

Forests and the Biodiversity Convention

Independent Monitoring of the Implementation of the Expanded Programme

of Work in Mexico





Mexico

GFC coordinator for the Independent monitoring programme: Miguel Lovera Global Forest Coalition Bruselas 2273 Asunción, Paraguay E-mail: miguel.lovera@globalforestcoalition.org

Citation:

Country monitoring report on Mexico. (2008) 33 pages. Independent monitoring of the implementation of the Expanded Work Programme on forest biodiversity of the Convention on Biological Diversity (CBD POW), 2002-2007.

By Raul Benet. Email: raulbenet@prodigy.net.mx

Disclaimer:

The information contained in this report has been provided by the independent country monitor. As such, the report does not necessarily reflect the opinion or position of GFC or other contributors.

Cover:

Plant taken in Oaxaca, Mexico.

This report was made possible through the generous contribution of the Dutch Ministry of Foreign Affairs.

For more information visit: www.globalforestcoalition.org

© Global Forest Coalition, May 2008

CONTENT

CHAPTER	PAGE
EXECUTIVE SUMMARY	6
QUESTIONNAIRE ON THE EXPANDED PROGRAMME OF WORK ON FBD	6
1. DESCRIPTION OF THE COUNTRY'S ENVIRONMENTAL,	
GEOPHYSICAL AND SOCIO-ECONOMIC ASPECTS	9
2. CHARACTERIZATION OF MEXICAN FORESTS	10
3. THE LAND REGIME: THE SITUATION OF FOREST MANAGEMENT IN THE COUNTRY	11
4. FULFILMENT OF MEXICO'S COMMITMENTS TO THE EXPANDED	
PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY	12
 4.1. PROGRAMME ELEMENT 1. CONSERVATION, SUSTAINABLE USE AND BENEFIT-SHARING 	12
	24
	28

EXECUTIVE SUMMARY

In 1992, at the famous Rio Summit meeting, over one hundred countries, including Mexico, signed important agreements with the intention of putting in order economic activities in orchestration with global social and environmental sustainability. In this context, Mexico engaged itself to undertake significant and tangible actions to manage its forests to guarantee conservation and restoration of the cover, biodiversity and forest soils, while providing benefits to forest inhabitants.

Fifteen years later, the Global Forest Coalition carried out an investigation to assess fulfilment of these commitments.

The main conclusions in the case of Mexico may be summarized as follows:

- 1. At the beginning, firm steps were taken towards building up environmental institutions, establishing bodies such as the Environmental Secretariat, the National Commission for Knowledge and Use of Biodiversity, the National Commission for Natural Protected Areas, the National Institute for Ecology, and programmes such as Coinbio, Procymaf and the Meso-American Biological Corridor, which contributed directly to fulfilling Mexico's commitments towards the Convention on Biological Diversity and its forestry programme. A Federal Attorney's Office for Environmental Protection was set up, with results falling very short of those required (an eternal lack of capacity, political decision, human resources, legal instruments and now in the hands of environmental delinquents). All these environmental institutions have slowly been eroded and increasingly geared to the justification of unsustainable energy, hydraulic, livestock and forest policies, resulting in a loss of biodiversity and forest cover and soil.
- 2. There was also significant progress regarding a legal framework and laws such as the LGEEPA, the Law for Sustainable Forest Development and the Wildlife Law. However, this legal framework is being dismantled at an increasingly fast rate, with serious setbacks such as the changes proposed to article 60 T of the Wildlife Law, whereby the Federal Government intends to remove protection from mangroves, placing them at the disposal of tourist promoters. Mexico is one of the five countries in the world having major mangrove cover, and the only one of the five that appears on the list of those most depredating it. Another example of serious backward steps regarding legal environmental matters was the adoption of a biosafety law that enables genetically modified organisms to enter the country, placing at risk the forest diversity that Mexican forests stand out for on a global level. Again, the instrumentation of the Certification Programme for Common Land (Procede), has promoted land division with the consequent loss of forests throughout the country. The manifestations of environmental impact and land use planning have also been 'domesticated' to convert them into instruments for the justification of devastating projects such as the highway that is under construction around the Zempoala lagoons and forests.
- 3. Among the agreements Mexico has entered into, is that of fair and equitable benefitsharing derived from good management of forest biodiversity and wildlife in general. This has not been the case and, what is worse, schemes have been institutionalized that guarantee this will not take place, such as the creation of 'Profas', which in most cases have only given back forest control to depredating logging mafias. The almost unrestricted support of investors regarding forest plantations, contrasts with the scant support to community plantations (less than 30 % of the cost of establishing a plantation).
- 4. Another item of the agreement, the 'ecosystem approach' is not even understood by the high officials of the National Forestry Commission, who in a very erroneous manner counterpoise it with the 'watershed approach' ignoring that with the ecosystem approach, what is sought is to maintain the principles governing an ecosystem, such as

complexity, interconnectivity, long term processes, the syncretic role of the system's elements, etc. Mexico's forest policy is precisely a sample of an ANTI-ECOSYSTEM approach.

5. A basic commitment is that of establishing measures for the conservation of forest biodiversity. However, forest biodiversity has been practically forgotten. The National Programme for the Management of Forest Genetic Resources does not even define forest diversity in a correct manner (it reduces the concept of biodiversity to germplasm for forest plantation, without even considering soil biodiversity or the fauna, for example), and still less is able to conceive measures for the conservation and sustainable use of forest biodiversity.

The result of this lack of fulfilment of forest-related commitments is that we continue to loose close on one million hectares of forest per year; mangroves continue to be destroyed at an increasingly fast pace and environmental institutions are growing weaker, more docile and are justifying unsustainable energy, industrial, livestock and tourist policies. And, in their majority, the communities who inhabit and own the forests are becoming poorer and more underprivileged and increasingly exposed to the devastating impacts of climate change.



Lorosverde in Chiapas, Mexico

QUESTIONNAIRE ON THE EXPANDED PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY (PoWFBD) - MEXICO

1. Do you know the Expanded Programme of Work on Forest Biological Diversity? (PoWFBD) of the COP VI Working group of the Convention on Biological Diversity (CBD)				
	Percentage of replies	Number of replies		
VEQ	50.0%	28		
165	50.05%	20		
NO	50.0%	28		
	Questions answered	56		
Holf the comple conculted offirm	Unanswered questions	0		
Han the sample consulted anni	ned that they know the Programme of work, which is apparently a high hun	iber considering that		
there has not been any systema	tic campaign nor any promotion or prior seminars convened among the f	prestry organizations and		
Institutions for the dissemination	n and discussion of the Programme of work. A slant in this reply probable	y comes from the fact that together		
With the mail requesting a reply	to the questionnaire a copy of the Programme was sent, so that in princi	ole. ALL those consulted had a "fresh"		
Copy at hand when answering t	ne questionnaire.	ublic discussions for the design		
implementation	and monitoring of actions or programmes aimed at conservation	n and use of forest biodiversity?		
	Replies as a percentage	Number of replies		
YES	42.9%	24		
NO	57.1%	32		
	Questions answered	56		
	Unanswered questions	0		
Public discussions do exist. Bu	It this type of closed question of the 'yes' 'no' type does not enable us to	see to what extent these consultations		
are effective, generalized or sig	nificant in the result of the design, implementation and monitoring. Isolate	d cases do exist, (Procymaf, Coinbio,		
the Meso-American Biological (Corridor, in the federal context, and Podesis, for example, in Chiapas) whe	re the results of this type of		
consultation are incorporated in	n a more or less significant way. But in the major programmes, such as PF	OARBOL, that consumes over 90%		
of the economic resources alloc	ated to forests by the federal government, there is no real consultation. Th	ere are instruments such as PROFAS		
and the Forest Management Un	its that on paper are aimed at this type of consultative and participative fu	nction, but in fact they are used more		
frequently for the purpose of va	lidating previously defined policies.			
3. Do you know	what components of the PoWFBD are being implemented in Me	xico?		
	Replies as a percentage	Number of replies		
To apply the ecosystem approach to the	20.0%	0		
management of all forests	22.2%	8		
Reduce threats and mitigate				
the impacts of threatening processes on forest iological diversity	44.4%	16		
To protect, recover and restore				
torest biological diversity	77.8%	28		
To promote the sustainable use of				
torest biological diversity	77.8%	28		
Access and benefit-sharing of forest genetic resources ,				
	0.0%	0		
Institutional and socio-economic enabliing environme	nt	20		
awareness regarding the importance of forest				
biodiversity	AA A9/	16		
	44.4%	16		
Improve understanding of the role of forest				
biodiversity and ecosystem functioning	11.1%	4		
	Questions answered	36		
	Inanswered questions	20		
It is evident that none of the per	ople consulted considered that there is any access and benefit-sharing in	the case of forest genetic resources		
Although Mexico is one of the o	ountries possessing the most biodiversity in very many important forest	species and a source of forest		
Germilaema for five continents on the planet and Maxican forests being 90% community property. The personal a source of second				
deminiasma for the continents on the planet and mexican lotests being 80% community property. The perception of people consulted				
in that the two most important activities in this field are protection, restoration and promotion of sustainable use of forest biodiversity (77% of				
replies) is noteworthy. Close on 50 percent of those consulted consider that there is an emphasis on institutional consolidation, and a very low				
number (4 out of 56) point out t	hat work has been done to improve knowledge of the role of forest biodiv	ersity in ecosystem functioning. In		
general it may be stated that those responsible for forest policies design them on their own, carry them out without any strong institutional body, without much dissemination and no benefit-sharing and an exceedingly poor ecosystem approach				

Global Forest Coalition

4. Has the issue	4. Has the issue of forest biodiversity been incorporated in sectoral policies?				
	Replies as a percentage	Number of replies			
YES	69.2%	36			
NO	30.8%	16			
	Questions answered				
T	Unanswered questions	4			
clear that this has been in a ma payment of environmental serv generalized reforestation, with ecosystem and on biodiversity.	rginal way in the cases mentioned above, and mainly in the case of Coinb ices for the conservation of biodiversity, but the approach is overwhelmin a predomination of species that are easy to produce and criteria other tha	io and also the programme for the gly towards commercial plantations o n an approach based on the			
5. Do you know	what resources have been allocated to the implementation of th	e PoW/FBD in the country?			
	Replies as a percentage				
SI	0.0%	Number of replies			
0.	0.000	Ŭ			
NO	100.0%	56			
	Questions answered	56			
	Unanswered questions	0			
Natural Areas, are geared to co much of this budget is applied exceed 15% of the federal budg	Natural Areas, are geared to conservation, knowledge and good management of forest bioduresity. Although it is difficult to discern how much of this budget is applied to the goals, objectives and activities agreed on in the Pow/FBD, what is clear is that as a whole it does not exceed 15% of the federal budget for forest matters.				
6. Do you know	what person and what institution are responsible for the PoW/F	BD?			
	Replies as a percentage	Number of replies			
YES	28.6%	16			
NO	71.4%	40			
	Questions answered	56			
	Unanswered questions	0			
A quarter of those interviewed implementation of PoW/FBD. So partially correct as the National agreements. Only two people co 7. Have the under	A quarter of those interviewed mentioned the National Commission for Knowledge and Use of Biodiversity as the body responsible for the implementation of PoW/FBD. Several of them state that they suppose this but are not totally sure of the fact. At all events, the reply is partially correct as the National Forestry Commission is responsible for the law, as leader of the sector, for fulfilling international agreements. Only two people consulted replied that they knew the name of the responsible person. 7. Have the underlying causes of the loss of biodiversity and forest degradation been identified?				
	Replies as a percentage	Number of replies			
SI	57.1%	32			
NO	7.1%	4			
I DO NOT KNOW	35.7%	20			
120 NOT KNOW	Questions answered	56			
Six out of ten people interviewed consider that the underlying causes of the loss of biodiversity have been identified and most agree that the main causes are certain unsustainable cattle raising activities that cause fires, change in soil use, hindering restoration are obstacles in the instrumentation of conservation actions and good management of forest diversity. These obstacles mainly arise, according to various people consulted, because many cattle ranchers perceive forest conservation and diversification activities as contrary to their interests.					

L

Global Forest Coalition

	Replies as a percentage	Number of replies
YES	9.1%	4
NO	90.9%	40
	Questions answered	
nly nine percent of those interview BD. This agrees with what was pois me from social parties. 9. Do you consider the in Mexico?	Unanswered questions ed consider that traditional knowledge is taken into consideration in nted out above, believing that policies are designed and implemente hat the PoW/FBD (or parts of it) is useful to recognize the r	12 the formulation of policies reg d by government offices and pole of forest biological div
nly nine percent of those interview BD. This agrees with what was poin ome from social parties. 9. Do you consider th in Mexico?	Unanswered questions ed consider that traditional knowledge is taken into consideration in ted out above, believing that policies are designed and implemente hat the PoW/FBD (or parts of it) is useful to recognize the r Replies as a percentage	12 the formulation of policies reg d by government offices and ole of forest biological div Number of replies
nly nine percent of those interview BD. This agrees with what was poin ome from social parties. 9. Do you consider the in Mexico?	Unanswered questions ed consider that traditional knowledge is taken into consideration in ted out above, believing that policies are designed and implemente hat the PoW/FBD (or parts of it) is useful to recognize the r Replies as a percentage 90.0%	12 the formulation of policies reg d by government offices and ole of forest biological div Number of replies 36
nly nine percent of those interview BD. This agrees with what was point orme from social parties. 9. Do you consider the in Mexico?	Unanswered questions ed consider that traditional knowledge is taken into consideration in the out above, believing that policies are designed and implemente hat the PoW/FBD (or parts of it) is useful to recognize the r Replies as a percentage 90.0% 10.0%	12 the formulation of policies reg d by government offices and ole of forest biological div Number of replies 36 4
nly nine percent of those interview BD. This agrees with what was point orme from social parties. 9. Do you consider the in Mexico?	Unanswered questions ed consider that traditional knowledge is taken into consideration in ted out above, believing that policies are designed and implemente hat the PoW/FBD (or parts of it) is useful to recognize the r Replies as a percentage 90.0% 10.0% Questions answered	12 the formulation of policies reg d by government offices and ole of forest biological div Number of replies 36 4 40

1. DESCRIPTION OF THE COUNTRY'S ENVIRONMENTAL, GEOPHYSICAL AND SOCIO-ECONOMIC ASPECTS

Mexico is among the countries considered to be mega-diverse. It is frequently noted that it comes fourth in the world with respect to biodiversity. The territory covers approximately two million square kilometres, of which close on 50% correspond to forests, jungles and mangroves. A very notorious aspect of the Mexican territory from an environmental standpoint is the enormous diversity of landscapes (beta diversity), where vast tracts of mangroves, low, medium and high forest, oak and pine woods, cloud forest and deserts and extensive coastal areas and fast-flowing rivers are present. Mexico is the centre of origin and diversification of very important forest species such as Pinus spp, Quercus spp and Bursera spp. It is also the home of traditional landraces of food plants of world importance such as maize (Zea maize) and beans (Phaseolus spp) and of a great quantity of animal species, with high levels of reptiles and amphibians, fish and birds and many invertebrates. Biogeographically, Mexico is located in two regions: the Neo-Arctic region in the north and the Neo-tropical region in the south. The altitude range in Mexico goes from sea-level up to 5,600 m.asl. Two large sierras run from north to south, the Western Sierra Madre and the Eastern Sierra Madre and between these a large plain is located covering close on half the territory and ending in the south with a motley orographic junction and nine cordilleras covering the southern territory of Chiapas (the Sierra Madre of Chiapas). These conditions added to the tropical location (the Tropic of Cancer crosses the national territory), the immense coastlines on the Pacific Ocean and the Atlantic Ocean (the Gulf of Mexico) and the existence of two peninsulas on both oceans (the Baja California peninsula in the Pacific and the Yucatan peninsula on the Caribbean sea, in the Atlantic), favour a very high diversity of climatic conditions that in turn, favour this country's rich diversity.

With regards to the socio-economic situation, it should be noted that Mexico has a considerable Indigenous population, corresponding to 10% of its total population (ten million out of a total of one hundred and four million inhabitants are Indigenous people), distributed among close on 70 ethnic groups that inhabit all over the national territory, from the frontier with the United States in the Otam zone, to the many Maya expressions in the south-southeast (Tzeltals, Tzotzils, Choles, Mames, Tojolobals, Chontals, etc.), added to the cultural wealth of the Huicholes, Coras, Tepehuanos, Mixtecos, Zapotecos, Nahuas, Mixes and many other ethnic groups that are scattered all over the territory. A large proportion of the Indigenous population lives in rural areas, particularly in the country's forests and jungles. The World Bank reports that in rural areas, one out of every three Mexicans lives in absolute poverty, but this data is seriously questioned as it is considered to be over optimistic. The 2007-2008 Human Development Report prepared by the United Nations Development Programme, establishes that only one out of four Mexicans lives in non-urban areas. The Gines index measuring inequality, according to the same report, sets it at 46.1 for Mexico, comparable to the rate of Nigeria, Rwanda and Zambia, among others. Regarding health, only Trinidad & Tobago and Ecuador, on the American continent, invest a smaller percentage of their GDP on this item. Haiti invests the same as Mexico and countries such as Cuba, Colombia, Bolivia and El Salvador invest almost twice as much.

Mexico has a free trade agreement with the United States and Canada that has generated enormous conflicts, mainly in the agriculture and livestock chapter. It has led to the substitution of Mexico's main peasant products by US products. This is the case of maize, beans, sugar-cane and rice, among others. Maize imports, the staple food of the Mexican people and an emblematic product of its history, have increased since the Free Trade Treaty came into force (in 1994) going from some hundred of thousands of tons per year, to close on six million tons. As from January 2008, these products are open to import free from tariffs. The same treaty opens the door to imported timber which has involved a considerable imbalance of the market for timber products. Dumping practices are a serious burden on the peasant economy that year by year increasingly abandons forest and farm lands to join the migratory wave towards North American and Canadian crop fields.

Mexico releases 5 ton of CO2 per capita per year, as compared to the 20 ton released in the United States, and the relative contribution to releasing atmospheric CO2 is 1.5 and 20 %, respectively.

2. CHARACTERIZATION OF MEXICAN FORESTS

A great diversity of forests and jungles cover 64.5 million hectares in Mexico, representing 33% of the national territory. These forests have a high biodiversity value, produce numerous economic benefits and are critical for the welfare of many communities that are the depositories of ancestral knowledge on natural resources.

The temperate pine, oak and oyamel fir forests are generally to be found in the higher parts of the mountains. Mexico is a diversity centre for both pine and oak trees, possessing over 50% at planetary level of all the species of pine and more than 150 species of oak. A wide variety of species lives in these forests, among them mention may be made of the black bear, the Serrana parrot and the Monarch butterfly.

Cloud forests are located in areas with a high rainfall in the middle part of the mountains. Presently they are quite restricted. Tree-like ferns, epiphytes, the formidable quetzal and the singular peacock are characteristic species.

The dry tropical forests are distributed in the low parts. They contain large numbers of endemic species and are the habitat of the jaguar, the iguana, the gila monster (heloderma suspectum), and the great green macaw.

The tropical rainforests have disappeared from the coastal plains, and are reduced to 10% of their original extension. This complex and diverse ecosystem is home to tapirs, spiders and howling monkeys, a great variety of parrots and toucans and the imposing harpy eagle.

However, the forests and jungles are diminishing at an alarming speed. The annual rate of forest loss has been estimated at between 300,000 and 1,500,000 hectares (see more information on deforestation). As a result a great quantity of species is now in danger of extinction and many more are being taken out locally. The direct actions causing forest destruction and degradation are:

- Conversion to agriculture, cattle ranching, fires and major works (loss of habitat and fragmentation);
- Illegal and immoderate logging, hunting and illegal fauna trading (over-exploitation);
- Pests (invasive species);
- Air and water pollution;

Although we see these actions directly, the underlying causes of the loss of forest ecosystems are social, economic and political. The consequences of forest loss and degradation are the following:

- Loss of unique biodiversity;
- Damage to fresh water ecosystems and hydrological processes;
- Reduction of environmental services;
- Maintenance of the poverty cycle;

3. THE LAND REGIME: THE SITUATION OF FOREST MANAGEMENT IN THE COUNTRY

The origin of communal land ownership in Mexico goes back to before European Colonization times. There are many traces of community land occupation and management, going back 10 thousand years, including practices of domestication of seeds, such as pumpkins, beans and

maize. The Spanish settlers banished from the flat and fertile lands an enormous number of inhabitants, displacing them to forests and slopes. This is the most important reason to explain the presence in our times of the main Indigenous groups in the forest areas of the country. Not all the lands were dispossessed and the Spanish Crown granted 'primordial deeds' to ancestral communities, deeds that are still kept and that have a significant legal value.

During the second half of the nineteenth century, when Mexico's profile as an independent nation was shaped, most of the flat fertile lands passed into the hands of wealthy landowners, many of them foreigners, and the ancestral rights of the local and indigenous populations were ignored. The agrarian revolution between 1910 and 1917, headed in the south by General Emiliano Zapata Salazar, led to a new constitution establishing the bases for land ownership. Article 27 of the 1917 Constitution establishes the bases for social land ownership as well as those for private and national property. Close on 80% of the forests remain in possession and the legitimate property of the 'ejidos' and communities for their conservation and enjoyment, but with no right to transfer them, sell them or attach them, nor to divide them for inheritance in fractions (this in the case of the 'ejidos'). In 1992, the Government of President Carlos Salinas de Gortari in the context of the agreements for the signing of the Free Trade Treaty with North America and the inclusion of Mexico in the OECD, substantially modified article 27, which gave form to social property, opening the door, under certain conditions, to the privatization of land that had previously been the property of farming communities.

A result of these profound modifications has been the division and clear-felling of considerable extensions of forest land all over the national territory, in spite of the fact that it is expressly prohibited by the Forestry Law and also the privatization of much land, particularly land having a high commercial value (close to the beaches and cities or in sites having tourist interest). Mangroves have suffered drastically from this process as they have become exposed to marketing for tourist development purposes. Large tracts of forest have passed into the hands of private logging companies or have gone to increase the files of the real-estate market for urbanization purposes or other forms of change in land use.

Forestry management in Mexico is regulated by a recent Federal Law for the Sustainable Development of Forestry, establishing the bases for forest use and care. However Federal Government policies and resources have been devoted to promoting the plantation of commercially valuable species, very often exogenous, and contrary to practices for the conservation of the original biodiversity and almost always in contraposition with traditional forest management practices.

The main government programmes regarding forest affairs are geared to reforestation and to the promotion of commercial plantations and very little (although it is very valuable) has been done regarding community forestry, certification and diversification, above all regarding the conservation of biodiversity in forest ecosystems. There have been programmes such as Procymaf, Coinbio and the Meso-American Biological Corridor, with a clear orientation towards diversified management of forest wealth, community strengthening and equitable benefitsharing, but these projects have been no more than marginal examples within a context of generalized changes in land use, illegal logging, monoculture plantations and soil loss, together with the eviction of the inhabitants towards industrial suburbs in regions where there are sweetshop assembly lines or towards United States or Canadian farm lands.

4. FULFILMENT OF MEXICO'S COMMITMENTS TO THE EXPANDED PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY

The following report is the result of a series of workshops with various stakeholders seeking to synthesis progress in Mexico regarding its commitments to the EXPANDED PROGRAMME OF WORK ON FOREST BIOLOGICAL DIVERSITY adopted by Mexico in the framework of the Convention on Biological Diversity. The main actions carried out in Mexico contributing to its implementation are described here below. It is important to mention that although progress has been made, there are still major gaps that must be filled in if sustainable forest management all over the national territory is to be achieved.

Perhaps the most outstanding element in the situation of the present administration's forest policy is the strong focus on reforestation (the so-called PROARBOL programme) favouring mass sowing and planting without a real ecosystem approach, without any great attention to the conservation of biodiversity and with increasing abandon of community forest activities in favour of forest plantations.

4.1 ELEMENT 1. CONSERVATION, SUSTAINABLE USE AND BENEFIT -SHARING

Goal 1. To apply the ecosystem approach to the management of all types of forests

Objective 1:

Develop practical methods, guidelines, indicators and strategies to apply the ecosystem approach adapted to regional differences to forests both inside and outside protected forest areas as well as both in managed and unmanaged forests.

Both the Environmental and Natural Resources Secretariat and the National Forestry Commission (the former responsible for policies and the latter responsible for implementing actions in forest matters), agree that although Mexico has established an important commitment in this matter, they do not necessarily share its approach and point out that 'due to the fact that ecosystems are hard to define' prefer 'a watershed approach'. The Mexican Government has made explicit this position of not sharing the ecosystem approach at CBD meetings and in the working group on forest biodiversity. Although various laws, regulations and ordinances make reference to this approach, there is no clear definition of the principles, processes and criteria enabling the ecosystem approach to be systematically and coherently included.

- The General Sustainable Forest Development Law (Ley General de Desarrollo Forestal Sustentable) that established domestic forestry policies, notes forests as a national priority. Governing principles and social, forestry, economic and environmental criteria are included, among them mention is made of the ecosystem approach.
- The General Wildlife Law (Ley General de Vida Silvestre) considers the ecosystem criterion on pointing out that the objective of the national policy regarding wildlife and its habitat is conservation through protection and the requirement for optimum levels of sustainable use, to achieve the simultaneous maintenance and promotion of the restoration of diversity and integrity, while increasing the welfare of the country's inhabitants.
- The NOM-022-SEMARNAT-2003 establishes specifications for the preservation, sustainable use and restoration of coastal wetlands in mangrove areas. Together with the cloud forest, they are the two forest ecosystems whose management comes closest to an ecosystem approach in the sense that what is being sought is to protect the ecosystem, its ecological and evolutionary processes, its complexity, etc.

- In a marginal way, work is being carried out on a draft Official Mexican Standard establishing the guidelines, criteria and specifications for the preparation of forest management programmes. Among others they must consider the application of an ecosystem approach. However, it is not clear whether it will pass from an affirmation to a true instrumental definition of such an approach.
- The Project for Conservation and Sustainable Management of Forest Resources in Mexico (PROCYMAF) is a programme supporting forest cultivation with the participation of its owners and possessors, with the benefits favouring the development processes of these forest nuclei. Through this Project, various forest communities have developed sustainable resource use and management schemes and are operating with a greater guarantee of conservation and good forest management.
- The Funds-in-Trust for Shared Risk Micro-basin Management Programme (FIRCO) operated by SAGARPA, contains a Governing Production and Conservation Plan (PRPC). This is a planning instrument for technical, economic and social interventions in the micro-basin. It is one of the instruments that the authorities consider supports the 'Watershed approach'.

Goal 2. To reduce the threats and mitigate the impacts of threatening processes on forest biological diversity

Objective 1:

Prevent the introduction of invasive alien species that threaten ecosystems and mitigate their negative impacts on forest biological diversity in accordance with international law.

National legislation establishes the legal framework to minimize the risk of introduction of invasive alien species. Some of the main provisions in this respect are mentioned here below:

• The General Sustainable Forest Development Law establishes that reforestations and plantations must be done using native species. However the instrumentation of such actions frequently continues to be done with a variety of gmelina, eucalyptus, teak and other exotic species as can be seen in the states of Campeche, Tabasco and Veracruz, just to mention three examples of places where close on one hundred thousand hectares have recently been planted with exotic species.

Regarding guidelines in specific terms, some are mentioned here below:

- The General Wildlife Law defines exotic specimens or populations as those that are outside their natural scope of distribution, including hybrids and modified specimens.
- The Federal Plant Health Law (Ley Federal de Sanidad Vegetal) states among its objectives: the identification and prevention of the dissemination and introduction of plant plagues, their products or sub-products representing a risk for plant health. It also establishes phyto-sanitary measure and regulates the effectiveness of phytosanitary inputs and integrated controlling methods.
- The Official Mexican Emergency Standard (Norma Oficial Mexicana de Emergencia NOM-EM-154-SEMARNAT-2007), establishes plant health measures to control, eradicate and prevent the dissemination of the termite *Coptotermes gestroi*.
- The Packaging Standard (Norma de Embalaje NOM-144-SEMARNAT-2004), requires enforcement regarding packaging used for imports, due to the dissemination of plagues among countries that can cause negative impacts on ecological and economic aspects if the native vegetation of each country is affected. (More information contained in the document detailing the Programmes).

Furthermore, with the aim of relying on a system preventing and minimizing the introduction of invasive species, CONABIO is launching the preparation of a National Plan for Detection and

Struggle against Invasive Species. For its part PROFEPA carries out actions for inspection and monitoring to prevent the introduction of invasive species.

The Law for biosafety and genetically modified organisms prevents sowing genetically modified seeds in the centres of origin and distribution; however it does not have mechanisms and instruments to implement it if contagion were eventually to occur.

Objective 2.

Mitigate the impact of pollution such as acidification and eutrophication on forest biodiversity.

The National Action Programme against Land Degradation (Desertification) and Mitigation of the Effects of Drought 2007-2030 (Programa Nacional de Acción contra la Degradación de las Tierras (Desertificación) y Mitigación de los Efectos de la Sequía 2007-2030) promotes sustainable land management to revert the present levels of natural resource degradation, reduce vulnerability to natural disasters such as droughts and flooding, promote agriculture, livestock and forest production and support a sustained struggle against poverty. It does not have a clear approach directly protecting against repercussions on forest biological diversity.

- The NOM-061-SEMARNAT-1994 establishes specifications to mitigate adverse effects on wildlife due to forest use. The capacity and willingness of the authorities responsible for monitoring the application of the standard do not point in the direction of making this NOM into a tangible reality.
- The National Soil Inventory is a set of techniques and procedures to obtain quantitative and qualitative information on forest resources, associated vegetation and territorial components and characteristics about the site of the forest making it possible to determine the types of surfaces and types of erosion, reporting the situation of Mexican soils and forests to the world.

Objective 3

Mitigate the negative impacts of climate change on forest biodiversity.

- The General Law for Sustainable Forest Development, and as a consequence, the State Forestry Laws, establish elements concerning reforestation as a priority element in forestry management programmes. However most of the reforestation programmes do not have a focus on biodiversity but rather favour biomass and forest cover.
- The Official Mexican Standards related with efficient fuel use, geared to reducing the use of timber and the Official Mexican Standards for energy efficiency, contribute to the mitigation of climate change. Here again the focus is on biomass and not necessarily on biodiversity.
- The National Soil Inventory provides information for planning public policies on sustainable forest development on a local, regional and national level, considering the characteristics of each zone, including the changes recorded regarding forest cover in Mexico over the years and promoting industrial development in regions with more timber-related potential or lacking in timber-related potential.
- Programmes for the development of forest plantations have enabled lands showing a high degree of desertification to acquire vegetation cover, reactivating soil functions, capturing and retaining rainwater, trapping CO₂ and decreasing anthropogenic pressure on native forests. There is, to a certain extent, a contribution for certain species associated to forests (soil micro-organisms, birds, etc.) but biodiversity as a whole is not given any priority in forestry plantations, as pointed out earlier on.
- The Sustainable Forest Management Programmes are geared to the preparation of technical instruments for planning and follow-up, describing the actions and procedure for sustainable forest management.

- Through the Proarbol programme, projects are being supported that favour biodiversity conservation in the framework of the Environmental Service Programmes (Programas de Servicios Ambientales PSA) granting economic support to the owners and/or legitimate holders of lands with forest resources for the environmental services they generate, such as: hydrological, carbon trapping, protection of biodiversity and agro-forestry systems with shade crops.
- Through the implementation of the National Climate Change Strategy, electric generation using renewable sources and technologies low in carbon intensity is being promoted, seeking to cancel subsidies to energy consumption or to the production of energy based on fossil fuels.
- Regarding reforestation, the Programme for the Conservation and Restoration of Forest Ecosystems (Programa de Conservación y Restauración de Ecosistemas Forestales PROCOREF), favours the development of projects aimed at supporting maintenance of forest zones favouring aquifer recharge, carbon trapping, biodiversity protection and the management of agro-forestry systems with shade crops.
- The Forest Management Units (Unidades de Manejo Forestal UMAFORES) are areas with physical, environmental, social and economic conditions that require land planning, sustainable forest management and conservation of resources, contributing to mitigate climate change.
 In order to favour carbon trapping, in the framework of the Detection, Early Warning and Fire Management Programme, a National Campaign for Ecological Restoration and against Land Use Change has been carried out in areas affected by Forest Fires.
- The demands of society for viable alternatives aimed at socio-economic development in Mexico have partly been responded to by the UMA, seeking to promote the diversification of productive activities in the rural sector, based on the binomial conservation-use of natural resources, thus achieving alternative sources of employment, income for rural communities, generation of convertible currency, valuation of the elements comprising biological diversity and maintenance of focal environmental services provided by the site and its surrounding areas.

The System of Management Units for Wildlife Conservation (Sistema de Unidades de Manejo para la Conservación de la Vida Silvestre - SUMA), partially contributes to curbing environmental deterioration caused by loss of biodiversity in the various habitats and contributes to the mitigation of climate change by conserving biological processes in the various ecosystems.

Objective 4:

To prevent and mitigate the adverse effects of forest fires and fire suppression.

- NOM-015 establishes control of the use of fire in farming and forestry activities and has recently been updated with the Draft Official Mexican Standard PROY-NOM-015-SEMARNAT/SAGARPA-2007.
- The Programme for the prevention, early warning and management of forest fires has as its main objective to inform society on how to prevent forest disasters affecting forest ecosystems and to protect the areas where fires are likely to occur, giving priority attention to wooded areas, endemic areas and where the flora and fauna are the main resource to be protected, focusing attention on accidents in protected natural areas, making maximum use of early warning and timely firefighting.

According to forest authorities, actions in this regard have made it possible to continuously improve indicators, however meteorological conditions involving long periods of drought and scant rainfall, or the consequences of hurricanes causing an accumulation of combustible material the following summer, cause some years to be critical in terms of forest fires.

• The programme for the detection of hot spots through remote sensing techniques is aimed at contributing to forest fire prevention and control. Hot spot location is carried out daily by CONABIO, detecting hot spots all around the year and

particularly during the forest fire season, corresponding to the dry season of the year, as during the rainy season the cloud cover prevents direct observation of the Earth's surface and the occurrence of forest fires drops. Information on possible fires is sent daily to the institutions responsible for addressing and following up on these phenomena.

- In the framework of the CONAFOR CONACYT National Sectorial Fund (Fondo Nacional Sectorial CONAFOR – CONACYT) there are research, technological development and technology transfer programmes that promote development and consolidation of scientific and technological capacity benefitting the forest sector, aimed at detecting forest fires (for example the project for the detection and monitoring of forest fires in Chihuahua which has the basic purpose of protecting an area of over 7,4 million hectares comprising the cold-temperate climate forest ecosystem, with the possibility of extending the operation of this programme to protect the State's semi-arid zones).
- The Fire Management Strategy in Natural Protected Areas is aimed at establishing priorities, providing technical elements, facilitating participation processes, revising public policy aspects and supporting the strengthening of technical officials in protection against fires and fire management issues. This is done with the technical and financial support of the Fire Management Actions Alliance.

Objective 5:

To mitigate effects of the loss of natural disturbances necessary to maintain biodiversity in regions where these no longer occur.

- The General Sustainable Forest Development Law and the General Law for Ecological Balance and Environmental Protection, establish criteria for policies regarding forest issues and criteria to generate ecological restoration programmes.
- The National Forestry Inventory makes it possible to keep a record of changes in Mexico's forest cover. Taking this information as a base, it is possible to plan public policies on sustainable forest development on a local, regional and national level and to establish conservation and restoration programmes depending on the characteristics of each zone and to promote industrial development in regions having the greatest timber and non-timber potential.
- The Mexican Forest Fund is an instrument to attract and distribute resources to finance productive activities in the forestry sector, finance ecological restoration programmes and to trigger off collection and payment for the environmental services provided by the country's forests.
- In the framework of the Proárbol Programme, the Programme for Conservation and Restoration of Forest Ecosystems (Programa de Conservación y Restauración de Ecosistemas Forestales PROCOREF), grants support to implement programmes for reforestation, conservation and restoration of forest soils and forest health.

Objective 6:

To prevent and mitigate losses due to fragmentation and conversion to other land uses

- The General Sustainable Forest Development Law establishes that changes in land use can only be made exceptionally.
- The Zero Tolerance of Illegal Logging Programme, by means of inspections to plots with soil changes, avoids and mitigates losses due to fragmentation and other land uses.
- The NOM-022-SEMARNAT-2003, points out the specifications for the preservation, sustainable use and restoration of coastal wetlands in mangrove areas.
- The NOM-020-SEMARNAT-2001, establishes procedures and guidelines that must be followed for the restoration, improvement and conservation of forest grazing lands.
- The NOM-060-<u>SEMARNAT</u>-1994, contains specifications to mitigate adverse effects on soils and bodies of water due to forest use.

- The 60 Mountain Conservation programme is geared to improve water production and enhance its quality, and to carbon trapping by means of conservation, restoration, management and use of natural resources with a watershed-forest approach, through programmes for sustainable management, contributing to avoid forest fragmentation in the 60 mountains defined as priorities and in their area of influence.
- The Environmental Services Programme for hydrology and biodiversity protection has been set up as an element to revert forest degradation, favouring attractive investment in ecosystem restoration and promoting the restoration of forest cover and its biodiversity, particularly in rural zones, while making it possible to satisfy demands for its ecosystem services.
- The Environmental Compensation Programme for Changes in Land Use in Forest Land, operated by CONAFOR, carries out restoration of degraded ecosystems by means of conservation, soil restoration and reforestation, together with maintenance to achieve, in the long term, the generation of new forest ecosystems compensating for those that have changed their use. Economic support obtained as compensation for changes in land use is granted by the Mexican Forestry Fund, enabling owners and holders of degraded forest land, or preferably forest land, to implement projects to restore them.
- The objective of the Procampo Ecológico Programme is to conserve, restore, reforest or enhance the land while support is continued to be received from PROCAMPO. This scheme supports the marketing of farm produce through the granting of subsidies to farmers and their organizations, such as net guarantees to fund productive projects. The aim is to strengthen the organization's financial structure, seeking better price conditions and generating added value over time.
- The Productive Reconversion and Sustainable Agriculture in Recurrent Drought Zones Programmes are operated in coordination between SEMARNAT and SAGARPA, with the aim of users taking advantage of the various integrated productive reconversion and sustainable agriculture programmes, particularly in high risk zones that could endanger crop areas, promoting decreases in the negative impact of adverse natural factors on farming and forestry activities.
- The establishment of SUMA, has complemented to a great extent the National System of Natural Protected Areas, forming biological corridors among them thanks to the incorporation of an increasingly large number of hectares into habitat management schemes to make sustainable use of wildlife species: A fundamental requisite for its establishment is the submission of a management plan considering an ecosystems approach and that it should include among its objectives habitat conservation and development within its conservation strategies.

Goal 3: To protect, recover and restore forest biological diversity

Objective 1:

Restore forest biological diversity in degraded secondary forests and in forests established on former forestlands and other landscapes, including in plantations.

 Programme for the Conservation and Restoration of Forest Ecosystems (Programa de Conservación y Restauración de Ecosistemas Forestales - PROCOREF). This Programme is aimed at granting support to encourage owners and holders of forest land or preferable forest land, to take part in the protection, conservation and restoration of forests and associated resources within the national territory, through the following categories of action:

Reforestation actions, that is to say the induced establishment of forest vegetation, either in preferable forest lands or in degraded forest lands;

- Actions for conservation and restoration of forest land, consisting of practices and work to control soil degradation or to restore soils, aimed at maintaining productivity; and
- Forest health actions.

- In the framework of the ProÁrbol Programme, a programme for Payment of Hydrological Environmental Services (Pago por Servicios Ambientales Hidrológicos PSAH), has been set up for Carbon Trapping, Biodiversity Protection and Agro-forestry System Improvement and Establishment. This is done with the development of local strategies to obtain international funding for carbon trapping and biodiversity conservation.
- For Mexico, the Payment for Environmental Services (Pago por Servicios Ambientales PSA) is an option to conserve or strengthen specific services provided by ecosystems and to face the challenge of reverting their degradation and satisfying the demand for their services.
- Through the Programme for Environmental Compensation for Land Use in Forest Lands, restoration of degraded ecosystems is carried out and consequently the restoration of forest biological diversity through actions for conservation, soil restoration and reforestation and their respective maintenance. This to achieve in the long term the generation of new forest ecosystems compensating for those that changed use.

Objective 2:

Promote forest management practices that further the conservation of endemic and threatened species.

- The General Sustainable Forestry Development Law establishes modalities and requisites for use, for the conservation of non-timber species.
- The General Wildlife Law establishes that endangered species can only be used when priority is given to collection and capturing for restoration, redoubling and reintroduction activities. (Article 85 LGVS).
- Management Units for Wildlife Conservation (Unidades de Manejo para la Conservación de Vida Silvestre - UMAS) have shown important results and produced significant progress in conservation, both regarding biological resources and that of their habitats all over the country. This scheme has significantly complemented the National System for Natural Protected Areas, forming biological corridors between them, thanks to the incorporation of an increasing number of hectares of land to habitat management schemes for the sustainable use of wildlife species. A basic requisite for their establishment is the presentation of a management plan that considers an ecosystem approach and that includes habitat conservation and development among its conservation strategies.
- The forestry management Programmes establish measures for the protection and conservation of endangered species.
- NOM-059-SEMARNAT-2001 establishes environmental protection for Mexican native wild flora and fauna species, endangered categories and specifications for their inclusion, exclusion or change on the list of endangered species.
- NOM-061-SEMARNAT-1994 establishes specifications to mitigate adverse effects on wild flora and fauna due to forest use.
- The Zero Tolerance of Illegal Logging Programme prevents removal of endangered species and has achieved a reduction of illegal logging in the core zone of the Monarch Butterfly Biosphere Reserve.
- The Procampo Ecological Programme is aimed at conserving, restoring, reforesting or enhancing land while support is being received from PROCAMPO. This scheme strengthens the marketing of farm produce, while granting subsidies applied for by farmers and their organizations, such as net guarantees to fund productive projects. In this way it is sought to strengthen the organization's financial structure through better price conditions and the generation of added value over time.

Objective 3:

Ensure adequate and effective protected forest area networks.

- The General Sustainable Forest Development Law contemplates the establishment, modification or removal of forest bans when adequately and effectively protected forest zones are affected.
- State forestry laws establish their concept of ban, in terms that have been previously established by the General Sustainable Forest Development Law (for example, the Sustainable Forest Development Law for the State of Tamaulipas and the Forestry Law for the State of Coahuila de Zaragoza, establish as a definition of forest ban: total or partial temporary restriction of the use of one or various forest resources in an area or for a determined species, through a decree issued by the Federal Executive officer).
- The General Ecological Balance and Environmental Protection Law, contemplates the establishment of Natural Protected Areas and that owners, holders or those entitled to other rights over land, water and forests, included within natural protected areas, must act in accordance with this Law and also with the provisions contained in the management programme and in the corresponding ecological management programmes.
- The National System of Protected Natural Areas in forest zones has been integrated, with the purpose of including areas that, due to their biodiversity and ecological characteristics, are considered to be of particular relevance to the country. Protected Areas are set up as strategic and demonstrative centres for the recovery of species and restoration of ecosystems, contributing to the maintenance of environmental goods and services.
- There are presently 161 protected areas on a federal level, covering a total area of 22,712,284 hectares. Of these protected areas, 120 have a forest area, which may include coniferous forests (1,413,886 ha), oak forests (1,804,869 ha), mountain cloud forests (162,156 ha), deciduous forests (979,477 ha), thorny forests (240,535 ha), perennial forests (1, 364,774 ha) and sub-deciduous forests (243,969 ha), amounting to a total of 6,209,665,814 hectares.

The National Commission for Protected Natural Areas (CONANP), carries out conservation actions aimed at protection, management and restoration of forest ecosystems, in its field of competence.

Likewise, in order to enhance inspection and monitoring in Natural Protected Areas, PROFEPA has programmed for the present year the implementation of four Comprehensive Treatment Plans (Planes Integrales de Atención - PIA) to fight against illegal logging, having implemented 15 plans (Area for the Protection of Flora and Fauna Cuatrocienegas; Montes Azules, Selva El Ocote, Sierra de Manantlán, Mariposa Monarca, Sierra de Huautla, Sierra Gorda and Los Tuxtlas and Uxpanapa Biosphere Reserves; El Chico, Iztaccihuatl-Popocatepetl, Lagunas de Zempoala, La Malinche and Pico de Orizaba National Parks; and Los Chimalapas Priority Conservation Area).

Furthermore, as part of the actions to counteract the causes of biodiversity loss and forest degradation in Mexico, protected areas have been established in forest areas and schemes have been set up to protect environmental services. In this way it is sought to generate and promote mechanisms to compensate local inhabitants for the environmental services provided by their property and to enable people to obtain benefits from the ecosystem through the promotion of conservation and the economic value of the product, either directly or indirectly. This takes place through projects such as: carbon inventories, monitoring of priority species and inventory of springs for hydrological services.

• For the establishment of Forest Management Units (Unidades de Manejo Forestal - UMAFORES), a zonation is made of the land for integrated forest activity planning.

Goal 4: To promote the sustainable use of forest biological diversity

Objective 1:

Promote sustainable use of forest resources to enhance the conservation of forest biological diversity.

- The General Sustainable Forest Development Law states that one of its objectives is to develop environmental goods and services and protect, maintain and enhance biodiversity provided by forest resources.
- The General Law for Ecological Balance and Environmental Protection states that the use of natural resources must be made in such a way as to respect the functional integrity and carrying capacity of the ecosystems of which these resources are part, for indefinite periods.
- A draft Mexican Official Standard exists, setting out the guidelines, criteria and specifications for the preparation of forest management programmes.
- State Forestry Laws (for example the Law for Sustainable Forestry Development of Michoacán, indicates that environmental goods and services must be developed and protected, maintaining and increasing biodiversity of natural resources; the Law for the Sustainable Forestry Development of Tlaxcala, notes that the protection and conservation of ecosystems that enable certain essential economic processes and forest biological diversity are considered to be of public utility).
- In the Proarbol Programme environmental services are aimed at supporting forest areas favouring aquifer recharge, carbon trapping, biodiversity protection and the management of agro-forestry systems involving shade crops.
- In the Draft Programme for the Conservation and Sustainable Management of Forest Resources in Mexico (Programa Proyecto de Conservación y Manejo Sustentable de Recursos Forestales en México - PROCYMAF) activities promoting timber and nontimber use and programmes for the development of sustainable community use of biological resources are encouraged (for example, the Project for Conservation of Biodiversity in Indigenous Communities in the States of Guerrero, Michoacán and Oaxaca).
- The COINBIO Programme's main objective is to contribute to the conservation of rural and indigenous areas containing a high degree of biodiversity in the States of Oaxaca, Michoacán and Guerrero. It supports initiatives by 'ejidos' and communities to actively safeguard biological diversity through protected communal areas. It is focused on areas of priority interest for regional sustainable development, promoting the creation of green markets, favouring the establishment of schemes for providing and paying for environmental services through a self-managed institutional arrangement.
- The Procampo Ecológico project seeks to conserve, restore or manage land while support is still being received from PROCAMPO. (For more information, see the Project Details document).
- SUMA seeks to promote alternative production schemes, compatible with environmental care, through rational, orderly and planned use of natural resources, curbing or reverting environmental deterioration. That is to say, it promotes the development of alternative sources of income for rural communities and in general for the legitimate holders of the land where this is distributed, by means of placing value on biological diversity to promote its conservation.

Objective 2:

Prevent losses caused by unsustainable harvesting of timber and non-timber forest resources.

- The General Law for Ecological Balance and Environmental Protection states that the use of natural resources must be made respecting the functional integrity and carrying capacity of the ecosystems that these resources are part of, for indefinite periods of time.
- The General Sustainable Forest Development Law regulates the use of timber and non-timber forest resources.
- A draft Mexican Official Standard exists, setting out the guidelines, criteria and specifications for the preparation of forest management programmes.

- In the framework of State Forestry Laws establish that sustainable use of forest resources shall be monitored and supervised (for example, the Sustainable Forest Development Law for Michoacán indicates that obligatory criteria in forest policies of an environmental and sylvicultural nature are the conservation of forest ecosystem biodiversity together with the prevention and struggle against theft and illegal extraction of this diversity and the protection of forest resources through the struggle against trafficking or illegal appropriation of raw materials and species.
- In the Proárbol Programme, Environmental Services are aimed at supporting maintenance of forest zones, favouring aquifer recharge, carbon trapping, biodiversity protection and the management of agro-forestry systems with shade crops.
- One of the specific elements of PROCYMAF is to design a strategy strengthening its internal regulations for the use of identified natural and biological resources, to gear them towards sustainable development patterns.
- The productive structure of the COINBIO project supplies tools to enable the indigenous communities, 'ejidos' or legally constituted organizations that they set up, to appropriate natural resource conservation and management processes, incorporating new management techniques and making an integrated and sustainable use of ecosystem goods and services, with results reflected in their standard of living.
- The Procampo Ecológico project seeks to conserve, restore, reforest or improve land while support is still being received from PROCAMPO. (For more information, see the Project Details document).

Objective 3:

Enable indigenous and local communities to develop and implement adaptive communitymanagement systems to conserve and sustainably use forest biological diversity.

- The General Law for Ecological Balance and Environmental Protection seeks to guarantee community rights, including those of Indigenous people, to the protection, preservation and sustainable use of natural resources and safeguard and use of biodiversity.
- The General Sustainable Forest Development Law rules as obligatory criteria for forestry policy of an environmental nature, to contribute to the socio-economic development of Indigenous peoples and communities, as well as of 'ejidatarios', community dwellers, cooperatives, small-holders and other holders of forest resources.
- In the framework of the Proárbol programme, resources are available to support planning and forest organization as it promotes through forest land planning and organization the planning of forest areas and the organization of its inhabitants through community land planning, the preparation or modification of bylaws or community regulations and the implementation of national, state or regional projects favouring integrated forest organization and use.
- For its part PROCYMAF has supported forest resource management by 'ejidos' and communities, and the identification of alternatives for the use of non-timber forest resources.
- The COINBIO project for Conservation of Biodiversity by Communities and Indigenous People in the States of Oaxaca, Michoacán and Guerrero, Mexico, is an initiative by Indigenous communities implemented through the National Financing body (Nacional Financiera - NAFIN) with the assistance and technical supervision of SEMARNAT and the financial support of the Global Environment Fund (GEF).
- A National System of Forest Genetic Resources is being developed, contemplating the incorporation of a National Centre for Forest Genetic Resources, in order to have quality germplasm and plants. This will require joint efforts in all areas related or linked with the forestry sector, including Indigenous and local communities.
- Forest Promoters carry out actions for the conservation and restoration of forest vegetation, considering the needs of the population possessing these resources.
- Through the Programmes for Productive Reconversion and Sustainable Agriculture in Recurrent Drought Areas, efforts are being made to enable the peasants to use various comprehensive programmes for productive reconversion and sustainable

agriculture in areas that have a high risk of drought and which could endanger crop lands, promoting a decrease in the impact of adverse natural factors on farming and forestry.

• Through the Procampo Ecologico Programme, marketing of farm products is supported, granting subsidies that can be applied for by farmers and their organizations, such as net guarantees to fund productive projects, furthermore, support in kind is given to the communities to avoid peasants using forest lands for agriculture.

Objective 4:

Develop effective and equitable information systems and strategies and promote implementation of those strategies for in situ and ex situ conservation and sustainable use of forest genetic diversity, and support countries in their implementation and monitoring.

- The General Ecological Balance and Environmental Protection Law states that gathering and uses for commercial or scientific purposes of forest biological resources must recognize the rights of Indigenous communities to ownership, knowledge and use of local varieties.
- The General Sustainable Forest Development Law has incorporated in its Chapter 1 (on the aims and application of the Law) the definition of forest genetic resources. Furthermore, its articles 101 to 106 include as part of the obligatory criteria for forest policies of an environmental and forest nature management of forest activities contributing to maintaining genetic assets and biodiversity in addition to other elements that contribute to sustainable management and use of such resources. Likewise, the Law establishes two innovative aspects: it recognises community and 'ejidatario' ownership of the resources and also recognizes the associated knowledge of the resources, establishing that in order to access said resources, prior informed consent of the communities or owners of the resource is required.
- The Law on Biosafety for Genetically Modified Organisms is aimed at regulating activities regarding the confined use, experimental liberation, pilot programme liberation, trade liberation, marketing, import and export of genetically modified organisms, in order to prevent, avoid or reduce possible risks that these activities could cause on human health or the environment and on biological diversity or on the health of animals, plants or aquatic resources.
- The General Wildlife Law indicates that the rights over genetic resources are subject to international treaties and to the provisions on the matter.
- During 2008, the National System for Forest Genetic Resources will be set up, contemplating the establishment of a National Centre for Forest Genetic Resources in order to have quality germplasm and plants.
- The National Programme for Forest Genetic Resources favours in situ conservation, with the following strategies:

in situ Conservation*:*

- To increase the Natural Protected Areas Network (Red de Áreas Naturales Protegidas

 ANP), using genetic diversity criteria for its establishment and to promote better
 management of existing ANPs in order to substantially increase efforts regarding in
 situ conservation of genetic variation within forest species representative of forest
 biological diversity.
- To establish a network of Forest Genetic Resource Conservation Units (Unidades de Conservación de Recursos Genéticos Forestales - UCRGF) including species that are representative of forest biological diversity, of great economic value as well as those that are little known, endemic or local, possessing appropriate genotypes and phenotypes for their selection, considering as a criteria for prioritization their status as endangered or over-exploited species.
- To promote the conservation of genetic variation within (timber or non-timber) species in areas under forest management. To recognize the 'ejidos' and

communities' use practices and customs regarding their empiric management of their environment.

The strategies for *ex situ* conservation are:

- To develop mechanisms that lead to germplasm banks as long term stores of ex situ conservation and as centres reserving and distributing forest genetic resources in order to support both in situ conservation efforts and ecological restoration strategies.
- To establish plantations for *ex situ* conservation of genetic diversity among endangered and over-exploited forest species and in particular those having a high economic value. The National Commission for Knowledge and Use of Biodiversity (CONABIO) (which functions as a focal point for the Global Plant Conservation Strategy), together with the Mexican Botanical Garden Association, have taken on the task of implementing the preparation of the Mexican Plant Conservation Strategy. The preparation of this strategy will be the responsibility of an Intersectoral Coordinating Committee, comprising academics from various universities, NGOs, representatives of botanical gardens and government representatives and will be presented at the Ninth Conference of the Parties to the Convention on Biological in May 2008.

Goal 5: Access and benefit-sharing of forest genetic resources

Objective 1:

Promote the fair and equitable sharing of benefits resulting from the utilization of forest genetic resources and associated traditional knowledge.

- Article 102 of the General Sustainable Forest Development Law states that gathering and uses for commercial or scientific purposes of forest biological resources must recognize the rights of Indigenous communities to ownership, knowledge and use of local varieties.
- Based on COINBIO's approach, a new generation of biodiversity sub-projects is being promoted, in which the beneficiaries participate from project design to operation and assessment, thus making the beneficiaries responsible for decision-making regarding each of the actions to be carried out, considering conservation and productive activities under a participative scheme in accordance with the general outline of a National Committee in each State.

4.2 PROGRAMME ELEMENT 2: INSTITUTIONS AND SOCIO-ECONOMIC ENABLING ENVIRONMENT

Goal 1: Enhance the institutional enabling environment

Objective 1:

Improve the understanding of the various causes of forest biological diversity losses.

• In order to improve understanding of the causes of forest biological diversity losses, diagnoses of these losses are available in several documents, such as

The National Forestry Strategy to 2025;
 The 2007-2012 National Environmental and Natural Resource Programme;

- $_{\odot}$ The updated study on the country's biodiversity and an assessment of the state of marine and terrestrial ecosystems and the services these provide is still under preparation.
- Furthermore, the National Committee for Forest Education and Training (Comité Nacional de Educación y Capacitación Forestal - CONAECAF) disseminates information and increases public awareness about the causes of forest biological diversity loss and promotes actions for its care. It is responsible for promoting national forest activities through education and forest training, promoting conservation and enhancement of forest resources, rural development and the national economy.

Objective 2:

Parties, Governments and organizations to integrate biological diversity conservation and sustainable use into forest and other sector policies and programmes.

The forest laws, standards and programmes contained in the attached matrix promote the formulation of appropriate policies and the adoption of objectives integrating forest biological diversity into national forest programmes, the national sustainable development programmes, strategic documents concerning poverty reduction, related non-forest programmes and national strategies and action plans on biological diversity, guaranteeing coherence in direct relationship among the different programmes.

The General Wildlife Law mentions that the objective of the national policy regarding wildlife and its habitat is conservation through the protection and the requirement of optimum levels of sustainable use. In this way it is hoped to simultaneously achieve maintenance and promotion of diversity restoration and integrity, also to increase the welfare of the country's inhabitants. It guarantees a unity of purposes and coherence in the action of the Government's different orders regarding the implementation of national policy guidelines related to wildlife and also establishes the various guidelines to be considered to implement sustainable use.

Objective 3:

Parties and Governments to develop good governance practices, review and revise and implement forest and forest-related laws, tenure and planning systems, to provide a sound basis for conservation and sustainable use of forest biological diversity.

Current legislation, contained in the attached matrix and described in the annexed document, promotes the preparation and implementation of appropriate measures and regulations to guarantee a permanent forest zone, sufficient to enable conservation and sustainable use of forest biological diversity.

It is important to note that Article 51 of the Agrarian Law establishes that as a matter of right the allocation of plots in forests or tropical forests is invalid, thus promoting forest conservation. Furthermore, Article 5 of the same law states that the leading bodies of Public Administration shall be responsible for promoting sustainable use to preserve an ecological balance and, if timely, to use the potential of the land in benefit of workers and the population inhabiting rural areas. Finally, the provisions of said law regulate the use, access and conservation of the ejidos' common use lands, including the 'ejidatarios' rights and obligations regarding such lands (Article 74).

- Funds, such as the Mexican Forestry Fund, the CONAFOR CONACYT Sectoral Fund, SEMARNAT – CONACYT Sectoral Fund, the Funds-in-Trust Shared Risk Micro-Basin Management Programme (FIRCO) and the Funds-in-Trust Instituted in Relation with Agriculture (Fideicomiso Instituido en Relación con la Agricultura - FIRA) enable the different interested and relevant parties to implement work programmes to promote conservation and sustainable use of forest biological diversity.
- The Policy for Zero Tolerance of Illegal Logging, has visualized a model for management, protection and public safety, based on intergovernmental interaction

among the various federal government bodies and among these and the state governments, addressing the localities where this practice is more widespread and developing preventive action with the help of preventive police and crime pursuit in the Federal context and dissuasion and contention of armed operations by organized bands.

Objective 4:

Promote forest law enforcement and address related trade.

- The General Sustainable Forest Development Law establishes among its objectives to contribute to the country's social, economic, ecological and environmental development, through sustainable integrated management of forest resources, strengthening and increasing the participation of forestry production in national economic growth; to promote and regulate commercial forests or plantations, promoting that forest products come from sustainably managed forests through forest certification; promote productivity throughout the forestry chain; contribute to the socio-economic development of Indigenous communities and peoples, and of 'ejidatarios', communities, cooperatives, small-holders, and other holders of forest resources; promote economic instruments to promote forest development and foster the development of social and community forest business among Indigenous peoples and communities. It also includes certification as a way of accrediting appropriate forest management, improving the protection of forest ecosystems and facilitating access to national and international markets for products obtained legally and sustainably.
- Forest certification appears as an option to establish an institutional arrangement to enable performance standards for forest use to be voluntarily stepped up. Through external technical auditing, the forest owners can seek preferential markets on verifying that their forest management units comply with internationally recognized good performance standards. Over the past few years increasing interest has been shown among the forest communities and 'ejidos' on certification of their forestry operations.

Furthermore, the Mexican Standard NOM-050-SCFI-2004 has recently been issued, containing market information, general labelling of products, for the certification of sustainable forest management and it establishes the specifications applicable within the national territory to companies or forest plots interested in sustainable forest management.

The following scheme shows the progress of certification in Mexico:

Entidad	No. De Predios	Superficie
Chiapas	1	2,363
Chihuahua	2	221,569
Durango	33	344,223
Guerrero	1	15,190
Michoacán	1	8,449
Puebla	2	55,666
Querétaro	4	13,330
Quintana Roo	6	133,305
Oaxaca	10	89,642
Tlaxcala	1	12,330
Zacatecas	1	2,000
TOTAL	62	898,067

Entity No. of Plots Area

- Added to the above, the Government Purchase Decree establishes the obligation to require certification guaranteeing sustainable forest management for acquisitions, hiring and services involving timber products, furniture and office supplies of this material. In the case of purchases of paper for office use, a minimum of 50% of recycled fibres and chlorine free bleaching are required. The most consumed material inputs in public administration offices are paper and timber-derived products (for more information see the programme detail document).
- The Zero Tolerance of Illegal Logging policy has two components: a reactive one that facilitates the application of sanctions to contain and reduce loss of forest biodiversity and a proactive one, promoting the development of employment and poverty reduction, facilitating redistribution of wealth both for owners and holders of the resource and for the various stakeholders along the production chain.

Goal 2: Address socio-economic failures and distortions that lead to decisions that result in loss of forest biological diversity

Objective 1:

Mitigate the economic failures and distortions that lead to decisions that result in loss of forest biological diversity.

In order to promote trade contributing to sustainable management and to healthy forest species, some Official Mexican Standards have been prepared and in some cases, their inclusion in CITES appendixes has been promoted. The following are listed here as an example:

- NOM-059-SEMARNAT-2001. Environmental Protection Native Mexican Species of wild flora and fauna – Risk categories and specifications for their inclusion, exclusion or change – list of endangered species.
- NOM-061-SEMARNAT-1994. Specifications to mitigate adverse effects on wild flora and fauna due to forest use.
- NOM-018-SEMARNAT-1999. Technical and administrative procedure, criteria and specifications for sustainable use of candelilla (*Euphorbia antisyphilitica* and *Pedilanthus Pavonis*) and transport and storage of candelilla wax.
- Furthermore, the General Ecological Balance and Environmental Protection Law promotes the preservation and protection of biodiversity and sustainable use and, in its case, the restoration of soils, water and other natural resources in a way that is compatible with obtaining economic benefits and the activities of society, with ecosystem preservation.
- With the Project for Conservation and Sustainable Management of Forest Resources in Mexico (PROCYMAF) community forestry is being promoted as a strategy to achieve sustainable forest management, generating investment, expenditure, strengthening of social assets, development examples in 'ejidos' and communities on organizational bases that enable long term development plans to be defined and executed.
- The Proárbol programme has developed Productive Forest Chains, understood as a grouping of stakeholders related to forest activities who are seeking a collective and individual benefit and to become competitive, both qualitatively and quantitatively. In this framework, stakeholders interact in a complementary fashion to enable production, transformation and marketing of products from natural forest and commercial tree plantations.
- Furthermore, in this scheme to fight poverty, recover forest mass and increase forest productivity in Mexico, the Proarbol programme is aimed at communities, 'ejidos' and small landowners of forest lands for conservation and use, seeking a combination of economic resources in order to achieve better investment. While pursuing its goals, Proarbol primarily aims at obtaining a total of 500 thousand hectares with actions channelled towards productive reforestation or conservation and restoration.
- In order to regulate the international mahogany trade and guarantee that the volumes authorized are not damaging to its survival in the forest environment, in 2002 this species was listed in Appendix II of the Convention on International Trade in

Endangered Species of Wild Flora and Fauna (CITES). As from 15 November 2003, all the measures of control required by the species entered into force.

• In this respect, in April 2007, an International Expert Workshop was held to prepare Directives for Non-Detrimental Extraction of Mahogany (*Swietenia macrophylla*), that gathered experts from many different countries to define a proposed methodology for the formulation of non-detrimental extraction directives and with them, improve the instrumentation of CITES provisions and ensure long term use and sustainable international trade of the species.

This workshop was a sample of the collaboration and joint effort of exporting and importing countries, together with specialized organizations to ensure that use, transport, transformation and trading of mahogany be done under solid technical and scientific guidelines ensuring its sustainable use and availability of the resource and of the related social and economic benefits.

 Mexico has been a member since 2004 of the International Tropical Timber Organization (ITTO). This organization has among its main objectives achieving that all tropical timber entering international markets comes from sustainably managed sources, together with the promotion of sustainable management of forests producing tropical timber.

From the time of its incorporation as a member country in 2004, Mexico can access each and every one of the benefits this entails, such as access to financial support for projects for the sustainable management of tropical forests and forest plantations, training grants, study trips, exchange of experts on a world level, among others. Funding of projects by ITTO will be of enormous economic, social and environmental benefit to our country. CONAFOR is responsible for channelling proposals as they arise.

ITTO does not have any mechanisms to regulate prices or to intervene on the market. It grants the same importance to trade and to conservation, promoting the concept of sustainable tropical forest management through support and assistance to the tropical timber industry and trade.

4.3 PROGRAMME ELEMENT 3: KNOWLEDGE, ASSESSMENT AND MONITORING

Goal 1: To characterize and to analyse from forest ecosystem to global scale and develop general classification of forests on various scales in order to improve the assessment of status and trends of forest biological diversity

Objective 1:

Review and adopt a harmonized global to regional forest classification system, based on harmonized and accepted forest definitions and addressing key forest biological diversity elements.

- The National System for Forest Information (Sistema Nacional de Información Forestal - SNIF) is a national policy instrument regarding forest matters, established under article 35 of the General Sustainable Forest Development Law of the United States of Mexico.
- The National System for Forest Information aims at: recording, integrating, organizing, updating and disseminating information related to forest matters. The information contained in the System is available for public consultation and must be integrated to the National Environmental and Natural Resource Information system.
- The National Forest Inventory is a set of techniques and procedures making it possible to obtain quantitative and qualitative information on forest resources, associated vegetation, territorial components and characteristics of the site where the forest is located. It has cartographic and statistical information on soils and forest ecosystems in the country to support the national policy for sustainable forest development and promote activities in the sector with quality information. Some of its specific functions are: planning of public policies; ecological land planning; informing at international fora on the state of the country's forests; establishing conservation and restoration programmes, among others.
- The United Nations Food and Agricultural Organization (FAO), at the request of its member countries and the world community, assesses the world's forests through a Programme for Forest Resource Assessment, aimed at providing information and a source of knowledge on the forest resources of the world, facilitating discussion and decision-making on how to conserve and manage forests sustainably on a global scale.
- The Global Forest Resource Assessment 2000 (FRA 2000) revised the state of forests at the end of the millennium. FRA 2000 covered information of a national nature based on data from existing inventories, and on research on changes that have taken place on the cover of the earth and, finally through a series of studies, on the interaction existing between people and forests.
- The assessment of the world's forest resources provides information and a holistic perspective of these resources, their land planning and uses. It includes seven elements of sustainable forest management: Extension of forest resources; Forest health and vitality; Biological Diversity; Productive Functions of forest resources, Protective Functions of forest resources; Socio-Economic Functions; and Legal, political and institutional framework.
- The document entitled "State of the World's Forests" (SOFO), a bi-annual publication of the United Nations Food and Agriculture Organization (FAO), examines progress made towards sustainable forest management and in its structure considers seven thematic elements for sustainable forest management: Extent of forest resources; Forest health and vitality; Biological diversity; Productive functions of forest resources; Protective functions of forest resources, Socio-economic functions; Legal, policy and institutional framework.

This document bases its analysis on the most recent information available, including new data that did not appear in the 2005 Global Forest Resource (FRA 2005). Part II

presents specific issues such as climate change, reestablishment of the forest landscape, forest tenure, invasive species, management of wild fauna and flora, and wood energy, among others.

Objective 2:

Develop national forest classification systems and maps (using agreed international standards and protocols to enable regional and global synthesis).

- Article 75 of the General Ecological Balance and Environmental Protection Law establishes that SEMARNAT must be integrated into the National System of Natural Protected Areas (SINAP), with the purpose of including in the System the areas that, due to their biodiversity and ecological characteristics, can be considered of special relevance for Mexico.
- In order to compare the National System of Natural Protected Areas and variables that make it possible to characterize some aspects of the variability of the national territory, digital maps are used, integrated into a Geographical Information System (GIS). In order to achieve physical-geographic characterization, the map of the different climates of the Mexican Republic is used, at a scale of 1:1,000,000 according to Köppen's climate classification, modified by García (García, 1998), the map of natural regions at a scale of 1:4,000,000 by Cervantes-Zamora *et al.* (1990) that was drawn up taking into account the main climate zones and relief and a digital elevation model, derived from the contour curves from topographic maps, at a scale of 1:250,000 by the National Institute for Statistics, Geography and Computer Science (INEGI).
- In order to assess the distribution of biodiversity, a map of the bio-geographical provinces was used at a scale of 1:4,000,000, resulting from the synthesis of three systems of biogeographical classification: [a) vascular plants; b) amphibians and reptiles; and c) mammals] combined with the main morpho-tectonic features (CONABIO, 1997); the map of plant divisions on a scale of 1:8,000,000, by Rzedowski & Reyna-Trujillo (1990) obtained through a regionalization based on the analysis of the flora's geographical affinities and the map of the National Forest Inventory 2000, at a scale of 1:250,000, with information on the present distribution of the different types of vegetation (Palacio et al., 2000; Mas *et al.*, 2002).
- It is SEMARNAT and CONAFOR's responsibility to establish the methodology, criteria and procedure for the integration and up-dating of forest zonation, which should be coherent with the National Forest Inventory and soil inventory, whereby, by means of forest zonation, forest lands are identified, grouped and arranged within the hydrological-forestry watersheds, sub-watersheds and micro-watersheds by biological, environmental, socio-economic, recreational, protective and restorative functions and sub-functions, for management purposes and aimed at promoting better administration and contributing to sustainable forest development.

Objective 3:

To develop, where appropriate, specific forest ecosystems surveys in priority areas for conservation and sustainable use of forest biodiversity.

• The National Wetland Inventory was finished in 2007, with the participation CNA, CONABIO, CONANP, INE, INEGI and SEMARNAT. The Inventory considers generating an information system including the country's coastal and terrestrial wetlands at a scale of 1:250,000. This system will contain information on the name, location, area and limits of the wetland; physical and hydrological characteristics; classification, biodiversity, elements of human activities, present and potential negative impacts; conservation measures and on its value and state of conservation. The information contained in the National Wetland Inventory will make it possible to support planning and development of pro-wetland policies, identify those of national and international importance, make studies on loss and degradation, among other issues.

• This year a similar exercise was started as that carried out for the National Mangrove Inventory, in this case, that of an Inventory of Mexican Cloud Forests.

Goal 2: Improve knowledge on and methods for the assessment of the status and trends of forest biological diversity, based on available information

Objective 1:

Advance the development and implementation of international, regional and national criteria and indicators based on key regional, subregional and national measures within the framework of sustainable forest management..

- Mexico is a party to the Working Group on Criteria and Indicators for Conservation and Sustainable Management of Temperate and Boreal Forests ("the Montreal Process"), set up in Geneva in June 1994, to promote the development of internationally accepted criteria and indicators, applicable on a national level for the conservation and sustainable development of temperate and boreal forests. On the basis of seven criteria and their associate indicators, conservation and sustainable management of temperate and boreal forests are characterized. These are specifically related with forest conditions, attributes or functions and with the values and benefits associated with environmental and socio-economic goods and services provided by forests. The purpose or significance of each criterion is clarified by its respective indicators.
- In the framework of the Fourteenth Conference of the Parties, CITES, with the encouragement of Mexico, agreed to hold an international Expert Workshop for the preparation of guidelines on non-detrimental extraction directives.
- The United Nations Food and Agriculture Organization (FAO), at the request of its member countries and the world community, assesses the world's forests through a Programme for Forest Resource Assessment, that is aimed at providing information and a source of knowledge on global forest resources, facilitating discussion and decision-making on how to conserve and sustainably manage forests on a global scale.
- The Global Forest Resource Assessment 2000 (FRA 2000) revised the state of forests at the end of the millennium. FRA 2000 covered information of a national nature based on data from existing inventories, and on research on changes that have taken place on the cover of the earth and, finally through a series of studies, on the interaction existing between people and forests.
- The assessment of the world's forest resources provides information and a holistic perspective of these resources, their land planning and uses. It includes the seven elements of sustainable forest management: Extension of forest resources; Forest health and vitality; Biological Diversity; Productive Functions of forest resources, Protective Functions of forest resources; Socio-Economic Functions; and Legal, political and institutional framework.
- In the framework of the Fourteenth Conference of the Parties, CITES, with the encouragement of Mexico agreed to hold an international Expert Workshop for the preparation of guidelines on non-detrimental extraction directives.

<u>Goal 3</u>: Improve understanding of the role of forest biodiversity and ecosystem functioning

Objective 1:

Conduct key research programmes on the role of forest biodiversity and ecosystem functioning.

• This is carried out through the sectoral funds, which are funds-in-trust that the Federal Public Administration offices and entities, jointly with CONACYT set up to grant resources to scientific research and technological development in the

corresponding sectoral framework. They are aimed at promoting development and consolidation of scientific and technological capacity, benefitting the sectors, channelling resources to contribute to the overall development of sectors through scientific and technological actions.

- These are aimed at public and private universities and higher education institutions, centres, laboratories, public and private companies and other persons registered with the National Record of Scientific and Technological Institutions and Companies that provide scientific and/or technological solutions to the sector's problem areas.
- The CONAFOR- CONACYT Sectoral Fund created in 2002, promotes, through economic support, participation of research workers in solving forest-related problems through research projects, technological development and technology transfer. The aim of this Fund is to promote development and consolidation of scientific and technological capacity in benefit of the forestry sector, and to channel resources to contribute to the overall development of the sector through scientific and technological actions.
- The Sectoral Fund for Environmental Research (SEMARNAT-CONACYT) promotes the proposal of solutions to the main problems affecting the environmental sector, supporting scientific and technological research projects generating the knowledge required by the sector, to address the country's environmental problems, needs and opportunities, strengthening the scientific and technological capacity of the productive sector in favour of sustainable development.
- An International Expert Workshop was held to prepare Directives for Non-Detrimental Extraction of Mahogany (*Swietenia macrophylla*), to define a proposed methodology for the formulation of non-detrimental extraction directives (NDF's) for mahogany and improve the instrumentation of the Convention on International Trade in Endangered Species of Wild Flora and Fauna (CITES) provisions and ensure long term use and sustainable international trade of the species. Since 1992, CONABIO has supported over 100 projects related with the generation of taxonomic knowledge, conservation, restoration, management and use of natural resources in Mexican forests. Various projects along these lines are still being supported.
- Between January and July 2006 the following actions were carried out, with results in training of human resources, together with the promotion of research and development of technology in CONAFOR:
- Eighty-seven courses lasting a minimum of 15 hours were given, with the participation of 4,960 people through the different operational areas that grant CONAFOR support.
- Two meetings were held of the National Committee for Forest Education and Training (Comité Nacional de Educación y Capacitación Forestal CONAECAF) aimed at exchanging relevant information and report on progress on the priority goals identified. (For more information, see the Project Detail document).
- Training of 118 forest technicians graduated from the three forest education and training centres (CECFOR) during the 2005-2006 scholastic cycle.
- Twelve courses were given to 1248 purveyors of technical and profession forest services, on the single regulation for the operation of forest development programmes.
- Through 14 courses, 1348 accredited technicians were prepared to operate conservation and restoration concepts according to the single operating regulation.
- An Agreement on Performance has been established with the SAGARPA National Institute for Forest, Agriculture and Livestock Research.
- Mexico has actively participated in the International Tropical Timber Organization (ITTO), which has provided funding for various forest projects through international donations for an amount of 1,408 million dollars. The projects and activities financed through CONAFOR participation in ITTO are the following:
 - A donation of 514,653 dollars to carry out a project for the preparation of criteria and indicators for sustainable forest management of Mexican tropical forests.
 - ITTO sponsorship to hold various workshops on the development of criteria and indicators, management of secondary forests, for an amount of 40 thousand dollars.

- ITTO sponsorship to hold an international forum on natural tropical forest investment, held in April 2006, amounting to 100 thousand dollars.
- The participation of ITTO and various experts sponsored by the same organization in events such as the Forest Expo, and reconnaissance missions in the tropical forest sector of Mexico.
- ITTO sponsorship for the participation of Mexican experts at various technical conferences.
- A donation of 366.27 thousand dollars to implement the project on Production systems and integrated management of borer insects for the successful establishment of meliacea plantations in the Yucatan Peninsula and in Veracruz.
- Donation of 387.29 thousand dollars to implement the project on criteria for land planning of mangroves and flood forests along the central coastal plain of Veracruz, a community-management instrument.



Selva Lacondon, Chiapas, Mexico

Global Forest Coalition



For more information, please contact Miguel Lovera, miguel.lovera@globalforestcoalition.org

This publication has been made possible through the generous support of the Ministry of Foreign Affairs of the Netherlands.