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

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**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.

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*Country submitting the R-PIN:*
*Date submitted:*

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

The above mentioned people, governmental entities and several NGO experts (TNC, Conservation International)

**2. Which institutions are responsible in your country for:**

**a) forest monitoring and forest inventories**

Hydrology, Meteorology and Environmental Studies Institute (IDEAM) and SINA (National Environmental Information System) Research Institutes: national inventories and monitoring.

Regional Autonomous Corporations (CARs – regional environmental authorities): natural resources management and regional monitoring.

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**b) forest law enforcement:**

The Ministry of Environment, Housing, and Territorial Development (MEHTD) is the central leading entity that defines natural resource policy, including forests protection and use. At a regional level, forest law implementation is the responsibility of the CARs, urban entities (for large cities), and territorial entities (Regional Governments and Townships). The Special Administrative Unit for the National Natural Park System (SAUNNPS), as part of the administrative structure of the Ministry, controls the country's protected areas. On the other hand, the Ministry of Agriculture and Rural Development is responsible for the formulation and implementation of policy related to forestry plantations for commercial use.

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**c) forestry and forest conservation:**

In the Colombian institutional framework, management and conservation of natural forests and protective plantations, is the responsibility of the National Environmental System (SINA), which is composed by the MEHTD, CARs, IDEAM and the SAUNNPS, as well as other research institutes with territorial emphasis).

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**d) coordination across forest and agriculture sectors, and rural development:**

Through the National Department of Planning and inter-ministerial agendas.

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

**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 different land tenure dynamics (public, communal or private) have lead to the fragmentation and/or loss of natural ecosystems in Colombia in the past century, principally forest ecosystems. Recently, the IDEAM has established an official deforestation rate of 101, 303 ha/yr, for the period from 1994 and 2001, based on a visual classification of LANDSAT images. This is the equivalent to the yearly reduction of 0.18% of the national forest cover[1]. However, this data does not reflect annual regional variations.

Within this framework, it is worth mentioning that for the period studied, the most affected ecosystems in the country are:

Amazon Region:     Pre-humid forests near the Amazon basin and forests of the basins of the Caquetá, Putumayo and Guaviare rivers.

Pacific Region:     Humid forests of the Pacific plains

Andes Region:     Sub-humid high altitude andean forests,   sub-humid andean forests, tropical dry andean forests,

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[1] **INSTITUTO DE HIDROLOGÍA, METEOROLOGÍA Y ESTUDIOS AMBIENTALES, IDEAM.** 2004. Informe anual sobre el estado del medio ambiente y los recursos naturales renovables en Colombia. Bogotá. 256 p. (Annual report on the condition of the environment and natural renewable resources in Colombia.

sub-andean dry forests, pre-montane sub-humid forests, wet sub-andean forests, sub-andean very dry forests and shrublands, andean pre-montane wet forests, dry pre-montane Andean forests

Caribbean Region:  Sub-humid and dry forests of the caribbean plains, riparian forests of the basins of the caribbean, riparian forests of the basins of inter-andean valleys, sub-humid forests and dry forests of the Caribbean mountains

The harvesting of natural forests is the most important Wood source for the furniture industry and construction in Colombia. It is estimated that between these two productive sectors approximately 3 million square meters of wood are consumed annually (IDEAM, 2006, National Forestry Information System). In general, 480 species are extracted, especially 15, of which 6 are of high commercial value. This extraction is mainly concentrated in the Pacific and Amazon Regions, and remnant forests of the Andean Region, including the Magdalena River Valley and the Caribbean Region. This activity is the principal source of economic resources and income for many communities living in these regions, forest dwellers, composed mainly by afro-colombian communities and indigenous communities, and colonists form other regions of the country. The harvesting is conducted by selective logging in many cases, in low-income environments, with complex processes of commercialization that do not favor the sustainable management of forests. Quite the contrary, they incentivize forest degradation and deforestation. Much of the income generated by these activities is not left to the local communities or forest dwellers, but in stead to intermediaries and buyers that re-sell the wood or harvested wood products in towns and cities.

The demand on precious-woods has forced the CARs and Sustainable Development Corporations to report them as highly threatened[2]:

| Common name | Cientific Name | Family |
|---|---|---|
| Cedro | *Cedrela odorata* | Meliaceae |
| Abarco | *Cariniana pyriformis* | Lecythidaceae |
| Roble | *Quercus humboldtii* | Fagaceae |
| Caoba | *Swietenia macrophylla* | Meliaceae |
| Comino | *Aniba perutilis* | Lauraceae |
| Chaquiro | *Retrophyllum rospigliosii* | Podocarpaceae |
| Nogal | *Juglans neotrópica* | Juglandaceae |
| Caracolí | *Anacardium excelsum* | Anacardiaceae |
| Carreto | *Aspidosperma polyneuron* | Apocynaceae |
| Pino colombiano | *Podocarpus oleifolios* | Podocarpaceae |

Fort he case of deforestation due to illicit crops[3], studies have determined that to produce 1 hectare of coca, producers have to deforest 4 hectares of tropical rain forests, and to produce 1 hectare of poppy, 2.5 of Andean forest. This means that according to estimates of the period between 1990 and 1998, a total cumulative area of 78,516 ha of Andean forests were deforested due to poppy plantations, and from the period between 1987 and 1998, 425,600 ha of tropical rain forest were lost due to coca plantations.

Finally, by analyzing protected areas[4], and the change in forest cover in these areas until 2005 at a semi-detailed level, it was estimated that the deforestation rate is 2,300 ha/year. This study calculated that the impact of illicit crops on the deforestation of National Natural Parks, and found that generally less than 1% of forest cover is lost due to this driver, hoverer, it has been found that this is not the case for some of the Parks such as Catatumbo-Bari and Paramillo which present serious deforestation due to illicit crops, 14% and 11% of their deforestation respectively.

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[2] Colombia, Ministerio de Ambiente, Vivienda y Desarrollo Territorial, e Instituto Amazonico de Investigaciones Científicas. 2007. Libro Rojo de Planta de Colombia. Volumen 4. Especies maderables amenazadas: Primera Parte. Serie libros rojos de especies amenazadas de Colombia. Bogotá. 232 p.

[3] Dirección Nacional de Estupefacientes. 201. Impacto ambiental ocasionado por sustancias químicas, los cultivos ilícitos y las actividades conexas. Bogotá D.C. 42p.

[4] ONU-UNDCP, 2005.

[5] Fuente: IDEAM, 2001. Inventario de Gases efecto Invernadero. Módulo de Cambio en el Uso de la Tierra y silvicultura. Bogotá. Pv.

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

The results of the consolidated CO2 emissions and absorptions and emissions of non CO2 gases from activities in the LULUCF sector can be found in the following tables[5]:

| SECTORIAL REPORT FOR THE NATIONAL GHG INVENTORY – YEAR 2000 (Gg) | | | | |
|---|---|---|---|---|
| Categories – sources and sinks<br><br>Total net LULUCF | CO2 Emissions<br><br>29,944.93 | CO2 Removals | CH4<br><br>12.67 | N2O – Nox<br><br>0.009 – 3.15 | CO<br><br>110.88 |
| Total LULUCF | 30,095.40 | -150.47 | | | |
| Changes in biomass in forests and other types of woody vegetation | 6,412.76 | | | | |
| Conversion of forests and grasslands | 16,345.70 | | 12.67 | 0.09 – 3.15 | 110.88 |
| Abandonment of agricultural land | | -150.47 | | | |
| CO2 Emissions from soils | 7,36.94 | | | | |

| SECTORIAL REPORT FOR THE NATIONAL GHG INVENTORY – YEAR 2004 (Gg) | | | | | |
|---|---|---|---|---|---|
| Categories of GHG sources and sinks | CO2 Emission | CO2 Removal | CH4 | N2O | NOx | CO |
| Total net LULUCF | 25,720.5 | | 12.67 | 0.09 | 3.15 | 110.88 |
| Total LULUCF | 25,820.94 | -100.39 | | | | |
| Changes in forest biomass and other types of woody vegetation | 2,130.90 | | | | | |
| Conversion of forests and grasslands | 16,345.70 | | 12.67 | 0.09 | 3.15 | 110.88 |
| Abandonment of agricultural lands | | -100.39 | | | | |
| CO2 emissions from soils | 7,344.35 | | | | | |

The following is a graphical comparison between CO2 emissions and adsorptions for years 2000 and 2004:

**Fig 1. Total CO2 emission and adsorption**

**Figura 1. Emisión y absorción de CO$_2$ por categorías**
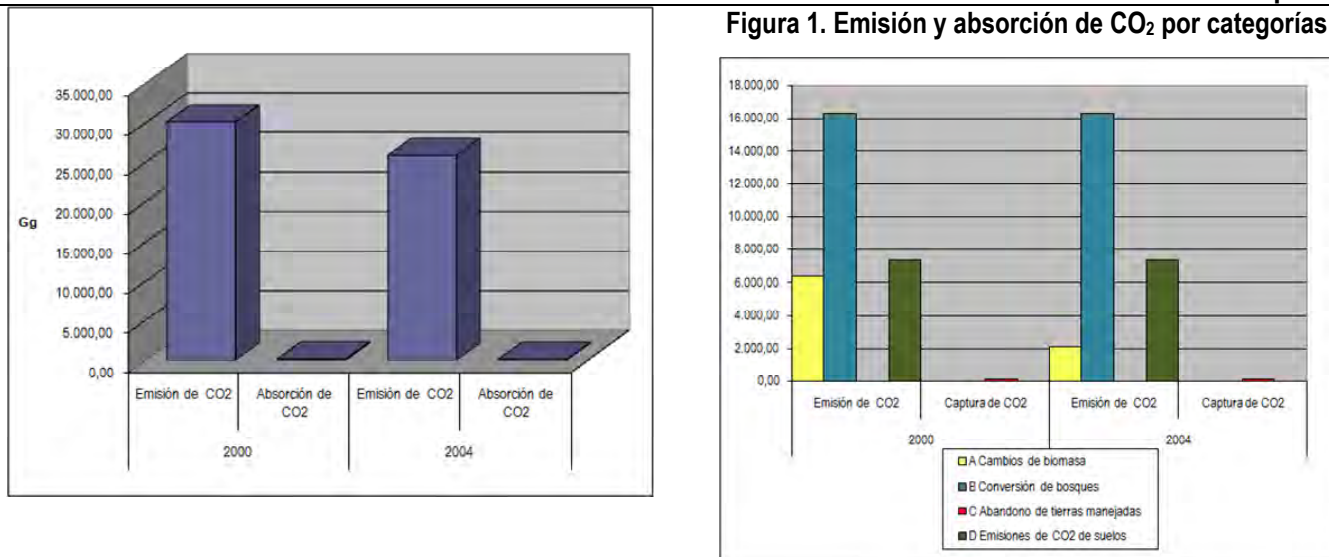


SIMSI (United Nations's Office for Drugs and Crime satellite imagery analysis system) has estimated that the burning of natural forests due to illicit crops destroys 280 tones of biomass per hectare, which means 152 million tones of biomass that have turned into ashes, CO2 and sediments. This process contributes to high GHG emissions and to diminish the navigability of rivers and cannels and affect the country's dams.

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**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 principal source of data on degradation and deforestation is the annual report on the status of the environment and renewable natural resources in Colombia published by IDEAM in 2004. In this report, reforestation data from the last 30 years is presented. As a result of the analysis, IDEAM estimated, as mentioned previously, a deforestation rate of 101,303 hectares a year. This number should be recalculated with a set periodicity to maintain precision (FIDE IDEAM 2004:144).

For national park areas, data that has been published has been obtained by different research projects. Currently, they are using MODIS Rapid Response (NASA/Maryland University), to detect disturbances that could be related to the illegal occupation of land. This data is available in the Technical sub-direction of the National Parks Unit (Monitoring and Planning of Management Unit), as well as in publications and reports from governmental research institutes such as SINCHI and the Von Humboldt Institute. For the specific case of illicit crops, the data source is SIMSI. Annex I contains a more detailed account of documents that further this information.

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

As the main drivers associated to forest degradation and deforestation we have detected:

- Expansion of agricultural frontier

- Colonization

- Construction of infrastructure projects

- Forest fires

- Extraction of wood for energy purposes

- Sub-utilization of forest resources (unsustainable management)

-Selective logging or high-grading for valuable forest species

In addition to these drivers, we find low governability in some areas of the country due to the armed conflict that affects the environmental authorities' capacity to manage the forest resource.

The direct drivers mentioned have their origin or are exacerbated by a complex interaction of underlining elements. These factors are found at the local, regional and national levels, and vary from place to place depending on the local

circumstances; the underlying causes are more complex and controversial than the direct drivers. Some of them are linked to national policy, planning and legislation in different economic sectors such as the agricultural and mining sectors. In that sense, we see a trend in the past decades to undervalue the forest resource of the Country.

Annex 2 contains the current National Park's vegetation cover and their influence areas

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**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.?**

There are a series of key aspects that determine the application and implementation of forestry policy. These vary according to regional specificities. These are, among other, the following:

- Presence of illegal armed groups that generate instability and difficult governability conditions.
- Lack of capacity and financial resources in the CARs, which affects their ability to manage the resource efficiently
- Coordination difficulties between different governmental entities related to the forest sector
- Difficulties in implementing follow-up on command and control instruments on management and harvesting
- The acceptance of illegal forest products by the industry
- Lack of integration, development and equity of productive chains in forestry, inefficiency, and difficulty in the regulation of these activities
- Lack of capacity in ethnic communities for sustainable forest management
- Under-value of the wood products from natural forests
- Lack of interactions of policies, plans and legislation of different sectors

**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.):**

From the total Colombian forest cover, more tan 23 million hectares are located in collective territories that legally belong to indigenous or Afro-colombian communities. This defines the country's definition and implementation of special strategies for conservation, management and sustainable use of forests within these territories.

For example, for regions with the most forestry capacity, namely the Amazon and Pacific regions, we have:

- In the Amazon region, there are 88 "resguardos" (indigenous legally owned communal land), that span through three departments: Putumayo (30 resguardos), Caquetá (38 resguardos) and Amazonas (28 resguardos).
- In the Pacific region, there are 238 "resguardos", located in the departments of Antioquia (37 resguardos), Caldas (3 resguardos), Cauca (36 resguardos), Chocó (104 resguardos), Nariño (34 resguardos), Quindío (5 resguardos), Risaralda (4 resguardos) and Valle del Cauca (17 resguardos). They constitute an area of 8'311,884 hectares and are home to 29,073 people of 5,619 families.

In 2001, of the total area of the Colombian Amazon (476,505 km2), 41.8% are indigenous "resguardos"; 26.2% are forest reserves, 10.6% are in National Natural Parks or Reserves, and 3.8% are in special management districts. Today we have some areas under two legal figures, indigenous "resguardos" and protected areas, these cover 3.6% of the whole region (Murcia et al., 2003).

**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 National Forestry Development Plan –NFDP-, was elaborated in compliance of law 37 of 1989 and of the recommendations by the United Nations Forum on Forests (UNFF).

For its formulation, the National Government through the Ministries of Environment, Agriculture, Commerce, Economic Development and the National Planning Department, through a participative institutional, and sectoral process, constructed a long-term plan, in which a national policy was defined with the purpose of incorporating the forestry sector to the national economy, to improve the livelihood of communities, by offering productive alternatives that contribute to sustainable development and peace.

Additionally, the participative strategy for the ecologic restoration run by the National Park Unit is developed through 4 principal process: i) the establishment of inter-institutional cooperation agreements for the implementation of the restoration processes ii) the conformation of restoration groups composed by peasant families that live within restoration areas, iii) the conformation of an inter-institutional technical committees for the ecological restoration of the affected area and iv) the establishment of an inter-institutional management and commentary system in the area.

Recently, the current formulation of the National Strategy for Payment for Environmental Services has been the result of several activities, in which international NGOs such as TNC, WWF, and CI participated along with the private sector, regional environmental authorities, and research institutes.

In terms of REDD readiness, the country would organize a broad consultation process, which would include among others; work shops with different actors of the sectors involved (peasant and indigenous communities, industry, NGOs, universities, etc.), in order to achieve an integral vision for their development. Work would be focused mainly, but not exclusively, on strategic forest ecosystems so as to generate a cost-effective impact on the local and institutional capacity to tend to deforestation and degradation issues.

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

In order to reduce deforestation and degradation of forests, the implementation of the National Forest Development Plan – NFDP- must continue and be enhanced, as well as the revision and coordination of the different related policy instruments. The following planned projects have a direct effect on the abovementioned topics, although many lack the financing necessary for their implementation:

1. Updating the national and regional forest inventories
2. "Zonification" and ordainment of forest ecosystems at the municipal, regional and national scales
3. Formulation of contingency plans against forest fires at the regional and local scales
4. Conformation of a National Organization of Prevention Centers for forest fire detection and control
5. Monitoring of forest ordainment and sustainable management in productive forests, through indicators and criteria
6. Basic and applied research for natural forest management
7. Low-impact management in natural forests meant for production
8. Monitoring and control over forestry extractive operations and the mobilization of forest products
9. Current status report on forestry industries that produce wood products for industry from natural and planted forests
10. Establishment of a support system for the expansion and technical modernization of existing forestry industries
11. Strengthening and implementation of the Forest Information Systems
12. Design of a forest monitoring and follow-up system
13. Design and implementation of a quality control system to the management and use of forest resources
14. Evaluation of the National Forestry System's pertinence, structure, and management schemes
15. Promoting of forest goods and services at the international level

For the national inventory issue, forest "zonification" and ordainment, the development of a monitoring, follow-up and modeling plans are fundamental, as they will facilitate the following:

- Delimitation, accounting and zoning of forest ecosystems and forest areas in the country
- Characterization of the goods and services generated by the forest ecosystems and forest areas with the participation of environmental entities
- Evaluation and assessment of the production capacity of goods and services of forest ecosystems
- Detection of changes and trends in forest ecosystems
- Interpretation the impacts of changes on surrounding areas, so mitigation options can be defined
- Generation of protocols, guides and standards for the efficient management of forestry information
- Generation of the forest indicators with the aid of the SINA system and private sector, to learn about forest

dynamics in different areas of the country
- Definition of the forestry sector's input to the national Gross Integral Product

In the framework of the national forest development plan, we can point out some important activities such as:

- Development of pilot projects with communities for natural forest management and regeneration that would allow for social integration and transfer of knowledge and resources

- Development of policy instruments for forest protection, conservation and management, and sustainable agricultural development

- Monitoring of forest use plans

- Implementation of the National Strategies for Payment for Environmental Services

- Integration of the Strategic Sectorial Environmental Evaluations that allow compensation for unavoidable environmental damages in the process of mega-project development

- Development of activities related to the use and of sustainable extraction of timber and non timber forest products from natural forests, to be implemented by research institutes

- Development of the sustainable biocomerce initiative, which aims to generate sustainable production alternatives based on native biodiversity

The points mentioned above are framed in a decentralized and specialized institutional scheme, being that the regional environmental authorities (CARs) are the managers of renewable natural resources.

At the same time, a participative ecological restoration strategy is being implemented in the National Natural Parks, based on natural assisted regeneration of ecosystems. This means that the natural processes and their natural sequence are recognized as the axis of restoration and are imitated and promoted so as to aid the ecosystem in the recovery of its structure, composition, and functions.

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**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):**

Fort he purposes of readiness for REDD, the country would seek capacity for diagnosing, project design and monitoring of carbon in forests at a national and regional level. At a national level this would be done through IDEAM, and regionally through the CARs. In parallel, work would be forwarded on the socialization of the opportunities and incentives related to REDD in all regions of the country, emphasizing work on areas with high deforestation rates.

This work would be done with the objective of generating incentives from different communities that are participating in processes that lead to the degradation or deforestation of forests. Each community should establish the causes of deforestation in their area of influence, and develop sustainable forest management plans or alternative productive projects. After this proposal comes forward from the community, entity or person(s) that own the land, the central and/or local government may come in to support the community in the technical aspects that it may not be able to do on its own. This assistance could include, capacity building for the area's forest inventory, remote imagery analysis, reference scenario setting, development of a monitoring scheme, support for the detailed design and implementation of the alternative productive plan. The governmental organizations in charge of these tasks will aim to create the capacity to supply the support needed through readiness assistance such as the one possible through the FCFP.

It is important to mention that this scheme would ensure that each community related to a REDD project or initiative (or with their territories involved in one) not only would consent to the activity, but determine the alternatives that would satisfy their needs and that they are made in line with their culture and traditions.

Additionally, we have detected some concrete actions that will be forwarded or are being developed at the national level to aid in the coordination of activities of this nature:

- Policy instruments designed for communities that live in areas of transition from forest to non forest
- Establishment of the national strategy for payment for environmental services

- The elaboration of a interministerial policy document (CONPES) on climate change that will seek to coordinate and harmonize policies that will detect and eliminate perverse incentives in the different sectors
- Improvement of the CARs' management capacity in areas such as planning, ordainment, conservation, management and use, follow-up and monitoring of forest ecosystems.
- Evaluation and adjustment of policies that could negatively impact climate change

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

In taking into account the needs of communities that are deforesting (mainly out of necessity or lack of alternatives), or finding the way to compensate for their opportunity costs and the costs for other deforestation agents such as companies that base their production on wood extraction or agricultural expansion, sustainable projects can be created. These projects should endure in time, be compatible with communities' interests, and would not generate conflicts due to imposing land use changes and life style changes, because the initiatives would be coming form within.

The national forest monitoring program will allow, through the national forestry information system to generate information regarding to forests, maintain up-to-date indicators related to forest change, deforestation rates, and other information necessary to mitigate deforestation, this with the view of maintaining decision makers well informed, mainly the Ministry of Environment, who is in charge of generating the national forest policy.

These programs will allow for the improvement of management of the forest resource in the whole country, with current and continuous information about the condition of the resource, with a better integration of the entities in charge of the forest sector, from the national to local scales, with personnel capable of planning, ordaining, drafting conservation management, use and monitoring plans for forest ecosystems, under sustainability criteria.

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**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.)?**

Colombia is working on a national policy on climate change at the highest level of Ministerial consultations. In this document, one of the sectors to be treated is the forestry sector. As with all other sectors, a vulnerability to climate change study will be mandated, as will be a study on mitigation potential (including REDD). The result will be an adaptation and a mitigation plan for the sector.

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**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.**

The need for the implementation of trans-sectoral policies that aim to harmonize the development agenda with the ecosystem characteristics is apparent when we realize the conflicts generated by different land uses such as agriculture, and extensive cattle ranching and forest land for ecosystem and water conservation purposes. Additionally, the sub-utilization of land produces problems of food shortage and social inconformity, which have a direct impact on the over-utilization of fragile ecosystems (IDEAM 2004:124).

According to the land use conflict map done by the National Geographic Institute Agustin Codasi (IGAC), lands properly managed are 37.7% (aprox. 21'996,294 ha) and the improperly managed constitute 62.3% (aprox. 36'343,312 ha) of the total land.

32.7% of the land partially or intensely transformed, is being over-utilized in some degree, which is an area of 19'079,013 ha. The moderately and intensely over-utilized land spans over 68% of the territory, which is an area of 12'973,728 ha or 11.3 % of the country. These are areas with high risk of degradation and of loosing their capacity to provide their ecosystemic functions. Finally, it was established that 29.6% of the area partially transformed is being sub-utilized, which is an area of 17'270,299ha (IDEAM 2004:121)

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**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):**

The country has recieved no assistance for REDD as of yet. There is a small scale pilot project financed (ERPA signed in 2007) by the World Bank in Antioquia (San Nicolas), which is allowing the Ministry to test this option and is implementing a new methodology for this purpose.

**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?**

As expressed in previous questions, several events and strategies will be put in place in order to "socialize" the RED topic and proposed mechanism, including readiness for RED. The objective will be to learn about any concerns from the communities and the sector, and to inform them so they can decide if they want to participate. All of this will be framed in the consultation procedures established by Colombian legislation for indigenous and afro-colombian communities (Law 21 of 1990 and Law 70 of 1993).

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

They would be consulted through informative papers with questions for feedback, workshops, conferences and working groups.

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**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?**

Not specifically for RED, between the MEHTD and IDEAM, there are several cooperation scenarios in various forest related issues, such as the formulation and development of the National Monitoring Program for Forests.

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

Through the implementation of the national forest development plan, diferent scenarios have been generated, scuh as the national round table on forests, an inter-institutional committee, a forest policy advising committee, the national environmental council, and the national economic and social policy council (CONPES), which are possible forums for the presentation and discussion of RED.

Specifically regarding the Climate Change CONPES, due to the nature of the council, the representation is at the highest ministerial level, and the following ministries are involved:

Agriculture Ministry
Energy Ministry
National Planning
National Farmers association
Water and sewerage facilities institutions
Research institutes, regional authorities, protected areas authority, civil society reserves, etc.

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**d) Across state or other subnational governments or institutions?**

Additionally, we plan to hold work shops with the CARs in order to socialize the government's proposal with regards to REDD, give the community the opportunity to express any concerns they might have, and in a second phase, create capacity in local CARs and communities that wish to initiate REDD activities.

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

All NGOs, and other interested sectors will be invited to the regional work shops on REDD.

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

As indicated before, forest land in collective territories are about 23 million hectares in Colombia, and the National Law dictates specific consultation mechanisms according to Law 21 of 1991 and Law 70 of 1993. In this sense, because of the work shop plus official consultation process, we would be going beyond the law and allow for participative forums and processes.

**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.):**

| LIMITING FACTOR | ACTION |
|---|---|
| Lack of updated information on forests and forest change | Updating data through the national forest inventory and the operation of the national forest information system, plus the design of a monitoring system to track forest change. |
| Lack of updated information on forest carbon. | Obtaining local carbon content data and coupling with the systems mentioned above. |
| Issues relating to technical and technological limitations. | Improving technology used for forest monitoring, such as ALOS imagery that also surpasses barriers of imagery interpretation due to clouds (significant issue in the Pacific and Amazon regions). |
| Lack of financial resources | Cooperation among the National and local governments and international resources. |
| Difficulties in inter-institutional coordination. | Coordination of management and operation plans at regional and national levels. |
| Lack of operational capacities of some local environmental authorities (CARs). | Capacity building through strategic partnerships with other institutions and the national government. |
| Lack of industry capacity. | Industry formalization. Capacity building and conformation of cooperative working groups. |
| Governability issues. | The central government is working on this. We have to be prepared for natural resource management in places we start recovering. |
| Difficulties to implement a follow-up system for forest management and monitoring. | Developing and implementation of the forest monitoring program. |
| Lack of implementation of sustainable forest management alternatives. | Development of general forest ordainment plans in regions, localized areas or pilot areas. |
| Very low technical capacity in local communities in sustainable forest management and appropriate technologies and best practice guidelines. | Capacity building, transference of technology and pilot projects. |

| | |
|---|---|
| Lack of incentives for conservation and sustainable forest management. | Revision and adjustment of national and regional policy, and international incentives such as REDD. |
| Lack of productive alternatives in some regions. | Development of production systems that integrate aditional value because of conservation, biodiversity and impacto on climate.<br><br>Finding sustainably produced products that can be sold in "green markets". |
| Illegality | Enforcement of command and control instruments, transparency agreements, strategic alliances, development or implementation of certification and gold standard. |
| An extractive forest culture | Education for communities to value the forest through productive processes (of timber and non-timber forest products), with aggregate values and specific green market options. Recognition and payment for environmental services. |

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**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):**

It is fundamental to have a national forest inventory that is more accurate and updated, and available for the CARs to use in their planning, managing, use, and monitoring of forest ecosystems. The financing from REDD will be essential to contribute to achieve this national goal.

Payment for environmental services (PES) is an alternative to recognize these services and the opportunity costs incurred by forest land owners. Given the nature of these payments, their implementation should be coordinated with other policy instruments. It is important to clarify that REDD projects will be in line with any policy related to PES, and will be a complementary option to this program.

In addition, the continuation of the National Forestry Development Plan implementation with its different programs and sub-programs, allows us to address many obstacles mentioned in the prior question, directly and indirectly. The policy is there, but it is crucial to have enough economic resources for its correct development.

Resources from REDD will also allow favorable conditions for local producers, while at the same time they can provide the "income or investment return time" from certain forestry activities, making them more favorable and feasible for the communities that implement them, which are frequently low-income families. In this way, payment for GHG emission avoidance will favor local communities and increase their conception of the value of forests.

**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.):**

The following table presents the results of the multi-temporal study on forest cover change for Colombia between years 1986, 1996, and 2001.

| Cobertura | 1986 | 1994 | Cambio 1986-1994 | 1986 -1994 (miles de ha/año) | 2001 | Cambio 1994-2001 | 1994-2001 (miles de ha/año) |
|---|---|---|---|---|---|---|---|
| Ec. urbanos artificiales | 92 | 125 | 33 | 4 | 144 | 19 | 3 |
| Agroecosistemas | 33.382 | 34.367 | 985 | 122 | 34.749 | 381 | 58 |
| Bosques | 56.902 | 56.280 | -622 | -77 | 55.613 | -667 | -101 |
| Plantaciones forestales | 107 | 165 | 58 | 7 | 269 | 104 | 16 |
| Páramos | 1.725 | 1.614 | -111 | -14 | 1.627 | 13 | 2 |
| Sabanas | 15.525 | 15.531 | 6 | 1 | 15.556 | 25 | 4 |
| Nieves | 54 | 40 | -14 | -2 | 29 | -11 | -2 |
| Humedales | 2.991 | 2.848 | -143 | -18 | 3.006 | 158 | 24 |
| Coberturas poca vegetación | 3.124 | 2.958 | -166 | -20 | 2.949 | -9 | -1 |
| Sin cobertura natural | 57 | 54 | -3 | 0 | 56 | 2 | 0 |
| No definidos* | 39 | 17 | -22 | | | | |

*Los "No definidos" son producto del manejo de la información en el Sistema de Información Geográfico, SIG, y de las sombras de interpretación de los sensores remotos.

Fuente: Ideam, 2004. Nota: Factor de cálculo entre los períodos 1986–1994 = 8,091 y 1994–2001 = 6,587.

The study conducted by IDEAM and published in the Annual Natural Renewable Resources and Environment Assessment in Colombia for 2004, indicates that of the national land area, 49% or 55'882,000 hectares are forests (natural and plantations), and that of this areas we lost 77,000 hectares/year between 1986 and 1994 and of 101,000 hectares/year for the period between 1994 and 2001. The study started with the identification and classification of vegetation cover in different units with the use of remote sensors (Landsat TM imagery, for the 80s, and 90s decades, and years 2000 to 2003) and the translation of these in vegetation cover maps and current use maps, for years 1986, 1994 and 2001, over which trend analysis are done. It is important to specify that due to the lack of consecutive satellite imagery (due to cloud cover or missing images for specific periods), it was necessary to implement an interpolation of the analyzed areas to be able to determine the mosaic base year.

The country has its Environmental Research Institutes (SINCHI, IIAP, INVEMAR, IAVH) which are coordinated by IDEAM, and these entities retrieve and analyze the country's vegetation cover. For this reason, the researchers in these institutes should be given financial and technical support, for them to be able to develop the mentioned studies in an improved manner and more frequently. It is estimated that the percentage of the research done in the country in forest related issues is only 30% of its potential.

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**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.):**

Studies developed have found problems in their development due to lack of technical support and that financial resources

are not enough to guarantee the sustainability of the studies in time. In consequence, it is necessary to strengthen institutional capacities in environmental monitoring, project design and implementation. The use of high end technologies, access to satellite imagery, protocols and standards, information management policies, data management and information processing systems. Another issue is that the subject is not treated as a priority study topic, studies are done only on a need-to-know basis.

Another limiting factor is the lack of updated remote sensing imagery, availability of capable technicians with enough allocated time to the subject matter in addition to the lack of field operations for corroboration of the interpreted classified units.

It is necessary to strengthen the capacities of institutions in terms of information management, data registry, technical support for data processing, coupled with the strengthening of coordination within and among institutions for the elaboration of reports and the development of field verification protocols with capable personnel for data management and registry.

It is also necessary to reach institutions and make them understand the strategic importance of monitoring and follow-up to deforestation and forest degradation.

Another difficulty is the high costs in maintaining the information platform and information contained in high-resolution satellite imagery updated.

**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.)**

It is necessary to have specific spatial, biological and socioeconomic information provided for each project in order for the country to be able to develop an analysis on the local and regional context. Some of the information could be provided byu local or central governmental institutions (IDEAM, IGAC and CARs), and some by the project developers. Such information includes:

- Satellite images, aerial photographs, and field data – IDEAM, IGAC, CARs
- Vegetation characterization/biomass - IDEAM, IGAC, CARs or project developers
- Identification of potential leakage causes and monitoring of leakage (through satellite images and/or field methods) – project developers
- Development of bioclimatic models - IDEAM
- Soil types/properties – IGAC, CARs
- Population information - project developers
- Socioeconomic indicators pre-project and during the project – project developers

**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?**

We expect that a obvious result of REDD activities will be the conservation of forests, and therefore expect also that ecosystem services that are not generally valued in the markets, such as protection and enhancement of biodiversity and different cultural positive effects will take place.

In parallel, we expect that resources obtained through REDD activities will contribute to improving the livelihoods of forest dwellers due to increased financial flow and protection of environmental services they need.

For communities with high opportunity costs, we expect that REDD income will be the necessary incentive (in most cases) to achieve a change in their traditional land use tendencies towards more sustainable options.

Finally, it is of interest to the Colombian government, to try to enhance the participation of marginalized and vulnerable communities that are in threatened forest ecosystems that contain important carbon reserves.

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

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The country produces national biodiversity reports that reflect the status of such resource in the national territory, however, given the bio-geographic complexity and size of our country, the reports fail to reflect the huge biodiversity found in our territory.

Currently, the IDEAM, Department for National Statistics and MEHTD have agreed to generate and validate through a pilot test of a methodology for the implementation and updating of the national forest inventory, together with the SINA members and the academic sector. The goal of such inventory is to account for and monitor forest biodiversity and some ecosystem services proxies such as carbon stock and biomass content.

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

Yes, as an additional benefit, but it mainly depends on if the buyer(s) are willing top ay for this aggregate value so projects can manage the costs. Initially, broad monitoring could be continued through the SINA institutes.

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

No, but as part of a future process of national approval of REDD projects in the MAVDT, this would be a basic requisite.

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

Yes, by defining indicators that can measure the socioeconomic benefits (or negagative impacts if any) generated by REDD.

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**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.):**

We would need assistance for the workshops mentioned above.

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

Starting from the identification of institutional actors and their roles in the development of REDD projects, needs for the development of strategies that will allow for the setting of baselines of emissions from deforestation will be assessed. Particular attention will be placed on institutional capacity building, human resources, technical and financial.

1. Capacity building on the application of international rules for the development of standards, methodologies and protocols for monitoring deforestation.
2. Strengthening and capacity building on information management (documentation, preserving information and outreach)
3. Strengthening of institutional capacity for the development and operation of the national forest inventory as a basis for the characterization of carbon stocks at the national and regional levels
4. Developing thematic cartography on the country's forest ecosystems
5. Financing for caracterization and zonification of the country's forests
6. Purchase remote imagery (including ALOS images) and update available remote imagery sets, and establish permanent evaluation periods
7. Train people to interpret the remote images each year and evaluate them using the developed and
8. Update and strengthen technical capacities for the design of sampling schemes and field inventories

9. Update and strengthen capacities in data base design, operation and management
10. Capacity building on issues related to the evaluation of environmental services
11. Updating of the information platform of relevant institutions
12. Adquisición y actualización de equipos de campo para la colecta de datos e información y muestras botánicas
13. Purchase and updating of field equipment for field data and sample collection
14. Capacity building for relevant institutions on the use, Electronic programming and calibration of field equipment
15. Capacitación en manejo de programas estadísticos para la interpretación de datos
16. Capacity building on the use of statistical software for data interpretation

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**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.):**

Colombia's goal is to achieve a sub-national REDD approach where the Government will support the communities or organizations that want to implement REDD activities in their territories. Transactions would be between the buyer and the project proponents directly, under conditions established by both parties, and they would pay no fee or levy on their credits to the Government given this design. If project participants ask for advising on these issues, this could be arranged on a case by case basis.

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

IDEAM through the Second National Communication has developed the GHG national inventory based on the 1990, 1994, 2000 and 2004 IPCC guidelines, and with that, a first step in the annual systemization of data collection for the different sector inventories, including LULUCF.

At the same time, in order to feed into this information, and achieve more precise data and reduce the uncertainty, it is necessary to strengthen the national forestry information system in its data compilation process, analysis and validation. At this time, the country does not have sufficient and reliable enough data on forests and their status and dynamics, including carbon data. In this sense, it is critical to have a national forestry inventory, which at the moment is being designed by IDEAM.

Strengthening of capacity is needed in order to increase institutional capacities at the national and regional level to strengthen forest management and follow-up capacities, and create a registration and report of information system, within the related sectors.

It is equally important to have frequent access to high quality satellite imagery, in aims to analyze forest cover change with a higher precision.

Among the main challenges for a RED program, there are priorities that can be categorized in two groups: technical and capacity building needs. These building blocks are essential to guarantee the survival of the program in the long-term, in order to deliver deforestation and forest degradation reduction, prevention and mitigation in Colombia. For this purpose, we need to be prepared functionally, technically, and scientifically so as to obtain the clear criteria necessary for a RED strategy; we need to emphasize the following aspects: strengthen and promote clear ecosystem monitoring programs that are agreed upon by the national environment institutions in coordination with the MEHTD.  Having this in mind, the involved institutions will need:

1. Conformation of the organizational structure for deforestation monitoring

2. Creation of the national reference framework for deforestation

3. Development of the "Actions to address, prevent and mitigate deforestation effects in Colombia" Project, which should involve a long-term plan that includes the development of a model for avoiding deforestation, purchasing, processing, interpretation and analysis of remote imagery, updating the cartography that serves as a basis for the evaluated period, construction of change matrices, interpretation of results: which includes determining the drivers of deforestation, evaluation of the level of degradation, determination and establishment of mitigation strategies and policies for the management and restoration of degraded areas. Updating of the information platform, and the strengthening of the technical capacities of relevant institutions.

4. Conformation and consolidation of a technical team to research, monitor and model carbon cycles in soils and forest vegetation, modeling of critical variables to determine the storage capacity of different forest types and the

emissions of GHG due to different anthropogenic and natural disturbances in forests

5.  Strengthening of institutional capacities to formulate, develop and implement in cooperation with relevant institutions, a national RED strategy that allows for the creation of a measurement, monitoring and verifying system of emissions from deforestation and forest degradation Capacity building on the knowledge and lessons learned at the national and International levels, on the development of methods for restoration of forests (including native and indigenous knowledge)

6.  Capacity building on the construction of models to establish change tendencies, and produce actual and potential scenarios of forest dynamics

7.  Capacity building and updating on the development of mitigation strategies for deforestation impacts

8.  Updating of flight routs for aerial photography in areas of difficult access and/or with security issues

9.  Updating and broadening of the IDEAM's environmental monitoring network for strategic ecosystems

10. Capacity building and permanent updating of national and regional technical teams in sampling techniques, modeling, GIS, remote imagery interpretation, data management and analysis, quality control and data validation

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**e) Other?:**

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**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?:**

No donors or partners yet.

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**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?**

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

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**Anexo I:**

**BIBLIOGRAFÍA RELACIONADA CON DEGRADACIÓN Y DEFORESTACIÓN DE BOSQUES EN COLOMBIA.**

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**Tipos de cobertura presentes en las áreas protegidas y zonas de influencia**
Fuente: Mapa de ecosistemas terrestres, costeros y marinos de Colombia. Esc. 1:500.000
Datos en hectáreas

| | Áreas urbanas | Áreas mayormente alteradas | Cultivos anuales | Cultivos semipermanentes y permanentes | Pastos | Áreas agrícolas heterogéneas | Bosques plantados |
|---|---|---|---|---|---|---|---|
| SPNN | 6,2 | 111,1 | 13.663,2 | 1.608,5 | 65.910,5 | 90.710,3 | - |
| 0 - 5 Km | 9.156,6 | 1.255,0 | 80.796,3 | 14.352,5 | 318.326,6 | 229.026,2 | 1.755,5 |
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