

The Forest Carbon Partnership Facility (FCPF) Readiness Plan Idea Note (R-PIN) Template

March 8, 2008

Guidelines:

1. The purpose of this document is to: a) request an overview of your country's interest in the FCPF program, and b) provide an overview of land use patterns, causes of deforestation, stakeholder consultation process, and potential institutional arrangements in addressing REDD (Reducing Emissions from Deforestation and Forest degradation). This R-PIN will be used as a basis for the selection of countries into the FCPF by the Participants Committee. Information about the FCPF is available at: www.carbonfinance.org/fcpf
2. Please keep the length of your response under 20 pages. You may consider using the optional Annex 1 Questionnaire (at the end of this template) to help organize some answers or provide other information.
3. You may also attach at most 15 additional pages of technical material (e.g., maps, data tables, etc.), but this is optional. If additional information is required, the FCPF will request it.
4. The text can be prepared in Word or other software and then pasted into this format.
5. For the purpose of this template, "Deforestation" is defined as the change in land cover status from forest to non-forest (i.e., when harvest or the gradual degrading of forest land reduces tree cover per hectare below your country's definition of "forest." "Forest degradation" is the reduction of tree cover and forest biomass per hectare, via selective harvest, fuel wood cutting or other practices, but where the land still meets your country's definition of "forest" land.
6. When complete, please forward the R-PIN to: 1) the Director of World Bank programs in your country; and 2) Werner Kornexl (wkornexl@worldbank.org) and Kenneth Andrasko (kandrasko@worldbank.org) of the FCPF team.

Country submitting the R-PIN: MEXICO

Date submitted: May 2nd, 2008

1. General description:

a) Name of submitting person or institution: Comisión Nacional Forestal (National Forest Commission –CONAFOR–)
Title:

Contact information:

Address: Periférico Poniente 5360, Col. San Juan de Ocotán, Zapopan, Jalisco. C.P. 45019

Telephone: +52(33)3777-7084 and +52(33)3777-7083 **Fax:** +52(33)3777-7023

Email: liglesias@conafor.gob.mx

Website, if any: www.conafor.gob.mx

Affiliation and contact information of Government focal point for the FCPF (if known):

Victor Eduardo Sosa Cedillo
Coordinador General de Producción y Productividad
vsosa@conafor.gob.mx

Leonel Iglesias Gutierrez
Gerente de Servicios Ambientales del Bosque
liglesias@conafor.gob.mx

b) List authors of and contributors to the R-PIN, and their organizations:**Authors:****CONAFOR**

- Ing. Víctor E. Sosa Cedillo, Coordinador General de Producción y Productividad
- M. C. Leonel Iglesias Gutiérrez;, Gerente de Servicios Ambientales del Bosque
- Ing. José. Armando de la Rosa, de Mecanismos de Financiamiento y Demanda
- M. C. Gmelina J. Ramírez Ramírez, Especialista en Mercados de Carbono

ECOSUR (Colegio de la Frontera Sur)

- Dr. Bernardus H. J. de Jong, Director Campus Villahermosa, Colegio de la Frontera Sur, Tabasco.

c) Who was consulted in the process of R-PIN preparation, and their affiliation?**Subsecretaría de Planeación y Política Ambiental de la Secretaría de Medio Ambiente y Recursos Naturales (Undersecretariat of Planning and Environmental Policy)**

- Dr. Germán González Dávila. Director de Políticas Ambientales Globales para Cambio Climático
- M.C. Miguel Angel Cervantes Sánchez. Director General Adjunto de Cambio Climático
- Ecol. Anthony Challenger. Underminister Advisor

Instituto Nacional de Ecología (INE –National Institute of Ecology)

- Dr. Carlos Muñoz Piña, Director General de Investigación en Economía y Política Ambiental
- Dra. Julia Martínez Fernández, Coordinadora del Programa de Cambio Climático

Comisión Nacional de Áreas Naturales Protegidas (CONANP -National Commission of Natural Protected Areas)

- Biól. Javier Medina, Director de Proyectos Especiales

Procuraduría Federal de Protección al Ambiente (PROFEPA -Federal Agency for Environmental Protection)

- M.C. Humberto C. Rodarte Ramón, Director de Inspección y Vigilancia en Áreas Naturales Protegidas de la Dirección General de Inspección y Vigilancia

Technical Advisory Committee on Environmental Services (consultancy body in which are participating NGOs, academic and social organizations, as well as government institutes)

- Ing. Sergio Madrid Zubirán. Director General del Consejo Civil Mexicano para la Silvicultura Sostenible (CCMSS) y Presidente del Comité
- Dr. José Antonio Benjamín Ordóñez Díaz, Programa de Cambio Climático de PRONATURA

2. Which institutions are responsible in your country for:

a) forest monitoring and forest inventories: CONAFOR is responsible for implementing forest monitoring and forest inventories at the national level (General Law for Sustainable Forest Development –LGDFS-, article 22, fraction VI); the National Institute of Statistics, Geography and Informatics (INEGI) is responsible for developing land use and vegetation cover (LULC) maps at the national scale.

b) forest law enforcement: PROFEPA (Procuraduría Federal de Protección al Ambiente –Federal Agency for Environmental Protection-) is responsible for forest law enforcement (LGDFS, article 158), while the Ministry of Environment and Natural Resources (SEMARNAT) is responsible for environment and forest regulation.

c) forestry and forest conservation: These are also activities under CONAFOR's responsibility (LGDFS, article 22, fractions XXIII and XXV); conservation of forests and its biodiversity inside natural protected areas is responsibility of the National Commission of Natural Protected Areas (CONANP); whereas SEMARNAT is responsible for forestry and forest

conservation regulation.

d) coordination across forest and agriculture sectors, and rural development: SEMARNAT coordinates sectoral institutions, such as CONAFOR, CONANP, PROFEPA and the National Water Commission (CNA); it is also responsible for coordination with institutions of agriculture sectors and rural development under the Ministry of Agriculture, Livestock, Fisheries and Food (SAGARPA) as well as other related sectors for human and economic development.

The Intersecretarial Commission for Climate Change coordinates the Secretariats related to rural development and energy resources; the Technical Secretariat of this commission is the responsibility of SEMARNAT through its Undersecretary of Planning and Environment Policy.

Coordination across forest sectors is the main responsibility of CONAFOR, (LGDFS, article 22, fraction XIII).

3. Current country situation (consider the use of Annex 1 to help answer these questions):

a) Where do forest deforestation and forest degradation occur in your country, and how extensive are they? (i.e., location, type of forest ecosystem and number of hectares deforested per year, differences across land tenure (e.g., national forest land, private land, community forest, etc.):

Both deforestation and forest degradation are relevant land use problems. Deforestation is mainly driven by conversion to pasture and to a lesser extent agriculture, while forest degradation is mainly driven by uncontrolled logging and shifting agriculture. Deforestation and forest degradation occurs in all forest types of Mexico, although evergreen and semi-deciduous tropical forests, cloud forests, oak forests, mangroves, riparian forests and certain kinds of conifer forests are among the worst affected. Many of these ecosystems tend to be concentrated in the south of the country, so the greater part of the deforestation processes which affect them are also located in these areas. Deterioration is more widespread, affecting Mexico's poorer rural south, the central highlands (where this is related to illegal logging and urban growth) and the western and eastern Sierras Madre, where forestry, agricultural and extensive livestock activities are among the principal causes. Most of the forests in Mexico are in communal ownership the rest being mostly privately owned, although some federally owned forest land also exists. Between 1993 and 2002 about 512,500 ha/year of forest were converted to non-forest land-use types, including secondary vegetation, and 457,700 ha/year of forest were degraded. In some areas forests were recovered or restored to a mature state. Forest conversion between 2002 and 2006 are estimated at 330,000 hectares per year, using NDVI analysis of MODIS imagery. The latter estimate may be slightly underestimated, as MODIS imagery does not identify small-scale deforestation, which is typical for slash-and-burn related deforestation processes.

Yearly rates of forest conversion are: 0.3% of mature and 0.6% of degraded coniferous forest, 0.2% of mature and 0.7% of degraded mixed broadleaved-coniferous forests, 0.3% of mature and 0.3% of degraded broadleaved forests (former forest types are considered tropical highland forests); 0.3% of mature and 1.4% of degraded tropical evergreen forests and 0.7% of mature and 1.2% of degraded tropical deciduous forest.

About 66.7 million hectares of forest in 1993 remained forest in 2002. Of these forests, about 35.3% of the highland forest area and 60.1% of tropical lowland forest area were covered by degraded forest (2002). The annual rate of forest degradation was about 457,700 hectares between 1993 and 2002, whereas 116,000 ha recovered from degraded forest to mature forest. The rates of degradation were: 0.9% of coniferous forests, 1.4% of mixed broadleaved-coniferous forests, 0.3% of broadleaved forests, 2.1% of tropical evergreen forests and 0.6% of tropical deciduous forests.

Maps that demonstrate the distribution of the various successional stages of forests in 2002 are presented in the annex. Data is available on-line in www.cnf.gob.mx/emapas and also in the FAO Global Forest Resources Assessments 2005.

According to the INEGI ejido survey (2007), about 55% percent of lands are property of ejidos or communities (either agrarian or indigenous). A preliminary analysis performed by ECOSUR (2008) using a georeferenced land tenure map revealed that about 59% of the forest land is owned by ejidos and communities, around 33.5% is privately owned and the remaining 7.5% are forests on national lands. This contrasts with earlier reports which stated that about 84% of the forest is owned either by ejidos or communities¹. Updated tenure maps will be used to verify these data and to detect possible regional variation in land tenure and the effect of land tenure on the rate of deforestation and forest degradation. Up to now there are no studies analyzing effects of land tenure on deforestation and/or degradation; nevertheless, risk of deforestation and degradation increases in areas when unsolved land tenure conflicts are present; illegal logging and forest fires are the most common problems in those areas. Deforestation in areas where forest management plans are executed was significantly lower than in areas where no forest plans are established, which indicates that forest management may reduce the risk of deforestation. The same is true for areas within and outside Federally protected

¹ Chapela-Mendoza, G. 1992. Sector social forestal: unas propuestas para competir. El Cotidiano. Universidad Autónoma Metropolitana. Azcapotzalco, México. Año 8, Número 48)

areas.

b) Are there any estimates of greenhouse or carbon dioxide emissions from deforestation and forest degradation in your country? If so, please summarize:

Total LU/LC and forestry related annual emissions (forest conversion loss of biomass and soil organic matter, forest under management, abandoned land) during the period from 1993 to 2002 were estimated at 86.7 million tonnes of CO₂ per year – albeit with high levels of uncertainty, such that these figures are considered preliminary (INE-SEMARNAT, 2006). At the end of 2009 an updated GHG inventory will be available for the years 2002 to 2007. Mexico is collaborating with Canada to evaluate the feasibility to apply the Canadian Forestry Service Carbon model (CBM-CFS) to the Mexican forestry sector.

c) Please describe what data are available for estimating deforestation and/or forest degradation. Are data published? Describe the major types of data, including by deforestation and forest degradation causes and regions if possible (e.g., area covered, resolution of maps or remote sensing data, date, etc.).

Freely available satellite imagery includes daily coverage of MODIS (pixel size 250*250 m) through an antenna established at CONABIO (Mexico City) and ECOSUR (Chetumal). The Secretary of Navy (SEMAR) has a contract with SPOT to receive all SPOT 5 imagery (pixel size 10*10 m) with a frequency of about 16 days. These images are available on request and can be used for any monitoring system. Landsat 5 imagery is also available through the antenna established at ECOSUR (Chetumal). Future developments of satellite imagery, such as radar imagery that can be used to develop 3D vegetation structure maps will be available through an agreement between Mexico and Germany. A monitoring system, which incorporates various satellite imagery with efficient ground truthing, such as the Brazilian “PRODER” monitoring system, will be developed to detect deforestation and forest degradation.

National land use and land cover maps are available from INEGI at a scale of 1:250,000. The first series was developed during the 1970s and 1980s by means of aerial photography interpretation, with photographs taken at a scale in the range of 1:40,000 to 1:80,000 (photos are still available from INEGI on request). Series 2 covers the LULC of 1993 and is based on the interpretation of paper maps derived from Landsat imagery. Series 3 covers the LULC of 2002 and is based on digital interpretation of Landsat imagery. All series have identical land use classes and are accompanied by statistical tables inventorying coverage (hectares) of all classes of natural vegetation and land use, and thus can be used to estimate calculate and map land-use changes at the resolution permitted by the scale of the cartography. Forests are classified according to dominant species or physiological characteristics and each forest type is subdivided into 4 successional stages: primary, secondary with tree dominated cover, secondary with shrub-dominated cover, and secondary with herbaceous plant-dominated cover. Changes in forest successional stages can be used as a tool for estimating and mapping areas of forest degradation. INEGI has planned to develop these types of maps on a 5-year cycle, with the next series available at the end of 2008 (using 2007 Landsat and Spot imagery).

National forest inventory data are available from 1992-1994, comprising about 16,000 sites of 1000 m² established in conglomerates of up to 3 sites. A systematic approach was used to distribute the conglomerates.

In 2004 a newly designed National Forest Inventory was developed and between 2004 and 2007, about 25,000 geo-referenced permanent conglomerates were established and measured; each conglomerate has 4 sites of 400 m², with a total of 1,600 square meters per conglomerate; 20 percent of all conglomerates will be re-measured each year, starting in 2008. A total of 1’300,000 trees were measured during 2004-2007. These plots will be used to verify the land-use maps derived from the satellite monitoring system and to determine classification errors.

Using the Deforestation Risk Index (DRI) developed by National Institute of Ecology (INE)², areas likely to be deforested were identified; remaining forest in Mexico was classified according to the deforestation risk (low to very high). Topographic conditions, road access and proximity to human settlements are the main variables explaining deforestation behavior in forest areas. Even though DRI is not providing information on when deforestation will happen, it indicates a relative risk of each forest area to be deforested, as deforestation is expected to take place first at sites with a very high risk. Knowing the rate of deforestation we can estimate where this will most likely occur (at least within well defined forest classes with known biomass densities). A similar effort was carried out in Chiapas, where deforestation baselines were developed to estimate the avoided emissions from deforestation (Castillo-Santiago et al, 2007; de Jong et al, 2005). A similar system will be developed and tested on a national scale and a scaled crediting mechanism for REDD will be derived from these risk maps. The models will be periodically tested and updated, as ex-post data becomes available. Deforestation in areas where REDD funding is applied will be compared to areas without REDD funding, to measure the

² Muñoz, C.; Alarcon, G.; Fernandez, J. (2003). Pixel patterns of Deforestation in Mexico 1993-2000 (Draft). INE Working Papers Series INE-0401. Instituto Nacional de Ecología, México.

impact of the program.

d) What are the main causes of deforestation and/or forest degradation?

Both deforestation and forest degradation are relevant land use problems in Mexico. Deforestation is mainly driven by conversion to pasture and, in to a lesser extent, to agriculture, while degradation is mainly driven by over exploitation, illegal logging, forest fires, direct grazing, shifting agriculture, fuel wood collection and forest pathogens.

The main drivers of deforestation and forest degradation are conversion to pasture land, forest fires associated with agricultural burning (e.g. stubble burning), slash-and -burn agriculture, and uncontrolled logging (over exploitation and/or illegal logging). In some areas, forest fires and hurricanes also affect forest cover, especially in the tropical lowland forest area. Historically, government agrarian reform programs were responsible for distributing millions of hectares of land – much of it with its original cover of natural ecosystems – to peasant farmers, and At some extent, government subsidy programs for the agricultural sector have also been responsible for the deforestation of large swathes of natural forest, especially in the lowland tropics. Both of these were particularly important drivers of deforestation during the twentieth century (mainly between the 1930's to the 1990's). Even today, agricultural support programs such as PROCAMPO and PROGAN have been identified as likely underlying causes of deforestation, although efforts are increasing to ensure cross-sectoral environmental mainstreaming.

INE has estimated that 82% of deforestation occurred in Mexico as a result of land-use change to agriculture or grazing purposes; 8% due to illegal logging, 6% caused by forest fires and pests, 2% by authorized land-use changes and the last 2% by other causes such as hurricanes or other natural disasters (CCMSS, 2008).

Before 2000, land-use policy encouraged agriculture and animal husbandry; examples of those policies are a national law in the 70s which promoted deforestation for agriculture or grazing purposes. Effect of other programs implemented in the agricultural sector, such as PROCAMPO and PROGAN (mainly for promoting cultivation of corn and beans), is yet to be determined, but there is a perception that those programs triggered deforestation in order to obtain PROCAMPO subsidies.

e) What are the key issues in the area of forest law enforcement and forest sector governance (e.g., concession policies and enforcement, land tenure, forest policies, capacity to enforce laws, etc.?)

Law enforcement. Even though capacity for law enforcement has been increasingly growing since 1992, when PROFEPA was created, and forest law clearly establishes measures to punish unauthorized land-use change and illegal logging, both causes of deforestation and forest degradation, there are not enough human and financial resources to effectively enforce these laws. There are areas within the country where government personnel have limited access due to the presence of organized groups of illegal loggers, drug traffickers and, in some specific areas, guerrilla groups, challenging local and federal authorities. These areas are identified by PROFEPA as priority areas. Where possible, PROFEPA and CONAFOR actively encourage the formation of local, community-based forest vigilance groups, to discourage illegal activities and report on the presence of unauthorized logging or harvest of wild flora and fauna.

SEMARNAT issues authorizations to owners for harvesting forests, based on a technical study and a forest management plan as required by forestry laws. PROFEPA is responsible for enforcing compliance with the details of these permits of harvesting authorization; although it has human and/or financial resources for the scale of the work required to enforce authorization and regulations for forest harvesting. To some extent, forest degradation has occurred due to overexploitation inside those areas having official authorizations.

Forest governance: Socially equitable organization within forest community organizations is a critical issue to deal with. Local experience and the findings of some studies provide evidence that in those communities with power inequalities in the distribution of power within the group (e.g., within ejidos or indigenous communities), agents with more power are able to impose higher costs on those with less power; on the other hand, powerful leaders in well organized communities may provide positive benefits to the group. However, overall Results of studies indicate that greater power inequality tends to lead to more illegal logging and more forest degradation.

Most ejidos, communities and privately owned forests do not have sufficient organizational efficiency enough for carrying out sustainable forest management; nevertheless good examples of community forestry exist in some states. CONAFOR programs are aimed to increase the involvement of forest owners in sustainable forest management through a participatory approach. Communities in Mexico are a great force for both forest management and conservation, and there are many models for good resource management and forest enterprises. Designing and supporting these models requires building capacity within on their particular own time frames and initiatives and creating the appropriate enabling factors and thus which implies flexible support over the long term.

Land tenure. Tenure rights are relatively secure in Mexico, although agrarian conflicts persist in some localities. About

85% of land has been geo-referenced through a governmental program and official property titles handed over to the ejidos, communities and private land owners. The remaining 15% still has persistent problems of land tenure; they are in most cases located in conflicting areas. Conflicts are present but not common; conflicts in land tenure increase the risk of deforestation and forest degradation due to forest fires, over exploitation and illegal logging. Some of these areas are located within indigenous communities. The land tenure of About 2 million hectares is disputed between indigenous groups or between indigenous and non-indigenous communities.

Poverty. It is estimated that 12 to 13 million people live in forest areas in Mexico, and about 5 million of whom are indigenous people, mostly of them living in conditions of extreme poverty (medium to very high levels of marginalization levels, according to the National Population Council marginalization index), with limited access to education, public services and work opportunities. Most of these are generally poor people depend on firewood as energy source for cooking (and, to a lesser extent, winter heating), the use of which may cause forest degradation where population pressure or firewood is scarcity leading to the felling of live trees.

4) What data are available on forest dwellers in lands potentially targeted for REDD activities (including indigenous peoples and other forest dwellers)? (e.g., number, land tenure or land classification, role in forest management, etc.):

In October 2007 a national land-use census was carried out by INEGI. Data from this census will soon become available with detailed land-user statistics at the scale of communities, ejidos and private land owners. This will give a good insight about the number of rural peoples active in the forestry, agricultural and animal husbandry sectors, their technological development, and their cultural background.

Population censuses that include livelihood statistics are available from 2000 and 2005, including economic and social parameters and availability of public services. Rural properties of about 85% of the country have been geo-referenced and cadastral property rights have been handed over to the owners (private, community, ejido). This has resolved many of the several land tenure conflicts.

5. Summarize key elements of the current strategy or programs that your government or other groups have put in place to address deforestation and forest degradation, if any:

a) What government, stakeholder or other process was used to arrive at the current strategy or programs?

The Government of Mexico (GOM) has taken a number of legislative, institutional, and budgetary actions to address the daunting environmental challenges the country is facing. For example, in 1986 the government created the National System of Protected Natural Areas (SINAP) to safeguard some of Mexico's richest habitats and areas with high biological diversity. With financial assistance from the GEF and World Bank, an endowment fund was created to provide long-term support for SINAP. The Mexican government is also committed to a target of "zero net deforestation" target³ and in April 2001 the GOM created the National Forest Commission (CONAFOR) to support sustainable production and conservation of forest resources based on the Strategic Forestry Program for 2000-2025, which articulates specific priorities, goals, and strategies in areas such as community forestry, commercial forestry, soil conservation, forest land-use planning and management, and reforestation. This forest strategy is part of an overarching approach to national development that also includes formal sector strategies for water, rural development, and biodiversity. To help support and implement these strategies, the government recently passed on extensively modified laws on water resources management, forests, and sustainable rural development. These sectoral initiatives are complemented by the Sustainable Development Program, which seeks to build synergies and complementarities among different government policies and instruments. The introduction of a fiscal instrument (the water fee) and the payment for environmental services programs are further examples of the government's serious commitment to conservation and sustainable use of natural resources.

Consultations of stakeholders are a common practice for developing and updating strategies and programs; for example, stakeholder consultations have been carried out for the National Action Strategy on Actions for Climate Change (2006), the Strategic Forest Plan for the year 2000-2025, the six-yearly National Forest Programs every six years, and for updating the Operational Rules of ProÁrbol, are examples of the result of this process.

A key element to reduce deforestation and forest degradation is to increase the budget of the national forest program, concentrated in the so-called ProÁrbol program in order to promote sustainable forest management and conservation activities. Since 2001 the Mexican government has substantially increased forest subsidy programs to assist communities

³ It should be emphasized that this concept currently assumes that a net balance *in hectares per year* will be reached, at some point in the future, between rates of deforestation of mature forest cover and rates of areas replanted through reforestation programs, although the concept does not account for losses of biodiversity, carbon or ecosystem goods and services associated with the deforestation of mature forest.

in developing forest management plans, reforestation activities (commercial plantations and forest restoration), use of non-timber forest products, sustainable management of wildlife, and payments for ecological services, among others.

Another key element to reduce deforestation and forest degradation is promoting an integrated land-use strategy and planning at different levels based on participatory approaches.

b) What major programs or policies are in place at the national, and the state or other subnational level?

National Reforestation Program (PRONARE). Program oriented to restore forests cover in deforested and/or degraded areas, generally with no commercial purpose, usually in scattered areas with an extension of less than 5 hectares. This program has increased its target for the total number of trees planted every year and it has national coverage. 250 million trees were planted in 2007 (about 250,000 hectares) and a goal of 280 million trees is the target for 2008 (280,000 hectares); Survival rates for plantings have been increasing, but are it still around 50% per cent, on average.

Forest Fire Prevention and Fighting. Every year an intensive campaign is carried out to prevent and control forest fires. The use of fire as a land-use practice (slash and burn) within the agricultural sector is still common, although the farmers are encouraged to use other methods to control pests and weeds, and instead of burning crop stubble, or scrub on fallowed land. The program is aimed to coordinate actions between the various levels of the government, land owners, NGOs and other sectors, to reduce the incidence and effects of forest fires.

Forest pest control and prevention. Subsidies are channeled through CONAFOR to forest owners to conduct activities to prevent forest pest infestation (diagnosis through field surveys) as well as direct pest control activities (both mechanic and chemical).

Soil conservation. CONAFOR has a special program for soil conservation. The program finances restoration and conservation practices on forest lands, mainly to prevent water-derived soil erosion. Subsidies are used to pay for labor and/or acquisition of materials and/or tools required for such activities.

Commercial plantations (PRODEPLAN). It was established to channel financial resources to develop plantations of timber and non-timber forest products for commercial purposes. The program (now a component of ProÁrbol) promotes the establishment of forest plantations on deforested lands only.

Sustainable Community Forestry (PROCYMAF). It encourages sustainable forest management based on capacity building of forest communities and ejidos, through participatory approaches to planning management, forest production and conservation activities. The program has obtained World Bank's finance and technical assistance, although its implementation is currently limited to 6 states in Mexico. PROCYMAF has delivered important lessons for working with indigenous communities and ejidos for implementing sustainable forest management. CONAFOR has proposed PROCYMAF could focus on capacity building and operate as an entry for the rest of the rest of its programs.

Payment for Environmental Services. It is the latest and most innovative program of CONAFOR. The Payments for Hydrological Environmental Services Program (PSAH) began in October 2003, and it is designed to complement other initiatives by providing economic incentives to avoid deforestation in areas where water supply is a severe problem, but where in the short- or medium-term commercial forestry cannot cover the opportunity cost of switching to agriculture or cattle ranching. PSAH consists of direct payments to landowners with forests in a good state of conservation. Payments are made for watershed conservation, management, and restoration aimed at preserving highland and lowland tropical forests (particularly montane cloud forests associated with the supply of water to communities. Part of its innovative approach is that it is funded partially through the water fees collected under the Federal Rights Law (LFD).

In 2004, as a complement to the PSAH, Mexico created a program called CABSA (Program to Develop Environmental Services Markets for Carbon Capture and Biodiversity and to Establish and Improve Agroforestry Systems). CABSA supports reforestation activities and land-use changes (from annual crops to agroforestry) in Mexico and links them to national and international markets/financing for carbon capture and biodiversity conservation.

Landholders can receive payments for environmental services if their lands are inside eligible areas determined by CONAFOR and based on certain criteria. Eligible lands are distributed all over the country. Since 2004, payments for environmental services through PSAH and CABSA have delivered payments in more to support forest conservation 1.2 million hectares.

Forest Development Program. This program is oriented to promote sustainable forest management granting financial support to forest owners to increase their capacities to undertake forestry and forest production activities by their own; activities financed through this program are aimed to increase productivity of forests, diversify production of forest goods and services and/or to increase added value to timber and non-timber forest products.

Forest productive chains. This program is aimed to increase productivity and competitiveness of forest sector, by promoting association and collaboration of those involved in every link of the forest productive chain; i.e. from timber

producers to forest products retailers. Program finances initiatives aimed to organize forest product chains to provide added value, increase use of technology and marketing, among other activities.

Mexican Forest Fund: This Fund was created as a financing mechanism to promote conservation and sustainable forest management, and to facilitate access to financial services and to develop mechanisms of payment for environmental services (LGDFS, article 142). It ensures that financial resources collected for environmental services are dedicated to pay directly to the providers of such services and for financing the operating costs related with such payment mechanisms (LGDFS, 143). It also encourages private contributions, as they are tax deductible (LGDFS, article 143).

Since 2007, ProÁrbol has integrated CONAFOR's previously separate programs into a single, comprehensive program for sustainable forest management and conservation.

Programs implemented by CONAFOR are regularly evaluated by a technical commission, in which NGOs, academics and other social organizations are represented. Any REDD strategy will pass through this consultative body for approval.

6. What is the current thinking on what would be needed to reduce deforestation and forest degradation in your country? (e.g., potential programs, policies, capacity building, etc., at national or sub-national level):

Deforestation and forest degradation are mainly driven by economic factors. Owners of the forests generally decide to convert forests to other uses as these are economically more attractive to them, such as agriculture, animal husbandry- or due to direct food production needs, in subsistence-based communities. Either the expected income from forest resources is very low, or the owners do not have the means or technical capacity to carry out sustainable forest management. Positive externalities, such as environmental services, are not generally recognized and programs of payments for such services are not universally available, so that the most forest-land owners are not compensated for them. Therefore it is important to design and implement an appropriate financial mechanism that is able to compensate the owners of forest resources to develop a sustainable forest management plan and to carry it out. The financial mechanism has to consider the payments of compensatory funds based on performance that is based on-related verifiable results. This means that additional financial and technical assistance is required to develop the sustainable management plans and at the same time this has to coincide with agricultural and animal husbandry policies that will reduce the pressure on existing forests.

Participatory planning in forest communities has been identified as the main method to achieve these aims. Social organization within the communities is an important factor that needs to be addressed in order to guarantee that the forestry related resources are equitably distributed among the members of each community.

It will be also important to mainstream ecosystem conservation and restoration in sectoral policies outside forest sector, such as for agricultural or transportation, among others.

Strengthening law enforcement in those identified areas where illegal logging occurs will be a major challenge. Working with PROFEPA for designing more effective activities involving local population and forest industries, such as communitarian surveillance and promoting commercialization of timber and non-timber products from sustainably managed forests. Increasing governance inside ejidos and communities is expected to have an effect on reduced illegal logging.

Increasing forest areas through reforestation and commercial plantations are expected to have an effect in the medium to long term, for supplying timber and non-timber forest products for industries as well as for fire wood and another domestic uses.

a) How would those programs address the main causes of deforestation?

It is expected that those programs will increase profitability of forest lands when compared with competitive land uses such as agriculture or grazing, having an impact on reducing land use change. Recognizing positive externalities of forest lands through payment for environmental services is aimed to this objective. Sustainable forest management for timber and non-timber forest products in areas where deforestation and forest degradation occur, as well in surrounding areas, will contribute to increase profitability of forests lands and to reduce pressure for changing land use. Sustainable forest management will also contribute to reduce forest degradation when forest lands are used as fire wood supply.

Land use change has responded to government incentives to expand livestock and agriculture, as well as urban, industrial and tourist developments; Incorporating environmental criteria in land use management policies in those programs and incentives is expected to decrease their potentially negative impacts.

Increasing forest governance through capacity building and financial assistance that promote an equitable distribution of the resources will contribute to a reduction of the pressures leading to deforestation or forest degradation. Experiences and lessons from PROCYMAF will be replicated as it has demonstrated to be an effective approach for working with ejidos and communities for capacity building and participatory planning to implement sustainable forest management and sharing its benefits.

As poverty and marginalization have been identified as one of the contributing causes of deforestation in Mexico, CONAFOR's program ProÁrbol, as well as other institutions such as SEDESOL (ministry of social development) and CDI (National Commission for Indigenous Peoples Development), is part of an integrated strategy aimed to contribute to reduce poverty in forest areas, offering opportunities to land holders to increase their livelihood and income levels to reduce pressure over remaining forest and/or to promote adoption of sustainable forest management when possible.

b) Would any cross-sectoral programs or policies also play a role in your REDD strategy (e.g., rural development policies, transportation or land use planning programs, etc.)?

Yes. Currently the Intersectoral Commission on Climate Change is developing a Special Program on Climate Change. The program is intended to develop a series of actions to be carried out by all Secretariats involved in land use and rural development directed towards mitigation of GHG emissions and adaptation to Climate Change. Decreasing deforestation and forest degradation is one of the important issues requiring cross-sectoral attention.

c) Have you considered the potential relationship between your potential REDD strategies and your country's broader development agenda in the forest and other relevant sectors? (e.g., agriculture, water, energy, transportation). If you have not considered this yet, you may want to identify it as an objective for your REDD planning process.

As pointed out under 6.a and 6.b, the REDD strategies need to be coordinated with other Secretariats that are concerned with land use and rural development. One of the tasks of the national REDD preparation period will be to analyze the effects of the various governmental programs on deforestation and forest degradation, such as agricultural and animal husbandry subsidy programs, construction of roads and highways, among others. Synergistic strategies need to be developed that incorporating REDD-derived financing into a more comprehensive forest management and conservation program and at the same time, community-based land-use planning.

d) Has any technical assistance already been received, or is planned on REDD? (e.g., technical consulting, analysis of deforestation or forest degradation in country, etc., and by whom):

Federal funding through CONAFOR is currently the only financial resources available to create the technical capacities, although some financial assistance through external funding (National Research Commission, international financing) has been given to independent research institutes and universities to carry out deforestation and forest degradation analysis at either regional or national scale. The National Autonomous University of Mexico, Colegio de Postgraduados (COLPOS) and Colegio de la Frontera Sur (ECOSUR) have been active at the national level. CONAFOR is planning to contract national and international experts to help develop the REDD program for Mexico. Actions will be coordinated by CONAFOR with participation of the National Institute of Ecology and SEMARNAT. The Mexican Carbon Program (a network of research institutes and universities involved in carbon related research) will assist CONAFOR in developing a national monitoring system and regional stakeholder consultations.

Other important collaborative agreements of CONAFOR with a number of governmental organizations such as Finland Government, United States Forest Service, FAO, Forest Canadian Service and others will be expected to bring important elements when designing REDD strategy, especially in matters related with monitoring land use change and achievement of emission reduction goals.

7. What are your thoughts on the type of stakeholder consultation process you would use to: a) create a dialogue with stakeholders about their viewpoints, and b) evaluate the role various stakeholders can play in developing and implementing strategies or programs under FCPF support?

a) How are stakeholders normally consulted and involved in the forest sector about new programs or policies?

National Forest Council (CONAF). It was constituted under LGDFS (article 156), as an advisory group for providing guidance on forest related issues. Their attributions include monitoring and evaluation of the national forestry policies and programs. CONAFOR is bound to ask for CONAF's opinion in matters of sectoral planning and regulation. CONAF comprises representatives of government institutions, landholder organizations, NGOs, private and community organizations of the social and private sectors, academic and/or research institutes, and professional organizations; all of them are key stakeholders of the forest sector.

Technical Advisory Committee for Environmental Services Project. The Environmental Services Project has created an advisory committee involving the main stakeholders; the committee gives recommendations to improve the operational rules of forest programs in order to increase their efficiency and effectiveness. Participation of NGOs, landholder organizations, users of environmental services, private organizations and other government institutions are also part of this committee.

Regional or local consultations. Normally, every year when the forest programs or their rules are to be redesigned and published, a consultation process is initiated at a regional and/or local level. Participation of stakeholders is encouraged and their recommendations and suggestions are incorporated, where feasible, into the new program rules for programs. This will also apply to be part of the consultation mechanism to design and establish the REDD consultation mechanism to design and establish the financial program. Important facets of the consultation process include eligibility rules, criteria and indicators to define financial assistance. State Forest Councils have been constituted nationwide for giving guidance on forest related policy at state level and certainly these will be important fora for local consultation.

b) Have any stakeholder consultations on REDD or reducing deforestation been held in the past several years? If so, what groups were involved, when and where, and what were the major findings?:

Discussions have recently initiated within the Technical Advisory Committee on Environmental Services Project; expected outcomes include the design of a consultation process for stakeholders at different levels (national, regional or local) and key issues for designing a REDD strategy have been identified. Methodological issues have been discussed, such as establishing an appropriate emissions reference scenario (baseline) and monitoring system; operational matters such as incentive types, eligibility criteria, level of payments, implementing participatory approaches and sharing benefits among land holders, have also been discussed. Others issues discussed include indigenous rights, marginalization indices of forest communities, law enforcement and governance matters. This ongoing consultation process allows CONAFOR to identify issues on which to focus the proximate consultation process and key issues for which FCPF support will be relevant.

c) What stakeholder consultation and implementation role discussion process might be used for discussions across federal government agencies, institutes, etc.?

CONAFOR has already started a discussion process among the key governmental institutions using as a basis for the consultation the existing programs for payments for environmental services. CONAFOR is expected to organize and facilitate the consultation process, with the participation of the institutes of SEMARNAT (CONANP, PROFEPA, INE and CONABIO) and representatives of other sectors (SAGARPA, Secretary of Agrarian Reform -SRA-, Secretariat of Social Development -SEDESOL-). The process will include, among others, aspects, such as sectoral policies, design and implementation of incentive programs and the institutional requirements for implementing them (capacity building, budget, etc), as well as the identification of the opportunities, limitations, and threats. Discussions on methodological issues will involve consultation with national and international experts, particularly on issues such as reference emissions (national baseline) and monitoring systems. Participation of institutes such as SEDESOL and the National Commission for Indigenous Peoples Development (CDI) will guarantee that the incentive programs will distribute the financial or capacity building resources equitably among forestry related communities, with special emphasis on indigenous groups and marginalized communities.

On the other hand, the involvement of economic development-related sectors, such as the Secretariat of Communications and Transport (SCT), will allow CONAFOR to discuss the risks of deforestation and forest degradation when increasing the national road network.

Federal government institutions are also part of the Technical Advisory Committee, which will promote consultation among involved federal agencies as well as for defining their roles when implementing the REDD strategy.

d) Across state or other subnational governments or institutions?

The consultation with sub-national governments (state, municipality) and their institutes will be part of the regional consultation process, in which other interested actors will be involved for defining roles of the various local, state and regional actors in the implementation of the REDD program. Local involvement will be a key factor for guaranteeing good forest governance, implementation of environmental laws and an equitable distribution of the potential benefits of the REDD program.

e) For other stakeholders on forest and agriculture lands and sectors, (e.g., NGOs, private sector, etc.)?

The consultation process will be carried out at various levels: national, regional and local. The national consultation will be feasible through the already existing consultation bodies, such as CONAF and the technical consultative bodies. At the regional level, participatory workshops are being planned at either state or regional level and other consultative bodies, such as the Sustainable Development Commissions, will be used to discuss the REDD mechanisms. The consultation process will be designed and implemented by the sectoral institutes involved (SEMARNAT, INE, PROFEPA, CONANP and CONAFOR). In indigenous regions, regional and local traditional authorities will be invited to participate in the process.

f) For forest-dwelling indigenous peoples and other forest dwellers?

The owners of the forest land will play a key role in the consultation process, to assess the feasibility and adjust, when necessary, the financial assistance scheme of REDD (including financial compensation and technical assistance). Special attention will be given to indigenous communities and marginalized groups as potential beneficiaries of the REDD scheme, in order to identify barriers that could prevent their participation in such schemes and to promote the equitable distribution of potential financial and other type of benefits.

CONAFOR has also been promoting creation of Forest Regional Management Units (UMAFORs) to organize forest landholders and producers to implement sustainable forest management as well as for increasing productivity and competitiveness of forest sector. UMAFORs will be part of the regional consultation as well as other appropriate consultation bodies at regional or local level inside rural sector.

Consultation process with forest dwellers must address current barriers of ProÁrbol's Operational Rules which limits participation of those who cannot demonstrate land tenure as well as alternatives for delivering financial support for conservation and management activities in areas under land tenure conflicts.

8. Implementing REDD strategies:**a) What are the potential challenges to introducing effective REDD strategies or programs, and how might they be overcome? (e.g., lack of financing, lack of technical capacity, governance issues like weak law enforcement, lack of consistency between REDD plans and other development plans or programs, etc.):**

Identified potential challenges to designing and implementing effective REDD strategies include (i) strengthening environmental institutions; (ii) increase effectiveness of programs for delivering payments for maintaining natural forests, (iii) strengthening protected areas that effectively restrict certain land uses; (iv) supporting community and indigenous forest management; (v) undertaking regular and systematic monitoring and analysis of deforestation and forest degradation; (vi) increasing effectiveness of enforcement of law, rules and regulations in order to reduce deforestation and forest degradation; (vii) promoting infrastructure policies that prevent access to forested areas; and (viii) promoting macroeconomic and agricultural policies that make less profitable clearing additional forest lands to other uses.

Governance issues: Governance issues that have to be incorporated in REDD strategies include social organization within communities along forestry related activities, local leadership capacity building, participatory approaches within communities, and local consensus building mechanisms.

Four key themes emerged as important when designing and implementing sustainable forest management strategies pretending to be sustainable: (i) local governance, (ii) equitable decision-making, (iii) forest management and (iv) environmental awareness. The effectiveness of the verification process is likely to depend heavily on good sectoral governance, and any governance conflicts are likely to lead to different responses. Preliminary results suggest that local governance systems are more successful when the actors enjoy favorable conditions for information exchange and learning.

Land tenure. Developing effective REDD strategies must address land tenure issues as, up to now, financial support from

ProÁrbol is available only for those land holders who can demonstrate legal land tenure; CONAFOR will strengthen collaboration with agencies from agrarian sector, such as Secretariat of Agrarian Reform (SRA) and its Agrarian Agency (PA -Procuraduría Agraria-), in order to set up alternatives for demonstration of legal property of lands and to work within areas with land tenure conflicts identified with a high deforestation risk.

Technical and operational issues: Identified challenges includes establishing and monitoring national baselines (reference scenario); assessing the effectiveness of individual activities within this framework and ensuring that any financial system is both equitable and effective through appropriate management of revenues. Verification of both deforestation rates and project 'additionality' against a national baseline is expected to be primarily based on remote sensing technology and deforestation risk maps, but it will require systems for 'ground truthing' the data gathered remotely, particularly where governance risks are identified and biomass densities are unknown. The permanent forest inventory plots will be the basis for the ground truthing, both for biomass density assessments as for the land-use mapping. Additionally, collaboration with other governmental monitoring programs will be incorporated in the system, such as the PROGAN program. A national monitoring system based on satellite imagery such as PRODER (Brazil) is envisioned for Mexico. Satellite imagery to develop this system is already available at on a regular basis and new technologies will be tested and incorporated as these become available. The Mexican Carbon Program will assist in developing this monitoring system, which will initially be developed to detect changes within forested areas, but eventually will generate national land-use land-cover maps on an annual basis. Sources of error and variances will be assessed in order to improve estimations of monitoring system.

b) Would performance-based payments though REDD be a major incentive for implementing a more coherent strategy to tackle deforestation? Please, explain why. (i.e., performance-based payments would occur *after* REDD activities reduce deforestation, and monitoring has occurred):

Indeed, performance-based payments along with proper technical assistance would be the best approach to tackle deforestation through REDD. Preliminary analysis of CABSA and PSAH indicate a positive effect of these programs on decreasing deforestation in areas where these they have been implemented, thanks to (a) the owners of the forest land are being totally or partially compensated for the opportunity costs of not changing the land use, and (b) the payments they receive each year after complying with their conservation objectives, (that is, after they prove the forest cover has been conserved).

Nevertheless, performance-based payments will be a part of an integrated REDD strategy aimed to increase profitability of forest lands and promoting alternative income-generating activities that do not lead to deforestation.

To produce permanent results, payments have to be permanent, that is a principle of payment for environmental services approach. However, preliminary ideas lead to a scheme where payments are delivered until sustainable forest management and/or alternative income-generating activities are possible; initial time frame where such payments would be delivered must be analyzed and they are expected to be open-ended.

9. REDD strategy monitoring and implementation:

a) How is forest cover and land use change monitored today, and by whom? (e.g., forest inventory, mapping, remote sensing analysis, etc.):

CONAFOR is responsible for forest monitoring and for the National Forestry and Soils inventory; forest monitoring includes analysis of remotely-sensed data to identify changes in land cover at regional/national level using MODIS. National Forest Inventory will be updated every year based on re-measurement of 20% of all permanent sampling sites.

Programs of payments for environmental services, includes a monitoring process of enrolled areas, based on the analysis of high resolution satellite imagery (IKONOS, QUICKBIRD or SPOT); monitoring is carried out at least three times in a five year period, to verify compliance with forest cover conservation. In some cases, when no satellite data is available, monitoring is complemented with field surveys.

INEGI is responsible for mapping

Land use and land cover (LULC) in coordination with CONAFOR. It is expected that data from the national forest inventory will be used to produce the new LULC map (the 2007 LULC map will be available at the end of 2008).

CONAFOR initiated the monitoring of land cover dynamics using MODIS images; due to imagery scale, although the resolution of these images only allow for monitoring land use changes in areas bigger than 25 hectares; the National Forest Inventory is expected to act partially as a ground-truthing process. Monitoring of land-use change is expected to be performed on an annual basis; however it has provided limited results up to now. A semi-automated monitoring system will be set up as part of the REDD mechanism.

b) What are the constraints of the current monitoring system? What constraints for its application to reducing deforestation and forest degradation? (e.g., system cannot detect forest degradation of forest stands, too costly, data only available for 2 years, etc.):

The current system that is based on MODIS imagery only detects land-cover change of polygons larger than 25 hectares and It does not detect forest degradation. Forest degradation is very difficult to detect in satellite imagery and, then, indirect methods will be tested, for example, relating forest degradation to distances from infrastructure is giving promising results in some countries. The main factors that will influence the system are likely to be the distances of forest degradation in relation to the various sources of infrastructure, such as distance to and size of communities, distance to roads, highways and rivers, distance to and size of markets, and presence and size of the livestock population, among others.

Another identified constraints are: (i) limited human resources with appropriate skills and training for developing and implementing effective monitoring systems; (ii) insufficient information about emission factors (e.g. regional and/or biomass relations, growth and yield models); and (iii) costly and insufficient satellite imagery periodically available at an appropriate resolution for monitoring land use and land cover changes.

c) How would you envision REDD activities and program performance would be monitored? (e.g., changes in forest cover or deforestation or forest degradation rates resulting from programs, using what approaches, etc.)

The REDD activities will be developed within a national monitoring system of LULC change. Complementary activities will include the development of a network of permanent monitoring plots, for which the National Forest Inventory permanent plots will be an integral part. Additional more intensive monitoring of LULC change and biomass density plots will be established in areas with high levels of land use change. National Forest Inventory will be used as "ground-truthing" for increasing accuracy of remote sensing analysis and to determine when the use of coarse, medium or high resolution imagery is needed. Comparing rates of deforestation, forest degradation and changes in biomass in areas whether REDD programs are implemented or not (with all participating communities having geo-referenced maps of their property) will be used to evaluate the success of the program.

10. Additional benefits of potential REDD strategy:

a) Are there other non-carbon benefits that you expect to realize through implementation of the REDD strategy (e.g., social, environmental, economic, biodiversity)? What are they, where, how much?

Social benefits of a potential REDD program include improved governance of forest resources of the owners of the resource and reduction in local land-use related conflicts.

Economic benefits include the generation of sources of income derived from forest conservation or forest management without deteriorating its productive capacity, which in turn can be used to improve their livelihoods.

Mexico is considered as one of the 10 most important biodiversity countries. Programs that are directed towards conservation or sustainable management of forests, where a major part of national biodiversity is associated to, will undoubtedly contribute to biodiversity conservation, compared to alternative non-forest land uses.

b) Is biodiversity conservation being monitored at present? If so, what kind, where, and how?

Biodiversity is monitored at site-specific or local scale only, under project basis with financial assistance of the National Commission for Knowledge and Use of Biodiversity (CONABIO), the CONAFOR's program CABSA as well as in selected Protected Areas (CONANP). Other Efforts have been carried out mainly by research institutes and universities. A national or regional system has not been set up yet, but the monitoring program of the REDD program could be used to aid the implementation of a national biodiversity monitoring program.

c) Under your early ideas on introducing REDD, would biodiversity conservation also be monitored? How?

Consultation process will be carried out in coordination with CONABIO. The implementation of the REDD monitoring system could thus be designed to monitor biodiversity via appropriate related parameters, such as fragmentation indices as part of the LULC change analysis, key species identification in the National Forest Inventory program, among others. A more intensive monitoring in areas with high levels of LULC changes might include the detection of more precise indicators of forest fragmentation and degradation. Biodiversity monitoring could be designed using a nested or hierarchical approach, considering landscape, ecosystem and, potentially, population or species monitoring. Appropriate monitoring systems could be designed in a step-wise process as follows:

1. Establishing goals and objectives of monitoring
2. Gather and integrate existing data
3. Establish “baseline” conditions.
4. Identify “hot spots” and ecosystems, species and populations at high risk
5. Formulate specific questions to be answered by monitoring.
6. Select indicators.
7. Identify control areas and treatments.
8. Design and implementation of a sampling scheme.
9. Validate relationships between indicators and sub-endpoints
10. Analyze trends and recommend management actions

d) Are rural livelihood benefits currently monitored? If so, what benefits, where, and how?

CONAPO (National Population Council) is the institute responsible for monitoring the quality of life by means of a marginalization index. This index combines various factors, such as level of education, availability of public services, housing quality, and availability of paid employment, all at the community level. This index is used to identify priority areas for social attention and to prioritize rural development projects. At the national level, the index is derived from the national population census, which is carried out every 10 years.

e) Under your early ideas on introducing REDD, would rural livelihood benefits also be monitored? How?

To evaluate REDD related impacts on livelihoods; a special instrument has to be developed, through stakeholder consultations and coordinated by CONAPO. The livelihood evaluation of REDD should be directed towards the evaluation of its impact on possible barriers such as: weak or undefined land tenure, limited access to information or project funding, favoritisms in the assignment of REDD funding, high transaction costs due to small-scale approaches, restricting access to forest resources. Monitoring of livelihood benefits will provide standards for reporting and adjustments to the program where necessary, to ensure poverty reduction and improvement of rural livelihoods through the implementation of the REDD program.

11. What type of assistance are you likely to request from the FCPF Readiness Mechanism?

- **Identify your early ideas on the technical or financial support you would request from FCPF to build capacity for addressing REDD, if you are ready to do so. (Preliminary; this also could be discussed later.)**
- **Include an initial estimate of the amount of support for each category, if you know.**
- **Please refer to the Information Memorandum and other on-line information about the FCPF for more details on each category:**

a) Setting up a transparent stakeholder consultation on REDD (e.g., outreach, workshops, publications, etc.):

Support will be required to design an effective communication strategy, which will use among other options: publications and messages through existing media. Regional and national stakeholder meetings will be organized, for which financial support will be required, in order to succeed in involving all stakeholder groups.

b) Developing a reference case of deforestation trends: Assessment of historical emissions from deforestation and/or forest degradation, or projections into the future.

Support to develop a national baseline is required. Currently only three points in time are known in terms of land use/land cover: 1970's, 1993 and 2002. In order to select a reference scenario it is important to have at least 4 points in time, for selecting the most conservative deforestation and forest degradation reference trend that can be projected into the future. By the end of 2008, the LULC map as for 2007 will be available. It would be advisable to get the 1990 and 2005 satellite imagery to develop LULC maps for these years. Additionally, assistance will be required to develop and test the deforestation risk maps.

b) c) Developing a national REDD Strategy: Identification of programs to reduce deforestation and design of a system for providing targeted financial incentives for REDD to land users and organizations (e.g., delivery of payments, governance issues, etc.):

Financial support will be required to establish appropriate REDD strategies through stakeholder consultation. Data are required to identify the eligible forest areas (which forests are under greatest threat without a REDD program), how to set up guarantee funding to reduce compliance risks, potential indicators to measure impacts on rural livelihoods and biodiversity conservation. It will also require analysis how to improve existing programs to generate co-benefits, such as forest fire control, land tenure security, promotion of on-farm or off-farm employment, agricultural improvements in favorable areas, strategic planning of road improvements, and support for community-based forestry, among others.

d) Design of a system to monitor emissions and emission reductions from deforestation and/or forest degradation:

Important efforts will be required to design an adequate and efficient monitoring system which incorporates an integrated data collection and analysis procedures. It will require, among other things: (i) collection, digitalization, and integration of data bases regarding archive spatial data of the legally recognized property boundaries and forestry permits, industrial timber plantations, reforestation for conservation and national protected areas, etc.; (ii) adjusted spatial data into for drawing up a national forest base maps, and (iii) production of up-to-date forest and land-use change maps at the national scale. An adequate and efficient monitoring system to detect changes in biomass densities due to forest degradation will be set up in those areas where degradation is occurring or expected to occur. Manuals that describe data collecting and analysis procedures need to be developed, including data quality control measures.

e) Other?:

An important issue that needs to be studied is the possible impact of forest pests on forest degradation under various climate change scenarios, particularly the pests occurring in coniferous forests (e.g. recent forest pests outbreaks in US and Canada). Satellite based pest detection methods need to be developed, tested and incorporated into the current pest control program. Training programs to detect and control pests in the field will be part of the system.

12. Please state donors and other international partners that are already cooperating with you on the preparation of relevant analytical work on REDD. Do you anticipate these or other donors will cooperate with you on REDD strategies and FCPF, and if so, then how?:

Currently, there are no donors cooperating with the Mexican authorities. It is also not envisioned who will assist Mexico in

the near future.

13. Potential Next Steps and Schedule:

Have you identified your priority first steps to move toward Readiness for REDD activities? Do you have an estimated timeframe for them yet, or not?

1. **Capacity building.** This will be an ongoing process for the next couple of years. Experience with the CABSA and PSAH programs indicate that capacity building at the national level requires time and institutional efforts. Together with academic institutions that are involved with REDD, a capacity building program will be set up.
2. **Gathering information.** Most of the required information on REDD is available. The information that is still lacking is related to IPCC guidelines on carbon quantification methodology (especially the adjusted IPCC-2006 guidelines). A Mexican representative will participate in the IPCC inventory workshop, to be held shortly in Finland.
3. **Economic studies for determining opportunity costs and prices.** This will be a high priority study, to determine possible levels of REDD payments, required to overcome the opportunity costs of conserving forest relative to alternative land uses. About minimum of 2-3 months are required to carry out the study at national level.
4. **Estimating reference emissions level (baseline).** This is also a priority step; it will require the analysis of satellite imagery from 1990 and 2000, to identify changes in land use from 1993 and 2002 LULC maps. This will require about 6 months.
5. **Building a monitoring system.** The satellite based LULC monitoring system will require about 9-12 months to construct, depending on the available resources. Ideally a network of 4-5 regional monitoring stations will be required that are connected through high-speed internet (preferably internet 2).
6. **Designing a REDD strategy.** The REDD strategy requires a series of stakeholder workshops at the national and regional level. This will require about 4-6 months, depending on available funding.
7. **Consultation process.** Part of point 6.
8. **Piloting REDD strategy and monitoring at regional/local levels.** It is advisable to set up the REDD strategy and monitoring system in a series of 3-6 regional pilot areas which experience high levels of LULC change and contain high levels of biomass densities, to generate experiences with REDD in areas where GHG benefits will be high. Such areas should also focus on potential co-benefits, such as poverty alleviation and biodiversity conservation, to attain optimum overall results. This pilot system could be set up within 12 months after initiating the studies, if these are identified from the ongoing of the project.
9. **Adjusting strategy (lessons learned and feedback from stakeholders).** Based on the experiences derived from the pilot areas, the strategy could be adjusted and applied to whole country within 2 years after starting the process.

14. List any Attachments included

(Optional: 15 pages maximum.)

- 1.
2. Maps
3. Biomass density estimations for the various forest types, based on the 2004-2007 National forest Inventory

Can risks for investors in REDD be reduced in a way that is in the interests of the poor?

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Ensuring benefit flows to all relevant stakeholders, including the poor, will be essential for the effective and long-term success of REDD strategies

- The form of REDD transactions from international to national levels, and benefit distribution within countries, are yet to be decided. Less centralised systems may be preferable for efficiency, reducing administration costs and avoiding state capture, but they will still present risks for the poor
- The exact implications of REDD strategies for the poor depend on the type of strategy, the nature of the actors who are delivering the benefits and agreements over how these benefits are delivered
- Contractual agreements for REDD need to be negotiated in an open and transparent way. The ability of different stakeholders to meet the terms of contracts, and especially redress mechanisms if emissions reductions are not delivered, will need particular attention
- Strengthening legal institutions at national and sub-national levels in a pro-poor way will be essential to ensure REDD benefits reach legitimate recipients and are subject to appropriate conflict resolution mechanisms
- Without clear land and carbon rights, REDD will be high risk for the poor; at the very least, there need to be binding arrangements for assessing and negotiating benefit distribution
- Benefit flows dispensed over time are likely to be much more beneficial for the poor and for future generations, than one-off payments. They must also be maintained over the duration of REDD projects.
- Support for upfront costs is likely to be required in order for national/local governments, companies, communities and individuals to access REDD benefit flows
- The use of carbon standards could reduce risks for buyers and sellers of REDD, bearing in mind that there can be trade-offs between high standards and ability of certain groups to meet these standards