and a structure through which to improve those aspects which were weak. The standards required in this specific certification are recognised as being atypical in regard to some of the technical norms asked for by FSC.<sup>3</sup>

The methodology used by the team in carrying out the assessment consisted of a fairly rigid framework of scoring as detailed in the Smartwood Guidelines for Assessing Natural Forest Management. The scheme is defined by a forest area not by the trade relations involved. Hence certification covers the forest management system in a given geographic area of forest; the owners of the certification are the forest managers.

### Terminology

In summary, *the scheme* refers to FSC certification. *The case study* site is the four *ejidos*, and the *members of* or *participants in* the scheme are the *ejidatarios*. *Non-participants* include both the other non-*ejidatario* residents of the four *ejidos*, and the population of other forestry timber-producing *ejidos* that are not certified.

It is important to note that during the study it became apparent that in this case study the majority of *ejidatarios* (i.e. the resource owners) were not aware of the fact that they are members of the scheme. Though there was wider recognition that they were part of the Green Cross scheme which had been in place prior or the FSC certification.

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<sup>3</sup>E.g. There is some questioning of the appropriateness of the current minimum diameter of 55 cm diameter at breast height for the extraction of Mahogany, and some strong discussion about realistic growth increments, but it was felt this may be an issue which could be addressed later.

*Table 1. The Certified Forests of Quintana Roo*

Name of Ejido	Total Area (ha)	Total Size of Permanent Forest Area (ha)	Number of Ejidatarios (head of household with land rights)	Sales of Certified timber?
Caoba	68,553	32,500	311	Yes
Petcacab	46,000	30,000	206	No
Noh Bec	23,100	18,000	219	Yes
Tres Garantias	44,520	20,000	100	Yes
<i>Total</i>	<i>182,173</i>	<i>100,500</i>	<i>836</i>	

Source: Interviews by the authors and Acopa and Mauricio (1996).

## THE MEXICAN FORESTRY SECTOR

Approximately 80% of the forested land in Mexico belongs to *ejidos* or indigenous communities. Roughly 15% is private property, and only 5% national land (mainly protected areas) (Merino and Madrid, 1987). The Mexican forest sector is not a major contributor to the national economy in terms of GDP nor in its command of government subsidies, although it does receive some assistance at federal level. Recent subsidies have tended to favour large-scale producers, temperate forestry, plantations and pulp production.

Forests have been profoundly effected by subsidies in other sectors, namely agriculture. While subsidies for forestry have been minimal, subsidies for agriculture, particularly maize production and cattle farming have remained in place. A recent (1992) change in the agrarian law now permits the commercial sale of *ejidos* land. This has put pressure on forest land to be converted to agricultural use.

Production forests within Mexico are dominated by conifers which contribute 88% of timber volume production, mainly pine. Only four percent of production is of tropical species, mainly Mahogany (*Swietenia macrophylla*) and Spanish Cedar (*Cedrela odorata*) (Merino and Madrid 1997). Temperate forestry is therefore dominant and tends to be the model used for most government policy design.

National and international factors have played a significant role in the timber markets in Mexico. Entry into General Agreement on Tariffs and Trade (GATT) in 1986 and the implementation of North American Free Trade Agreement (NAFTA) resulted in an influx imports of Mahogany substitutes from South America and S.E. Asia, and cheap pine from Chile, Canada and the USA. This had a major impact on the secondary processing industry with many industries



closing in the mid 1980's. The depreciation of the Peso in 1994 helped to reverse this trend and opened up both domestic and export markets with the total value of timber exports increasing by 30% between 1995 and 1996 (Armijo and Albrecht, 1998). In general in Quintana Roo demand outstrips supply for both Mahogany and Spanish Cedar. Many of the secondary species being promoted through the scheme are not affected by trends in the traditional markets as they tend to have very specific end uses in very particular markets, such as for decorative work on guitars. But these external factors have had an effect on the national disposition of policy makers towards the forest sector. Although there is a feeling that this policy framework is adequate for the good management of the forest resource there is common agreement that the capacity for monitoring and enforcement is very weak by government agents. This combined with the fact that systems are designed on the premise that they are primarily to be applied in the relatively straight forward ecosystems of temperate pine forests, has left the relatively small areas of tropical dry forest in southern Mexico vulnerable to mismanagement.

The history of forest exploitation and management throughout Quintana Roo, up until 1983 was one of timber mining, first by foreign concessionaires and then by national parastatal companies. Though the local population had a nominal stake in the forest land through ownership of the title, they received very little benefit, mainly through a nominal stumpage fee paid by the concession companies. In the early 1980's an ambitious scheme to hand over the forest management to the local communities or *ejidos* was set up jointly by the State government with Federal and international funding from the German funding agency, GTZ. This was known as the Plan Piloto Forestal (PPF). Through the Mexico-Germany Agreement (AMA), GTZ was responsible for co-ordinating the programme, offering technical advice, financing and monitoring.

The PPF has gained an international reputation as one of the most successful examples of forest conservation through sustainable use in the tropics. It worked on the assumption that if forests were recognised as having a long-term economic value to the *ejidatario* owners, then it would be in the owners' interests to conserve them and reverse the trend of forest clearance and degradation. Since its inception there have been significant advances for both conservation and economic development in the *ejidos*. The PPF significantly redistributed forest assets by helping the local *ejidos* harvest timber and manage their own forests. In the years since the Societies were created, deforestation has slowed and significant economic benefits have been distributed to *ejidatarios*. *Ejidatarios* now carry out most timber management, extraction, processing responsibilities and some have become forestry technicians. Several *ejidos* run sawmill operations. (Zabin and Taylor, 1997)

This has been a structure and a management system based on the assumption that all *ejidos* have an economically viable area of forest to support these services. It is questioned whether resource-poor *ejidos*, (i.e. without considerable timber resources) are best served by the forest management and organisational structure established under the PPF and extended to many more

*ejidos* during the Plan Estatal Forestal (State forestry plan) which followed it. The certification process has re-enforced the concentration of management efforts towards the resource rich communities as its focus is very much on the protection and management of production forest.

## **EXTERNAL FACTORS THAT MIGHT INFLUENCE THE SCHEME**

In many respects it is difficult to disaggregate the external factors which have been involved as instruments to effect the implementation of certification from those which have been part of a wider programme of improving forest management. Forest certification has been a product of whole series of initiatives, many of which have gained more and more of a vested interest in the process. Some of these are referred to in the section on organisational factors.

Most noticeably the scheme is vulnerable to shifts in the support it receives internationally. A decline in public confidence in the certification system or in the credibility of the FSC, might quickly lead to a reduction in funding from international foundations and trusts who are currently promoting and funding many of the certification efforts in Mexico and Quintana Roo.

## **LOCAL FACTORS THAT RELATE TO THE SCHEME**

### **Government**

The State government and Governor of the early 1980's were actively supportive of the process of community forestry management. Subsequent governors have been less proactive. For a time the Federal government with responsibility for forestry provided foresters for the producer Societies. Now these organisations have complete responsibility for their own technical services and must compete for whatever funding is available from international foundations, bilateral aid and government programmes. To this extent they are influenced by the conditionality of much of this aid which is able to request that people show sustainable management (e.g. certification) or wide benefit distribution.

SEDESOL, the Secretariat for Social Development, a federal agency, has recently had the funds to be able to support forestry in a way that the natural resources secretariat (SEMARNAP) has not. They have used their Rural Employment programme to pay members of the *ejidos* to carry out work necessary to achieve certification. They have used their FONAES fund (for small business support) to make loans available to *ejidos* to purchase milling equipment.

### **Local Markets**

Within the State of Quintana Roo there are limited market options for quality timber, there was a ply mill which bought raw logs at the time of certification but that has since closed. There is also a flooring manufacturer, PIQRO, which has

taken the largest volume of lesser known species, particularly Tsalam, Machiche and Chechen (*Lisiloma bahamensis*, *Lonchocarpus castilloi* and *Metopium brownei*). PIQRO helped finance the certification process and has its own 'Chain of Custody' certification from Smartwood, which demonstrates that in their warehousing and use of timber they do not mix certified and non-certified timber. Currently it sells very little if any material as specifically certified and there has been some doubt if it will pass its next assessment. Apart from these, buyers are on the whole small scale, often from other States mainly making doors and small scale furniture, none of which is sold as certified. These buyers do not have the same quality expectations of the milling and conversion of lumber as the international market and will buy the timber undried. They are currently the most important buyers and may lose out if certification encourages large increases in exports as they will face increasing competition for the timber which is being produced.

### International Assistance

In the wider context there is support to the State forest sector in the form of bilateral aid coming through DFID to SEMARNAP and SIMAP. This is technical rather than institutional at present. This has had an effect on specific elements of forest management such as roading, which is outside the framework of certification. This might set a new standard for road construction which field assessors might expect throughout the region during future site inspections.

At the outset certification was felt to be of political importance to the prestige of the State. Being the first of its type in Latin America the international profile was important to a relatively poor and marginalised part of Mexico. The growth of tourism in the area and change in administration has resulted in a more ambivalent attitude, but there is still some kudos attached.

## **POLITICAL CONTEXT OF THE AREA AS IT MIGHT AFFECT THE SCHEME**

Forest certification is a voluntary scheme and cannot rely on any legislative or regulatory framework to enforce membership. It is important therefore to look at some of the wider influences which have a bearing on the process.

The population of the State has increased eight-fold in the last 30 years (Acopa and Mauricio 1996). This has been a government-sponsored process, partly linked to the promotion of tourism and partly due to colonisation programmes. Most of the new inhabitants have been absorbed into urban coastal areas in the north of the State, with little direct impact on the forest resource. But there has also been population growth in the forest *ejidos*.<sup>4</sup> Under such rapid growth there is bound to be an increase in pressure on the natural resource base for a whole range of goods and services. Where there is no long-term strategic plan

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<sup>4</sup> Between 1990 and 1995 one of the *ejidos* increased from 578 to 846 inhabitants according to census data.

for the resources, tensions may lead to misuse in pursuit of short-term expedient solutions.

When GTZ became involved in the PPF it designed the project around the political and social structures needed to support community based forest management. In doing so it created the prerequisites for a system of forest management which has developed a very strong political identity of its own. It is a structure that seems to be in continual crisis or evolution

Today, the PPF heritage comprises over 40 *ejidos* organised into six societies, covering some 50% of the state's commercial forests (ODA 1993). The Sociedad de Productores Forestales Ejidales de Quintana Roo (SPFEQR) was created in 1983. The four certified *ejidos* were members at the time of certification. One year later the Organización de Ejidos Productores Forestales de la Zona Maya (OEPFZM) was created. In 1990 and 1991, as part of the state government's Plan Estatal Forestal (PEF), the Sociedad de Pueblos Indígenas Forestales de Quintana Roo 'Tumben Cuxtal' and the Organización de Ejidos Forestales de Quintana Roo 'Chactemal' were established. There is also a charcoal society (Organización de Productores de Carbón de la Zona Norte de Quintana Roo), and the sixth is the Unión de Ejidos José María Morelos (Zabin and Taylor 1997). All of these are legally designated 'Civil Societies' under Mexican law. The internal management of these various Societies is currently somewhat unstable. Among other problems elected representatives are frequently rotated so that the institutional memory is very weak. All Civil Societies are struggling to finance their technical forestry services

The larger of these Civil Societies have sufficient size to hold some political influence within Quintana Roo. There has been criticism of leaders using the Societies as a political springboard to further their own financial ambitions. As far as this is likely to affect the schemes it is important to recognise that certification has brought both prestige and international recognition to the forestry sector in the State. This could be regarded in some ways as political capital, both within the society of SPFEQR and at a wider political level. It may be that political and financial investment are worthwhile to protect that capital.

The Civil Societies are no longer the only means of obtaining technical advice on forest management, promotion, marketing or certification. There are a number of private technical forestry service providers in the State, and *ejidos* are not bound to the Societies. This increase in competition is having some destabilising effects on the structure of management within the Societies as they are feeling threatened by these new groups which they feel might cherry pick the most lucrative services and offer services to the richest *ejidos*. This competition is reflected throughout Mexico where there are 23 *ejidos* with or in the process of gaining forest certification, and another 26 applying (pers. com. Madrid 1998). This is a process which has taken on its own momentum, with two community forestry unions (UNOFOC and Red MOCAF) promoting the process and investing a great deal of their own credibility in the ideas and status

of forest certification. While it is still early days it is possible to see a situation where a critical mass of certified forests creates a situation where it will be unusual for an *ejido* managed forest to remain outside the certification process.

## **ENVIRONMENTAL CONTEXT INCLUDING SEASONALITY/ CLIMATE**

The Yucatan peninsular has been inhabited for 2000 years and managed under systems of shifting agriculture. It is a hurricane prone area and natural fires throughout the disturbed forest are common. In an area which undergoes such a frequency of exogenous shocks, the 'natural' state of an undisturbed forest is hard to determine and relatively meaningless. The PPF *ejidos* lie between two biosphere reserves (Calakmul and Sian Ka'an) and are considered important by some as an important forest corridor within wider State and regional conservation strategies.

The forest type is tropical dry/tropical semi-evergreen, with an annual rainfall of 1,200-1,300 mm. Its geomorphology is influenced by a limestone plateau that allows almost no surface drainage. The soils and geology favours forestry in the long term though there is a marked difference in alternative land use potential throughout the region. The south-east corner of Mexico is the only example of this type of forest in country. For many species this region represents the northern limit of growing conditions; global climate change might therefore extend or contract the reach of such zones, and affect the present ecological structure of the forest substantially.

The silvicultural practices needed for integral tropical forest management are subject to much debate; there is no definitive prescription for multiple-species silviculture in tropical forests. Management goals here in Quintana Roo are uncertain, and it is unclear whether the objective is to maximise mahogany production, to maximise production of several timber species or to maintain current biodiversity. The forests continue to play an important role in the subsistence of the surrounding communities, their management must also therefore take account of the future needs in terms of non-timber forest products (NTFPs), fuelwood and construction material.

## **SOCIAL DIFFERENTIATION OF ACTORS**

The rural population of the four *ejidos* is characterised by three main divisions:

Ethnicity The size of the population of Maya descent varies greatly between communities. In some regions there are *ejidos* where the population is still almost 100% indigenous, and Maya is the working language (e.g. Petcacab). In others the population is mainly from other States and but with large Mayan groups (e.g. Tres Garantias), and in others again there is almost

total dominance of settlers (e.g. Noh Bec which has a strong population from Veracruz)

Land rights *Ejidatarios* are heads of household with shared communal land rights and forest usufruct rights. There are also village residents called *repobladores* who have no forest usufruct rights, but may be given a small share of land at the discretion of the *ejido* assembly<sup>5</sup>. Some communities also distinguish *avecindados* who merely rent a piece of the urban land to build a house on, and do not have access to agricultural land. They are considered very transitory. Fourthly, there is a common distinction made between *repobladores* who have come from outside the community and 'sons' of *ejidatarios*, who command a higher position in society, and at whom employment creation efforts are generally aimed.

Gender There is a very strong gender division of labour and of access to land rights. In the four certified *ejidos* only five percent of *ejidatarios* are women; almost exclusively widows. *Ejidatarios* explained that these women attended the regular assemblies, but rarely spoke; "*because women are shy*". Women do not as a rule carry out farming or forestry activities which involve leaving the home, but generally consider themselves responsible for the backyard domestic fowl, the homegarden, household chores, food preparation and child-rearing.<sup>6</sup>

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<sup>5</sup> There is considerable inter-*ejido* variation for instance in Tres Garantias every *repoblador* is entitled to 25ha of 'communal use' land, whereas in Noh Bec (which shares its settlement with another community) *repobladores* would have to borrow or rent land from an *ejidatario*.

<sup>6</sup> Robinson's personal observation from participation in the fieldwork for a socio-economic consultancy (Armijo and Robertos, 1998)

# NATURAL CAPITAL

## NATURAL CAPITAL AVAILABLE IN THE AREA OF THE SCHEME

The natural capital available in the area of the scheme is the land itself, some occasional freshwater lakes and lagoons, and the extensive cover of tropical dry evergreen forest. Quintana Roo is one of the few Mexican tropical states which still has significant forest cover.<sup>7</sup> The land use suitability is designated as forest; soils are poor and in the main unsuitable for permanent agriculture<sup>8</sup>.

The forest resource comprises a variety of different products and services both utilised and potential. Commercial timber harvesting has always focused on two species - Mahogany (*Swietenia macrophylla*) and Cedro (*Cedrela odorata*). This was formerly extracted by foreign or parastatal companies and now by the communities themselves. Other commodities with commercial value include the lesser known tropical dense species (sold as rail sleepers<sup>9</sup>, or as exotics<sup>10</sup> internationally) and light woods (for plywood and panelling<sup>11</sup>, and tongue depressers<sup>12</sup>). These are considered very under utilised at present, and usually the harvest is less than 50% of the authorised volume (i.e. that considered sustainably extractable under the current management plans). Access to timber extraction is regulated by annual cutting licences issued by the government. Chicle (natural latex used in chewing gum) has been extracted on an individual basis in the region for nearly a century, and many of the current *ejidos* were established to provide land forested land for chicle extraction.

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<sup>7</sup> This is thought to be due to a number of factors including the low population density (1.8 / km<sup>2</sup> in 1970), the relative isolation and lack of infrastructure until the 1970s, and the "forest tradition" that existed (Acopa and Mauricio, 1996). This refers both to the Mayan populations who had practised shifting cultivation, and the early chiclero colonisers who required a large stock of living chicozapote trees (*Manilkara zapota*)

<sup>8</sup> Average maize yields are 1tonne/ha, citrus yields are one third the national average, and large-scale rice farming projects have failed (Acopa and Mauricio, 1998)

<sup>9</sup> Species used for sleepers include chechen (*Metopium brownei*), jabin (*Piscidia communis*), pucté (*Bucedea buceras*); chicozapote: (*Manilkara zapote*), chaktecok (*Sickingia salvadorensis*).

<sup>10</sup> Exotics or decorative timbers sold to the USA include Katalox, (*Swartzia cubensis*), Granadillo (*Platymiscium yucatanum*), and Siricote (*Cordia dodecandra*)

<sup>11</sup> These include: Amapola (*Psuedobombax ellipticum*) and Chaja rojo (*Bursera simaruba*)

<sup>12</sup> Tongue depressors and toothpicks are made from Sacchaka, (*Dendropanax arboreous*)

*Table 2: Utilised timber species in Quintana Roo*

<b>Local Name</b>	<b>Scientific Name</b>	<b>Density kg/m3</b>
Caoba	<i>Swietenia macrophylla</i>	420
Cedro	<i>Cedrela odorata</i>	430
Chacte kok	<i>Cosmocalyx spectabilis</i>	660
Katalox	<i>Swartzia cubensis</i>	830
Chicizapote	<i>Manilkara zapota</i>	900
Bari	<i>Calophyllum brasiliense</i>	520
Tzalam	<i>Lisiloma bahamensis</i>	770
Machiche	<i>Lonchocarpus castilloi</i>	740
Chechen	<i>Metopium brownei</i>	480
Sac Chaka	<i>Dendropanax arboreus</i>	430
Amapola	<i>Pseudobombax ellipticum</i>	440

Other NTFPs such as honey, bushmeat, palm for thatch and more recently ecotourism and commercial hunting all play varying roles in the subsistence and commercial economy. These are activities open to all members of the communities.

The subsistence use of the forest or wooded areas remains unquantified, and varies greatly within the region. It is highly significant in terms of domestic construction material (sawn wood, poles, thatch) firewood (which is used in 90% of homes) and subsistence bushmeat hunting (Armijo and Robertos, 1998).

There is a growing regional awareness of the service functions of the forested land. The possibility of a tax on urban areas or tourist developments in payment for forest protection by the communities was mentioned by the SEMARNAP forestry sub-delegate this year (Armijo and Albrecht 1998). At a national level, carbon sequestration has recently become topical, but this has yet to be seriously discussed in the region.

## **NATURAL CAPITAL AVAILABLE TO DIFFERENT CATEGORIES OF PEOPLE.**

The four certified *ejidos* all have geographically defined 'Permanent Forest Areas' which range from to 18,00ha - 32,000ha (Table 1) and which are then subdivided into management units for forestry production. These forests are the primary timber production areas, but are also a source of bushmeat, palms for thatch, chicle resin, charcoal, construction poles and stone.



The PFAs belong to the *ejido* and only *ejidatarios* are entitled to a share of the profits from commercial exploitation of timber from the forest. However, all members of the village may seek permission to cut timber for their own domestic construction purposes. This would usually be granted. Additionally many use the sawmill wastes in their house construction. In all cases the designated permanent forest area is not the only wooded area, and non-timber products are collected throughout the PFAs and other wooded areas. Access to resources for pole cutting, firewood and palm collection varies between *ejidos*, but is generally unregulated. In all four of the certified *ejidos* there are attempts to manage subsistence bushmeat hunting by declaring Fauna Reserves where access for everyone is restricted.

Community members with or without rights may be *chicleros*. This is a seasonal activity, totally dependent on the forest, but which has not yet been directly influenced by certification.<sup>13</sup>

There is as yet no evidence that management of the Permanent Forest Areas for timber has had any negative impact on access to subsistence requirements such as fuelwood, palms for roofing or poles for construction. There is no perceived shortage and most of these products are still obtained from the regenerating agricultural lands, or forest scrub outside the permanent zone. Nevertheless, should the *ejidos* chose to opt for an internal division of their agricultural lands (as is now permitted by the law) there could be serious conflicts regarding access to certain products. This would particularly affect the non-*ejidatarios*.

## **NATURAL CAPITAL REQUIRED TO PARTICIPATE IN THE SCHEME**

The basic requirement for certification is a forest area under management for goods and services. This could have single or multiple ownership. The scheme emphasises good sustainable environmental and economic management, and fair conditions for workers; it does not differentiate between collective and private ownership.

In the case of Quintana Roo the *ejidatarios* are the only 'members' of the scheme because they jointly hold the titles to the forested land. However certification is rarely seen as a 'scheme' here; more as an award or certificate of recognition. In many cases the 'members' are unaware of their own participation. Management control is carried out by the contracted foresters and a few knowledgeable *ejidatarios*. There seems to be minimal communication of the aims, objectives or rationale of certification to many of the members.

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<sup>13</sup> The board of FSC has recently approved the labelling of NTFPs as certified, on a trial basis, and there is great interest in this among the chicle co-operatives in Quintana Roo.

## ECONOMIC CAPITAL

### ECONOMIC ACTIVITIES IN THE AREA OF THE SCHEME AVAILABLE TO DIFFERENT CATEGORIES OF PEOPLE

In the space of just 20 years tourism has become the most important economic activity in the State, and the service sector (basically tourism and finance) expanded from contributing 50% of the State's GDP in 1970, to 90% in 1993. The contribution of primary production fell during this time and in 1993 forestry was contributing just 0.27% (Acopa and Mauricio, 1996). Most of the tourism boom has occurred in the north of the State, and has provided few job opportunities for the communities in the direct study area. However, the growth in demand for grass or palm for thatch, and poles for construction has generated additional cash-earning opportunities. There is the possibility of eco-tourism and also for hunting groups to use the forest, but this is as yet unfulfilled. Tres Garantias has a camp for tours and has had some hunting parties but on a very small scale. Similarly Caoba has begun to receive payments from US based hunting organisations and is considering selling exclusive hunting rights to a single organisation. Ejido-managed tourism enterprises are still in their infancy in the State, and it is unlikely the local community will fully exploit these opportunities in the near future. However, the spin-offs in employment as guides, cooks, drivers etc, and in expenditure by visitors in the stores and eating houses may be significant. As yet the *ejidatarios* have little experience in what is required to promote and sustain a tourist facility as a business, but can offer the facilities and attractions required to be included in a tourist route in the region.

Among the southern rural *ejidos*, even among the four with certification, there are a number of income sources. Agriculture dominates, this is both subsistence (maize and beans) and commercial agriculture (chillies, sugarcane, achiote). Pig and domestic fowl rearing are also important as are other extractive activities such as chicle resin, charcoal production, thatch cutting and honey. Daily wage labour is an important component of household income, and is mainly earned by working on agricultural land for others (Armijo and Robertos, 1998). In two of the four certified *ejidos* (Noh Bec and Petcacab) timber extraction is thought to represent the main economic activity.

Between *ejidatarios* there is an equitable entitlement to agricultural or 'common use' lands outside of the permanent forest area. This may be as much as 200 ha per *ejidatario* (Tres Garantias). Commonly only 5 - 10 ha are used in any one year. Non-*ejidatarios* are more limited in their use of the land and forest so are more dependent on wages (Armijo and Robertos, 1998). They work in commercial fields or ranches. In some cases they have been attracted by the surplus of agricultural work created by higher wages for *ejidatarios* in the forestry sector (e.g. Noh Bec), but mainly they are sons of *ejidatarios* seeking to make a living in the community.

## ECONOMIC ACTIVITIES OF THE DIFFERENT CATEGORIES OF PEOPLE PARTICIPATING IN THE SCHEME

A recent study of economic activities in the forestry *ejidos* showed that a hierarchy of access to forestry employment exists: *ejidatarios* are prioritised, followed by their children and immediate family (Armijo and Robertos, 1998). Only when labour is very scarce, or the job particularly hard, is employment available for settlers. Jobs in the forestry sector, and particularly in the sawmills, command better salaries than in the local agriculture. For example in Noh Bec sawmill workers earn a minimum of N\$35 / day (with more skilled jobs likely to be higher), and can therefore pay others to cultivate their fields at N\$27/day, and make a comfortable profit (pers com. David del Angel, 1998).

While forestry appears insignificant as an income generator at State level, it is important to local *ejido* economies. There are three main ways in which benefits can be measured; direct profit sharing from timber sales, employment opportunities, and a range of unquantified products and services.

a) Profit Sharing is in the form of two or three annual pay-outs that are exclusively for *ejidatarios*, though in some *ejidos* schools and the health centre have an entitlement to a share of the profits. In one *ejido* (Petcacab) this is currently around Pesos 12-18,000 per year. This is therefore three times what a wage labourer could earn if he successfully found work for six days a week, 50 weeks per year (pers. com. Leonardo Rivas Cahuich - *Comisariado*, 1998).

Three of the four certified *ejidos* now operate their forestry extraction via 'workgroups', rather than via the centralised *ejido* authorities. This gives individual groups more control over their costs and therefore their profits<sup>14</sup>. It has also led to more transparency and less corruption, something which certification had not been able to achieve.

b) Employment opportunities are created in forest based work (inventories, tree spotting, felling, extracting, reforestation), primary processing (sawing, drying), secondary processing (carpentry and the making of children's toys) and administration. In all cases priority is given to *ejidatarios* and their immediate families. There are generally few opportunities for women, and the success of the forestry enterprises has so far done little to increase these opportunities save for a handful of administrative jobs and some wood-based handicraft groups. Settlers are secondary beneficiaries through jobs created in the agricultural sector by displacement and the forestry work when labour demand peaks. There is no evidence to show that *ejidatarios* choose to cultivate more land as a result of having more capital to invest in wage labour, but this is common in similar situations elsewhere.

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<sup>14</sup> E.g. The profit share per *ejidatario* in Petcacab is said to have risen by 600%.

c) Goods and services from the forest are generally available to most residents. All the certified *ejidos* allow access to palm, construction poles and timber; either from outside the PFA or with special permission from the *ejido* assembly. Where the resource is threatened this may involve prohibitively high taxes to deter extraction.

The financial needs of the *ejido* are determined at the start of the year and the assembly agrees to contribute a percentage to a common social fund (for roads, lighting and laying on piped water). Priority is likely to be given to the centre of the village for these amenities where the voting members of the *ejido* live. New inhabitants tend to live on the outskirts but as they do not have a voice in the assembly their needs are often seen as secondary. Once these costs have been covered, any extra forestry income is shared between group members. This means that extra revenue derived through increased sales of lesser-known species are not going to have direct social benefits to the community as a whole.

Forest management, and therefore certification, works within the existing ejidal social structure. This benefits men with land rights. Some doubt that these trickle down to women/families (Armijo and Robertos, 1998). *Ejidatarios* have access to a far greater diversity of economic opportunities than any other social group.

## **FINANCIAL CAPITAL REQUIRED TO PARTICIPATE IN THE SCHEME**

The certification process is costly. When the certification was first carried out finance was raised outside the communities. The cost of carrying out a certification of the four *ejidos* as a group today is estimated at US \$ 13,000 (pers. com. Madrid 1998)<sup>15</sup>. As will be discussed later there are many national and international organisations supporting and subsidising certification in Mexico. Therefore, while it is not necessary for the *ejidos* to find all the costs themselves, politically they must be able to access these funds.

Other costs associated with gaining certification are harder to quantify as they tend to add marginally to activities already being carried out. The core requisite of forest certification is a demonstrable management plan; this means in practice a documented system which can be audited. The technical know-how to satisfactorily draw up the management plan is generally likely to need inputs from an external consultancy, which, if not subsidised, add greatly to the cost.

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<sup>15</sup> There are also at least 3 inspections to be carried out during the 5 years that the certification lasts, these cost around US \$ 3,000 each. When asked *ejidatarios* thought the process might cost between US \$ 150-500. Those who thought the costs were highest were the most willing to pay.

Greater evidence of good management practice is required for certification than for normal government permits. Data collection, data presentation, demonstration of a thorough management plan and monitoring of environmental impacts are all elements which are likely to be necessary over and above the standard requirements.

Additionally it may be necessary to make capital outlays in order to obtain or retain certification (e.g. lighter forest machinery, infrastructure investment, health and safety). In this case the assessment team made recommendations in two specific areas; increased silvicultural treatments in the year prior to harvest and greater use of directional felling. Both of these needed marginal extra investments, the cost of which has required funding by outside agents.

While access to good communication systems (phone, fax and email) is not an official requirement, contact with certifiers is severely hindered if these are not in place. In this scheme, poor communications contributed to delays of more than a year in finalising the process. It should also be noted that communication technology, access to vehicles and arrangements for the practical aspects of a certification visit are generally more problematic for under-resourced 'community' forests than large private operations.

## **HUMAN CAPITAL**

### **HEALTH CARE AND FORMAL EDUCATION OPPORTUNITIES IN THE AREA OF THE SCHEME.**

All four certified *ejidos* have a public health clinic attended regularly by a nurse or doctor, but only one has a pharmacy. The cost of medicine is the most expensive part of health care, and travel costs to purchase it significantly increase the total bill.

All four *ejidos* have the three basic schools (kinder, primary and secondary), and one (Noh Bec) is constructing a college. There is no explicit differential access to the formal education system for different social groups. Nevertheless the cost of sending a child to school (clothing, fees, material) and the opportunity cost (girls helping out at home, boys working in agriculture or extraction) means that poorer families are more likely to withdraw their children earlier.

### **INFORMAL EDUCATION OPPORTUNITIES IN THE AREA OF THE SCHEME.**

Informal education in the communities is more difficult to gauge. However the introduction of community managed forestry has undoubtedly created additional

technical training opportunities, in the timber trade (volume calculation, basic timber grading, saw-milling), forest management (inventory work, extraction, tree nursery and planting), marketing and administration. Additionally indirect non-technical training is available in terms of management and leadership capacity, political and commercial negotiation skills. Much of this training was offered as part of the PPF, pre-dating the certification process and can be seen as enabling the process.

## **HUMAN CAPITAL REQUIREMENTS FOR PARTICIPATING IN THE SCHEME**

A certification assessment team is looking for two elements to the management process. Firstly that the structure of management adheres to recognisable good practice and secondly that the theoretical structure is being followed in practice.

There is a basic level of administrative and management capacity necessary to document the various steps of the management plan to a level of transparency that allows the process to be audited. Although there is no need for the management plan to be a complex document there is often a cultural gap between those who design the system and those who actually implement it. The assessment team need to ensure that they can back up any of their recommendations with written evidence, but the rationale behind having written proof of activities being carried out, may not be clear to the scheme members, especially when there is a poor understanding of the scheme's purpose. Essentially the level of skills necessary to function in the scheme differs dramatically from that needed to actively participate in acceptable levels of management.

Monitoring the forest within such a complex ecosystem is a highly skilled task. It is arguable whether even in research stations there is an adequate understanding of the requirements for a comprehensive monitoring programme. Research capacity among foresters working in *ejido* forestry Societies is not particularly high and it is difficult to justify expenditure on research projects. The setting up of permanent sample plots, measuring mean annual growth rates and fauna surveys are carried out by *ejidatarios* by rote, with very little understanding of why. The ability of *ejido* members to interpret or analyse the data being collected is minimal, but it is increasing; certainly over the last 15 years the overall understanding of technical forest management for timber extraction has increased greatly among those who use it. Additionally, the current system is helpful; in that Society staff can have an overview of what is happening in a number of different forests and are able to draw data together from different places.

Before annual cutting licences can be issued it is necessary for technical staff with a degree in forestry to check and sign the inventory. Many children of *ejidatarios* have begun to study forestry, and several have now qualified as

forestry technicians. However, none of these have yet gained the qualifications and experience necessary to act as senior foresters (technical directors) within an *ejido* or society.

## INSTITUTIONS AND ORGANISATIONS

### ORGANISATIONS THAT ARE DIRECTLY INVOLVED IN IMPLEMENTING THE SCHEME

The **Forest Stewardship Council (FSC)** developed the standards of forest certification used in this scheme, and **Smartwood**, a programme of the **Rainforest Alliance** (a US based international non-profit environmental group) adapted them to create their own certification guidelines. The Mexican NGO, **CCMSS** (the Mexican Civil Council for Sustainable Silviculture), in partnership with Smartwood carried out the assessment.

An early visit by the **SCS** (Green Cross programme) with Smartwood in 1991 recognised the forest management efforts of the *ejidos*, but as no scheme or internationally recognised certification procedure existed, this was later classed as a pre-certification visit for the more regulated assessment of 1994.

In general the scheme can be said to have been 'introduced' to the producers themselves via the technical staff of the **Mexico-Germany Agreement (AMA)** (in Spanish) and foresters of the Technical Department of the Society (**SPFEQR**). The **producers** were basically passive actors in the process, and the AMA staff took responsibility for communicating with the certifiers, arranging the visit and escorting them to the *ejidos*<sup>16</sup>. The *ejidos* themselves and the Civil Society authorities now have greater responsibility for the certification process, and have direct contacts with the Mexican certifiers. Nevertheless most of the conditions and recommendations of certification relate to technical forest management and therefore the foresters of the Technical Department of the Society play a crucial role in promoting and implementing certification and in ensuring that conditions are met for the annual re-accreditation. They have an important institutional memory,

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<sup>16</sup> This strong involvement has subsequently been criticised; the Society technicians say that had they been consulted earlier they would have been able to give advice on which *ejidos* were suitable for membership of the scheme, and time and energy would have been saved. Those responsible for the certification (CCMSS and Smartwood) have also commented that by dealing with an intermediary (the AMA office) there was an unnecessarily long delay between the assessment visit and the contract signing, since the documents were not passed to the Society.

## **OTHER ORGANISATIONS THAT HAVE CONTRIBUTED TO THE SCHEME INCLUDING DONORS, NGOS, BUYERS ETC**

Certification in Quintana Roo has until recently been almost totally externally driven, and a large number of additional organisations, and indeed individuals, have been involved; through promoting, funding and buying. An attempt to represent this is given in Table 2.

In the early 1990s, even without certification, some buyers had begun to investigate 'ethical trade' because the *ejidos* were recognised as having good forest management. Much of the early trade was done on a very personal basis. One AMA employee at the time commented that the *ejidos* had so many international visitors that they "*didn't feel the incentive to make good management; everyone was telling them that they already were*". Members of the AMA got to hear about certification through the **USA Woodworkers Alliance for Rainforest Protection (WARP)** who were involved in carpentry training courses for *campesinos* with **AMACUP**.

Subsequently when those responsible for implementing and promoting certification became active in Quintana Roo (see above), the process took on its own dynamic .

Organisations which supported the original certification through direct funding included CCMSS who charged no fees to the *ejidos* for first assessment, **Rainforest Alliance/Smartwood** who similarly funded the visit of their assessors without charging the *ejidos*, and the **AMA/GTZ** which covered all the initial communication costs and transport in the area.

Certification fees have subsequently been partly covered by **PIQRO** (a local wood flooring supplier/ timber buyer) who paid part of the re-evaluation costs in 1996, and by the **MacArthur Foundation** via grants to **CCMSS** and **UNOFOC**, and which also fund forestry societies forest management improvements.

Organisations who have financed improvements in silviculture, minimising forestry environmental impact and reforestation can all be said to be supporting the certification process, and were all fully aware of their contribution to the *ejidos* meeting the criteria for certification in the next annual assessment. These include the bilateral agreement between **DFID** and **SEMARNAP/SIMAP**, who are assisting with the construction of narrower, more durable forestry roads and in the demonstration of tractors for lower-impact timber harvesting. Also **SEDESOL** which has supported nurseries, fieldwork for inventory and management plans; and the **GTZ/AMA** (with **SEMARNAP**) which has funded technical forestry support for inventories, PSPs, wildlife management and silvicultural research.

The two strongest *campesino* forestry producer organisations **UNOFOC**, and Red MOCAF (part of **UNORCA**) both support certification. The four certified



*ejidos* were all members of UNOFOC, which was a founding member of the FSC and has been active in promoting and financing the scheme. They currently have international funding for directly covering the cost of the certification process, provided by the MacArthur Foundation and NAFEC<sup>17</sup>.

It was noticeable that some international funders such as the MacArthur Foundation, as well as directly supporting certification by giving grants to promoters, indirectly encourage grass-roots organisations to work toward forest certification through their grant application procedure. Their Latin American coordinator explained that “*Although we do not formally require organizations to get their forest areas certified prior to applying to the Foundation, it is certainly a factor in our decision-making process*”. (A Shannon pers. comm. 1998). Other smaller international NGOs such as Tropical Forest Management Trust (USA) and the International Ecological Institute (Canada) also prioritise support to *ejidos* who are certified or are working towards it.

It is important to note that the role of the international buyers has been particularly influential in initiating ‘ecological’ sales, and thus providing a visible financial incentive for certification. The first international buyers to purchase timber directly from the *ejidos* in Quintana Roo were said to be “*ethically and environmentally motivated hippies*” and have made an extraordinary effort to obtain certified timber. They continue to take very high risks to overcome problems related to punctuality, quality and meeting order specifications. Such buyers have strong personal ethical criteria and a desire to support the community development and environmental sustainability objectives of ejidal forestry for which they take higher risks than most purely commercial buyers would accept. Their attitudes, along with the intermediary support offered by the German-Mexican Agreement, who for many years acted as bilingual negotiators, have allowed the *ejidos* and societies to undergo a prolonged period of apprenticeship in international trade relations, during which time considerable restructuring of their timber commercialisation has taken place.

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<sup>17</sup> The NAFTA Commission for Environmental Cooperation has a programme called the North American Fund for Environmental Cooperation (NAFEC) which has also provided funds for forest certification both to CCMSS and UNOFOC.

Table 3 Some of the Main Organisations and Institutions Involved in Supporting Certification in Southern Quintana Roo.

Organisation	Type	Has financed or subsidised a certification assessment	Has/Is funding certifiers or promoters	Certifiers	Promotion	Buyer	Financial Support to sustainable forest management
<b>Rainforest Alliance</b>	International Environmental Group, to which Smartwood belongs	✓	✓		✓		
<b>Smartwood</b>	Certifiers			✓			
<b>CCMSS</b>	Mexican NGO Certifier	✓		✓ (with Smartwood)	✓		
<b>AMA (GTZ)</b>	German Aid Organisation. Plan Piloto co-ordinator Bilateral aid	✓			✓		✓
<b>MacArthur Foundation</b>	International Foundation		✓ (UNOFOC, CCMSS)				✓
<b>UNOFOC</b>	A Mexican Union of Community Forestry Producer Organisations	✓			✓		
<b>PIQRO</b>	Buyer, Finished product exporter	✓				✓	
<b>NAFEC</b>	North American Fund for Environmental Co-operation.		✓ (UNOFOC, CCMSS)				
<b>SEDESOL</b>	Mexican Federal Social Development Secretariat						✓
<b>DFID</b>	UK Development Ministry. Bilateral Aid						✓

## **CAPACITY OF THE ORGANISATIONS TO IMPLEMENT THE SCHEMES**

The capacity of domestic NGOs, and producer organisations to promote and implement certification has increased dramatically. There has been a phenomenal growth in both the demand for certification and the capacity of Mexican nationals to meet that demand. Some of the organisations taking a proactive role (e.g. CCMSS, UNOFOC) are less than five years old. The south-east regional branch of UNOFOC has undergone recent restructuring and has lost the confidence of many of its members. However, nationally it has created a full-time post for its community forestry improvement and certification programme, and is very active in the grass-roots promotion and explanation of certification. CCMSS has run workshops presenting certification and raising awareness among potential certification assessors.

Additionally, the Forestry Producer Societies now have technical teams who are more aware of certification and of the production and marketing changes needed to make regular certified timber sales a reality<sup>18</sup>.

While the Societies and *ejidos* are more involved in certification than they were five years ago, there is still a question mark over the ability of the producer organisations to implement the changes required by certification without significant external financing. As poverty still dictates the need to put today's income before tomorrow's forest management, it is difficult for foresters to prioritise long term management changes which do not bring an immediate visible benefit. Currently an awareness of certification and of the link between 'sustainable management' and certain international markets exists only among *campesino* leaders. While there is no price premium on 'ecological' timber, and the future remains uncertain, at grass roots level they remain unprepared to invest heavily in terms of informing and discussing it with all the members..

## **STRATEGIES**

### **THE PROCESS OF CERTIFICATION**

The basic structure of the forest certification scheme is a four stage process: a pre-assessment, a field report, a peer review of the report and final ratification. The core element is a third party multi-disciplinary team of independent assessors which carries out a review of a range of aspects of forest management directed primarily by the Principles laid down by the FSC and specifically by the guidelines developed by the accredited certification body. To facilitate this process a pre-assessment exercise is carried out to ensure the forest management unit has the capacity to fulfil the various criteria, to scope

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<sup>18</sup> E.g. Two of the SPFEQR foresters visited Germany in 1996 and now have a greater understanding of the market forces driving certification.

the critical factors of the field assessment in order to identify the correct mix of disciplines needed on the review, and to identify the full range of stakeholders who should be consulted by the field assessment process.

The field assessment usually would take a week to ten days. In the case study under review it took slightly longer as it was the first of its kind carried out in the region so it was part of a learning process for all its participants. This also seems to have had some effect on the field assessment as a whole. Some of the imperatives used then are different to those currently being used during assessments. Additionally as mentioned above, the main actors pushing to have the forests certified were members of the Mexican German Agreement, technical staff from the societies advising the *ejidos* and people from the certification agency. To some extent this led to an exclusion of the majority of primary stakeholders, the *ejidatarios*, who in fact own the forest resource.

The result of this process is a field report, which is then distributed to a peer review panel which analyses the report independently, each giving their own recommendation on whether or not to certify to the accreditation body. During this process and the field visit a number of deficiencies in the management process are likely to have been identified. These are of three types:

- i) Areas of comment observed by the assessment team where a small adjustment in management practice can lead to improved management.
- ii) Areas of 'minor non conformance'. These may be management issues which need to be addressed over time in order to fit in with the schemes objectives. These would not individually prevent membership of the scheme but would cause a problem in large numbers, and it would be expected that the management would be able to demonstrate a strategy for improving the situation. Future monitoring visits would specifically need to see improvement in these areas.
- iii) Areas of 'major non conformance to the principles of the scheme' would comprise any factor which would specifically prevent membership and would need to be addressed before certification could be attained.

The issues raised during this process are confidential between the certification body and their clients. Partly due to the lack of corporate memory and partly due to a lack of understanding or dissemination there was virtually no example of specific changes demanded by the inspection team. The two examples which were given were more use of directional felling and the cutting of creepers the year before harvest in order to cause less damage to the forest canopy during harvesting.

## **THE PRACTICE IN MEXICO.**

In the case of Mexico there is often a supplementary step of a contract between the *ejido* and an enabling body such as UNOFOC or Red MOCAF, the unions which have been helping to finance the process. The contracts lay out how the

supporting institutions will assist those applying for certification and the steps which the forest owners will take to ensure their compliance. This was not the case in Quintana Roo but may become necessary in future.

Certain species are considered to be locally rare, these need a licence from SEMARNAP to extract and sell. It was considered that, though certification was not a straight replacement for such requirements, having forest certification demonstrates a high level of forest management, and such special permits are more likely to be granted. This may become even more important if, as is being considered, Mahogany is *Swietenia macrophylla* is added to CITES Appendix II, the international register of endangered species.

There is a very specific goal of opening up markets for timber species available in the forest which do not currently have any commercial value on the domestic market. Given the latent conservatism of the international timber market this would involve a considerable amount of re-education about the qualities and properties of some of the species. But within the more tolerant 'ethical' market there is a greater acceptance. The two most commonly extracted timbers, Mahogany and Spanish Cedar, are in high demand on the domestic and the export markets. However, as the international market offers a relatively small price differential but makes considerable quality demands, it has been much easier to remain selling to the local buyers.

## **THE SPECIFIC CONTEXT**

The process of assessment for certification does not itself aim to carry out any primary research to measure either the social or the environmental impacts of forest management. Its function is to ensure that the mechanisms to do so are in place (see FSC principles and Smartwood guidelines). Studying their wording it is immediately clear that the model for which the scheme is designed is not that of 'community' forest management. This was a major problem faced by the assessment team in carrying out the first assessment, the framework is designed for industrial relations in a commercial business rather than community management of a social enterprise.

Since the assessment was of a social enterprise there was an underlying assumption by the assessors that a number of the criteria required under the usual process were inevitably in place within the *ejido* system. They did not want to impose higher standards of social responsibility and equity on a forest management system being run by a community than was expected of a commercial operation. They did not focus heavily on forestry income distribution within the community, just as in a commercial operations after establishing that wages are appropriate for the job it is not necessary to establish how that wage is being distributed within the household. To a great extent the internal affairs of the *ejidos* are considered outside the remit of the assessment.

The scope of the forest certification scheme and its remit to be applicable to all types of forest under all systems of forest management, make it a very blunt instrument to assess the specific workings of one particular strategy of forest management. This means that it does not capture a lot of the livelihood impact information which is the specific focus of this study. It does not try to measure the fact that increasing numbers of the skilled technical posts within harvesting and mill production are now being carried out by trained members of the community. Fifteen years ago the human capital did not exist. This element of skilled job creation was raised as an important way of keeping educated members of the community in the area. This is not such an important factor in Quintana Roo, but may be in other areas of Mexico where there is a lot outward migration to the USA because of proximity to the border.

## **OUTCOMES**

### **LIVELIHOOD CREATION**

There are a number of ways that livelihoods can be assessed in relation to the workings of the scheme. These are more complex when looking at a common property resource covering a large area of forest than they might be under a system looking at a single commodity or an individual member of a scheme. Throughout this section it proved difficult to desegregate any one element specifically relating to the implementation of forest certification from the wider effect of the programme of improved community forest management dating back over 15 years. In a number of ways the certification process has been a confirmation or verification of a number of other efforts; important as much for its prestige value as for anything more tangible.

### **NEW LIVELIHOOD OPPORTUNITIES ARISING FROM THE SCHEME FOR DIFFERENT CATEGORIES OF PARTICIPANT.**

Livelihood opportunities have been created by the expansion of forestry in these large *ejidos*; some of which can be specifically linked to the existence of certification.

The main value of the certification within a debate on sustainable livelihoods is that it ensures a management plan is in place that offers inter-generational access to the forest. This is a very difficult to prove with any certainty but it does offer a more structured form of monitoring than other systems available. There is a general agreement that the rate of deforestation has slowed during the period since the PPF was introduced 15 years ago. All *ejidos* in the region have nominal areas of permanent forest, but it is in the four certified *ejidos* where the permanent forest is most clearly recognised and demarcated. This is partly a function of the greater recognition of its economic value but also partly due to the requirements of certification that the area under forest management be clearly defined.

In more immediate and tangible ways certification provides an opportunity to market species not currently harvested by making them available to a specialised niche market for certified timber in Europe and North America. These include timbers with properties which make them less uniform and harder to work than those more commonly available. The assurance of certification encourages end users such as specialist joiners and furniture manufactures to invest the extra effort needed to use these timbers.

**Table 4: National and International Sales of Certified Tropical Timber from the Sociedad de Productores Forestales Ejidales de La Zona Sur, 1994-1997**

(NB. These figures *do not* represent sales of timber generally from the *ejidos*. Almost all Mahogany is sold locally, generally on an individual *ejido* basis. Some hard and soft woods have also been sold for export to companies in other parts of Mexico and to Japan. In these cases certification was not an issue. However, these certified sales represent the majority of sales with an international destination).

All timber was from the ejidos Caoba, Tres Garantias or Noh Bec.

Year	Species	Country	Total Board Ft	Approx. price per board foot	Value of Sales (US \$)
1994	Chechen, Tzalam, Siricote, Granadillo, Katalox, Pukte	USA	37,000	US\$1.45	53650
1995	Katalox, Caoba, Cedro, Granadillo, Siricote, Machiche, Chechen	Germany	15,000	US\$1.45	21750
1996	Granadillo, Chactekok, Catalox, Machiche, Tzalam, Siricote	USA	21,928	US\$1.45	31795.6
1996	Mahogany	USA (via PIQRO)	104,000	US\$1.70	176800
1997	Mahogany	USA (via PIQRO)	10,600	US\$1.70	18020
<b>Totals</b>			188,528		<b>US\$302,016</b>

Figures provided by David Acopa Hernandez, pers com 1998.

1994/5 sales were negotiated directly with the Society.

1996 sales were negotiated via UNOFOC's comercialisadora (sales rep)

1997 sales were negotiated via the Society's Centro de Acopio (Timber store)

*Timber sales:*

Table 4 shows the sales of certified timber from the Forestry Society to which the four *ejidos* belong, during the period 1994-1997<sup>19</sup>. Certified timber purchases have been made from three of the *ejidos*; the fourth, Petcacab, has not yet felt any direct economic benefit of certification. It is not easy to distinguish between certified timber sales and other sales, but it is generally considered that the international market has been interested in these timbers due to recognition of good forest management. It is important to note that sales were made to overseas ecological buyers well before the official certification system was in place and FSC certification was awarded

Based on these figures we can say that certification has contributed to sales to Germany and the USA. These have mainly been species for the USA 'exotics' market, and for general carpentry purposes in Europe. During this period several *ejidos* experienced a decline in their annual authorised volume for Mahogany, and these sales may have helped to reduce the impact of this.

Despite these sales figures this study did not find a very high level of awareness about certification nor its benefits within the three *ejidos* from which sales have been made. Even one of the staff with responsibility for sales commented that "*certification does not have much to do with the economy of the ejido*". In part this is because of the general lack of awareness of the specifics of the industry among *ejidatarios*. An ex-representative (*Comisariado*) of an *ejido* commented that the majority of the population trusts their leaders to make the right decision. The most important indicators of the health of the industry to the majority of stakeholders are the availability of an annual down payment just before Christmas (when spending is high and income negligible), and a reasonable profit share-out later in the year when the sales are completed. The reality seems to be that certification *has* affected the economies of the *ejido*, but that there has been no direct discussion of this with or among *ejidatarios*.

Since Mahogany is always extracted first, certification can also be said to have prolonged the timber extraction season, creating greater employment for forest workers, and a larger windfall profit sharing at the end of the season. Where the timber is sold as boards the sawmill workers also benefit. Additionally, since the international market is more demanding, some additional employment has been created in meeting these requirements; for example a private workshop in Tres Garantias has benefited by gaining the contract for further sawing to specific dimensions.

While there is a thriving carpentry business in most *ejidos*, in general products are for the local market. The largest *ejido*, Noh Bec, has a business plan based

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<sup>19</sup> Sales information is, naturally closely guarded. Figures of total exports during the period and total sales of all species were not available. It would be interesting to carry out a study using a fuller data set and making adjustments for inflation and exchange rate fluctuations. Also to be able to compare the significance of these sales in relation to Mahogany sales and additional costs incurred.



around certification. It hopes to earn a chain of custody certificate and be allowed to sell sawn-wood and finished goods such as furniture and artisanry with a certification label. This should give them considerably greater access to the international markets and impact favourably on livelihood opportunities.

There have been several international aid organisations, foundations and national NGOs supporting or initiating wood-based artisan groups in the south of Quintana Roo. This has generated employment for small groups of individuals, although most are at a very early stage in their development, and have yet to clear their debts and establish buyers. Only one funder seems to be using certification as an explicit marketing element; The Tropical Forest Management Trust has been supporting women's wood turning products to be sold under certified Mayan forest label. While only on a small scale they set a precedent of supporting women's artisan groups which have subsequently been supported by the UNOFOC, State government and DFID. Similar initiatives producing wooden toys, buttons and carved animals have been promoted by UNOFOC in three of the four *ejidos*. Funding cannot be shown to be reliant on certification, but it certainly helps to 'sell' a project idea to a funder, and is useful if products are to be sold internationally. Recent contacts in the USA have expressed interest in buying wooden toys from Tres Garantias. This interest is conditional upon having certification.

### **NEW LIVELIHOOD OPPORTUNITIES ARISING FROM THE SCHEME FOR DIFFERENT CATEGORIES OF NON-PARTICIPANT.**

As previously mentioned most of the additional opportunities created through forestry in general, and therefore through certification, are captured by the scheme members: the *ejidatarios*. Some of the secondary processing and artisan employment has also benefited women; almost entirely due to targeting by NGOs or funders. Where jobs are created through certification, non-*ejidatarios* may benefit when there is a surplus of employment. They are also free to set up private initiatives such as carpentry workshops or artisan groups, however it should be noted that they are almost never in a position to capture funding destined for such enterprises.

### **LIVELIHOOD OPPORTUNITIES LOST AS A RESULT OF THE SCHEME FOR DIFFERENT CATEGORIES OF PARTICIPANT AND NON-PARTICIPANT**

There is no evidence for certification having reduced the livelihood opportunities for participants. Most of the costs and risks have so far been borne by others,

and the scheme has built on existing forest management, and not yet been linked to restrictions in other activities<sup>20</sup>.

These larger certified *ejidos* have tended to capture greater expenditure (in terms of time and direct funding) than *ejidos* with lesser forest resources. Foresters from the Society tend to concentrate their time there where there is a greater demand from the community, and a greater volume of timber being harvested. Management plans and inventories were finished in the certified *ejidos* before the others. Again this cannot be distinguished from the influence of size and volume and political representation, but it may be that certification played a role in encouraging the prioritisation of forest management work in these *ejidos*. It is not possible to know if this is detrimental to the livelihood opportunities of the other communities.

## **LIVELIHOOD OPPORTUNITIES LOST AS A RESULT OF THE SCHEME FOR DIFFERENT CATEGORIES OF NON-PARTICIPANT**

One negative livelihood impact of certification is likely to be a loss of income to certain individuals from unquantifiable illegal felling, which might arise if there is greater vigilance of the forest boundary. However, if the community has strong institutional structures capable of managing and policing its common property resource it will do so out of a desire to maximise profits for its members and for its own long-term benefit. It is doubtful that certification itself has a particularly strong role in forest protection. Forest protection is related to community recognition of the economic value of the forest resource; theft is seen as depriving the community as a whole. Theft is usually carried out by people from outside the *ejido* so there is often a common purpose in stopping it. The fact that excessive loss would mean losing certification is secondary to other considerations.

There is a debate which challenges the direct link between certain types of income generation and poverty reduction within the household. That male heads of household are gaining extra income does not necessarily translate into a full range of poverty reduction indicators across the whole family. The fact that the nature of payments for timber has traditionally been in large, irregular amounts has often led to distortions in the pattern of family income which has led to a reduction in some welfare indicators according to research done by the Rockefeller Foundation (unpublished internal report). Large payments of up to US\$2,000 encourage prestige purchases such as cars, which then become a drain on normal regular income.

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<sup>20</sup> While internally defined management rules for bushmeat hunting and palm cutting often exist, it is not considered that these have been imposed to any degree which has impacted negatively on livelihood opportunities.

Though forest certification has tended to be market driven it is not, in itself, market oriented. Therefore it does not set out to monitor or assist the commercialisation of forest products. Within the market place certification is only able to deliver part of the assurances that buyers are looking for, those regarding sustainability of supply. It says nothing about the quality of the product which, to most buyers is the more important factor. All other things being equal, few buyers would be likely to choose uncertified over certified, but all things are *not* equal and the quality of the end product is often not good enough for the international market. In this regard forest certification only delivers part of the potential for market access.

## **POVERTY REDUCTION**

### **THE ROLE OF FOREST CERTIFICATION IN POVERTY REDUCTION**

Forest Certification in itself makes no claims to having poverty alleviation as one of its objectives. A scheme which attracts a membership including multinationals with levels of turnover measured in billions of dollars and private estate owners such as the Duchy of Cornwall (the Prince of Wales), does not have wealth redistribution and equity as its central tenets. Short-term impacts of the scheme on livelihoods are spin-offs of good management rather than designed outcomes. The longer-term benefits of good management are increased inter-generational access to forest resources. It is difficult to quantify the level and range of benefits involved in this.

Whether assessing a major corporation or a community forest, the scheme is designed to stop well short of monitoring distribution of benefits beyond the level of compliance with national laws and norms. The only reason for the assessment process raising concerns in this area would be if the team felt that any of the inequities might threaten the security of the forest. Where there is common ownership as in the *ejido* system, this is very unlikely to happen.

### **IMPACT OF SCHEME ON IMMEDIATE AND LONGER-TERM POVERTY LEVELS OF DIFFERENT CATEGORIES OF PARTICIPANT AND NON-PARTICIPANT**

As discussed above, the livelihood opportunities created by certification have so far been minor. Where they exist they are almost entirely captured by the *ejidatarios*. Immediate benefits are in the form of profit share-out and additional employment opportunities generated in the forest, the sawmill, and the *ejido*

secondary processing industries. Longer-term benefits are expected when *ejidos* begin to sell finished goods under a certified label<sup>21</sup>.

The knock-on effect of this wealth creation is an increasing trend toward hiring labour for agricultural work by those who have secured jobs in the sawmills. This generates some seasonal labour for others.

Several social scientists have expressed concern that forestry profits in general do not reach the family level, and that the main beneficiaries are the beer companies as extra income is directly correlated to increased alcohol consumption. This is often at the expense of women and children (Armijo and Robertos, 1998; M. Velasquez pers. com. 1997). Recent field experience and interviews with a cross section of the population tend to back this up. Since certification is based on the existing organisational and profit sharing systems, extra profits generated are processed and divided in the same way.

Some researchers at a national level would like to see Mexican certification addressing more social issues. It is possible that certification could have an impact on improving health and safety conditions, medical insurance and pensions for *ejidatarios*. Such issues were mentioned as recommendations by the assessors in their final report.

## **CAPABILITIES**

### **HUMAN CAPITAL**

Contribution of scheme to improvement in human capital for participants

In so much as certification has contributed to the strengthening of the community forest management, it can be said to have had a considerable impact on informal training in forestry management, timber processing, marketing and management.

The recommendations made by certification assessors may translate into the acquiring of new skills (e.g. directional felling, forest road construction, improved replanting strategies), particularly if international funders pick up these recommendations.

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<sup>21</sup> E.g. in Noh Bec they have a small furniture work shop and hope to obtain the FSC chain of custody certificate. In Tres Garantias they are producing wooden toys which they hope to export.

The international interest generated by certification has generally increased the number of visitors to the *ejidos* and simultaneously the opportunities for capturing formal and informal training opportunities. These have included trips to the USA to receive awards, GTZ scholarships to study forestry in ESNACIFOR, Honduras, DFID funded workshops on commercialisation, and training in carpentry and artisanry to use sawmill wastes.

In so much as certification has helped to maintain or raise incomes it has contributed to social welfare investment in the *ejidos*. All communities use a proportion of timber profits to subsidise schools and clinics. The organisation of this funding varies between communities, and may be as a direct proportion of profits (e.g. Caoba) or on a needs only basis (e.g. Petcacab).

The certification criteria used give little scope for intervening in the social structure of what is already considered a 'social enterprise' where all members benefit. Nevertheless the certification report mentions that "*safety is an area where some active improvement is necessary*" (Smartwood 1998). This has not been prioritised in the *ejidos*. The certifiers made suggestions in Noh Bec that a form of health insurance and medical cover be offered for workers. Such a system is now offered to *ejidatarios*. There is a danger that these benefits will not be extended to other forestry sector employees in general.

### Contribution of scheme to improvement in human capital for non-participants

Non-participants (*repobladores* and women) have received indirect benefits from the social works investment made with forestry profits. Due to the social differentiation of employment opportunities in the forestry business controlled by the participants (*ejidatarios*) they are far less likely to have picked up the formal and informal training opportunities provided by contact with technical foresters and offered by international funders. The exceptions to this are the sons of *ejidatarios* who often have favoured status where training courses are concerned. Several sons of *ejidatarios* have received formal forestry training and gone on to be members of the technical services team.

There is little agreement over the benefits felt by technical forestry staff from certification. Within Mexico some have seen it is a lot of extra work for little reward. There has also been resistance toward having their work evaluated. Others see it as a positive recognition of their abilities, a way of motivating *ejidatarios* to make expenditure in certain areas or a way to generate greater incomes with an expected knock on to their own salaries. It is possible that it will eventually serve as a vehicle for improving the standard of forestry management skills, and for disseminating and encouraging best practice among foresters. Certainly by requiring a level of data collection and monitoring that can feed into silvicultural and ecological research, it is contributing to the understanding of tropical forest management. Unfortunately certification cannot control the quality nor dissemination of such research.

## **SOCIAL CAPITAL**

### **Contribution of scheme to improvement in social capital for participants**

In terms of raising the profile of the various stakeholders, the certification process has served to bring the whole PPF to the attention of a very wide number of people both within Mexico and internationally. This has opened up market opportunities, educational opportunities and, crucially, funding opportunities. Additionally, certification has been welcomed as an incentive for communities to work toward sustainable management. There is a natural competitiveness between *ejidos*, and the idea of certification as conferring 'prestige' on a community or their technical support organisation is one that was frequently mentioned.

All the participants see the international attention as a very positive aspect of certification and as a means defence against criticism from outside. In the face of criticism from Mexican urban-based environmentalists who have questioned the impacts of community forestry, a third party audit has served to silence some of the critics.

### **Contribution of scheme to improvement in social capital for non-participants**

On a wider front the process has led to the creation of cadre of certifiers within Mexico. Academic researchers have gained experience in multidisciplinary groups studying rural livelihoods. This provides a unique opportunity for these people to have access to funds to carry out this kind of work. It has also given the assessors a perspective which has included market and commercial oriented aspects which may not be encompassed in their own disciplines.

## **VULNERABILITY AND RESILIENCE**

### **RISKS FOR DIRECT PARTICIPANTS**

The building of the profile has led to a situation where a number of institutions feel that they have invested a great deal in ensuring that certification in Quintana Roo will be a success. Unusually the most direct stakeholders, the forest owners, have invested less than many others. The changes in management practice have been relatively small and any risk has mainly been in trying to capture additional income rather than subsistence. For forest owners certification has represented a formalisation and recognition of existing practices. To date this has involved quite small investments by the *ejidos* over and above what would normally have been required because the process has been subsidised. It should be recognised that there is already a steady local

market which provides the bulk of their sales (Mahogany) and is likely to remain the core of the business regardless of certification.

It seems likely that there will be a future shift toward the *ejidos* making direct financial investment linked to membership of the scheme. First in making a greater contribution to the financial costs of assessment and monitoring visits; a recurrent cost which will continue as long as their membership of the scheme. Secondly by capital investment in equipment such as improved saw mills and kiln dryers in order to improve the quality of their output to international standards. All four *ejidos* are currently pursuing this goal, which is regarded as necessary to fulfil the potential of market access that entry into the scheme offers. In that such investment is needed to raise the standard to a higher level than that needed to enter the current market this can be regarded as risk directly associated with certification. If the forest management subsequently loses its certified status the investment will be hard to repay.

A further area of vulnerability is that of third party donor funding. As mentioned above some funders are looking to certification as a prerequisite for promoting other assistance. This may affect communities that lose certification, but may already be limiting the opportunities to those *ejidos* which cannot or do not want to join ethical trading schemes.

The process of certification has generated new markets for processed products. Artisanal products and ecotourism have grown out of the possibilities arising from the scheme, in some respects they are more vulnerable to collapse if certification is lost. However, if an artisanal skills base is nurtured by certification it is possible that the artisans could adapt to the large (non-certified) tourist markets of the Cancun-Tulum corridor. As it is possible that these related activities may attract people who are not *ejidatarios* who cannot have a direct stake in the profits from the timber enterprises, their level of vulnerability is likely to be greater than that of direct members of the scheme.

## **RISKS FOR NON PARTICIPANTS.**

For other groups involved their credibility is invested in the ability of the *ejidos* to retain the certification standard. If it were possible to identify all the financial costs associated with the various different donor organisations the cost might well run into hundreds of thousands of dollars. Several NGOs and unions within Mexico have built their reputation on supporting certification initiatives and would be negatively affected by the loss of status associated with failure.

The whole credibility of third party assessment is based on credence of all members. Forest certification is still relatively new and there is an acceptance by most observers that during the early stages there is some latitude about finding and interpreting the standards of assessment. If there is a perception that standards are being interpreted too loosely or different assessors are using

different criteria then the whole scheme will become devalued and will lose its market advantage.

## **NATURAL RESOURCE BASE**

The scheme under consideration - FSC certification - considers sustainable resource management as a principle objective. It is a scheme which essentially grew up in response to environmentalists' concerns over destructive logging practices and a public desire to be able to avoid contributing to such practices. As such, long-term conservation of the resource base and minimising ecological impacts are given high priority.

There is considerable debate about what constitutes sustainable 'forest management' given the current state of knowledge about the ecosystem in Quintana Roo. Indeed, to avoid such problems the FSC always states that it certifies to a standard of 'good management' rather than sustainable management.

Nevertheless, the scheme certainly offers several elements that ensure that the forest use is well regulated and monitored. Certification requires the formal recognition by the *ejidos* where the permanent forest boundary lies and a formalised data collection system allowing for a baseline of information to be built up from which sustainability can be measured. The assessment of ecological impact as used in certification assessment also offers some security that the results of logging are relatively benign.

The most likely way to ensure the protection of the forest resource is to make it a more valuable asset than any alternative land use. Joining the scheme widens the range of markets available and the number of species which can be marketed; though neither of these benefits is explicit within the framework of the scheme. The scheme offers a very thorough monitoring and management evaluation process. In the case of Quintana Roo, specific improvements over time are sought, although it is doubtful whether the objectives are fully understood by participants.

## **CONCLUSIONS**

Forest certification does not set out to improve equity at household level. Its social criteria are designed primarily for use within the context of commercial forest management rather than social enterprises under common ownership. For this reason it is a rather blunt tool for measuring or promoting social development. However there is a set of minimum standards that do provide a baseline for any more specifically proactive social development activities.



There is often the belief, illustrated by this case study, that forest certification is wholly market oriented. This is not the case. It is primarily an environmental standard assuring the quality of forest management. This leads to confusion over direct and indirect impacts of certification. Because most participants join the scheme for commercial reasons (e.g. market access) a number of activities - often marketing related - become tied to the scheme, even though they are not integral to it. Such is the case of timber quality. The certification process does not in any way concern itself with the product, it is the market place into which the timber is sold that makes increased demands on quality.

In these examples the hope is that certification will enable communities to penetrate new markets with existing commercial species, or to sell lesser-known timber to niche markets. For this, and the subsequent rise in incomes to occur, assistance is needed in quality improvement and marketing.

The sales already been made have contributed to the profit sharing among forest owners (i.e. scheme members). However, most members are unaware of both their membership of the scheme and the benefits, however minimal, that that may have provided. This is in part because the scheme was externally driven and continues to be managed by technical staff and a few informed *ejidatario* leaders.

It is debatable whether income generation per se leads to improvements in rural livelihoods. There is some evidence that the nature of that income, with large irregular payments being made to the male heads of household sometimes leads to disruptive patterns of expenditure. This aside, the scheme can be said to have had a positive impact on income generation for the *ejidatarios* and to have created employment opportunities for a number of others. The exploitation of a wider range of species has extended the period of harvesting and the opportunity cost of extracting the extra logs is relatively low.

The demands of the international market are putting pressure on the *ejidos* to improve the quality of their output. This is creating secondary processing opportunities in areas such as kiln drying and cutting to specific dimension stock sizes. Some small scale downstream processing such as furniture manufacture it being catalysed by the introduction of the scheme.

Additional benefits in terms of training for *ejidatarios* and foresters - both in forestry management and in support to timber processing - are harder to confirm, due to the intensity of international interest that this Mexican community forestry model has generated. The fact that the forests provide income for their many owners has been as much a magnet for support, as has their environmental certification.

The level of international interest that has been generated by the scheme has served to raise people's awareness about their environment in a global perspective. Though there is little understanding of the objectives or the detail of certification, there does seem to be a pride generated by third party independent recognition of their forest management. If there were major income incentives to convert the forest to other land uses, certification alone would not be able to resist the pressures indefinitely, but it is part of a set of circumstances which is allowing the *ejidos* to recognise the full economic value of the forest.

For Quintana Roo it is possible to say that the poor soil conditions make forestry the best long-term economic option for land management. Anything that promotes or stabilises good forest management and allows for that realisation to be fulfilled is likely to have a positive impact over time. To ensure its full potential for the *ejidos* the certification must work in two ways, first as a management tool, which by offering a structured monitoring system helps to identify areas of critical environmental importance. Second it should work in promoting goods from the forest in the international market. Whereas the certification system contains mechanisms to realise the 'management tool' function with support and advice provided through external field monitoring, there is no such structure on the marketing side. Given that certification has now been operative for a number of years the volume of timber sold on the merit of being certified remains low. The supporting institutions are addressing this problem but considering that certification is promoted on the strength of its ability to open international premium markets the results have been slow.

## **FUTURE AREAS OF CONCERN**

The initial costs of certification and the lack of clarity about the potential benefits has led to reliance on international funding to promote and monitor forest management and finance certification means that much energy spend pursuing and justifying funding. This has occurred in combination with promotion and partial enactment by external agents and has removed some of the need for a deep understanding by the participants. Also the agenda tends to be dictated externally; by its very nature a monitoring scheme designed on a global scale is likely to be slightly detached from the participants, but the way it has been introduced has done nothing to ameliorate this. It is possible that future development within FSC Mexico could allow for a more localised and participatory approach but even at the national level the current discussions centre around a very extractive approach. This tends to fly in the face of much current development thinking where participation is paramount.

Only by ensuring the maximum amount of participation and understanding of the process can the ethos of the objectives of certification can be inculcated into the thinking of the community. To secure sustainability a comprehensive programme of education and support is necessary to ensure the necessary depth of understanding of the issues and objectives of the certification process.

Without a community-wide awareness the scheme will depend upon a narrow core of people, many of whom are external to its membership.

One of the major drawbacks of certification as a monitoring tool for development is its inability to monitor any differentiation between participants and non-participants. In the area of the case study there were marked differences between the *ejidatarios* and others within the community. The former had full access to the forest, employment opportunities and a share of the profits from timber and the latter only received partial benefits through increased labour opportunities. The scheme's success may increase differentiation as the increased access to capital might permit investment in agricultural or commercial expansion through the use of more hired labour. The *ejidatarios* are most likely to capitalise on investment opportunities created through value adding activities associated with the increased timber market. To be truly effective at monitoring the greater developmental process the scope of the field assessments would have to be set wider than it is currently, this is not within the remit of the certification process. It is difficult to see any circumstances under which the groups wanting to be assessed by the current criteria would choose to finance a broader study.

The lack of awareness at the level of individuals concerning the relationship between certified timber sales and sustainable management brings into question the sustainability of the scheme. It is important that the philosophy behind certification is understood at least at a basic level for it to have a long-term future. The fact that forest certification confines itself to forest management issues creates the danger that timber processing becomes a business isolated from integrated forest management. Because certification is promoted as a marketing tool there is a need for environmental education at community level about ecology, local environmental service functions (water, local climate), wildlife management and the invisible economic value of forest (firewood, palms, poles).

Within the wider support environment there are a number of vulnerabilities. Forestry technical services are under-financed and/or erratically financed. Foresters have not been able to improve the quality of forest management as has been requested, and they prioritise survival through timber extraction. There is a possibility that certification will be withdrawn when the next review takes place. Beyond these immediate concerns there is the need for wider support from academics and researchers to gain a better understanding of the ecosystem and the forest dynamics in order to interpret the data which is being generated by the scheme. While there is recognition that the management is reviewed in the light of current knowledge, there needs to be a mechanism for informing progressive improvement. This is not in place in Quintana Roo where environmental knowledge is highly site specific.

To address poverty reduction in a wider geographical area it should be remembered that the certified communities tend to be among the richest, and

support for other communities with a less well developed forestry system needs to be adapted to their socio-economic structure and natural resources. In such cases schemes which offer prestige and a seal of good forest management of interest mainly to an international market may not be appropriate for communities who do not have the timber resources, infrastructure, machinery and organisation to meet international market demands. To stabilise their forest boundary and meet livelihood needs support might be better invested in areas such as agroforestry or small plantations.

It may be possible to identify the major constraining factors which deny or dissuade membership of the scheme. It will be important to identify various minimum thresholds that make participation viable. These may include economic constraints where a minimum volume of timber may have to be extracted to make the process worthwhile. There may also be ecological constraints that preclude entry, a minimum area of forest under management maybe necessary to reasonably expect sustainable management as a long-term objective. Within the social aspects of certification it is necessary to identify what further information is needed to make the process a more refined development tool. It is very likely that if forest certification is going to remain a universally applicable scheme these additional elements which apply to community managed forests will remain external to the core process. But as all small scale community enterprises that have been assessed have been subsidised the development of an additional package of requirements useful to all donors would be very helpful in adapting forest certification as a development tool.

It is unlikely that the scheme itself can be adapted to have a poverty focus. But it could be encouraged to give greater transparency to the profit distribution and about the decision making structure. These are not the concerns of consumers at present they are happy with timber that has not destroyed a virgin forest, but with more education they could be persuaded to care about distribution of the profits if they could see the link between that and sustainability.

Forestry certification differs from some ethical initiatives in that it is not promoted and initiated in conjunction with a chain of buyers and retail outlets. As with organic certification, it is carried out by independent accreditation and certification bodies, and in no way promises that membership of the scheme will bring financial rewards. It has taken many years to establish contacts with the international timber trade and develop the personnel with skills to operate in the marketplace in order to start to see economic benefits from the scheme. Meanwhile promoters who have faith in the scheme, or who have strong forest conservation objectives have been promoting certification more as a recognition for good management and as part of an armoury against critics of community forestry than as a potential ticket to a niche market.

The *ejidos* are only just beginning to see the benefits of certification. It can be expected that on seeing the benefits they will have a greater commitment and a

greater urgency to meet the conditions and recommendations imposed during the evaluations. One can only hope that this will happen in time for the next re-evaluation. The level of understanding of the scheme has been undermined to some extent by the extent to which the process has been controlled by external agents. Aid organisations have seen their role as ensuring conditions have been met until the benefits begin to be seen. This has been paternalistic and has dismissed the need for reinvestment.

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