THE IMPACTS OF FOREST TRADE LIBERALISATION ON FOREST GOVERNANCE IN MEXICO

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EXECUTIVE SUMMARY

In terms of the objectives of this research study, Mexico appears to be an ideal case study. It offers one of the clearest cases of forest trade liberalisation, dating from 1986; before that the forest economy was very protected and subsidised, making it virtually closed to external trade pressures. Also the social and environmental impacts of the North American Free Trade Agreement (NAFTA), implemented in 1994, are very well documented (although the governance impacts rather less so). Any analysis of Mexican forestry must also start from an appreciation of its social importance in the form of the dominant community forestry (CF) sector; the somewhat unique ‘private common property’ land tenure system; and its proximity, and free trade relationship, with the world’s two most powerful forest sector trading nations. This case study attempts to assess forest governance impacts of trade liberalisation through causative analysis of changes in a number of key indicators, mainly through discussions with a set of key informants held in October 2002.

But the results of the investigation are inconclusive, mainly due to the fact that trade liberalisation impacts are indirect and inter-connected with other strong (or stronger) forest governance drivers. Trade liberalisation impacts are particularly difficult to separate out from the broader liberalisation package and the democratic process. There is also a lack of empirical data on forest sector variables like illegal logging and corruption levels, making it difficult to conduct robust analysis of the trade-governance relationship.

The complex interrelationship of trade liberalisation with other policy and regulatory changes is indicated by the changes which preceded or accompanied the implementation of NAFTA. The deregulatory 1992 Forest Law and the structural adjustment programme reduced state regulatory capacity in the period up to 1994. Another destabilizing institutional factor, both internally (in community forestry
enterprises (CFEs)) and externally, was the 1992 reform of Article 27 of the Constitution making it possible to divide up and sell ejido farmland while prohibiting this for forested areas (thus creating an incentive for forest clearance). This was all poor preparation for NAFTA, and led to a massive increase in unregulated or illegal logging according to key informants. Some argue that structural adjustment was a more powerful driver of (negative) forest governance standards than trade liberalisation. There is a vital sequencing point here for other countries embarking on a forest trade liberalisation process; as pointed out by Joseph Stiglitz, institutional strengthening should precede trade liberalisation.

On the more positive side, it was agreed that trade liberalisation has shaken up the forest sector and forced the government and other stakeholders to tackle some of the underlying structural problems, particularly the obsolescent processing equipment inherited from protectionism. Lifting protection and reducing subsidies forced the industry to modernise; it was also the death-knell for the heavily subsidised parastatals. Thus trade liberalisation helped the rise of the CF sector. The shift from a protected forest economy has also greatly reduced the possibilities for high level corruption, although another important factor was the pre-trade liberalisation shift away from an industrial forest concession model. Another major driver has been democratic progress; President Fox has introduced some powerful anti-corruption and pro-transparency measures. Petty or field level state corruption may also have fallen, but is more driven by the cost, time and complexity of permission procedures. There have been several positive institutional developments at least indirectly linked to trade liberalisation. It may also have stimulated civil society participation, certification, and the location of more law-abiding foreign companies in Mexico, although there have been other important drivers for these changes.

Forest trade liberalisation has resulted in a large trade deficit, with most of the imports coming from the subsidised plantation forests of Mexico’s competitors, including Chile and Brazil. This appears to place Mexico’s multiple purpose and community-oriented natural forest management at a great disadvantage, and economic comparisons indeed show the comparative economic disadvantage of much of Mexico’s forestry. But an important point is that the import surge has largely been of lower value and quality products. It has therefore been the suppliers and processors of cheaper products (cheap construction timber, cardboard, paper and pulp, pallets, etc.) which have suffered most. In the industrial sector, sawmilling and
cellulose plants have been most affected. Producers and processors of higher value products like furniture, veneer and construction parts have done much better.

In terms of community-level forest governance, the evidence is that trade liberalisation has increased governance pressures on CFEs with lower levels of social and natural capital. Various studies in the CF sector indicate that profitability is a major driver of local level forest governance. Thus the economic pressures associated with cheap imports have probably encouraged illegal logging as a means of reducing compliance costs; already weak traditional governance structures have been further weakened leading to an almost open-access situation. On the other hand, trade liberalisation has proved a stimulus for CFEs with higher levels of social and natural capital, i.e., CFEs with the capacity to respond to the competitive challenge.

This case study shows that CFE governance impacts of trade liberalisation (and associated neo-liberal drivers) vary significantly by area (State) and forest type. They have perhaps been most negative in the tropical and sub-tropical areas of southeast Mexico. Community-based broadleaf forest management is particularly vulnerable to market forces; trade liberalisation and structural adjustment have increased the market vulnerability of CF. There are strong social and environmental externality arguments for some protection of CF in these and other areas. The importance of financial viability for strong CF governance also places a premium on initiatives like the Mexican Forest Fund to develop payments for environmental services, and diversify CFE income through non-timber forest products and tourism.

A clear impact of trade liberalisation has been to widen the gap between good and bad forest governance, and between the formal and informal or unregulated forest sectors. This seems to confirm the broader hypothesis that trade is a magnifier of pre-existing governance strengths and failures. Similarly, an obvious conclusion is that trade liberalisation impacts are dependent on the accompanying policies – these can mitigate or exacerbate social, governance and environmental impacts. There is still a major challenge for forest policies and regulatory changes to make it ‘easier to be good’ without making it ‘easier to be bad’.
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1. INTRODUCTION

1.1 Objectives and methodology

This paper presents one of three country case studies examining the impacts of international forest trade on forest governance, as part of the ‘Forest Sector Trade Policy and Sustainable Forest Management’ study being carried out by the International Institute for Environment and Development (IIED) and funded by the Government of Japan through FAO. The main objective of the case study was to examine how Mexico’s forest trade liberalisation process has impacted on forest governance. The basic methodology and structure of the paper, was to:

(a) present a historical overview of the forest policy and governance context necessary for understanding current governance responses to trade liberalisation pressures;
(b) document the forest trade liberalisation process;
(c) identify direct economic, trade and production impacts;
(d) identify indirect governance impacts, largely stemming from the economic and production changes;
(e) assess changes in selected forest governance indicators, and the extent to which they appear to be related to the trade liberalisation process.

The following indicators of forest governance, some of them overlapping, were considered as most appropriate in the Mexican context:\n
- High level political corruption
- Petty field-based corruption
- Institutional regulatory capacity
- Control and denouncement of illegal logging
- Certification
- Self-regulation
- Relative law-abiding standards of foreign-owned and national companies
- Civil society participation in policy fora, audits, monitoring systems, etc.
- Community forest enterprise (CFE) level governance
These indicators were discussed with as many key informants as possible (Annex 1) over the period 7-16 October 2002 and through email correspondence, and informed by a small sample of Mexico’s extensive forest policy literature.

1.2 Mexico’s forest sector: an overview

The experience of Mexico in terms of external trade pressures and forest governance is unique for several reasons:

- the predominant system of forest land tenure, which can be best described as private common property resource management\(^2\) in contrast to the predominant Latin American model of state-owned forests;
- a very clear process of trade liberalisation surrounding entry into the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) in 1986 and implementation of the North American Free Trade Agreement (NAFTA) from 1994 (following the agreement in 1992);
- its proximity, and free trade relationship, with the world’s two most powerful forest sector trading nations;
- the inclusion of environmental objectives in NAFTA, including a parallel environmental agreement with governance implications - NAFTA has been called (by some) the first ‘green’ free trade agreement (Box 1);
- the extensive national and North American literature on the impacts of NAFTA and related neo-liberal reforms on the community forestry sector.

Any analysis of forestry in Mexico must start from its social importance. According to most estimates at least 80% of the forest area is divided between some eight to nine thousand forest-owning ‘ejidos’ and ‘indigenous communities’. Community forestry (CF) was effectively established by the Agrarian Revolution (1910-1917). The 1917 Constitution established the property rights of indigenous communities over forest

\(^1\) It should be noted that in Mexico there is no industrial concession sector, and forests are privately owned; therefore it was not possible to use some of the more tangible indicators of forest governance like a competitive concession allocation system or effective forest taxation.

\(^2\) David Bray, personal communication. Forest property rights are attenuated in that the sale of forested land is legally proscribed, but there is little in practice to stop the CFE taking a collective decision to clear the forest, and dividing it up between the members or ejidatarios for sale or renting. This process, known as parcelación, has been made possible by the 1992 Reform of Article 27 of the Mexican Constitution, a measure closely tied to the trade liberalisation process.
and farm land; these rights stipulated inalienable collective ownership, and that community land be located in the traditional settlement of an indigenous group (Chapela, 2002). Agrarian laws also provided for land ‘dotación’ (expropriation from landholders with more than 10 ha) to peasant communities. Collective land units created by dotación were called ejidos after the name used by the Spanish for communal grazing, hunting and collection areas surrounding small towns. In this paper, forest-owning indigenous communities and ejidos are collectively referred to as community forestry enterprises (CFEs). About a quarter of these CFEs have forest management plans and enter the formal forestry market. Most of the non-CF area is composed of small properties of less than 100 ha with an average size of 15-20 ha (Klooster, 2002).

The forest sector in Mexico is relatively small – in 2000 it contributed 1.1% of GNP compared to 1.4% in 1990 (Moran & Galletti, 2002). Mexican timber production is only about 2% of the US, and 5% of Canada, its NAFTA partners. The total forest area of 50-60 million ha represents a quarter to a third (depending on the source) of the country’s total land area. The forest area is divided almost equally between temperate (bosque) and tropical (selva) forests.
The main NAFTA agreement makes various explicit references to environmental objectives. In the preamble, a commitment is made to sustainable development and environmental conservation. Specific environmental provisions with the aim of maintaining the integrity of domestic environmental regulatory aims are found in four chapters:

- Sanitary and phytosanitary measures (Chapter 7)
- Measures to enhance international environmental management standards (Chapter 9)
- Provisions against attracting foreign investment by relaxing environmental regulations (Chapter 11)
- In the dispute settlement process (Chapter 20)

A major innovation of NAFTA was the creation of a parallel environmental ‘side-agreement’. The Commission for Environmental Cooperation (CEC) came into force on 1st January 1994 on the same date as the implementation of NAFTA. The purposes of the CEC are, among others, to safeguard the environmental objectives of NAFTA, to serve as a focal point for environmental cooperation, and to allow civil society to denounce failures to implement national environmental regulations. Following a consultation process, the CEC Council can apply penalties on countries (rather than on companies).

But critics of CEC argue that it suffers from weak sanctions, lack of transparency in dispute resolution procedures, and a relatively small budget - about $9 million per annum compared to almost $8 billion of the US Agency for Environmental Protection (Moran & Galletti, 2002). More fundamentally many feel it was a mistake to separate trade and environmental issues since this raises the potential for clashes between the two agreements, i.e., environmental issues should be handled within the main NAFTA agreement (Davidson & Mitchell, 2002). The incidents reported in Box 4 increase the suspicion that trade interests will usually win out, and seems to confirm that companies can challenge domestic environmental regulations under NAFTA Chapter 11. A problem for forest regulations is that due to the way environment law was defined, forest management issues are excluded from the citizen submission process. A submission can only be made on the basis of adverse welfare (e.g., reduced water quality) or biodiversity impacts from forest law violations, rather than on the basis of forest regulatory failure per se (Mitchell, 2002).

Forest production is concentrated in about ten States, with five States composing four-fifths of the total: Durango and Chihuahua (23% each), Michoacan (16%), Jalisco and Oaxaca (8% each) (Moran & Galletti, 2002). About 84% of total timber
production is softwood. Most timber production is for domestic construction, cellulose and paper production; only about 13% is for export. The main exports are paper, cardboard, sawnwood and furniture. Paper and cardboard accounted for about half Mexico’s total import value in 2000. The other main forest product imports are sawnwood, boards, plywood, fibreboard and particle board. Much of this goes into the forest ‘maquila’ import-export sector and is therefore re-exported. The USA is easily Mexico’s most important trade partner. It accounted for about 85% of Mexico’s exports and 80% of its imports in 2000. The US economic downturn is currently having a depressing effect on Mexico’s forestry exports.

It is worth noting that Mexico is not a ‘resource curse’ economy, although it used to be. It has changed from a high dependence on primary product exports (about 80% of total exports in 1980), especially oil, to become a diversified exporter, partly due to NAFTA’s stimulation of the maquila import-export sector.

2. THE FOREST POLICY AND GOVERNANCE CONTEXT

2.1 Pre-trade liberalisation forest policies and governance issues

Subsistence-oriented CF provided the main policy basis until the end of World War II when the government began to favour state forestry, mainly as an import substitution policy. An industrial forest concession system was developed, and CF was (unconstitutionally) prohibited by the 1947 Forest Law. A joint state-private capital approach was used to stimulate the industrial forest sector. By 1978, some 17 parastatal forest industries, called Forestry Administration Units (UAFs), covered 3.4 million ha (Chapela, 2002). Particular emphasis was placed on developing the pulp and paper industry.

Until the 1970s the government controlled forest production by alternating concession-granting periods with logging bans (Mitchell, 2002). The 1947 Forest Law established that communities could only sell to UAFs; they were paid a nominal ‘right of the forest’ (derecho de monte) of 1% of the market value of the standing timber. There was also occasional temporary employment for community members (Klooster, 2002). This became known as the ‘rentista’ model, and is still standard practice for many, if not most, CFEs. Log purchasing companies or middlemen tended to bribe community leaders, make threats and sometimes used violence to obtain the timber as cheaply as possible; there were many broken promises of
schools, roads and other social infrastructure investments. As a former forestry minister observed, this system led to “destruction, pillage and injustice” (Klooster, 2000). Also a substantial share of the stumpage money was put into trust funds managed by the Agrarian Reform agency. These funds were subject to mismanagement; the Forest Service also took their cut. In response to this system, campesinos resorted to timber smuggling, clearing and burning (Klooster, 2002).

Many analysts blame the rentista model for much of the poverty and violent social conflict in rural areas.

Meanwhile the forests were suffering from a standard state silvicultural method based on selective felling. This resulted in the ‘high-grading’ of broadleaf forests (Chapela, 2002). By the 1960s, the most accessible supply areas had been depleted, and forest stumpage values declined progressively thereafter – although subsidies hid the problem of ‘moving supply areas’. By the 1970s, the lack of logs was a major problem for the parastatal sawmills, and declining profitability was resulting in falling real wages. Parallel to the decline of the parastatal forest industry model, peasant movements in several states were mobilised over the issues of land rights, access to forests and labour rights, most notably in Oaxaca, Chihuahua and Guerrero States where Guerrilla movements were formed. In the case of Guerrero a small guerrilla army was active for five years.

A seminal political event coinciding with these developments was the 1968 university student demonstration in Mexico City. Some observers regard this as a threshold event in the revitalisation of CF in Mexico (Chapela, 2002). In response to these political pressures, the 1970-76 federal government embarked on a ‘democratic opening’ involving a shift from a Soviet style one-party state to a more pluralistic decision-making system. In 1973, the logging bans associated with timber smuggling and campesino persecution were lifted. But reforms were slow to materialise, and peasant frustration resulted in demonstrations against the UAFs in at least six States (Klooster, 2002). A group of highly motivated and socially committed forest professionals, NGOs and sympathetic government staff encouraged CFEs to organise themselves into unions or cooperatives which would allow economies of scale, and to develop forest management systems more oriented to CF goals. By 1980, CFEs were contributing about 37% of national forest production (Klooster, 2002).

### 2.2 Forest policy and governance since trade liberalisation
Before 1986, the forest regulatory structure was centralised and repressive, and the Official Forest Service acted like a police force against campesinos (Klooster, 2002). The 1986 Forest Law, which coincided with Mexico’s entry into GATT, returned the forests to community control and effectively ended the system of private and parastatal concessions, although many communities continued with the rentista model (Mitchell, 2002). The 1986 legislation also introduced stronger regulatory controls, including the need for forest management plans and permits for transport, processing and sales. An important change was that CFEs were allowed to hire in private technical forestry services (as opposed to depending on the state forest service, which was in terminal decline) to develop the management plans, and for forest extension and training. The 1986 Forestry Commission was also formed with the objective, in the words of the new Director, of ending “all the damage and offences caused by logging bans, concessions and para-statal organisations, and to give central place to the resource owner” (cited in Chapela, 2002).

Structural adjustment also resulted in the elimination of subsidies to inefficient parastatal industries, and trade liberalisation exposed the industry to market forces. The ‘moving supply area’ approach became unsustainable. Collapsing profits and severe labour problems combined to force the closure of most of the parastatals by 1990. These macro-economic changes clearly favoured the development of the CF sector; for example, the Emiliano Zapata Union of 15 ejidos in Durango State virtually took over the main State plywood industry to become one the main forest businesses in Mexico (Taylor, 2000). In Oaxaca State, some 50 new CFEs developed in the late 1980s (Chapela, 2002).

The 1992 Forest Law deregulated forest production as part of the wider liberalisation package designed to complement entry into NAFTA. It eliminated transport controls, and ‘legal’ logs only needed a hammer mark. The role of the state in forest planning and control was minimised, including monitoring and supervision of the private forest extension services, and there was minimal recognition of the CF sector. This made it “easier to be good, but also easier to be bad” (Jaffee, 1997) by facilitating forest management by well-organised ejidos, while providing less protection for poorly organised groups (Chapela, 1998). A key change was that CFEs were free to choose from unregulated private forest technical services. The CFEs therefore tended to hire
the cheapest service on offer. The irony of this was that it came at a time when CFEs were most in need of high quality technical assistance.

The deregulatory forest legislation also complemented the reform of Article 27 of the Mexican Constitution, rural Mexico’s biggest post-war rural policy change. This permitted the division of land between ejido members (parcelación) and sale on the basis of a majority vote. While this was prohibited on forested land, a huge incentive for establishing individual property rights by forest clearance was created. The main objective of this reform was to create rural institutions compatible with free trade markets (Klooester, 2002). Foreign companies or individuals were also permitted to buy up to 20,000 ha of ejido land; the aim of this was to encourage joint ventures between private capital and CFEs (Mitchell, 2002). In general, the deregulatory approach failed since sustainable forestry was not an attractive investment in comparison with, for example, illegal logging, the maquila and tourism sectors (Moran & Galletti, 2002).

Following a period of virtually unregulated logging, a second u-turn was made in 1997 when the Forest Law re-instituted a more regulatory approach, re-introducing many of the harvesting, transport, storage and processing controls lifted in 1992. It also provided some financial incentives for fast growing pulpwood plantations - both to reduce the large trade deficit in paper products, and to target the US and Asian markets (Klooester, 2002). Many observers see the development of plantations as critical for Mexico to compete with NAFTA and other trade partners like Chile and Brazil. But progress on plantation development has been very limited (Box 2).

**BOX 2. CONSTRAINTS TO PLANTATION DEVELOPMENT**

From the perspective of the forest industry, the main constraint to forest plantation development is land tenure. There is indeed a basic problem in the combination of CF resource ownership and a private sector controlled forest industry (Chapela, 1998); CFEs do not have the resources or incentives to invest in forest plantations, while the forest industry is unwilling to invest in a resource they do not have direct access to, partly since there is always a possibility the CFE will decide to clear the forest for parcelación (Chapela, 1998).

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1 According to Chapela (2002) there was, and still is, a very high return from high quality forest extension – technical and administrative training of community members can have a major impact on forest management and profitability. Chapela (2001) estimates that the cost of hiring forest extension services is less than 1% of the cost of timber production. Weak forest extension and training is still regarded as a major weakness in Mexico’s CF model.
Also up to a fifth of CFEs suffer from border conflicts with other ejidos or indigenous communities (these are often violent and have resulted in considerable loss of life in at least two well-documented cases).

Other basic constraints (according to key informants) to plantation establishment and joint ventures have been the lack of subsidies or low interest international credit, an unstable financial policy and investment environment, and low prices due to saturation of the international paper market. Various programmes to support or subsidise plantation development were established, including the Forest Development Fund (FONDEFOR) – also set up to help CF – and the Programme of Support for the Development of Commercial Forest Plantations (PRODEPLAN). These initiatives have been limited in their size and impact (Klooster, 2002).

Up to 1997, there was a ten to one disparity in financial support to plantation development compared to CF (Klooster, 2002). Following the obvious criticisms, the Programme of Forest Development (PRODEFOR) was set up in 1997 to support CFEs, especially their managerial capacity. The National Forest Commission (CONAFOR), established in 2001, has succeeded in obtaining increased World Bank support for CF, mainly in the form of the Conservation and Sustainable Forest Management Project (PROCYMAF) which aims to raise the administrative capacity and social capital of CFEs, improve the quality of technical services, assist product diversification, and promote markets for environmental services. Extra-sectoral reforms have aimed to increase internal ejido democracy and cooperation, but progress has been mixed (de Janvry et al, 2001).

Forest policy priorities continue to reflect the tension between plantation forestry and CF. While for some observers there are apparent contradictions in federal forest policy objectives (viz securing social and environmental objectives, and competing effectively on the international market), there would also appear to be major potential to help CFEs develop plantation forests on the increasing areas of abandoned pasture and farmland (also an impact of NAFTA). This could be combined with payments for environmental services\(^1\) to supplement timber production, ecotourism and other market opportunities in natural forest areas. These issues figure prominently in the current proposed forest law, as do plantations, environmental education, certification, environmental audits (voluntary), improving the quality of

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\(^1\) For example, 27 campesinos were killed in a recent case in Oaxaca State (Leticia Merino, pers.com.).
technical forest services, training, silvicultural management and decentralised forest administration.

3. THE FOREST TRADE LIBERALISATION PROCESS

3.1 The situation before 1986

Key informants reported that Mexico’s forest economy was effectively closed to external trade pressures before 1986. The tariff and non-tariff measures (NTMs) included:

- Import tariffs in excess of 50% on most products
- Import prices fixed by the agricultural ministry
- The need for a letter of permission from the ministry to import forest products
- Subsidies of up to 50% of production costs in the pulp and paper industry

There was also a system of export quotas, for example for cellulose, plywood and moldings, but removing them had no effect since they were never filled - there was little interest in exporting due to the high levels of protection and domestic demand.

3.2 Accession to GATT, 1986

In order to participate in the Uruguay Round of GATT and be accepted into the WTO, Mexico had to eliminate or reduce most tariff and non-tariff barriers to trade. Due to the crisis in the forest sector, and the difficulties with the parastatal sector, the forest sector went to the head of the queue in the structural adjustment and trade liberalisation process (Chapela, 2002). Forest import tariffs were reduced to those shown in the second column of Table 1. Mexico also signed a Structural Adjustment Programme (SAP) with the IMF in 1985 with the aim of reducing its inflation rate and correcting its tax and external trade deficits.

3.3 Implementation of NAFTA, 1994

Tariff reductions

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1 A major new initiative is the Mexican Forest Fund. With World Bank and Inter-American
Table 1 presents the timetable for tariff reductions agreed (and to date carried out as planned) under NAFTA for the main imported forest products. This shows that the more processed forest products faced almost immediate zero-tariff competition, while less processed products had more time to adjust. This exposed one of the main problems of the Mexican forest industry – the high cost of transporting logs and sawnwood. Chapela (1998) argues that a more gradual reduction of tariffs on processed products was desirable in order to stimulate vertical integration and the development of CFE industries\(^1\). The impact has therefore been to discourage vertical integration and increase the separation between primary forest production (CF) and further processing (private sector).

Table 1. NAFTA import tariff reduction schedule for main forest imports

<table>
<thead>
<tr>
<th>Import item</th>
<th>Pre-NAFTA tariff %</th>
<th>Mexico tariff reduction schedule: Years to zero tariff</th>
<th>US tariff reduction schedule</th>
<th>Canadian tariff reduction schedule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pulp and paper</td>
<td>0-5</td>
<td>Mechanical wood pulp: 10</td>
<td>Already 0%</td>
<td>Already 0%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Other pulp: immediate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Newsprint</td>
<td>15</td>
<td>5-6 years</td>
<td>Already 0%</td>
<td>Already 0%</td>
</tr>
<tr>
<td>Logs</td>
<td>10</td>
<td>10 with tariff quota</td>
<td>Already 0%</td>
<td>Already 0%</td>
</tr>
<tr>
<td>Sawnwood, pine beams/rafters</td>
<td>15</td>
<td>10 with tariff quota; immediate: construction spp.</td>
<td>Already 0%</td>
<td>Already 0%</td>
</tr>
<tr>
<td>Veneers</td>
<td>15</td>
<td>Immediate</td>
<td>Already 0%</td>
<td>Already 0%</td>
</tr>
<tr>
<td>Wood panels, particle board</td>
<td>20</td>
<td>10</td>
<td>Immediate</td>
<td>10 years</td>
</tr>
<tr>
<td>Cardboard sheets</td>
<td>15</td>
<td>10</td>
<td>Already 0%</td>
<td>10 years</td>
</tr>
<tr>
<td>Furniture</td>
<td>20</td>
<td>10</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Chipboard</td>
<td>15</td>
<td>5</td>
<td>Immediate</td>
<td>5 years</td>
</tr>
<tr>
<td>Softwood plywood</td>
<td>15</td>
<td>10</td>
<td>?</td>
<td>?</td>
</tr>
<tr>
<td>Hardwood plywood</td>
<td>20</td>
<td>10</td>
<td>Immediate</td>
<td>10 years</td>
</tr>
</tbody>
</table>

Notes:
(a) Tariff quotas refer to ‘tariff rate quotas’ whereby a specified quantity can enter duty-free, and anything above the quota is subject to a tariff (also reduced to zero in the times

\(^1\) While some may argue that this did not happen prior to trade liberalisation (so why should it happen after?), it can be observed that the over-valued peso, high protection for unprocessed forest products, and less advanced ejido organisation tended to discourage vertical integration before it.

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Development Bank backing, this aims to develop environmental service payment mechanisms.
specified). Importers have shown little interest in bidding for these quotas in auctions, preferring to pay the tariffs.

(b) The 10 year tariff reduction becomes effective in 2003, and the five year reduction in 1998.


In terms of the forest sector, NAFTA involves a trade partnership between two giants of forest trade and a relative minnow. The US is the world number one producer of roundwood and paper, a major timber exporter, and the main consumer of forest products, while Canada is the first world timber exporter and second producer of logs. A further problem of the forest trade liberalisation process for Chapela (1998), as in the agricultural sector, is the persistence of high subsidies by competing trading partners, e.g., the Chilean and Brazilian plantation sectors have been subsidised by up to 70% in the past, while US and Canadian subsidies are about 20-25% of production costs (Manuel Torres, pers. com.). The subsidy levels in programmes like PROCAFOR and PROCYMAF are relatively insignificant.

It should also be noted that Mexico has a number of other free trade agreements involving low or zero tariffs with countries which are important forest trade partners, notably with Chile (1998), various other Latin American countries (but not Brazil) and the EU (2000). The latter allows for a four to eight year period for phasing out tariffs depending on the product.

Non-tariff measures (NTM)

There are various NAFTA provisions with implications for NTMs:

- The rules governing ‘trade-legal’ phytosanitary standards are set out in Chapter 7. Core requirements are that they have a scientific basis, are based on ‘risk-assessments’, do not discriminate against imported products, and do not pose ‘unnecessary obstacles’ or a ‘disguised restriction’ to trade.

- A complex set of WTO style rules in Chapters 9 and 10 relate to process and production methods, product labelling, and government procurement. NAFTA recognises the supremacy of the WTO Technical Barriers to Trade Agreement.

- The possibility of introducing ‘countervailing duties’ under Article 19 could limit future efforts to support the CF sector. Should a country feel that subsidies in a
NAFTA partner country are causing severe problems, they can apply for countervailing duties (but at present it would appear that Mexico has a stronger case for applying for them than its NAFTA partners).

4. DIRECT IMPACTS OF TRADE LIBERALISATION

4.1 Impacts on prices and production

The impact of trade liberalisation on timber values and prices is key to understanding production and trade impacts. The evidence appears mixed. Whereas prior to NAFTA, pine lumber was sold on the national market for Pesos 1.90 per board foot (bf), by 1995 US and Canadian lumber was selling for Pesos 0.90 per bf in Mexico City; and in 1999 US sawnwood import prices were $0.90 per bf, compared to a cost of production in Michoacan of $2.80 per bf (Gonzalo Chapela, pers. com.). Jaffee (1997) also reports ‘plummeting’ pine sawnwood prices in Michoacan State as a result of NAFTA. But forest economist informants\(^1\) revealed that real log and sawnwood prices received by CFEs have held up and even slightly increased since trade liberalisation. Prices have held up for various reasons: preferences for national timber – imported species are mainly imperfect substitutes; increasing national demand including from a still over-capacity industry; and due to the way CFEs set their sale prices based on the cost of production (in these calculations, the logs are treated as a free good). Even lower quality ‘utility wood’ for construction and pallet making has maintained its value (J-L Mota, pers. com.).

There also appears to be mixed evidence as regards the impacts on production and trade. Different studies have been commissioned with different constituencies in mind. The IMEXFOR (2002) study involving the Finnish Consultancy group INDUFOR puts a fairly positive gloss on trade liberalisation; critics claim it was influenced by importing ‘maquila’ interests (e.g., furniture exports from imported timber) which have done well out of NAFTA. An earlier trade study (SAI, 2001), partly commissioned by the National Chamber of Forest Industry (CNIF) which particularly represents the sawmilling industry, was more critical of trade liberalisation, and hoped to persuade the government to reintroduce protection.

\(^1\) Jose Manuel Torres and Jose Luis Mota also confirmed a lack of time series price data for logs and sawnwood in Mexico.
There are various statistical inconsistencies between these studies, but it is clear there was a sharp fall in timber production from 1989 to 1995, followed by a strong recovery by the end of the decade. Total timber production in 1990 was 8.2 million m$^3$ roundwood, almost the same level as 1981. Production then fell to 6.3 million m$^3$ in 1995, mainly due to the country’s macro-economic crisis, but recovered to 9.4 million m$^3$ in 2000 (IMEXFOR, 2002). There data disguise a major decline in the national cellulose and (to a lesser extent) sawmilling industries; there seems little doubt that NAFTA has accelerated this decline (J-M Torres, pers. com.). Interviewed CNIF representatives argued that sawmilling sales were 70% down on pre-NAFTA levels. These problems have led to ANAFATA’s application for protection under the NAFTA ‘safeguard’ clause (Box 3).

**BOX 3. ANAFATA APPLICATION FOR ‘SAFEGUARD’ TARIFFS ON WOOD PANEL IMPORTS**

In 2002, the National Association of Wood Board Manufacturers (ANAFATA), supported by the government, made an official request to NAFTA to continue the prevailing 4% import tariff on wood panels beyond 2003, on the grounds that unexpected import surges are causing severe hardship to the forest industry. The case has been brought under the NAFTA ‘safeguard’ clause rather than the ‘countervailing subsidies’ clause. ANAFATA has also requested state support and lower taxation to revitalise the industry.

Forest production impacts have varied greatly by area. In the country’s most northern state Chihuahua, there has been a large increase in (not necessarily sustainable) pine/oak timber production and in the number of private sawmills (from 108 in 1993 to 309 in 1998) since NAFTA (Guerrero et al, 2000). Significant production increases have also been registered in other States with high stumpage values (low transport cost and/or higher value forest products) like Durango, Guerrero and Oaxaca.

In the southeast tropical areas, Galletti (2002) identifies two main phases of trade liberalisation impacts. The initial impact in the local timber industry was the substitution of locally produced timber and sawnwood (especially mahogany) by cheaper raw materials from neighbouring producer like Guatemala and Belize. The second phase, when NAFTA was in full flow, involved the import of more processed forest products from the US, Chile and Asia. This caused the collapse of much of the regional timber industry, especially wood panel, furniture, construction parts, and plywood producers. The local plywood industry suddenly had to compete with Asian
plywood at a third of the price (Galletti, 2002). A particular concern has been the erosion of regional marketing structures linking forest management and processing.

Various studies (World Bank, 1995; IMEXFOR, 2002) identify an underlying problem of low competitiveness for Mexico’s forest production in a liberalised trade regime. While Mexico is competitive in pulp production\(^1\), it is not competitive in pine sawnwood (almost double the cost of Brazil, and 25% more expensive than USA according to the IMEXFOR study) or plywood (40% more expensive than US, and 55% more expensive than Brazil). Reasons for this low competitiveness include (IMEXFOR, 2002; Morán & Galletti, 2002; other key informants):

- the prevalence of obsolete and inefficient technology inherited from the protectionist era;
- high transport costs from most production areas, many characterised by a mountainous terrain;
- scale problems: a view in Durango State was that the minimum size for a viable forest industry is 5 million bf per year. Large numbers of small companies have gone out of business, lacking the scale and technology (e.g., dryers) to compete;
- the dependence on natural forests of relatively low productivity (1-2 m\(^3\) per year) managed under multiple objective CF regimes, compared to the extensive industrial plantations managed by the profit-oriented and subsidised enterprises of its trading partners (productivity levels up to 30 times higher);
- tenure and other constraints to plantation investment (Box 2);
- declining stocks of mahogany and cedar from south-east Mexico.

Key informants stressed the structural problems pre-dating liberalisation, pointing out that trade liberalisation has magnified unfavourable underlying trends. As pointed out by World Bank (1995), an effect of trade liberalisation in Mexico has been to increase the forest area which is uncompetitive due to higher transport and processing costs. Some observers (not only the timber industry) also argue that the Peso is over-valued by 30-40%, and that this is a more serious problem for domestic industry than tariff cuts. Other sources pointed out that the exchange rate is floating, but often appears inflated due to remittances (the third most important foreign exchange earner), drugs and (temporarily) PEMEX oil export receipts\(^2\).

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\(^1\) But much of this is from imported timber or recycled paper.  
\(^2\) Dr Pablo Cutler, a macroeconomics researcher at Iberoamericana University, also pointed out that people are not buying dollars on any major scale, which suggests the exchange rate is not over-valued.
4.2 Impacts on imports and exports

While both imports and exports have increased with trade liberalisation, imports have increased much faster (Figure 1) reflecting Mexico’s comparative disadvantage in timber production in comparison with its trade partners, as discussed in 4.1. In the initial period of trade liberalisation (1988-1993), the forest trade deficit doubled (Chapela, 1998), and then doubled again from 1993 to 2000 as shown by Figure 2. Besides this long-term drain on the balance of payments, informants emphasised the problems arising from sudden large changes in exchange rates (resulting in sharp changes in import and export prices\(^1\)) and macro-economic policy adjustments, pointing that it is only the bigger players who can absorb these shocks and the depressing effects on investor confidence. For example, the economic crisis of 1994-95 and the dramatic peso devaluation resulted in an increase of forest exports to the US by 50% the following year, and a sharp fall in imports, as shown in Figure 1. Prior to this, there had been an import surge in paper products, and most cellulose companies went out of business in 1994. Sawnwood imports experienced large increase over 1995-98, followed by a sharp fall in 1998-99, since when they have increased again (Moran & Galletti, 2002).

It is important to note that an increasing proportion of forest product imports are coming from non-NAFTA partners, particularly Chile, Brazil and south-east Asia. According to SAI (2001), imports from Chile, Brazil and Indonesia increased from 1998 to 2000 by 641%, 218% and 163% respectively. Plywood imports increased in volume terms by 288% from 1998 to 2000 - Indonesia supplied 32% of Mexico’s plywood imports in 2000 (IMEXFOR, 2002). Imports are mainly of lower quality and value forest products like paper and cardboard (over 50% total import value). Some of these cheap imports appear to be illegal timber. According to the National Chamber of Forest Industry, ‘Chilean’ imports are often clandestine timber from Brazil, Bolivia and Peru shipped to Chile to avoid national taxes.

4.3 Impacts on the forest resource

Trade liberalisation is only weakly linked to deforestation according to most sources. Estimates of annual deforestation vary from 0.75% to 2% (300,000 to 800,000 ha),
with a consensus around 600-700,000 ha. Most of this is in tropical forest areas. The main historical driver of deforestation has been agricultural and livestock expansion policies, most recently due to agricultural subsidy programmes like PROCAMPO and PROGRESA (Morán & Galletti, 2002). These subsidies have also been driven by NAFTA as an attempt to compensate farmers for the loss of their basic grain markets. A major concern of NAFTA critics has been whether the economic pressures would result in widespread forest clearance for parcelación following the 1992 tenure reform, but the only State where this seems to have happened on a significant scale has been Chiapas - and this was partly due to an over-regulatory State forest law which drastically reduced the value of the forest resource (F.Chapela, pers. com.).

5. TRADE LIBERALISATION IMPACTS ON FOREST GOVERNANCE INDICATORS

5.1 High level or political corruption

How has the indicator changed?

Informants agreed that the opportunities for high level corruption were much higher in the pre-1986 forest economy. For example, there were opportunities for bribes in the requirement of a letter of permission for importing forest products and other complex import procedures (V. Sosa, pers. com.). But the scope for corruption in current national forestry programmes is felt to be very limited. This is partly due to President Fox's institutional reforms to implement his anti-corruption election pledges.

The Anti-Corruption and Pro-Transparency Unit (Unidad de Lucha de Transperencia y Contra Corrupción) was set up under the Auditor General’s Public Administration office (Controladuría General de la Administración Pública), directly attached to the President's office. There is now an anti-corruption unit in every government department. These carry out routine checks and audits, monitor nepotism and preferential treatment, and investigate denouncements. Punishments and penalties have increased substantially. High risks and low pay-offs have made high level corruption unattractive according to key informants. There are also State level anti-

\footnote{For example, the average price of imported softwood planks, beams and rafters fell by 43% from 1999 ($67.2 per m$^3$) to 2000 ($38.80 per m$^3$), while there was a 178% increase in volume (SAI, 2001).}
corruption units with strong civil society participation, for example, the Durango branch started up in December 2001.

While the Director General of the Environmental and Natural Resources Secretariat (Secretaría de Medio-Ambiente y Recursos Naturales – SEMARNAT) and other senior posts are political appointments, this is not felt to be a problem. This is firstly because there is little economic patronage power, and secondly nominees are generally well qualified for the posts.

*Is there a link with trade liberalisation?*

While there is agreement that trade liberalisation has encouraged transparency, an arguably more significant factor in reducing corruption was the shift away from the industrial forest concession system which reduced the size of potential corruption gains. This happened before the trade liberalisation process started. Informants also viewed the reduction in high level corruption as largely a product of democratic progress – particularly the transition from 70 years of one party rule.

5.2 Petty or field level corruption

*How has the indicator changed?*

Petty or field level corruption has always been prevalent. Logging bans, which intermittently covered up to a third of Mexico’s forests until the 1970s, were particularly associated with local level corruption which included the police force. Most informants agreed that local level corruption has increased with the introduction of stricter procedures surrounding the approval of forest management plans, transport and other permits. This implies increased corruption from 1986 to 1992, a reduction from 1992 to 1997, and an increase from 1997. In spite of the institutional improvements described in 5.1 and 5.3, petty corruption is still regarded as widespread, partly because the procedures are still slow and bureaucratic. Even in a protected area like the Monarch Biosphere Reserve in Michoacan there is a high

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1 These bans were also associated with high level corruption; one source reports they were motivated not by environmental concerns but to create reserves for industrial expansion, and to disadvantage those logging interests not allied to Presidential interests (Guerrero, 1998, cited in Klooster, 2002). The bans are also reported to have led to the entrenchment of timber smuggling.
level of petty corruption mainly involving forest technicians, timber merchants and the *comisariado ejidal*, the main ejido governing body (L. García, pers. com.).

*Is there a link with trade liberalisation?*

While the liberalising 1992 Forest Law designed to complement NAFTA reduced corruption associated with authorisation procedures, it was at a net forest governance cost since it proved a strong stimulus to illegal logging, and had to be reversed in 1997. It is difficult to argue a strong link between trade liberalisation and ‘field level’ corruption. However the greatly reduced complexity of import and export procedures introduced particularly under NAFTA has reduced the scope for corruption in external trade transactions.

### 5.3 Institutional regulatory capacity

*How has the indicator changed?*

The policy discussion in section 2.2 indicates that the reforms associated with trade liberalisation and other neo-liberal policies resulted in at least one u-turn in terms of federal regulatory capacity. While the 1986 Forest Law increased state regulatory powers, SAP budgetary cuts severely reduced the state’s implementation capacity. Between 1986 and 1992 the Forest Service was practically disbanded according to Jaffee (1997).

While the 1992 Forest Law reduced state capacity, there were at the same time several positive institutional developments. These included the NAFTA environmental side-accord CEC (Box 1); the merging of two Secretariats with forest and environmental management mandates into the Secretariat of the Environment, Natural Resources and Fisheries (SEMARNAP – later changed to SEMARNAT); the Attorney General’s Office for the Protection of the Environment (*Procuradía Federal de Protección al Ambiente* - PROFEPA); and the Technical Council for Forest and Soil Conservation (*Consejo Tecnico Consultativo Forestal y de Suelos* - CONAF) discussed in 5.8.

PROFEPA is responsible for tackling illegal logging; it carries out operations with the police and occasionally the army. The 1997 Forest Law re-established a stronger regulatory basis, and provided PROFEPA with increased enforcement powers and
an expanded audit authority. This includes the powers to close or suspend damaging operations, and to order violators to restore ecological damage (Guerrero et al, 2000). PROFEPA is also promoting voluntary environmental audits of forest technical service agencies, CFEs and the forest industry. However some observers feel that SEMARNAT lacks necessary regulatory capacity, for example to adequately monitor private forest technical services.

There are also grounds for concern over the potential regulatory impact of some of the NTM provisions of NAFTA. The forestry incident reported in Box 4 implies that due to the US interpretation of the phytosanitary ‘trade legal’ rules, trade considerations seem likely to overrule domestic health and environmental concerns (Guerrero et al, 2002). Further concern over the sanctity of national environmental regulations from trade pressures arises from the Metalclad case (also reported in Box 4), although there was also a problem of a clash of federal and decentralised governance. Behind these cases is the concern that Mexico is usually likely to lose out as the weakest NAFTA partner. For example, there is a resentment that there has been insufficient NAFTA response to situations in which strong labour unions in US border states have (illegally) prevented the entry of Mexican timber trucks.

**BOX 4. NON-TARIFF MEASURES: TRADE CONCERNS WINNING OUT OVER DOMESTIC ENVIRONMENTAL CONCERNS**

In 1998, the Mexican environmental ministry SEMARNAP proposed that unprocessed wood imports from NAFTA partners be certified as coming from a zone “free of pests and disease” and border inspections be carried out with powers to destroy, return or fumigate the timber according to the pests identified. The official US response was that the required certification would be “a serious problem”, and could cause “disruption” and “hardship” for the US timber industry. This response did not mention some of the valid environmental and health issues associated with the use of toxic fumigants to treat infected timber, indicating that the main US interest was on trade aspects of phytosanitary standards. SEMARNAP agreed that the final rules “will not impede US wood exports to Mexico” (Guerrero et al, 2000).

In another NTM related incident, the US hazardous waste disposal company Metalclad won an action against the Mexican government on the basis of a provision in Chapter 11 allowing private companies to apply for compensation from NAFTA governments for lack of “fairness” and “expropriation without compensation”. Metalclad won compensation worth almost $17 million following a decision by local government to prevent the landfill after a federal permit.
had been obtained. Guerrero et al (2000) felt that this case could be used by US or Canadian forestry companies to challenge the rejection of timber extraction permits, and that this could be exerting a chilling effect on the enforcement of national forestry regulations.

Is there a link to trade liberalisation?

Again the picture is somewhat blurred. While the 1992 reforms designed to complement NAFTA reduced control at the stump, various positive institutional developments are at least indirectly linked to NAFTA. Although the establishment of institutions like PROFEPA and CONAF coincided with NAFTA, the view was that they responded more to a broader democratic process. The NTM-related impacts can also be seen as part of the wider neo-liberal economic package.

5.4 Control and denouncement of illegal logging

How has the indicator changed?

It is difficult to establish overall trends in illegal logging\(^1\) in recent years – some key informants think it has increased, while others feel it is about the same or has fallen. In practice trends in illegal logging appear to vary greatly by State and forest type. It is probably worst in Michoacan, Mexico and Durango States, where the scale of operation ranges from the use of mules to armed groups with large trucks, probably part financed by drug money. Most illegal logging is for the low quality domestic construction market (S. Madrid, pers. com.); this is a booming market due to the rapid pace of urbanisation.

Much illegal logging stems from the rentista model in which timber merchants exert corrupting pressures on CFEs to sell them more than the authorised cut (D. Bray, pers. com.). Internal ejido tenure and corruption problems compound this. Forested land rights within the ejido or indigenous community are often unclear or insecure, encouraging short-term objectives (SEMARNAT, 2001). Many ejidos are dominated by internal corruption based on clientalism (client-patron relationships) and caciquismo (control by the elites). Most of the problems surround the main ejido governing structures, the comisariado ejidal and the consejo de vigilancia, which are

\(^1\)Current estimates of illegal logging vary from 60% to 200% of the legal cut. The higher estimate based on supply and demand analysis was published in the first draft of the Strategic Forestry Plan (SEMARNAT, 2001), but commands limited confidence – later versions omit it.
often controlled by one or two powerful families (Mitchell, 2000). Non-transparent administrative procedures particularly encourage corruption and erode social capital, causing the breakdown of community controls and individualised production decisions. Several informants also felt that slow approval procedures and over-regulation were encouraging illegal logging.

In Chihuahua State on the other hand, an informed recent estimate¹ is that illegal logging has fallen by about 80% over the last three years, mainly due to more effective implementation of the checks and regulations introduced in 1997, as well as improvements in the quality of the competing forest technical services (V. Peréz Cirera, pers. com). Also there is little or no clandestine exporting; there are various filters and checks (State and federal transport points, customs, etc.) and the punishments can be high (e.g., closure for three months) making it a high risk option (F. Chapela, pers. com.).

Denouncements of illegal logging by civil society has clearly increased in some States. In the late 1990s, indigenous leaders, ejido residents and NGOs filed over 400 complaints against illegalities in the Sierra Tarahumara in Chihuahua, where external trade pressures are the highest in Mexico (Guerrero et al, 2000). This resulted in 43 judicial actions being brought against illegal logging. A submission was also made by the Chihuahua-based NGO Fuerza Ambiental to CEC that the country failed to enforce forestry regulations or to respond to citizen complaints². These complaints and the accompanying civil society environmental justice campaign resulted in PROFEPA becoming more pro-active; most of the cases were concluded, but the level of fines and penalties was felt to be inadequate. Recent evidence is that people in the State are afraid of the PROFEPA forestry inspectors, who are being particularly active in revising management plans in the field, and the concern has now switched to weak or inappropriate State-level powers rather than federal capacity (V. Peréz Cirera, pers. com.).

_Is there a link with trade liberalisation?_

Some informants felt there was a significant link between cheap timber imports (typically 15-40% cheaper than the national production cost) and illegal logging, since

¹ Based on interviews in 38 CFEs by Vanessa Peréz Cirera as part of her doctoral research.
² The most recent communication on this is that CEC has replied that it considers the Government’s response to the denouncement as unsatisfactory (V. Peréz Cirera, pers. com.).
the latter represents a logical way of reducing costs to stay competitive (J-L Mota, pers. com.). Jaffee (1997) documents how lower resin prices due to imports encouraged CFEs in Michoacan State to abandon resin tapping and take up illegal logging. But another comment was that lower timber product sale prices also reduce the incentives for illegal logging, while increased reports of illegal logging reflect a more favourable reporting environment (C. Muñoz Piña, personal communication). The majority view was that there are other more powerful drivers of illegal logging than trade liberalisation, but the latter may be a contributory factor.

Guerrero et al (2000) found that while there was an increased application of environmental regulations post-NAFTA, the citizen complaint process lacked credibility and the regulations were ‘inefficiently’ applied, partly due to complicity between the authorities, timber companies, middlemen and the ejido caciques.

There is a problem in isolating trade liberalisation impacts as regards this and other indicators in that the introduction of NAFTA coincided (deliberately) with the deregulatory 1992 Forest Law. This resulted in a huge increase in illegal logging, one study in Durango State recording illegal logging levels three to five times greater than the authorised cut (J-M Torres, pers. com.).

5.5 Certification

How has the indicator changed?

Mexico has become one of the tropical world leaders in certification, partly due to the location of the Forest Stewardship Council in Oaxaca. At October 2002, about 500,000 ha belonging to 27 CFEs had been certified, and another 27 CFEs as well as 10 chain of custody operations were in the process of becoming certified (S.Madrid, pers. com.). A limitation to certification in Mexico is that most forest products are sold on the national market, and there is little current sign of a domestic certification market developing since it is highly cost sensitive\(^1\) (S. Madrid, pers. com.). Also, equity problems in ejidos and high transaction costs mean that there is a relatively small CFE area with certification potential (G. Segura, pers. com.). One key informant questioned the quality of some of the certificates, arguing that they sometimes amount to little more than spot checks.

\(^1\) Although the privatised telephone company TELMEX has announced it only wants certified timber.
Is there a link to trade liberalisation?

There would appear to be a strong *a priori* case for linking the development of certification, with its associated forest governance benefits, to the increased incentives for exporting in a liberalised trade regime, as well as the influx of cheap timber imports. As the domestic market becomes more difficult to supply (at least from some producer areas), the export market is becoming more important to CFEs and the forest industry in general. At the same time North American consumer pressures for certification are very gradually increasing.

While many CFEs are attracted to certification for more secure access to the export market, key informants pointed out that there are possibly more important motives for certification. These motives, some of which need to be understood in the context of high levels of conflict and sometimes violence over a range of rural development issues, include:

- Increased prestige and credibility with local government and other stakeholders – certification increases the level of respect, and hence negotiating capacity in a range of rural development situations;
- Improved land tenure security – some 20% of CFEs have boundary conflicts with neighbouring communities, and certification helps them resolve these\(^1\);
- Increased confidence of more equitable regulatory treatment by the state;
- Increased policy influence, e.g., to avoid the kind of over-regulation introduced in Chiapas, which resulted in widespread deforestation (F. Chapela, pers. com.);
- Increasing the likelihood of attracting donor projects.

Although there is some evidence of increasing demand for certification, it is not clear to what extent the process is being market-driven, partly since the CFEs are not paying the main costs of certification (covered in PROCYMAF). Some US importers (e.g., Home Depot) are requesting certified timber, although these are in a minority since demand for certified timber products is still weak in the US (J-M Torres, pers. com.). In Guadalajara, the National Chamber of Forest Industry reported there was no export market pressure for certification, while in Durango, the State with most certified forest, there was an incipient but not strong external market pressure.

\(^1\) Absence of boundary conflicts is also a condition for issuing timber extraction permits.
Finally it should be noted that the NAFTA rules restrict how much a country can promote certification through trade and procurement policies, at least to the extent that there is any deviation from international recognised standards. Although this is not currently an issue in Mexico, it could constrain future support for certification.

5.6 Self-regulation

*How has the indicator changed?*

Most informants felt that this process was still very incipient. However the new forest law (in preparation) will promote voluntary environmental audits, partly in the hope that a green market may eventually demand it. The University of Durango, for example, is helping to develop the audit process. There is also a strong demand for public audits of forestry companies in Chihuahua State.

Another voluntary level initiative encouraging better forest governance is the Canadian based Model Forest Programme. Mexico was the first country to become an international partner, and has three pilot areas with a twinning relationship with Canada (Mitchell, 2002). However Canadian funding has greatly diminished in recent years, and one of the areas, the Monarch butterfly forest reserve in Michoacan, was described by a SEMARNAT informant as a ‘headache’.

*Is there a link with trade liberalisation?*

Informants felt that the incipient movement towards increased self-regulation was only weakly related to trade liberalisation, although it seems clear that the incentive for self-regulation was much weaker in the pre-1986 closed forest economy. Also it might be suspected that Mexico’s participation with nine other countries in the Montreal Criteria and Indicators process in 1985 was partially motivated by the imminent inception of the trade liberalisation process. Finally a negative governance impact possibly related to trade liberalisation (since it represents a means of reducing costs in order to stay competitive) has been a reduction in essential monitoring data collected by the CFEs.
5.7 Relative law-abiding standards of foreign-owned and national companies

How has the indicator changed?

Since NAFTA, policies have tried to attract foreign direct investment (FDI), especially in the plantation sector (Klooster, 2002). In practice there has been more external interest in the processing and marketing of forest products. About 15 major US companies have set up operations in Mexico since 1994, including International Paper (Chihuahua and Chiapas States), Simpson (Chihuahua, Tabasco and Veracruz), Temple Inland Forest Products (Tabasco and Veracruz), and Boise Cascade (Guerrero). Several Chilean companies have moved into the marketing of forest products in Jalisco State, while a mix of Chilean, Canadian, American and Spanish companies have developed operations in Durango State.

Key informants, including national forest industry representatives, agreed that foreign-owned companies were generally much more law-abiding and respectful of norms than Mexican companies, partly due to the fear of eviction if they are not seen to be totally compliant. However the literature also indicates some cases in which the actions of foreign companies are not always so positive; for example, a subsidiary of the US International Paper Company attempted to obtain a forest permit in Chihuahua State stipulating very small diameter pines (9-15 cm) and which would have tripled the allowable cut of one ejido (Guerrero et al, 2000). The operation was stopped following a petition by 13 ejido members.

Is there a link to trade liberalisation?

While the evidence is perhaps thin, there appears to be a positive governance impact from foreign-owned companies. Compared to most Latin American countries, Mexico has a much stronger regulatory framework. This appears to confirm the hypothesis that good (or better) governance attracts good governance, just as the ‘economies in transition’ literature reveals that less scrupulous companies are attracted by lax environmental standards (see Richards, 2002). It could be the case that while Mexico is attracting more responsible companies, countries in Central and South America with a weaker regulatory basis are attracting less scrupulous foreign companies.
5.8 Civil society participation

How has this indicator changed?

An important effect of NAFTA according to Mitchell (2002) has been to stimulate a strong civil society response, in which NGOs have joined forces with grassroots organisations to protest against the ecological and social impacts of NAFTA. At least partly due to this civil society movement, Mexican citizens now have better access to environmental information and justice. Some important fora have been developed, most notably CONAF and the decentralised anti-corruption units (see 5.1 and 5.3). ** CONAF has a series of decentralised sub-committees in which NGOs, grass roots organisations and other stakeholders meet to discuss forest sector issues. An electoral commitment was that CONAF should have a policy influence.

Transparency has greatly increased in the Fox regime - it is now even possible to check government employee salaries on the internet. The CEC also provides citizens with the chance to denounce violations of national regulations, although there are limitations in terms of the violation of forest laws (see Box 1).

Is there a link with trade liberalisation?

Key informants agreed that civil society participation1 has increased substantially since NAFTA, but felt this was primarily a result of political democracy pressures – for example CONAF was a response to civil society demands for participation in environmental issues. It is also interesting to note that improvements in participation have come partly from the mobilisation of civil society to protest against the likely social and environmental impacts of NAFTA. While it is difficult to imagine the same progress could have been achieved in the pre-1986 forest economy, some level of protection is not incompatible with strong civil society participation.

5.9 Community forest enterprise governance

How has the indicator changed?

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1 Some informants pointed out that this participation is often rather ideologically based, and so is not always constructive.
This indicator overlaps considerably with illegal logging (5.4) and regulatory capacity (5.3). It is clear from the literature and informants that, just as low forest profitability erodes social capital and incentives for good governance, leading to a breakdown in community controls and the ‘tragedy of the commons’, higher returns encourage better governance where social capital is reasonably strong. A recent book on CFE governance by Merino Peréz (2002) finds that stronger institutions and higher social capital levels tend to be found in CFEs with higher levels of natural capital and which are regularly supplying the formal market. This is confirmed by other documented case studies showing how CFEs have responded positively to NAFTA’s challenges. These include San Juan Nuevo Parangaricutiro in Michoacan (Box 5), El Balcón in Guerrero State (Bray & Merino Pérez, 2001), Nohbec and a couple of other ejidos in the Sociedad de Productores Forestales Ejidales de Quintana Roo (SPFEQR), the Emilio Zapata Union of ejidos in Durango (Taylor, 2000), the Unión de Comunidades Forestales Zapoteco-Chinanteca (UZACHI) in Oaxaca State (Chapela, 2002), and Ixtlán de Juárez indigenous community (Mitchell, 2002).

**BOX 5. SAN JUAN NUEVO PARANGARICUTIRO – RESPONDING TO NEW MARKET OPPORTUNITIES** (based on Bray, unpublished)

The indigenous San Juan Nuevo Parangaricutiro (SJNP) CFE in Michoacan has about 18,000 ha of pine, oak and other broadleaf forest, and about 1,230 community members. According to David Bray, a long-time observer of Mexican CF, this is probably the most diversified and sophisticated CFE in the country. Its advantages include high quality forests; volcanic soils which allow all year round extraction; a high level of social capital (see below); and the market benefits from proximity to a large town (Uruapa). On the other hand, the forest is on steep slopes and the area is subject to strong forest clearance pressures for avocado production and high levels of illegal logging.

The success of SJNP is based on three main timber product lines: moldings, furniture and sawnwood. SJNP has particularly excelled in the production of moldings since 1993; by 2000, it was producing a million board feet in moldings, 80% for the domestic market, and 20% for the US. About 35% of export sales are to the US retailer Home Depot, one of the US companies pressing for certification. Bray feels that this is an example of a response to the new market opportunities under NAFTA - Mexico’s location gives it a competitive edge over Chile in supplying this market. The general manager of SJNP has also commented that NAFTA has been a challenge and stimulus to improved organisation and production efficiency.
In the case of furniture, SJNP has developed a niche domestic demand for high quality furniture from major department store chains; SJNP has been trying to persuade these Department Stores to develop a line in certified furniture (SJNP was certified in 1999 by Smart Wood; this has led to more environmentally sensitive management practices, although as at mid-2002 it had not sold any certified timber). SJNP is currently investigating the export market for certified rustic furniture. Thirdly, SJNP is able to sell high quality sawnwood (better than most imported sawnwood) on the domestic market to an established portfolio of industrial companies in Central Mexico, mainly for furniture and construction. Timber production is supported by the sale of non-timber forest products like mushrooms and moss; medicinal plants for domestic use; and eco-tourism.

Bray emphasises two historical factors in SJNP’s success, especially in terms of its high levels of human capital, social organisation and entrepreneurial efficiency. First the community was severely hit by the Paricutín volcano in 1944 causing the community to relocate. This ‘cataclysmic’ event engendered an enduring community spirit. Secondly, many of the men worked on reforestation brigades in the US Pacific North-West as part of the bracero contract labour programme from the 1940s to the 1960s. This exposed them to forest management and tree planting; it also caused unusually strong bonds between the remaining children and grandchildren, and an enduring respect for local institutions and traditions. SNJP has been careful to nurture its social and human capital, for example by allocating profits to further education opportunities.

But as discussed in 5.4, most CFEs still depend on the rentista model, are poorly-organised, and suffer from widespread caciquismo corruption (Jaffee, 1997). One of the six CFEs in the study by Merino Pérez (2002) used to be relatively strong (institutionally), but due especially to the federal imposed logging bans, the viability of timber management fell causing the erosion of its internal regulatory powers. The CFE now suffers from an almost open access situation and widespread clandestine logging. Another concern of trade liberalisation is that it has further encouraged a more monetary and less traditional or subsistence-orientation in forest management objectives, as noted for example in Chihuahua (V. Pérez Cirera, pers. com.), and that this has contributed to a decline in the respect for traditional community controls.

The ‘liberalisation’ of forest technical services in 1992, so that CFEs could choose the cheapest service available, proved especially problematic for CFE governance; for most smaller CFEs, hiring forest technical services is a significant cost – this was therefore an obvious cost-reduction opportunity. This policy also undermined intermediate peasant organisations like the Emiliano Zapata Union in Durango which
had its own technical forest services for affiliated CFEs (Taylor, 2000). Taylor (2000) also describes how NAFTA-related reforms have undermined grass-roots capacity to organise effectively in response to forest sector problems.

In the tropical south-east, Arguelles et al (2001) and Galletti (2002) present a grim picture of NAFTA impacts – both in terms of increased financial pressures, and how NAFTA-related reforms created an institutional environment which has encouraged internal CFE divisions. Pre-existing weaknesses in internal organisation, and traditional ejido structures and roles meant that the CFEs were not geared up for modern enterprise management. An important financial change accompanying trade liberalisation was that, as timber merchants and processors found they could import the raw material more cheaply and/or they ran into increasing financial problems due to import competition, they became less willing to pay the CFEs in advance. This shifted the onus for financing the production process from the industry to the CFEs. Another effect of the new system of payments was that the comisariado ejidal received large amounts of cash at the same time, increasing the concentration of power and causing equity problems (Arguelles et al, 2001). Also the possibility of ejido parcelación, but with the proviso that forested land is excluded, created further confusion for the forest ejidos.

Is there a link with trade liberalisation?

The evidence suggests that trade liberalisation has had positive and negative impacts on CFE governance. The positive impacts have been for CFEs with higher levels of social and natural capital who have been able to respond to the pressures to modernise and adapt. Unfortunately these are in a minority. For the majority of CFEs, the influx of timber imports appear to have increased the economic pressures on fragile internal governance structures. Several informants felt there was a risk that CFEs will increasingly revert to illegal logging as national markets are increasingly satisfied by cheap imports – or resort to alternative illegal activities.¹

7. DISCUSSION: DIFFERENTIATED IMPACTS

¹ For example, illegal opium and marujana cultivation is increasing in Guerrero, Durango and Chihuahua States, and could be linked to declining legal forest and agricultural profitability (L. Merino Peréz, pers. com.). The capacity to diversify legally varies according to the value of natural capital and access to other income-earning possibilities, e.g., potential for eco-tourism in southeast Mexico.
There are many Mexicos” (attributed to Octavio Paz)

One of the main lessons from the above analysis is that it is unwise to generalise about the governance impacts of trade liberalisation in Mexico. There is a need to differentiate by area, forest type and quality. In the case of the pine and oak forests, it has been the areas (e.g., Central Mexico) and CFEs with lower quality forests and products which have suffered most - the increase in imports has been mainly in lower quality timber and forest products. By contrast, demand for higher quality forest production from Durango, Chihuahua, Guerrero and Oaxaca States has continued to be firm (although prices have been somewhat flat) both for the export market and in the higher quality national markets. Even within States, there is a need to differentiate trade liberalisation impacts, as shown in Box 6.

BOX 6. DIFFERENTIATED IMPACTS OF TRADE LIBERALISATION IN OAXACA STATE (based mainly on discussions with Francisco Chapela)

Oaxaca has witnessed major changes in products, actors and markets over the last 25 years. In the 1970s, forest production was in the hands of the parastatal forest sector and logger merchants using the rentista model, and was mainly destined for paper production. Following the rise of the CF sector, many CFEs acquired sawmills in the early 1990s. Since the mid-1990s, production from the high quality pine-oak forests in the Sierra Norte has focused mainly on the export market and been processed on-site or locally. However this disguises three main ‘forest management’ situations in the State. Oaxaca has about 5 million ha of forest, which can be roughly broken down as follows:

- About 500,000 ha managed by ten industrialised CFEs producing mainly for the export market (about 60%), particularly doors, parquet floors, window frames and furniture. The market provides good incentives for forest governance in these CFEs, most of which have been certified or are in the process of obtaining certification.
- About 300,000 ha managed by some 440 small CFEs and smallholders holding legal forest management plans. With an average size of less than 1,000 ha of forest per holding, certification is an expensive option (for the government or the owner) and is discouraged by middlemen. The mixed export and national market provides reasonable but not strong incentives for good governance.
- The remaining 4.2 million ha are composed of small CFEs with poor quality forests selling to the local market and supplying subsistence needs. Although there are still traditional controls, they are breaking down. The consequences are illegal logging, widespread
forest clearance, and possibly some parcelación. A major cause of illegal logging is the high cost of compliance, but Chapela was reluctant to attribute this to trade liberalisation per se.

The main effect of trade liberalisation, according to Chapela, has been to accelerate the division between the formal regulated sector and an informal virtually unregulated sector. These divisions already existed but to a lesser extent. Therefore trade liberalisation has widened the gaps between good and bad forest governance in Oaxaca State.

A somewhat similar picture to Oaxaca emerges from Chihuahua State, where the majority of CFEs remain impoverished suppliers of timber according to Guerrero et al (2000), or have dropped out of the formal market and are increasingly considering a change of land use1. Other CFEs with higher levels of social and natural capital, and where traditional subsistence forest uses remain important, have become stronger as a result of the NAFTA shocks. For example, rank and file ejido members in some CFEs have managed to break down traditional contractual arrangements in which prices are fixed between merchants and caciques (V. Peréz Cirera, pers. com.).

In the case of the broadleaf forests of southeast Mexico, NAFTA economic pressures have had severe environmental and social impacts, as discussed in 5.9. The strong negative impacts in southeast Mexico can be partly explained by the more fragile viability of tropical (multiple-species) forest management, as compared to temperate pine/oak production. Other problems include the CITES limitation on mahogany exports; slow natural regeneration of mahogany; and forest policy instability (F. Chapela, pers. com., Galletti, 2002).

CONCLUSIONS

The basic picture of the impacts of trade liberalisation on forest governance in Mexico needs to be highly differentiated by area, species type and CFE levels of social and natural capital. In general pre-existing better governance or organisation has combined with trade liberalisation to result in strengthened governance, while free trade has exacerbated weak governance caused by more fundamental problems, and has possibly further encouraged illegal logging. More export-oriented CFEs tend to have much better governance; this is because of their superior natural

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1 V. Peréz Cirera notes an increased monetisation of the rural economy due to NAFTA in this area, and some erosion of subsistence forest values.
and social capital which allows them to access the export market in the first place. The more negative governance picture is associated with the supply of lower value forest products on the domestic market.

A recent analysis of the effects of NAFTA on the forest resource (Moran & Galletti, 2002) found that most effects of NAFTA were indirect and complexly inter-related with other causative factors; a lack of reliable data on forestry variables to carry out statistical analysis; and no conclusive evidence that NAFTA-related commercial pressures have increased forest exploitation or deforestation. A point also made by informants is that it is very hard to separate out trade liberalisation from wider political, social, legal, economic and technological changes. Trade liberalisation impacts, both past and in the future, are particularly dependent on the accompanying policies – these can mitigate or exacerbate the social, governance and environmental consequences.

Notwithstanding these caveats it is possible from the analysis of the governance indicators in section 5, and broader analysis, to derive a crude and somewhat arguable scorecard of the likely costs and benefits of forest governance, as well as some of the wider probable positive and negative effects of trade liberalisation. It appears from Table 2 that the positive or benefit column is the clear winner; the parenthesis caveats are important in terms of the objectives of this study. The discussions in Section 5 indicate that improvements in indicators like the level of corruption, certification, civil society participation, transparency, etc., are only partly due to trade liberalisation – and other drivers are usually more important. An important factor in the benefit column is the way trade liberalisation has stimulated change from the pre-1986 situation when forest governance was in a much worse state than now. Various informants felt that the main impact of trade liberalisation has been to ‘shake up’ the forest sector, and force the government and other stakeholders to tackle some of the underlying structural problems.

Table 2. Benefit-cost scorecard of forest governance and wider impacts of trade liberalisation

<table>
<thead>
<tr>
<th>Benefits: likely positive impacts</th>
<th>Costs: likely negative impacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Positive forest governance impacts:</td>
<td>Negative forest governance impacts:</td>
</tr>
<tr>
<td>• Reduced ‘grand corruption’ (but other factors)</td>
<td>• Probable increased illegal logging from</td>
</tr>
</tbody>
</table>
- Reduced 'petty corruption' (but still prevalent)
- Increased institutional capacity (but budgetary cutbacks due to SAP)
- Incentive for certification (but other factors)
- Foreign companies more law-abiding
- Increased civil society participation and transparency (but other factors esp. democratic process)

**Wider benefits:**
- Accelerated change from parastatal to CF model
- Forest industry forced to modernise in order to compete (but many went bust)
- Stimulus to find ways of increasing market forest value: diversification, payments for environmental services
- Cheaper forest products for consumers (but increased social & environmental externalities?)
- Stimulus to develop efficient commercial plantation sector (but failed to date)

**Wider concerns or costs:**
- Increased vulnerability of natural forest management to market forces especially in tropical areas: reduced protection for SF objectives
- Increasing forest trade deficit
- Commercial plantation development could have negative social and biodiversity impacts

CFEs with lower social and natural capital
- Changes in NTMs with chilling effect on national regulatory capacity

On the other hand, trade liberalisation has clearly exacerbated the difference between better resourced CFEs and those less well endowed. The flood of imports has increased governance pressures on weaker CFEs, and probably increased illegal logging. But just as it is necessary to qualify apparently positive impacts of trade liberalisation by pointing out the importance of other governance drivers, many would argue that negative impacts are driven by a *combination* of trade liberalisation and inappropriate public policies. Particularly important was the virtual withdrawal of state support (due to structural adjustment) for CFEs between 1992 and 1997. Structural adjustment has probably been more damaging for CF than trade liberalisation *per se* (Gonzalo Chapela, pers. com.).

Mexico’s CF model is vulnerable, especially in the tropical areas, to market forces which provide weak incentives for sustainable management. Informants who emphasised negative CFE governance impacts felt that some protection is needed to protect Mexico’s CF model against subsidised competitors operating from a more entrepreneurial or business culture. As argued by Richards (in press), it is unrealistic to expect market forces alone to ensure the viability of tropical forest management,
especially when there is a strong indigenous element. An arguable impact of NAFTA has been to reduce the role of the state in protecting externalities, and to increase the market failure problems for forestry. For Galletti (2002), the lack of long-term stability in terms of forest policy support has been key to ejido decision-making in favour of alternative land uses.

This case study brings out an important point as regards the sequencing of governance and trade changes. As pointed out by Stiglitz (1998), institutional strengthening should precede trade liberalisation. In the case of Mexico, the 1992 deregulatory forest law was a poor preparation for NAFTA, since it meant that any increase in price would be likely to increase unregulated or illegal logging. With a weak regulatory basis, either increased ‘CFE gate’ prices (greater incentive to log) or reduced prices (incentive for compliance cost reduction) are likely to increase illegal logging. A stronger regulatory basis is therefore necessary on both counts, but not one that increases the transaction costs of good forestry. Forest policies need to find ways to make it ‘easier to be good’ without making it ‘easier to be bad’.

There was general agreement that profitability is the main driver of governance at the CFE level since it provides the basic incentive for stronger community controls, although this needs to be complemented by other strategies of raising social capital (education, training, technical assistance, etc.). CF observers therefore realise the need to increase the value of the forest resource. The Mexican Forest Fund initiative, which explicitly seeks to increase payments for environmental services, can therefore be a key measure to improve forest governance.

The conclusion of Guerrero et al (2000: 73) seems well balanced in that it finds that forestry in Chihuahua State is "being driven as much or more by domestic economic conditions (including the value of the peso), changes in domestic forestry law and industry consolidation, than by NAFTA tariff reductions. It should be noted however that none of these factors is necessarily unrelated to NAFTA and the generalised neo-liberal and globalization policies to which NAFTA is linked." The Mexico case appears to confirm that trade is a magnifier rather than a prime cause of differences in forest governance.
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ANNEX 1. LIST OF KEY INFORMANTS

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- Dr Leticia Merino, Environmental Anthropologist, Institute of Social Research, Autonomous National University of Mexico (UNAM)
- Ing Sergio Madrid, Director, Mexican Civil Council for Sustainable Forestry
- Dr Gonzalo Chapela, forest policy specialist (consultant)
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- Ing. Francisco Chapela, Director, Estudios Rurales y Asesoría Campesina, Oaxaca
- Dr Carlos Muñoz Piña, Director General, General Direction of Policy and Environmental Economics Research, National Ecology Institute (INE)
- Lic Maria Zorilla Ramos, Economist, INE
- Dr David Bray, Chair, Department of Environmental Studies, Florida International University, Miami
- Lic José Antonio Morán, PROTEGO (author: Deforestation in Mexico - Economic Causes and Incidence of International Trade);
- Lic Luisa Mayela Garcia, Economist, INE (thesis conducted on management of Monarch Reserve, Michoacan)
- Dr Francisco Garcia Garcia, Head of Research and Technology Development, National Forestry Commission (CONAFOR head office, Guadalajara);
- Ing. José Roberto Vargas, Adjunto Director General, CONAFOR
- Ing Salvador Moreno, Head, Research of Production Chains, CONAFOR;
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- Alejandro Sanchez Rosales, President, National Chamber of Forest Industry
- Humberto Salazar Moreno, Vice-President, National Chamber of Forest Industry
- Other timber industrialists of Jalisco: Daniel Alvarez, Alejandro Gomez, Pedro Alvarez, Juan José Toscano, Ricardo Salazar
- Lic. Hugo Mancinas, President, Association of Forest Industries of Durango
- Ing Gerardo Andrade, Gerente, Forestal Vicaya (Sawmilling) Co., Durango
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• Dr Jose Luis Mota, international forest economist consultant
• Dr Deborah Barry, Mexico and C.America Program Coordinator, Ford Foundation
• Ing Laura Lara Granados, Director of International Cooperation, General Direction of the Federalization and Decentralization of Forest and Soil Services, Secretariat of Environment and Natural Resources (SEMARNAT)
• Vanessa Peréz Cirera, PhD student (ejido forest governance in Chihuahua State), University of York, UK
• Sarah Hutchinson, Conservation Director (interim), WWF Mexico Programme Office
Figure 1. Imports of timber, paper and other forest products 1990-2000 (1990=1.0)


Figure 2. Forest product trade deficit 1990-2000 (thousands of dollars)
