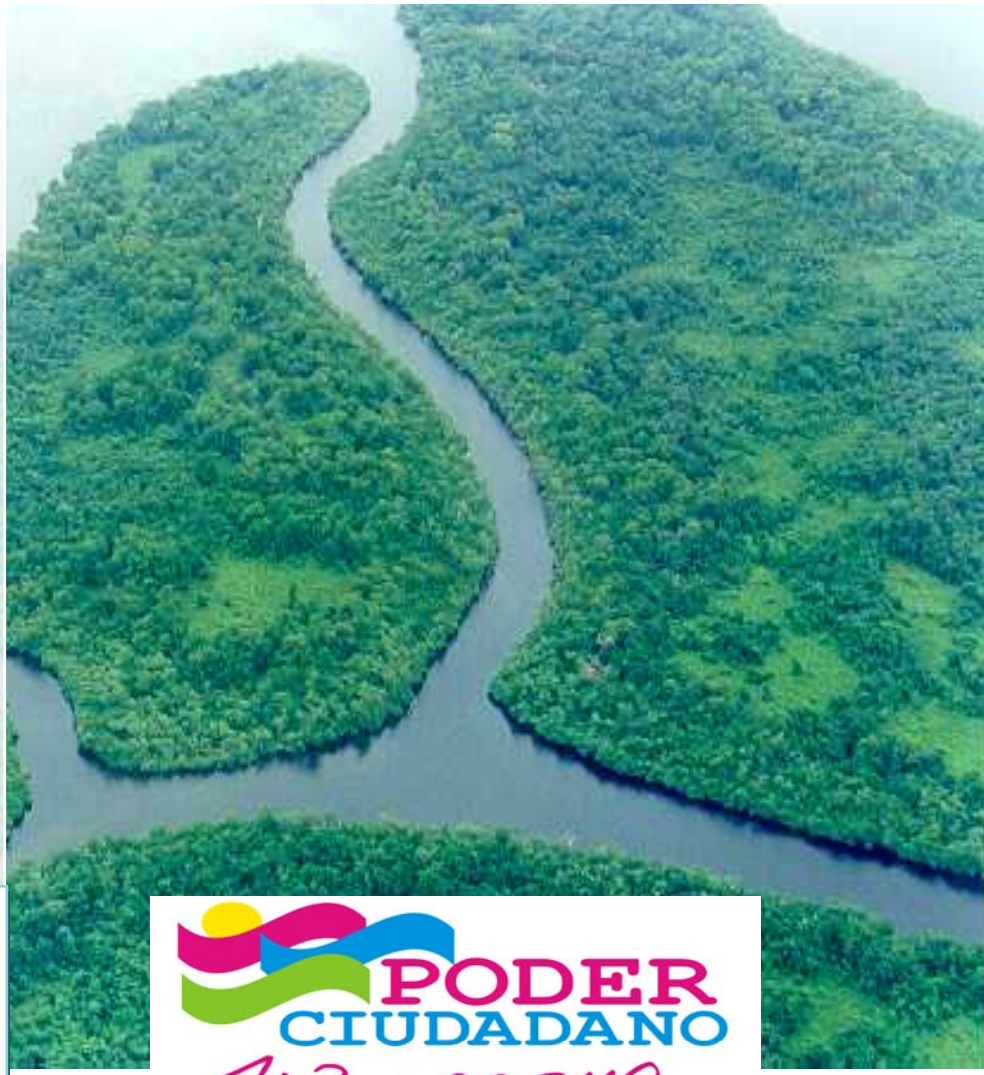
Gobierno de Reconciliación y Unidad Nacional
El Pueblo, Presidente!

READINESS PROJECT IDEA NOTE

REPUBLIC OF NICARAGUA

R-PIN 2008



PODER CIUDADANO
Nicaragua Gana con Vos!

Ministry of Environment and Natural Resource
Ministry of Agriculture and Forest
Forest National Institute

MARENA
Ministerio del Ambiente y los Recursos Naturales

MAGFOR

INSTITUTO NACIONAL FORESTAL
INAFOR

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

Date submitted: **July** 2008

Notes: Enhanced Versión for second round, considering the steering committee y Technical Advisor Pannel recommendations.

1. General description:

1.1) Name of submitting person or institution:

Juana Argeñal Sandoval. Ministerio del Ambiente y los Recursos Naturales (MARENA)

1.2 Title: Minister

1.3 Contact information:

Address: Km.12 ½, North Highway, across from Free Zones Corporation, Managua, Nicaragua.

Telephone: (505)263 1273, 263 1667 **Fax:** (505) 263 1274

Email: jargenal@marena.gob.ni **Website, if any:** www.marena.gob.ni

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

- Javier Gutiérrez Ramírez: *jgutierrez@posaf.org.ni* MARENA
- Ariel Bucardo: *ministro@magfor.gob.ni* Ministro de MAGFOR
- William Schwartz: *wschwartz@inafor.gob.ni* Director Ejecutivo INAFOR

1.5 **List authors of and contributors to the R-PIN, and their organizations:** *Lista de autores y colaboradores del PIN, incluyendo las organizaciones que representan.*

Names and Surnames	Institution	Position	Contact
Team of Authors:			
Roberto Araquistain Cisneros	MARENA	Deputy Minister	raraquistain@marena.gob.ni
Jorge Canales Colindres	INAFOR	Sub director	jcanales@inafor.gob.ni
Denis Fuentes	MARENA	Planning Director	dfuentes@marena.gob.ni
Erick Blandón	INAFOR	Planning Director	eblandon@inafor.gob.ni
Jader Guzmán Neira	MAGFOR	Director of Forest Policy	jader.guzman@magfor.gob.ni
Javier Gutiérrez Ramírez	MARENA	POSAF II Programme	jgutierrez@posaf.org.ni
Freddy Picado	MARENA	National Bureau of clean Development	fpicado@marena.gob.ni
Luis Valerio	MAGFOR	GIS Specialist	luis.valerio@magfor.gob.ni
Franz-Eugen Arnold	INAFOR	Technical Adviser	farnold@inafor.gob.ni
Constributors:			
Richard Modley	GTZ	MASRENACE	richard.modley@gtz.de
Edith Méndez	GTZ	MASRENACE	Mendezv.edith@gmail.com
Dámaso Barquero	Consultor		dambarquero@gmail.com.ni
Eduardo Centeno	Consultor	INAFOR	centeno.eduardo@gmail.com
Ricardo Ulate	Consultor	Conservation international	rulate@minae.go.cr

1.6 Who was consulted in the process of R-PIN preparation, and their affiliation?

The drafting of the document R-PIN has been a process of document review and consultations with experts in different fields under the supervision of a team of officials from the following sources:

- **Ministry of Environment and Natural Resources (MARENA) www.marena.gob.ni**
- **Ministry of Agriculture and Forestry (MAGFOR) www.magfor.gob.ni**
- **National Forest Institute (INAFOR) www.inafor.gob.ni**
- **MASRENACE – GTZ Programme**

2. Which institutions are responsible in your country for:

The Nicaraguan State has defined roles and responsibilities to the Ministry of Environment and Natural Resources (Marena), the Ministry of Agriculture and Forestry (MAGFOR) and the National Forestry Institute (INAFOR), which are defined in Law 290. "Law of organization, jurisdiction and procedures of the executive branch"[1].

a) forest monitoring and forest inventories:

The National Forestry Institute (INAFOR), attached to MAGFOR, is the institution responsible for forest inventory and monitoring according to the Law no. 462 "Law of Conservation, Promotion and Sustainable Development of Forest Sector". Published in the Official Gazette no. 168 of September 4, 2003. In areas under the National System of Protected Areas (SINAP) this function is shared with Marena. On the other hand, MAGFOR is the institution with a mandate to update the statistics on land use through the development of maps of coverage.

b) forest law enforcement:

The National Forestry Institute (INAFOR), under the sectoral stewardship of Ministry of Agriculture and Forestry (MAGFOR) has primary responsibility for enforcing the forest regime throughout the national territory, in accordance with article 7 of the "Law of Conservation, Promotion and Sustainable Development of Forest Sector ", known as Law no. 462. This responsibility is complemented by the efforts and actions of the Ministry of Environment and Natural Resources (Marena) in areas that belong to the National System of Protected Areas, Councils and autonomous regional governments of the Caribbean coast. (Law no. 28: Statutes of Autonomy of Regions of the Atlantic coast), municipal governments (Law no. 40.- Municipalities Law), Police and National Army, Justice Department, and Attorney General's office of the Republic with its supporting structures of the Judiciary, as regards the implementation of sanctions.

c) forestry and forest conservation:

In areas of forestry production, the use of which is dedicated to sustainable development of forest resources, is the National Forestry Institute INAFOR, head of the forestry administration, under the principles of sustainable forest management based on Law 462. In areas of forest conservation, is the Ministry of Environment and Natural Resources MARENA responsible for the conservation and protection of forest ecosystems and biodiversity. MARENA is responsible for managing the National System of Protected Areas (SINAP), which represents 34% (1.9 to 5.6 million hectares) of the total area of forest-oriented country.

d) Coordination across forest and agriculture sectors, and rural development:

The functions of intersectoral coordination and cooperation in the field of agriculture, forestry and rural development correspond to the Ministry of Agriculture and Forestry MAGFOR. For this function MAGFOR, uses mechanisms and instruments defined in different sectoral policies such as the National Agricultural Commission (CONAGRO), the National Forest Commission (CONAFOR), the National Environmental Commission (CNA), and the National Commission for Environmental Education (CNE) The Secretary-SE SINAPRED (National System of prevention and mitigation of natural disasters).

3. Current country situation (consider the use of Annex 1 to help answer these questions): situación actual o contexto del país.

Global Situation

According to the study by MAGFOR in 2000 for drawing up the forest map of Nicaragua, the country has a forest area relatively high. Approximately 40% of the total area covered by forests. Of the 5.6 million hectares of forest, is estimated that half (2.8 million hectares) would be suitable for forest management productive purposes, while the other half, largely is formally incorporated into the National System of Areas Protected (1.9 million hectares) and the rest (0.9 million hectares) presents environmental conditions that suggest management with conservation purposes. In the areas of productive forests is estimated that only 4% are currently

[1] La Gaceta No. 102 del 3 de junio de 1998 y su Reglamento, Decreto No. 71-98.

under scheme SFM (124, 000 hectares), while the remaining 96% is subject to gradual degradation process, rudimentary extractive uses, change of use or simply abandoned.

Importantly, out o f the total forest ecosystems available in the country, around 1.9 million hectares are formally under protection regime within the national system of protected areas SINAP, comprising 72 areas in the entire national territory, including the Bosawas Biosphere Reserve in the north, and Indian corn (Indio Maiz) in the southeast of the country and that together with the forest reserves of Wawachan and Cerro Silva will be part of the Central American Biological Corridor. The largest tracts of protected areas are located in the autonomous regions of the Caribbean coast of Nicaragua and are characterized as being populated largely by indigenous and ethnic communities, mainly Miskitos and Mayagna. Lately, the creation of private reserves (47 registered) and the municipal ecological parks (10) have gotten great importance.

Current use of Land in relation to the System of Protected Areas
The areas in square kilometres km2(Forest Map, MAGFOR year 2000)

Broadleaf forest Open	19 272,78	16 536,26	2 736,52	2 736,52
Broadleaf forest Closed	31 773,76	16 825,21	14 948,55	14 948,55
Pine Forest open	3 974,32	3 691,52	282,8	282,80
Pine Forest Closed	1 174,47	1 026,18	148,29	148,29
Fallow Forest	4 834,74	4 551,09	283,65	
Shrubs Vegetation	4 618,87	4 380,3	238,57	
Agricultural Use	48 875,06	46 935,45	1 939,61	
Mangroves	690,47	316,57	373,9	373,90
Flooding Land	1 419,93	1 110,87	309,06	
Herbaceous Vegetation	2 379,19	1 905,78	473,41	
Forests with Palms	486,18	118,77	367,41	367,41
Soil without Vegetation	569,54	207,19	362,35	
Urbanized areas	270,23	261,09	9,14	
Bodies of Water	10 033,93	10 033,93	0	
Total	130 373,47	107 900,21	22 473,26	18 857,47
Percentage%	100	82,76	17,23	

Poverty levels of the vast majority of Nicaraguans, coupled with the country's environmental vulnerability to natural disasters, cause a strong negative impact on forest resources, despite the fact that both environmental policy and forest policy seek to reach a effective prevention and reduce the impact of economic activities on biodiversity and natural resources in general, consistent with the development of socio-economic policies of the country.

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

The estimated rate of deforestation in the country is 1.16% per year on forest cover, during the period from 1983 to 2000 were wasted approximately 1.2 million hectares, meaning an annual average area of about 73, 140 hectares, with ranges between 80, 221 and 66, 466 hectares annually.

The greatest affectation by deforestation occurs in the areas of the agricultural border in central and Caribean regions. Deforestation and forest degradation represent a strong pressure on protected areas. The most affected municipalities are: Paiwas, Muelle de los Bueyes, Rama and Nueva Guinea (downtown / Caribbean and south area on the map attached).

The advance of agricultural border is being developed as a process of colonization of forest lands mainly in areas affecting propietary

equity of indigenous peoples and ethnic communities.

In the Pacific region, deforestation and degradation affect between 30% and 80% of its forest ecosystems, mainly as a result of the extraction of firewood, timber for construction and expansion of areas for annual crops.

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

The Second National Inventory of Greenhouse Gases (INGEI) referred to the year 2000 (Marena-ONDL, 2008), and which were based on the methodology of the Intergovernmental Panel of Experts on Climate Change (IPCC), presents emissions by sources and removals or fixation by sinks of GHGs generated by the activities of the following sectors: Energy, Industrial Processes, Agriculture, Land Use - Change of Land Use and Forestry (LULUCF) and debris.

The annual net balance of emissions / removals of greenhouse gases for the reference year 2000, indicates that were issued 49, 220.19 Gg of CO2, as a result of the balance between fixation of -94, 489 Gg of CO2 and emission of 139, 869 Gg CO2 LULUCF sector, mainly. The fixation and absorption of CO2 was the product of the processes of natural regeneration of forest cover, changes in forest and other woody, as well as the abandonment of farmland on the national territory

The second INGEI confirms that GHG emissions have increased from 1994 to 2000. A very strong trend was observed in the LULUCF, sector where in 1994 the sector was the main sink with a net absorption of -12, 055.71 Gg, while in 2000, became the main source of CO2 emissions, increasing their emissions by more than four times for an annual total of 45, 380 Gg.

The LULUCF sector considers emissions and removals of greenhouse gases mainly from three activities:

• Changes in forest biomass and other kinds of woody vegetation;
• The conversion of forests into grasslands;
• The emissions and removals in soils due to management and changing land use.

For INGEI of 2000 in this sector, most of the calculations were based on national data from authoritative sources, which improved its quality with regard to INGEI 1994 that used a larger amount of data on Estimated FAO STAT.

Procedure 1 - Module 5 (GBP, 1996). The total LULUCF sector emissions by 2000 under this procedure was 139, 869 Gg of CO2, while total removals were -94, 489 Gg of CO2, obtaining a total stock of 45, 380 Gg emissions of carbon dioxide. For gases other than CO2, there were 753 Gg of Carbon monoxides (CO), 86 Gg of Methane (CH4), 21 Gg of nitrogen oxides (NOx) and 1 Gg of nitrous oxide (N2O).
Procedure 2 - Modulo 5b (GBP, 2003). Under the procedure 2, total emissions were estimated 101, 181.8 Gg of CO2 and total removals -91, 930.80 Gg of CO2. Emissions of gases other than CO2 were: 1, 551.13 Gg of Methane (CH4), 28.51 Gg of nitrous oxide (N2O), 1.06 Gg of Carbon monoxide (CO) and 0.01 Gg of nitrogen oxide (NOx).

Nicaragua at present is in the process of consultation of the National Strategy for Climate Change, as well as participating in the elaboration of the Regional Strategy on Climate Change of SICA countries where it is mentioned that the initiatives of REDD are Priority for the mitigation of GHGs in our country.

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.).

The most complete information, in their official capacity, which is avalaible in the country on forest cover, land use changes and deforestation, could be found in the Forest Map of Nicaragua, conducted by the Ministry of Agriculture and Forestry (MAGFOR) in 2000, appended. The calculations that were made on deforestation in this study are based on the comparison and verification of satellite images near the year 2000 with cartographic data of the year 1983. All cartographic information and databases on different categories of forest in Nicaragua are available in the documentation of Forest mapconducted in 2000, which is part of the Annexes to this R-PIN.

The National Forest Inventory

Since July 2007 the country takes place in the National Forest Inventory (INF), which results will be processed and made available for the second half of this year. The topics covered in the inventory are as follows:

1. Forest cover and dynamics of the agricultural border
2. State, health and vitality of forests
3. Management of forests
4. Productive state of natural forests
5. Coverage of plantations, state of agroforestry and trees outside forests
6. Environmental Reporting of forests
7. Socio-economic information of forests and trees outside forests

Every item is classified into variables and its information source, where the final data system, will combine information from interviews of inventory and biophysical lifting , forest mapping and aditional information INEC (National Institute of Statistics and Censuses), it wil generate information highly relevant to help in the implementation of national strategies REDD, which was not previously available, as in Nicaragua had never been made a national assessment of their forest resources due to the high cost in models traditional forest inventory, which impede the establishment of permanent monitoring of resources at national level.

The inventory includes the lifting of data both inside and outside forests, as the management of these resources must be considered within the national plan for land use planning, which means knowledge of resources in all productive areas of the country, on the other hand, this consideration also allows to carry out a diagnosis to assess the recovery of degraded forest ecosystems. On the other hand, also contemplates the collection of socio-economic information, through interviews with the owners of the areas where the sampling units are located, resources users in those same areas, technical INAFOR and town councils, so that will be generated primary information on a topic that is virtually unexplored until now but to be addressed properly to implement the strategy REDD.

For the systematic design was defined a mesh of points every 10 minutes in latitude and 10 minutes in length (approximately every 18 kilometers) making a total of 372 sampling units. Each sampling unit (SU) consists of 4 rectangular plots distributed in a 500x500 square, where the first plot is located in the southwest corner of the square and takes a northerly direction, the second parcel is located in the northwest corner and has an easterly direction The third parcel is located at the northeast corner and is heading south and the fourth parcel is located on the southeast corner and heading west. The plots have a rectangular shape and size is 250 x 20 meters (0.5 hectares). Each parcel has three groups of plots nested to measure the regeneration and three points of soil measurement, which are distributed systematically. Additionally socio-economic interviews are conducted to owners of measured areas and other users.

With the resources derived from R-PIN is intended to establish capabilities to maintain a permanent system of monitoring of forest cover in the country.

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

The accelerated deforestation and degradation of forest resources represent the main environmental problem in Nicaragua. The central problem is summed up in the loss of forest and accelerated degradation of forest ecosystems that have resulted in the loss of biodiversity and land use changes with all its consequences of environmental degradation. The main cause is the process of expanding the agricultural border during the last five decades, with an annual rate ranging between 70, 000 and 100, 000 hectares per year.

The origen of this social phenomenon has been the economic development model adopted in the country during the last decades oriented to monocultures for export, such as cotton in the Pacific region and coffee in central region at the expense of slaughter forests; peasant migration resulting from the processes of colonization land of the seventies, the resettlement of war demobilized people at the beginning of 90, especially in the RAAS, the orientation of development policies and programmes towards promoting agricultural activities (cultivation of basic grains, ranching) that still persists.

In order of priority other causes of deforestation and forest degradation are as follows:

Forest fires

Fire is the main instrument used for expanding the agricultural border. Forest fires affect tracts of forest annually consequences of which represent economic and environmental problems in the short and long term, among others: (a) serious damages to the natural resources base, mainly biodiversity and forest ecosystems, (b) the emission of carbon dioxide which increases the greenhouse effect, (c) the infrastructure, productive activities and human lives are affected.

Illegal logging

Illegal logging of forests continues to be one of the major causes of deforestation and forest degradation. The data on this matter are inaccurate and therefore must be improved as part of implementing the strategy REDD. However, studies conducted in 2000 and 2003 indicate that illegal logging can cover up to 60% of the volumes of felling approved and registered by the INAFOR. According to the study in question, in 2000 authorized the INAFOR felling of 56, 100 m3 of roundwood, but exports were 70, 392 m^3 of lumber, which clearly reflects the magnitude of illegal felling of timber, for have exported 70, 392 m^3 was required to have cut about 140, 784 m^3 of roundwood (industrial average performance in Nicaragua is 1 m^3 Roll = 0.5 m^3 sawn timber).

Studies by the World Bank and cited by the same source indicates that the illegal felling of timber varies around the 30, 000-35, 000 m^3 in hardwood timber and between 110, 000 and 135, 000 cubic metres at coniferous woods. The same study estimated that tax losses coming from illegal logging cost the government of Nicaragua between US$ 4 and 8 millions a year, evaluated in terms of net present value (NPV), these losses are estimated between $ 30 and 60 millions, without considering previous value in terms of carbon stock. From the foregoing it is clear that in addition to help achieve overall objectives of stabilizing the levels of emissions of greenhouse gases; a good implementation of the reduction strategy emissions from deforestation can provide significant contributions to the country from an economic, social and environmental perspective.

Natural phenomena

The natural resources in general and forestry in particular, have been strongly affected by natural phenomena, mainly by hurricanes over the past 20 years. The most important have been Joan hurricane in 1988, affecting over one million hectares of forest in the RAAS; Mitch Hurricane in 1998 which severely affected with mudslides the Pacific and north regions of the country and recently Felix Hurricane, which caused damage to one million more hectares (half a million in high-involvement category), in the Autonomous Region of north Atlantic. In some cases it may speak of deforestation but the main problem that has been generated is the degradation of forests, but also is required to define technical and methodological approaches to refine the estimates for each category, which is expected to make further resources R - Plan.

Insecurity in land tenure

The continuing problems in terms of certainty of ownership or possession of land, mainly in indigenous communities in the Caribbean coast, where they are concentrated the largest forest areas. Despite the progress made in the demarcation and titling of land in indigenous territories; many communities are still awaiting certification. In this sense the reduced access of forest owners to incentives and financing, under appropriate conditions for forest activity, causes the owners of forests give little value to forest resources and consequently invest little in their conservation because potential returns are uncertain.

Other factors favouring deforestation

Historically the forest sector has not been a matter of priority on the agenda of the Govement for the low valuation that this gives the resulting environmental services and the provision of this item to the national economy.

Severe budgetary constraints of the institution administering the forest scheme have led to a weak institutional and inter-agency coordination. Although these elements have been addressed under the new forest policy with the aim to implement a participatory and sustainable forest development strategy in the long term to ensure the sustainability of forest ecosystems and their economic, social and environmental benefits (contribution to GDP vs. the potential forest) , still requires additional investment to consolidate these institutional mechanisms.

Lack of market for financial compensation for environmental services (carbon in this case)

The practice of a ranching with low productive yields results in accelerated progress of the agricultural border in this activity becoming a major threat to natural forests.

The lack of research in the country on new forest species of economic and potential importance encourages that at present the number of species of commercial use be reduced by a few, which leads to excessive abstraction and reduce these niche markets for commercialization.

Extraction of fuel wood, which depend a high percentage of households Nicaraguans to meet their energy needs, as well as Industries associated with this resource, among other productive activities, presents a technological problem due to their use is so traditional, not considering the principles of sustainable forest management, or energy efficiency. This situation is most evident in the pacific area and central parts of the country.

The weak technology transfer to forest producers and users on management techniques, processing and marketing resources of timber and non-timber forest, cause not maximize the forest resource and is maximized the environmental impact of development activities. According to the State of Environment Report 2003 GEO, as a result of climate change Nicaragua will lose in capital goods 0.4%, equivalent to 240 millions cordobas (20 million dollars) annually by natural disasters. For extreme events would reach 9, 600 millions cordobas (U.S. $ 800 million U.S. dollars). If we take into account exports of Nicaragua in 2005, which were 9, 000 millions cordobas, the extreme scenario would mean 93% of exports damage and the normal scenario would mean 38%. This trend would be maintained if the country does not assume mitigation strategies and adaptation to climate change, particularly with the strategy to reduce emissions by deforestation and forest degradation.

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.?

- In terms of land tenure, reference was made earlier to the need to universalize the process of consolidating the economic rights or property or both individual and social groups in a number of regions of the country covered by forests, so that the owners of buildings obtain a level of security that induce them to take steps to conservation of forest resources. To this end, Govermnet efforts should be strengthened as part –but not only- of the strategy REDD.

- Despite the fact that in 2003 it is established a new specific legal framework to promote sustainable forest management, in reality remain serious constraints for public sector entities have the appropriate skills to meet the demands of control and supervision of the forest sector; including inadequate budgetary allocations in general, in addition to personnel and material resources to carry out the duties of institutional competencies.

- Regarding the issue of governance of the forestry sector (Forest Law Enforcement and Governance, INAFOR supported by the World Bank) and GTZ are implementing analysis leading to priority proposals that respond to the challenges of governance in forestry and institutional aspects of sector, which include:

    - Design of systems for verifying the legality of forest products to identify legal and illegal felling of forests,
    - Promoting transparency in forestry from forest ownership and its legal backing,
    - Enhancing the capacity to respond to demands for regulation and control of logging,
    - inter-institutional coordination measures to improve governance and reduce forest crime,
    - Strengthening capacities to implement the forest incentive mechanisms defined in forest policy.

As noted, the information to be generated through this initiative will be crucial for addressing many of the problems associated with the major challenges of governance in the sector.

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.):

The country does not have a registration system with comprehensive information on forest owners. Do not count with an updated register of land, much less forest land. INAFOR only has records of owners and forest plantations under forest management plans that represent only 4% of the country's productive forests and MARENA with partial records forest owners in some protected areas under management plans (currently accounted 22 protected areas under management plans between approved and approval process). As a single reference is known of forest land registered land, which belonged to forestry project in the northeast, RAAN (1964), approximately 310, 000 hectares of conifers.

It is known that the largest tracts of forest, mostly broadleaved are located in the Caribbean coast of the country and belong mainly to indigenous peoples and ethnic communities. But they mostly are not properly identified, not titled or registered in the register of ownership, which represents a serious limitation that should be addressed to create better conditions for the implementation of projects or activities REDD. .

Recently positive experiences are developing in cases of communities, whose situation of legality on its forests have been resolved and are participating in community forest management initiatives, including forest certification especially in the autonomous regions of the Caribbean coast, with the support of some organizations and international cooperation agencies. (WWF, Rain Forest Alliance and GTZ). Forest certification began in 1996 in Nicaragua and has developed very slowly. In January 2008 are accounted for 15,047 hectares of natural forests and certified plantations, located in the RAAN, the Pacific and San Juan River. The most relevant experience represents Layasiks Miskito Community with managing natural and semi-natural forests in 4464 hectares in RAAN.

One source of registration data on major forest owners can represent associations and federations of forest owners mainly in the provinces of Nueva Segovia and San Juan River, but the data are not consolidated at the national level.

The National Forest Inventory will also conduct an inquiry in relation to land tenure and other relevant socio-economic factors that are expected to be useful in future phases of the implementation of REDD.

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 country currently has an updated forest policy product of a broad and complex process of social participation, which responded to the new legal requirements in terms of citizen participation and took place under the platform of forest governance and institutional decentralization <u>based on three main elements: (i) Intersectoral Forest-Environment commitment, (ii) policy and strategy concerted with the actors and (iii) mechanism for dialogue and consultation between the actors.</u>

<u>For this process, during the months of May through July 2008, were caried out 10 regional workshops with the participation of a total of 994 people, representatives of various institutions, social sector, local, indgenous and ethnic communities, educational institutions, cooperative sector and private and international cooperation, namely all relevant actors in the chain of forest resource management.</u>

The National Forestry Plan generated five essential components of work that are closely related to the topic of avoided deforestation (governance and forest institutionality, forest conservation and managemenet, forest restoration, development of forest industry and commerce, generation and knowledge management).

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

The Government of Nicaragua promotes Policy and Strategy for Sustainable Rural Development to develop the economy and address the social situation of rural poverty. The Sectoral Program of Sustainable Rural Development (PRORURAL) and the Food Programme and Food Sovereignty, which are the concrete expression of the policies and strategies of agriculture and forestry. It aims to improve the competitive position of production structures, innovative capacity and the incorporation of new technologies, to trade liberalization and globalization.

Marena drives currently processes of consultation with different levels of progress in defining the following policies: Policy on Watershed and Natural Resources Management, Conservation Policy and Management of Protected Areas and Biodiversity, Quality Improvement Environmental, mitigation and vulnerability adaptation to climate change policy and development of instruments for environmental management policy. These consultative processes are based on the platform of forest governance (GOFO).

Protected Areas: The government's actions about protected areas is governed by several laws and policy instruments, such as environmental policy, the national biodiversity strategy, the regulation of protected areas, the national strategy of protected areas, etc. Through the national system of protected areas are protected 17% of the national territory through 72 protected areas, where are located 16 of the 65 ecosystems of the country, through 13 protected areas: Bosawas, Cayos Miskitos, Indio Maiz River, Cola Blanca, Los Guatuso, Laguna de Parra, Zulu, Cabo Viejo, Makantaca, Datanlí-El Diablo, Estero Real and Estero Padre Ramos. However, these areas and the system as a whole suffers from a number of weaknesses which begin with their official declarations

that in many cases should be consolidated, the absence of clear delineation of their areas, lack of management plans, what really enables the administration implements the basic tasks of management. Therefore, despite the willingness of government, there is no certainty of the viability of these long-term actions as a tool to prevent the loss of forest cover.

On the issue of management of watersheds, recently ending the socio-environmental and Forest Development program, Marena - POSAFII, aimed at providing incentives for management and forest restoration and disaster prevention and mitigation of natural phenomena under comprehensive management approach of watershed, which were met with 14, 400 producers, owners of estates covering 78, 000 hectares of agricultural and forestry production systems, and reforestation as well as drawing up comprehensive plans for forest management in the 15, 683 hectares and plans for natural regeneration in 10, 921 hectares.

In addition to the preparation of national forest programme, INAFOR boosts national strategy for Community Forestry in the RAAN mainly with indigenous communities from forest owners. It also promotes a plan for promoting the process of certification of sustainable forest management.

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 subnational level):

a) Strengthening of the National Forest Program

The Government encourages the implementation of the new forest policy under the principle of broad citizen participation in the integrated platform of forest decentralized governance. The new policy identifies four main objectives: (i) promoting forest governance, (ii) modernization of the national system of forest management, (iii) increase of areas under forest management and (iv) articulation of the forest value chain.

The national forest program propose 5 programs of priority work:

1. Management and forest conservation,
2. Firest Reforestation and restoration, including National Crusader of Reforestation.
3. Forest Governance and institutionality,
4. Development of forest industry and commerce
5. Forest Generation and knowledge management.

With the implementation of this program is expected to put the base to reverse significantly in the medium term the main processes of deforestation and forest degradation in Nicaragua and contribute to fight poverty which affects 70% of the national population, especially in rural areas and the Caribbean coast of the country.

In addition to forest policy, will need to articulate more adequately rural development programs and poverty reduction that are been driven by other public sector institutions, since must be addressed the socio-economic causes of deforestation through this kind of rules, beyond control of the forestry sector alone.

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

The new forest policy will enable to insert, in a more appropriate way, rural communities, small and medium-sized forest owners and indigenous groups in forest management activities which in turn generate higher incomes, so that people can better meet their comsumption needs of goods and basic services such as housing, energy, transport and food, many of those that generate the need to seize the forest. In parallel, is required to integrate other public institutions related to rural development and national development planning, to identify public policies that help to meet the basic consumption needs of the population, such as those mentioned above.

But besides the above regulations, should be maintained and strengthened rules of control and protection, both in protected areas and in forests outside protected areas, to prevent the activities of illegal exploitation of forest resources, as well as to improve the coordination of actions with other sectors of national planning that drive policies related to land use for different economic activities. Both the national system of protected areas as the National Forestry Institute must strengthen their institutional capacities in terms of procedures, human resources and materials, use of technological tools, etc. To make more efficient the control and protection work of their resources.

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.)?

Some intersectoral programs or policies could play a role in strategy REDD.

In addition to the National Forest Program other intersectoral aspects to be considered are as follows:

- The policy of biodiversity using the same mechanisms used for consultation during the consultation of forest policy last year 2007.
- The development strategy for renewable energy, within which have been approved reforms to Law 217, General Law of Environment and Natural Resources to carry out research for energy purposes within protected areas, for purposes of national interest.
- The tourism sector policy and Law of coasts in particular
- The process of decentralization, decentralization and regionalization policy
- The process of the policy of food security and sovereignty in development. Biofuel policy
- Agriculture and livestock Policy
- Integrated management policy of hydrographic watershed in approval process
- And finally, public policies must be identified directly related to fight the causes of deforestation and determine how best to guide them in solving these cases, which requires open spaces for political dialogue among various sectors of public policy planning, and possibly between social sectors (housing, energy, transport, food security, etc.).

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.

There is no doubt regarding the direct link between the Strategy REDD and national Policy of sustainable development; on the contrary, the only way to address causes of deforestation as varied and complex as those identified in the country, will be through the clear link between national development strategies and the role of forestry policy in them.

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):

Nicaragua has not yet received technical assistance within the framework of REDD specifically, however, is pushing comprehensive review processes of forest policy and forest governance framework with the support of international cooperation (GTZ, World Bank, FAO, AEC, Austria, etc.).

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?

The Government of Nicaragua has formally established a series of consultation mechanisms related both forest policy and rural development strategies, which were above and guaranteeing the participation of all sectors and actors in the Forest-related industries, so that hardly be necessary to establish other mechanisms. The strategy of consultation is based on the principles of the new government on public dialogue. On that basis are executed dialogues between

actors formally introduced and in the process of consolidation of forest governance. However, there are always opportunities to improve coordination actions, especially among different government entities linked to public policies

Moreover, the approach of the Forest Governance in Nicaragua is based on the concept of national forest program, agreed in 1997 at the Forum on Forests of United Nations and is based on three main elements: (i) the intersectoral forest-enviromental commitment, (ii) Policy and strategy concerted with the actors and (iii) mechanism for dialogue and consultation between the actors. More documentation on the site: http://www.fao.org/forestry/site/nfp/es/

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

It reiterates that, based on Law no. 475 of citizen participation in its Act 26, are developed, successfully in the country since 2004, processes of decentralized forest governance, which has developed the new forest policy and other sectoral policies. The strategy REDD should consistently be inserted into the structure and spaces of platform of forest Governance.

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?:

The strategy REDD has been discussed within the forestry policy of the country to which had been referred. As a result of it have already been identified priority areas to guide the action of both conservation and reforestation. Thus as part of forest management of watersheds, establishing that will be important and encourage the conservation of natural forests and reforestation in the upper areas as a way of ensuring the provision of water resources for population and promoting the use and management of resources soil, water and forests by the systems and productive agricultural and forest policies in the country, for its recharge, recovery and sustainability of the same, with highest priorities for the following basins:

• Basin of Cocibolca Lake of Nicaragua

• Sub- basin South 3 of Managua Lake

• In the dry zone of Leon and Chinandega, in the basin of Coco River, in biosphere reserves Bosawas and San Juan River.

We will encourage forest conservation on land with natural forest cover to minimize the change in land use, except land declared for conversion by national interest and approved by the National Forestry Commission.

These guidelines should be analyzed and contrasted with the geographical areas of highest incidence of deforestation and possibly identify additional need for dialogues with relevant stakeholders.

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

The Forest Governance platform has a wide structure; whose body was full consultation at the national level is the National Forest Commission (CONAFOR). At territory in the departments are the Forestry Development Councils (CODEFOR), and municipal level municipal councils Forest (COMUFOR), the Municipal Environmental Commissions, the Environmental Management Units Ugas and other forms of coordination or used. This coordination structure would play an important role in implementing the strategies REDD. Additionally, this mechanism should be incorporated into the relevant units responsible for planning and public institutions related to socio-economic programmes that address the major causes of deforestation (energy, housing, infrastructure, etc.).

d) Across state or other subnational governments or institutions?

Already mentioned in the previous section municipal sector participation in the platform for dialogue.

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

These actors are directly involved in the platform of existing decentralized forest governance

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

In the autonomous regions of the Atlantic Coast, where the country has the most significant areas of forest, has developed the capacity of formal and effective participation of indigenous and ethnic communities in consultations and decisions on its forest estate. (Law No.445).

In the RAAN works with good success, the Consultative Forest Committee (CCF) under the coordination of the Autonomous Regional Council with the aim of consolidating the efforts of the forestry sector and overlooking the regionalization of functions. Such mechanisms are suitable for consultation in regions with relevant local groups.

8. Implementing REDD strategies: implementando la estrategia REDD

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.):

The main challenges of the forestry sector that should be taken into account when implementing the strategy REDD, are identified in forest policy. Among the most important we highlight:

- Harmonisation of sectoral and inter-sectoral policies in order to respond better and comprehensively through public policies aimed at resolving the causes of deforestation.
- The strategy REDD must be incorporated as part of the country agenda in the macro economic policy and sustainable development.
- To improve mechanisms for monitoring and assessment of forest resources, environmental management and its mechanisms. (Information capabilities for designing the baseline, monitoring coverage and changes in carbon stocks, etc.).
- Linking education, research and transfer additional allocation of budgetary resources to the bodies responsible for the management of forest resources, both inside and outside protected areas.
- Generating mechanisms to secure new financial flows to forest management, with participation of regulatory and willing international markets, so as to generate incentives
- Improve institutional capacities for the implementation of actions arising from the framework of forest policy and the implementation of existing legislation, including strategies to combat illegal logging.
- Identify additional public resources to strengthen public policies aimed at poverty reduction, given the limitations of the country in terms of public incomes.

- The implementation of initiatives under the strategy REDD represents for Nicaragua to overcome some obstacles that are not exclusive to other development initiatives and conservation of national forest heritage which have been fully identified and discussed in the consultation process for the new forest policy. Among the major

challenges to overcome include:

- Need for balancing policy actions between Production - Conservation – protection including culture changes needed in the private sector
- To strengthen the participation of civil society, indigenous and ethnic communities in the sustainable use and management of forest resources as a means to generate additional wealth and improve the social distribution of economic benefits, as well as control actions of unsustainable activities of use of forest resources.
- Citizen participation in the management and monitoring of environmental - Agricultural - Livestock – Biofuels policies, and analyze their long-term impact in terms of forest cover
- The expansion of state investment and private sector in areas of the Nicaraguan Caribbean coast, mainly in social investment programs that meet the needs of reducing poverty and creating better living conditions for the population,
- Specific demarcation lines for the reduction of the Agricultural Border (perverse incentives to the forest) or limitations on the land-use change through market incentives and other non-market rules as appropriate.
- Improving the economic valuation of our forest resources and the wide range of environmental goods and services generated for multi-purpose.
- The harmonization between sectoral and cross-sectoral strategies, so that adequately address the original causes of deforestation in a holistic manner.
- Extensive training plan for technicians, officials, communities, etc.
- Further inter-agency coordination mechanisms
- Capacity building for access to basic information and continuing to develop monitoring of forest cover and carbon stock, including the development of methodologies in accordance with the technical requirements necessary to comply with the guidelines of the IPCC.

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):**

Financial incentives based on achieving reduction targets can certainly be an appropriate instrument to promote conducive attitudes for maintaining the forest cover or avoiding deforestation, however, this will require creating an appropriate and qualified institutional framework to implement such a system, including identification of constant flows and long-term funds to the sustainability of the system. On the other hand, should be strengthened social processes of partnership, cooperatives and community organization to allow more direct involvement of actors and social groups in implementing the mechanism, so that they can also reduce transaction costs.

One of the challenges that must be addressed from this perspective is how to generate financial resources to strengthen the actions of consolidation of protected areas for which individual studies would be needed with support of resources REDD.

However, Nicaragua does not have the financial resources to promote prior investment (pre investment) required to develop projects of this type, so it should be studied alternative mechanisms of advance payments to countries that are not likely to bear the expenses of preinvestment.

9. REDD strategy monitoring and implementation: estrategia de monitoreo e implementacion

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

Currently several actions to monitor land use and forest condition of Nicaragua are been undertaken. On the one hand, MAGFOR, supported by Marena, INID and INAFOR, is headed to update the coverage map of land use with SPOT satellite images, with color resolution of 20 m. For its part, Marena through SINIA, is in the process of updating the environmental criteria and indicators, which includes criteria and indicators on the state of natural resources and biodiversity. Additionally, INAFOR is developing the National Forest Inventory (INF), which is generating the field checkpoints for developing the map of coverage and will provide information baseline for updating the criteria and indicators related to forestal monitoring which is compiled and analyzed by SINIA.

The INF is the main tool for monitoring forests, as it has been established based on the program of national Forest monitoring and assessment systems Forest (National Forest Monitoring and Assessment) FAO. These methodologies are fully compatible with the guide of good practices of land-use change and forestry (IPCC, 2005), since it is based on a network of permanent plots in a systematic design that takes as its basis throughout the national territory. In each plot is recorded the current use of land, according to a homogenized classification with categories to be used on the map of coverage and global categories that are used in World Forest Resources Assessment (FRA). With the periodic upheavals getting the change of land use in each section measured in the year 0 and year 5 for example. In each land use, all the trees higher 10 cm are measured DPA, allowing obtaining information about stock of carbon, based on trees, both in and outside forests. Additionally tree regeneration is measured in smaller sub plots. With this information you can calculate carbon accumulation of biomass of trees above and below ground, with the allometric avalaible equations available and proven in the country or the Central American region, according to the standards established by the IPCC. (In The annex presents more details.) Other variables related to the change in land use is the identification of the state of crops and pastures, namely whether they are productive or neglect. In relation to forest, variables are collected on the state of development and are measured stumps for estimates of depletion of the forest. Additionally, there are interviews with the owners of sections of land use measured; they are gathering information to make a prior diagnosis of land tenure at the national level, which serve as a reference while advancing the National Cadastre. Also variables are collected to establish levels of poverty, with a methodology based on the Census of Agriculture, which conducts MAGFOR. INF information is compiled in a module of the registration system and forestry operations (SIRCOF) INAFOR, which is linked to SINIA, to provide updated information as periods of lifting or data collection. In December 2008, is expected to have the results of the 2007-2008 uprising, which will be the baseline for periodic monitoring, which has been defined to be conducted every 5 years.

For the development of the coverage map, is in the field data collection phase with INF, which in addition to the permanent plots collects control points of access to coverage for each sampling unit, for it is recorded the location with the geoposicionador and shows the kind of land use, according to the classification defined at the national level. In total is expected to take about 1500 control points, distributed throughout the country. Subsequently performance of the supervised classification of images and information of the parcels will take place the validation process. Finally, we made field new validations where there is uncertainty.

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 monitoring system started with INF, will be cary out every 5 years, however SINIA is mandated to provide

environmental indicators annually. The reasons for planning the lifting of INF every 5 years, is the availability of financial resources. The cost of the first uprising was about U.S. $ 1,000,000.

It has been argued that using the tools of remote sensing can make the analysis of change in coverage annually, using the support of server (regional system that operates under the auspices of the System of Central American integration SIC-CCAD), once there is availability of images annually (or biannual) for the whole country, and where resources should be allocated to strenght this regional mechanism to provide this service to countries in the region.

The methodology of the INF must be analyzed to improve the capture of other variables that currently are not collected, such as vegetative biomass of undergrowth and other land uses, is also due to gather information from the dead organic matter and soil organic carbon. Other variables on biodiversity can be added to this monitoring system; however costs will always be a limiting factor for the amount of information being collected.

From the experience gained from interviews with the owners of sections of land use, must be improved and homogenize the procedures for collection of state of land tenure and link this information to national register while this goes forward. Also, data to establish levels of poverty of the occupants and owners of the sections of land use, is a variable that should be made homogeneous to the methodologies that are used in the national census of population and households. The main constraint at the moment was the costs, since the time of registration of information increases with the number and type of variables to collect.

One limiting of the methodology of INF is the level of uncertainty in land uses rare in the landscape, while the smallest is the variable sampling error increases, however, can assess the quality of the results obtained in the first lifting and analyze the current rise of sampling, according to economic resources available to be taken.

To calculate the stock of carbon, the main constraint is the availability of models allometric factors or expansion developed locally for all uses of land and forest types.

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 purpose of monitoring the implementation of mechanisms REDD would be through monitoring the monitoring system established by the National Forestry Inventory and monitoring to improve the inventory of greenhouse gases (GHGs) in the sector land use, use change of land and forestry.

On this basis should be making adjustments in methodology that best meet REDD. It also should link other information-gathering systems such as the Census of Agriculture and the national census of households, particularly for measuring variables and socio-economic indicators to establish changes in poverty levels in populations where deforestation is concentrated, as well as access to basic services related to them (energy, housing, food, etc.).

10. Additional benefits of potential REDD strategy: beneficio adicional o potencial de la estrategia REDD

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?

The implementation of mechanisms of the strategy REDD, will allow additional benefits in the social field through organizational capacity building and management of target groups and communities that includes training and technical assistance. This would also benefit the living conditions of indigenous peoples and ethnic communities dominated by tracts with the highest forest ecosystems. On issues such as environmental conservation and recovery of water resources under the integrated watershed management, conservation of biodiversity in forest ecosystems. In the economic sphere directly efficient sustainable forest management. In what was generally expected the development of multiple benefits under the social economic strategy of Nicaraguan state.

b) Is biodiversity conservation being monitored at present? If so, what kind, where, and how?
Está supervisando en la actualidad la conservación y la biodiversidad? Si es así, de qué tipo, dónde y cómo?

The country has developed mechanisms for research, monitoring and control to biodiversity and conservation. Under the management of the Ministry of Environment and Natural Resources has developed the National System of Protected Areas consisting of 72 protected areas throughout the country, which cover an area of 1,9 million hectares.

Under the office of CITES oversight mechanisms are implemented to endangered species.

It is implemented monitoring mechanisms in areas under forest certification scheme

Programs of biololgical corridors have been implemented. Currently running a binational program with Honduras, known as HEART (CORAZON) with support from the World Bank.

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

- definition and delimitation of protected areas
- Monitoring ecosystems and biodiversity
- Promoting the process and mechanisms for certifying forests.
- Supporting management in the management of protected areas.
- Strengthening in the implementation of mechanisms for Community Forestry

Monitoring of biodiversity, species standards: Within protected areas can be carried out rapid environmental assessments of change indicator species, which are cheaper measurements.
With the methodology of permanent plots of INF, monitoring forests can be lifted information from some change indicator species, such as beetles, butterflies, mice, bats, birds, epiphytes and vines, indicator species of undergrowth. We must seek indicator groups indicators which monitoring suits the characteristics of lifting of INF and that are economically viable.

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

In Nicaragua is currently implementing a comprehensive program of productive rural Sector Development known as PRORURAL, which involved public institutions of productive agricultural Rural Sector (SPAR). This program is funded with resources from bilateral and multilateral cooperation. In the context of this program that includes forest and environmental investments are included monitoring activities in profits to this sector, however these activities are amenable to improvement in its planning and interagency coordination. Within PRORURAL runs a component aimed at the implementation of forestry policy, which goal is defined as: Promoting sustainable development of forestry sector as an alternative to improve the quality of people's life linked to the resource, promoting the appropiate management of natural forests, plantations and agroforestry systems.

There is the Agricultural Census, the national Census of population and households and the National Forest Inventory, but any accurate information is generated so as to identify impacts of poverty levels in deforestation, for that reason some adjustments should be made to the system of statistics in order to consider these variables on socio-economic conditions of rural populations.

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

With forest monitoring based on the current methodology of the INF can collect information on beneficiaries of a random (systematic) through the socio-economic interviews that apply. To which the current methodology must be adapted to the needs of REED. You can also adjust the variables that are collected in the agricultural census. Both results

of monitoring forest and agricultural census results can be compared across two systems of selecting a sample. It should also analyse the merger of these monitoring tools, as exists in other countries where it conducts an integrated assessment of land uses (Integated Land Use Assessment resourses, INRA) this methodology is being developed by FAO and has been implemented in Zambia and Kenya. In this case there should be appropriate mechanisms for coordination with the entities responsible for national statistical systems.

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

Basically, Nicaragua needs to establish the baseline scenario for the strategy REDD. We need to update the available report on emissions of greenhouse gases, with recent historical values and projections based on the methodological guidelines of the UNFCCC or on guidelines of international best practices. This will establish the emission reduction targets as a country and the strategic measures to be implemented to reduce deforestation and forest degradation. The definition of the baseline and associated methodological process will also require decisions on definitions of forest, deforestation and forest degradation to be used under the project, as well as the review of methodologies for REDD.

Further more precise studies about the causes of deforestation will be required to drive, so that the measures to be proposed subsequently as part of the strategy REDD are consistent with the needs of attacking these causes, and identifying other actions of public policy beyond Forest sector actions that are required by the Government for such purposes.

Additionally, funding is needed to organize roundtables both on the results of analysis of causes of deforestation and on the policy measures proposed to address them, because it requires that both the causes and measures will be legitimized with the potential target groups of such policies, in addition to the processes of coordination with the national authorities of other ministries should be involved in defining strategy, and that should allow consolidate a specific coordination mechanism for further progress in the project.

Another key issue which would require resources is the design and establishment of the system of monitoring of deforestation and degradation as well as changes in carbon stocks to measure the impact of rules implemented. It is quite possible that require access or buy some sources of information (satellite imagery or aerial photography) and the cost of their interpretation, to refine the numbers on the levels of forest cover change depending on the requirements of establishing the baseline. This activity may eventually include support to serve as long as they provide the required information and thus contributing to consolidate a regional entity that can be sustained over time supplying with relevant information to all countries of SICA.

- **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.):

The incorporation of the mechanisms of the strategy REDD, as noted in previous questions, will be conducted through its incorporation into forest policy and using the platform of the Forest Governance for validation. At least two national consultations will require and several (10) regional for socializing the diagnosis and the rules proposed in the strategy, apart from a couple of meetings with government officials to articulate public policies and programs. Also, a high-level political meeting to legitimize the government action on the strategy REDDS.

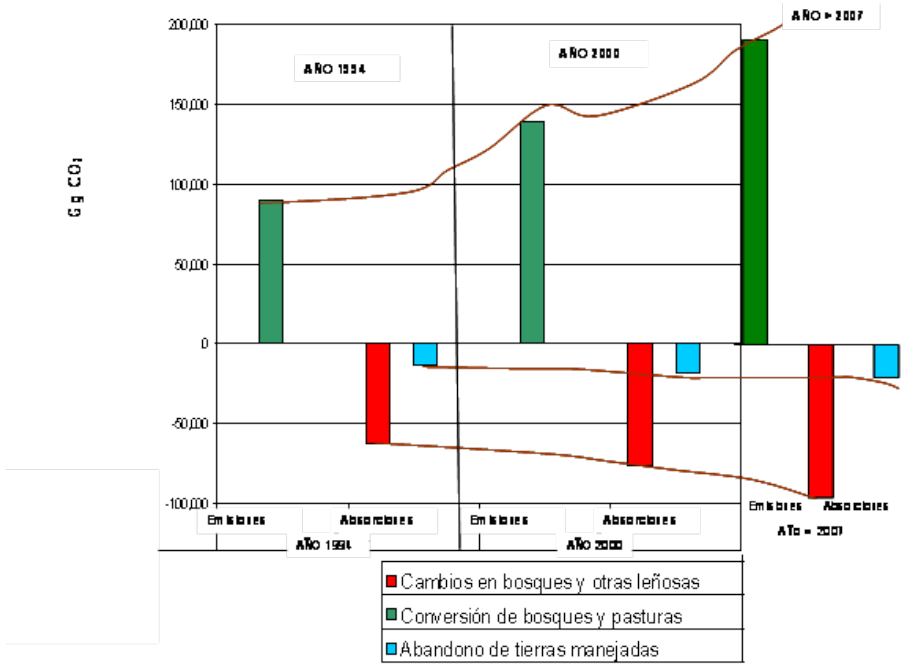
b) Developing a reference case of deforestation trends: Assessment of historical emissions from deforestation and/or forest degradation, or projections into the future.

Trending emissions / removals inventory sector LULUCF

The trend of emissions and removals from LULUCF sector were based on the results of inventories of the years 1994 and 2000. It is important to emphasize that the LULUCF sector, is influenced by many variables of social, economic and environmental consequences, which are addressed in the chapter of "national circumstances" of both INGEI. Under the foregoing, it is proposed a conservative trend line which represents increases in stocks of forests and other woody and a steady increase in the conversion of land.

Figure 11B.1, provides an estimate of increased emissions and removals (in percentage) of the key categories LULUCF sector, based on the trend of inventories of 1994 and 2000. The cases considered indicate that after 2007 it is possible to expect an increase of conservative takeovers in forests and other woody (from 10 to 20% higher), as well as the abandonment of managed lands (26% higher). In addition emissions are expected to increase moderately in for a 35% increase.

The estimated trend of GHG emissions Chart 11B.1, can be altered so abrupt by an extreme hydrometeorological event, such as a hurricane, which can increase CO2 emissions from 2 to 4 times regarding a normal year.



These trends must be ratified and adjusted based on 2006 or 2007, depending on the availability of satellite images comparable to those historically available, also require resources for testing and have at least three points of historical comparison to establish the baseline for the strategy REDD.

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.):

On this aspect, as mentioned previously, are required two levels of inputs: a) Government: to analyze existing mechanisms and incentives and enhance their suitability for the maintenance of forest cover, according to market of alternative uses of land and the achievements of other social and economic goals, including the sustainability of potential funding sources, if they have a financial national component and b) to identify potential incentives or other payments specifically for reducing emissions. This requires at least analyze the characteristics of the mechanism to make it competitive and attractive to forest owners. Eventually a payment program for environmental services can combine the two mechanisms, but should be conducted specific studies and have clarity on the behaviour of potential markets

absorbing credits REDD, because if there is no international markets, are unlikely to generate positive results in long term.

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

As in the case of the definition of the baseline, is required to dvelop technical and methodological elements that allow monitoring of forest cover in accordance with the requirements arising from the guidelines of the IPCC which are of general acceptance, as well as those relating to methods for measuring changes in carbon stocks as a result of measures taken. This activity will require the hiring of technical studies, discussion activities and search for agreements to make national decisions

e) Other?:

A plan for training beneficiaries, technicians and officials of various levels and institutions of central and municipal public sector

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?:**

Formally working under the strategy REDD we do not have a direct intervention in this matter because it is relatively new. However, is not excluded that several representations of international cooperation that are involved in development of initiatives within the framework of reducing deforestation and forest degradation and poverty, can direct its effort in the strategy REDD, since its capabilities and resources as: Strengthening the policy framework, to promote sustainable forest management, forest certification, biodiversity and protected areas, etc.

13. Potential Nest 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?

The following activities are part of the next steps, many of which can be carried forward independently and with other complementary, so that can be adjusted to be implemented within a maximum of 12 months in total.

Definitions of strategic key concepts: forest, deforestation, forest degradation, baseline, monitoring system, criteria and indicators, etc. (2 weeks).

Precise studies on causes of deforestation in Nicaragua in selected hot spots and analysis of current public policies aimed at improving the conditions of the population access to basic services (two months).

Development of the baseline reference on deforestation and emission reduction. (three months) Studies on specific need for adjustment in public policy and institutional capacities to improve care of the causes of deforestation.(2 months).

Discussion on feasibility of achieving national goals for reducing emissions, setting goals and achieving basic political compromises (1 month) as well as defining roles and responsibilities of relevant public actors. (1 month).

Development of the system for monitoring changes in forest cover and changes in carbon stocks and associated elements (biodiversity, water resources) (3 months).

Coordination of efforts to improve the capture and systematization of information on changing socio-economic

conditions in the population most likely to engage in activities of deforestation and forest degradation. (3 months).

Studies and discussion of specific rules and policy actions to improve the delivery and scope of public services and satisfaction of basic needs of the population dependent on forest resources (3 months).

Review mechanisms, economic instruments and incentive schemes to implement actions for compensation for reducing deforestation, and creating the basic conceptual framework. (2 months).

Specific Strategy of capacity building to improve the performance of the entities responsible for forestry policy (Marena, INAFOR, MAGFOR) in its work of conservation, monitoring and control in protected areas and wooded areas outside protected areas. (2 months)

14. List any Attachments included Anexos
(Optional: 15 pages maximum.)

Annex

a) has been set up in google groups page R-PIN (FCPF) Nicaragua for consultation and information gathered as a mechanism of exchange. For more information visit: *http://groups.google.com/group/rpinfcpfnicaragua?hl=es*

b) Inventory of greenhouse gases. Sector LULUCF
c) Forest Governance
d) Methodology National Forest Inventory
e) Estimation of Carbon Stock
f) Annexes: forest inventory
g) agricultural Border
h) Analysis of the forest situation (draft)