

Readiness Preparation Proposal (R-PP)

THE ORIENTAL REPUBLIC OF URUGUAY

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Forest Carbon Partnership Facility (FCPF)

**The United Nations Collaborative Programme on
Reducing Emissions from Deforestation and Forest
Degradation in Developing Countries (UN-REDD)**

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SUMMARY OF THE R-PP

Dates of R-PP preparation (beginning to submission):	01/06/2013 to 08/11/2013
Expected duration of R-PP implementation (month/year to month/year):	January 2014 to December 2017
Total budget estimate:	US\$6.47 million

Anticipated sources of funding:	From FCPF: US\$3.8 million From UN-REDD: Government contribution (in cash): US\$2.67 million Other source: Other source:
Expected government signer of R-PP grant request (name, title, affiliation):	Arq. Jorge Rucks, National Director for the Environment in the Ministry of Housing, Land Management and Environment of Uruguay
Expected key results from the R-PP implementation process:	Outcome 1 - Strengthening of key stakeholder capacities in a REDD+ process. Outcome 2 - Adaptation and updating of the regulatory and institutional framework to facilitate implementation of REDD+ activities in the country. Outcome 3 - Coordinated technical development, with the incorporation of protocols for monitoring vegetation cover and its carbon content. Result 4 - Identification of and, if applicable, measures to mitigate the potential social, environmental and economic impacts of REDD+ implementation. Result 5 - Development, through a participatory process, of a National REDD+ strategy.

EXECUTIVE SUMMARY

Uruguay, with an economy traditionally based on agriculture and livestock production, has begun to experience a significant increase in grain production and forest goods which, together with tourism, have grown steadily over the past ten years and now account for the bulk of Uruguay's foreign earnings.

This increasing focus on non-traditional products has brought about substantial changes in land use in rural areas as well as increased pressure on natural resources, the country's main asset.

Notwithstanding the above, it is important to note that Uruguay still has negative rates of deforestation. However, although no assessment of the depletion and degradation of valuable species has been undertaken from an ecological or wood resource point of view, there are clear signs of degradation when the remaining areas of primary forest are compared to those with secondary forests.

In these circumstances, we consider that this is an appropriate moment to begin a REDD+ preparation process. Uruguay proposes to initiate, with the support of the Forest Carbon Partnership Facility (FCPF), the REDD+ process, which is in line with our country's current regulatory and institutional approach to Climate Change, Biodiversity and Forests.

The Ministry of Housing, Land Management and Environment (MVOTMA) is the national authority in charge of climate change and biodiversity conservation, while the Ministry of Livestock, Agriculture and Fisheries (MGAP) is responsible for formulating and implementing the National Forest Policy.

Uruguay has been a pioneer among developing countries in terms of implementing policies consistent with the objectives of the UN Framework Convention on Climate Change. Our government has submitted three National Communications to the Convention. The 3rd National Communication included Uruguay's National Response Plan to Climate Change, containing strategic guidelines established by the government for the mitigation of, and adaptation to, climate change, and outlining mitigation measures for the Agricultural Production sector and, within this, also for the Forests and Forestry subsector.

We believe that a REDD+ process calls for an area of specific dialogue to be set aside as a permanent platform for exchanging ideas and information on this subject, with the widest possible participation. To ensure that the REDD+ Strategy is appropriately coordinated, we therefore consider that the establishment of a REDD+Steering Group (*Mesa*) with a broad and varied membership could serve as a focal point for institutional and technical expertise and actions on forests.

As part of the preparation process for REDD+ we propose to formulate a national strategy. The main action lines of this strategy are the following: to avoid deforestation and degradation by banning logging of native forests; to award permits for native forest management plans; to increase local capacity building; to promote silvopastoral systems and eco-tourism; to avoid degradation and foster the conservation of carbon stocks through the protection, regeneration and colonization of native forest species and species enrichment; and to avoid degradation by controlling invasive alien species. The strategy would also involve working with producer groups which, given their location, can be priority targeted for participation in pilot conservation and sustainable native forest management schemes.

To formulate the national forest emissions reference level, a multidisciplinary working group will be set up under the aegis of the proposed REDD+ Steering Group. Uruguay is well-placed in this respect since it already possesses a detailed National Forest Inventory and a sound National Greenhouse Gases Inventories system.

As a framework for managing environmental and social risks associated with the REDD+ strategy, we propose undertaking a social and environmental assessment to identify potential negative and positive impacts on different human populations and the environment.

The proposed schedule envisages starting activities in the first half of 2014, with a four-year deadline for completion of readiness preparation. The total budget for preparation is estimated at US\$6.47 million, of which US\$ 3.8 million is requested from the FCPF.

Acronyms and terms used by Uruguay in the R-PP

Private Sector:

ADIMAU: Uruguay Timber Industries Association
ADIPA: Paper Industry Association
ANCAP: National Fuels, Alcohol and Cement Administration
ANII: National Agency for Research and Innovation
ANONG: National NGOs Association
AFAP: Private Pension Funds Managers
AFE: State Railway Administration
AIB: International Arrangement on Forests
ANP: National Ports Administration
APAP: Private Protected Areas
ARU: Rural Association of Uruguay
ASECFUR: Uruguay Association of Forest Contractors
BCU: Central Bank of Uruguay
BPS: State Social Security Bank
BROU: Bank of the Oriental Republic of Uruguay
BSE: State Insurance Bank
CDB: United Nations Convention on Biological Diversity (CBD in English)
CDM: Clean Development Mechanism
CIPROMA: Wood Processing Industries Chamber
CINTERFOR: Inter-American Center for Research and Documentation on Vocational Training
CIU: Uruguay Chamber of Industries
CJPB: Bank Employees' Retirement and Pension Fund
CJPN: Notaries Retirement and Pension Fund
CJPPU: University Professionals Retirement and Pension Fund
UNFCCC: United Nations Framework Convention on Climate Change
CMNULCD: UN Framework Convention to Combat Desertification
CNBPF: National Code of Good Forest Practice
CND: National Development Corporation
CNT: National Confederation of Workers
CONEAT: National Commission for Agro-Economic Soil Studies (MGAP)
CNUMAD: United Nations Conference on Environment and Development (UNCED in English)
DGF: General Forestry Department (MGAP)
DIEA: Agriculture Economic Research Directorate (MGAP)
DINAMA: National Environment Office (MVOTMA)
DINAMIGE: National Directorate of Mines and Geology (MIEM)
DINOT: National Land Directorate (MVOTMA)
DNB: National Fire Brigade (MI)
DNE: National Energy Directorate (MIEM)
DNI: National Industries Directorate (MIEM)
DNT: National Labor Directorate (MTSS)
FRU: Rural Federation of Uruguay
INC: National Colonization Institute
INE: National Statistics Institute
JUNAE: National Employment Commission (MTSS)

JUNAGRA: National Farm Commission
 LATU: Technological Laboratory of Uruguay
 MEF: Ministry of Economy and Finance
 MERCOSUR: Southern Cone Common Market
 MEVIR: Movement for the Eradication of Insalubrious Rural Housing
 MFS: Sustainable Forest Management (SFM in English)
 MDL: Clean Development Mechanism (CDM in English)
 MDN: Ministry of Defense
 MGAP: Ministry of Livestock, Agriculture and Fisheries
 MI: Ministry of the Interior
 MEM: Ministry of Industry, Energy and Mines
 MTOP: Ministry of Transport and Public Works
 MTSS: Ministry of Labor and Social Security
 MT & D: Ministry of Tourism and Sport
 MVOTMA: Ministry of Housing, Land Management and Environment
 OIT: International Labor Organization (ILO in English)
 OPP: Office of Planning and Budget
 OPyPA: Office of Agricultural Policy and Planning (MGAP)
 PIT: Inter-Union Workers Plenary
 RENARE: General Directorate of Renewable Natural Resources (MGAP)
 ROU: Oriental Republic of Uruguay
 SFM: Sustainable Forest Management
 SINAE: National Emergency System.
 SPF: Forestry Products Society
 SNAP: National Protected Areas System (DINAMA / MVOTMA)
 SNRCC: National Climate Change Response System
 SOIMA: Wood and Allied Industries Workers Union
 UCUDAL: Dámaso Antonio Larrañaga Catholic University
 UDE: Uruguay Business University
 UDELAR: University of the Republic
 UNIT: Uruguayan Technical Standards Institute
 UTEC: Technological University of Uruguay
 UTU: Labor University of Uruguay

General

UNFCCC: United Nations Framework Convention on Climate Change

SESA: Social and Environmental Strategic Assessment. This can be defined as "a set of analytical and participatory approaches aimed at integrating social and environmental considerations into policies, plans and programs, as well as evaluating the inter-linkages with economic, political and institutional considerations." The SESA generally involves using a variety of tools rather than following a single, fixed and prescriptive approach.

COMMON APPROACH: A comprehensive framework for the World Bank and development agencies that will be partners charged with implementation and providing funding to the countries participating in the FCPF REDD+ for formulating or developing the R-PP.

CPR: REDD+ Readiness Committee

ESMF: Environmental and Social Management Framework

FCPF: Forest Carbon Partnership Facility

FIP: Forest Investment Program

GHG: Greenhouse Gases

IPCC: Intergovernmental Panel on Climate Change

MRV: Measurement, Reporting and Verification System

RL/ REL: Reference Level/Reference Emission Level

SFM: Sustainable Forest Management

UN-REDD: United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

REDD: Reducing Emissions from Deforestation and Forest Degradation

ToR: Terms of Reference

Component 1: Organization and Consultation

1a. National Readiness Management Arrangements

1a.1 Institutional and Regulatory Framework

The process of preparing for REDD+ that Uruguay proposes to undertake with the support of the Forest Carbon Partnership Facility (FCPF) is in line with our country's current regulatory and institutional approach to Climate Change, Biodiversity and Forests. The following is a brief description of this approach. More specific details are contained in other parts of this document.

Uruguay ratified the United Nations Framework Convention on Climate Change (UNFCCC) with Law No. 16.517 of July 22, 1994 and the Kyoto Protocol with Law No. 17.279 of November 23, 2000. In addition, Uruguay endorsed the Convention on Biological Diversity (CBD) with Law No. 16.408 of August 27, 1993.

As for legal aspects, under Article 19 of Law No. 17.283 of November 28, 2000, referring to General Environmental Protection, which regulates Article 47 of the Constitution of the Republic, Uruguay's Ministry of Housing, Land Management and Environment (MVOTMA) is the national decision making authority responsible for the implementation and application of the UNFCCC and the Kyoto Protocol. Furthermore it is responsible for establishing measures for mitigating and adapting to climate change, regulating greenhouse gases emissions and coordinating the roles and responsibilities of other public and private entities with an interest in these matters. Article 22 of this Law refers to the conservation and sustainable use of biological diversity as a general interest and a fundamental part of national environmental policy. Decree 487/993 assigns to MVOTMA responsibility as the competent authority and focal point for the implementation in Uruguay of the UN Convention on Biological Diversity. This Ministry is therefore charged with introducing measures to identify, monitor and conserve biodiversity and ensuring the sustainable use of biodiversity, using appropriate powers to coordinate the tasks entrusted to other public and private entities regarding the conservation and use of different species and their habitats.

As the focal point for the UNFCCC, the MVOTMA is the Designated National Authority for the Clean Development Mechanism of the Kyoto Protocol and is also the Designated Authority under the Kyoto Protocol Adaptation Fund.

The National Environment Office (DINAMA), created in 1990, reports to MVOTMA. The Climate Change Unit (CCU) within DINAMA was established by Ministerial Resolution 505/94 and its remit expanded by MR 341/2001. This Unit serves as the operational and implementing arm of MVOTMA in matters of climate change, participating in relevant international negotiations and assisting definition of national positions on climate change, coordinating as appropriate with the National Environment Directorate of the Ministry of Foreign Affairs and other sectoral ministries. In terms of the national strategy for the conservation and sustainable use of biodiversity, the Biodiversity and Protected Areas Division of DINAMA addresses issues considered to be high priority and feasible, while complying with Uruguay's international commitments.

The Ministry of Livestock, Agriculture and Fisheries (MGAP), through its General Forestry Department (DGF), is responsible for formulating and implementing the National Forest Policy in accordance with the country's Forest Law. To achieve the objectives of this policy we have established a set of criteria aimed at protecting soils, native forests and plantations, in conformity with national and international environmental standards and guidelines.

A network of formally-established coordination entities currently exists. These involve a wide range of practitioners drawn from society as a whole such as, primarily, the Technical Advisory Committee on the Environment (COTAMA) which, under the aegis of MVOTMA, includes representatives of all the ministries, the private sector, academia, and NGOs. The National Climate Change Response System (SNRCC) also plays an important role, acting as an intersectoral coordinating body on climate change mitigation and adaptation. This also reports to MVOTMA and consists of representatives from different ministries, the Office of Planning and Budget, the National Emergency System and the National Mayors' Congress. A particularly important outcome of the work of these coordinating bodies was the development, in 2010, of the National Response Plan for Climate Change, a key document containing strategic guidelines on climate change. Finally, as far as Biodiversity and Protected Areas are concerned, the National Commission of Protected Areas, with legal status under Article 15 of Law 17.234 (National System of Protected Areas) and including representatives of six farmers' unions, specifically focuses on protected areas issues. This same Law also created the Specific Protected Areas Advisory Committees that provide local consultation and advisory services in each area covered by the system. These cross-sectoral committees bring together representatives of a number of ministries and local and departmental government agencies, NGOs, producers, local communities, etc.

In recent years Uruguay has shown, especially since the ratification of the UNFCCC, a very proactive attitude on all these issues both nationally and internationally. It is clear that we have a strong commitment to taking steps to mitigate and adapt to climate change. The keen interest of the public sector authorities as the main regulatory stakeholders is a crucial ingredient, with their ability to substantially influence a private sector that increasingly seeks to generate productive projects. With these objectives and interests uppermost in mind, we believe that it is profoundly important to incorporate REDD+ into national discussion and decision-making, with the ultimate goal of developing a National REDD+ Strategy.

We are also of the opinion that a REDD+ process will call for a specific space for dialogue and discussion which, with the widest possible participation, can serve as a permanent platform for information exchange. Given the breadth of the issues that are already being addressed in the above-mentioned coordinating bodies, a special body devoted to generating a targeted approach to issues of deforestation and forest degradation, biodiversity, conservation measures, carbon increase and others, would enhance our effectiveness in preparing, implementing and developing REDD+ strategies.

1a.2 Institutions and relevant stakeholders to manage preparation

For the management of REDD+ in Uruguay various stakeholders and/or institutions involved directly in the REDD+ mechanism have been identified. These are grouped within the following sectors:

- **Public:** directly linked to the Executive
- **Public/ Private:** non-state public legal persons or a public/private combination

- **Private:** persons actively interacting within the Forest and Climate Change sector.

Public Sector

Central Government

Ministry of Housing, Land Management and Environment (MVOTMA)

This is the national authority responsible for the implementation and application of the UNFCCC and the Kyoto Protocol, the Designated National Authority for the CDM of the KP and the Designated Authority under the KP Adaptation Fund. Within its organizational structure the following are of specific relevance to REDD+:

National Environment Office (DINAMA)

DINAMA's mission is to ensure adequate protection of the environment by promoting sustainable development through the generation and application of instruments aimed at improving the quality of life of the population and the conservation and environmentally responsible use of ecosystems, coordinating environmental management of public entities and liaising with the various social stakeholders. Its Climate Change Unit and Biodiversity and Protected Areas Division will play a priority role in the REDD+ preparation process.

National Land Directorate (DINOT)

DINOT's mission is to formulate, implement, monitor and evaluate national plans for sustainable development at the regional level, mainstreaming and coordinating public policies (democratic, transparent and participatory) regarding land use and management, establishing and promoting a national strategy for local socially and environmentally sustainable development, as well as addressing the regional dimension and fostering effective decentralization with a view to improving inhabitants' quality of life.

National Water Directorate (DINAGUA)

DINAGUA's mission is to improve quality of life and ensure sustainable use of the country's water resources by formulating national water and public sanitation policies, with the participation of the different involved stakeholders, and ensuring coordination with other public policies.

Ministry of Livestock, Agriculture and Fisheries (MGAP)

MGAP acts as a direct link to the Executive for forest owners and forestry companies. It operates the **General Forestry Department (DGF)**, the main government office responsible for Uruguay's national forest.

Institutional Framework

The institutional framework of the Forest Sector is governed by Articles 2 and 4 of Law 15939. These state that the national forest policy shall be formulated and implemented by the Ministry of Agriculture and Fisheries and its executing agency will be the General Forestry Department.

The DGF's *mission* is to seek to achieve Sustainable Forest Management based on the protection, improvement, expansion and creation of forest resources, the development of forest industries and the forest economy overall. Its goal is to be a forest service which by its actions on sustainable forest management is:

- 1 - Valued by the Uruguayan people
- 2 - Renowned for its efficiency
- 3 - Technically respected at national and international level.

Other divisions in MGAP with responsibilities linked to those of the DGF are the:

Renewable Natural Resources Directorate (RENARE)

A division of MGAP directly involved in forests as a renewable natural resource (studies, protection and conservation of flora and fauna).

National Commission for Agro-Economic Soil Studies (CONEAT)

This body controls the production capacity of rural properties and provides data on Uruguay's productive capacity.

Wood Sector Council - Production Bureau (CSM/GP)

The GP has since 2008 aimed to enhance social justice in line with economic growth. It is basically an inter-ministerial coordination unit which provides a baseline definition of sectoral policies for 13 value chains. One of its areas of concern was the creation of the **Wood Sector Council** in 2010. This Council was responsible for launching the **Tripartite Sectoral Forestry - Wood Council (CSTFM)** as an instrument for coordinating and generating inputs into sector policy with a view to prioritizing and implementing the measures identified by the GP in 2009.

Other official bodies with direct interests include the:

- **Ministry of Labor and Social Security (MTSS)** responsible for setting standards and controls for forestry staff.

- **Ministry of Economy and Finance (MEF)** which manages budget allocations for forestry sector financing, involving inter alia the General Directorate of Taxation (DGI), the Department of Trade (DGC), the National Customs Directorate (DNA) and the National Land Registry (DNC).

- **Ministry of Foreign Affairs (MRREE)** through its Environment Directorate.

- **Office of Planning and Budget (OPP)** which reports directly to the President of the Republic, advises on economic strategy and resource allocation to the forest sector and liaises with municipal governments.

Ministry of the Interior (MI) runs the National Fire Brigade and is responsible, in coordination with the DGF, for protecting the National Forest Heritage, including fighting forest fires.

- **Ministry of Transport and Public Works (MTOP)** deals with the construction and maintenance of the infrastructure required for forest access, as well as supervising timber transport arrangements (National Roads Directorate and the National Transport Directorate).
- **Ministry of Industry, Energy and Mining (MIEM)**, through its Directorate of Industries (NI), the National Energy Directorate (DNE) and the National Mining and Geology Directorate (DINAMIGE).
- **Ministry of Education and Culture (MEC)** with its capacity building and training units.
- **Ministry of Tourism and Sports**, through its National Directorate of Tourism.
- **Ministry of National Defense (MD)**, with its National Border Control Directorate and Army Recovery Services.
- **Ministry of Social Development (MIDES)**, with its National Land Management and Social Monitoring Directorates.

Decentralized Autonomous Entities or Organizations

A number of State entities are run as autonomous companies but with senior management appointed by the government. These have a monopoly over certain goods and services, including public utilities e.g. the state telecommunications company (ANTEL), the national electricity company (UTE) and the state water company (SBI). Other parastatals are prominent in the social welfare sector such as in the State Insurance Bank (BSE), the CJPB (Notaries' Retirement and Pension Fund), the CJPB (Bank Employees' Pension Fund) and the CJPPU (University Staff Pension Fund), as well as ANCAP (National Fuels, Alcohol and Cement Agency) and the INC (National Colonization Institute) responsible for land distribution.

All these owners of land and forests (native and/or planted) have intensified their forest-linked activities over the years.

Two other state agencies which interact with the forest sector in the design and operation of infrastructure, forest products transport system and tourism are the National Ports Administration (ANP) and the State Railway Administration (AFE).

Investment promoters

Bank of the Oriental Republic of Uruguay (BROU), the country's development bank, has financed (and finances) forest resources. Forest development loans made it possible to develop a large number of plantations in the 1990s.

Science, Education and Technology Institutions

In the Human Resources training sector, the **University of the Republic (UDELAR)** is the only public tertiary education institution in Uruguay.

The recently established **Technological University (UTEC)** (created by Law No. 19.043/2012), is mandated to develop public education activities at undergraduate and postgraduate level in various areas and to undertake research, promote innovation and provide services in the social context, in line with the country's development requirements.

Training of forest workers and middle managers is the responsibility of the **Universidad del Trabajo del Uruguay (UTU)** which runs Agricultural Schools in the rural areas for training non-university level technical staff.

The **Forestry Training Council** (reporting to the MTSS) also runs training courses for forest personnel.

The **National Research and Innovation Agency (ANI)**, a government entity, promotes research for the benefit of the productive and social sectors by providing funds for research projects, scholarships for students involved in national and international graduate programs, and runs a series of entrepreneurship training programs for staff in the private and public sectors.

The **National Research System (NRS)** provides facilities for carefully selected Uruguayan researchers, and runs the *Timbó* website, which allows free access to Uruguayan educational and scientific institutions and scientific publications worldwide. The NRS has a system for liaising stakeholders and others involved in knowledge development, research and innovation.

Private/Public Sector

Science, Education and Technology Institutions

The **National Agricultural Research Institute (INIA)** generates forest technology and knowledge from its Tacuarembó Experimental Station in the north of the country.

The **Technological Laboratory of Uruguay (LATU)** runs Forest Management, Wood Technology and Environmental Certification programs.

Private Sector

Trade Associations

The **Uruguay Rural Association (ARU)** represents agricultural producers. The **Forest Producers Society (FPS)** operates under its auspices.

The **Uruguay Chamber of Industries (CIU)** is an umbrella organization for the following:

- The **Wood Processing Industries Chamber (CIPROMA)** representing the major wood processing firms.
- The **Uruguay Association of Timber and Related Industries (ADIMAU)** representing the majority of primary and secondary timber processing plants.
- The **Paper Industry Association (ADIPA).**

In addition, the **Inter-Union Workers Forum - Workers' National Convention (PIT-CNT)**, represents wood industry workers in general. The **Wood and Allied Industries Workers Union (SOIMA)** is the formal negotiating body on the timber sector's Wage Councils.

Investment Promotion

Uruguay's private banks have generally failed to invest in the forestry industry despite its growing importance in terms of export earnings. Funding for the forestry and processing sectors has been provided mainly by foreign banks or investment groups or by local pension funds (CJPN, CJPB and CJPPU).

The vast majority of forest loans have been driven by the official development bank (BROU). Meanwhile, Banco Santander and BBVA have provided short and medium term credit for machinery purchases but have been reluctant to lend long-term for forest projects with slow return on capital.

Regardless of the above, private banks, the Montevideo Stock Exchange (BVM), the Electronic Stock Exchange (BEVSA), the National Pension Funds Association (AFAP) and international investors are all potentially important stakeholders and should be encouraged to help leverage innovative projects in the context of REDD+.

Science, Education and Technology Institutions

Two private universities have recently begun to offer forest-related courses: the **Damaso Antonio Larranaga Catholic University of Uruguay (UCUDAL)** runs a Forestry Program and at the **Business University (ESU)** the Agricultural Sciences Faculty trains agronomists and forestry technicians as well as running undergraduate courses on Rural Tourism.

The following have also done important work in this area:

The **Inter-American Center for Research and Documentation on Vocational Training (CINTERFOR)** is an NGO involved in training forestry staff.

The **Uruguayan Technical Standards Institute (UNIT)** is a private, nonprofit organization that for over 60 years has fostered quality standards as well as providing training and certification.

Environmental NGOs

Over recent years environmental NGOs have played a key role by addressing the forests issue as a crucial environmental concern. Their approach to the "forest model" tends to vary significantly: some NGOs actively collaborate with the forestry process while others maintain a robustly critical position. Their main contribution has however been to encourage civil society to discuss and analyze relevant environmental issues, drawing particular attention to the need to ensure that social welfare is not subverted by the private interests of certain economic groups.

The **National NGOs Association (ANONG)** is a national network of environmental NGOs which coordinates actions in the environmental sphere throughout Uruguay.

1a.3 Roles of relevant stakeholders

State and Parastatal Sector

The existence of a dedicated environmental ministry (MVOTMA) facilitates the design, implementation, coordination and deployment of public policies related to the environment. This ministry is an authority on environmental issues and serves as the focal point for UNFCCC. It will take the lead, through its National Environmental Office, in driving forward the REDD+ process.

To prepare and implement the REDD+ process satisfactorily, MVOTMA will coordinate with MGAP (Livestock, Agriculture and Fisheries), and in forest matters, with DGF (General Forestry Department), the official body responsible for the country's forests. The decisions and actions of the DGF directly affect the forestry sector because:

- it is responsible for overseeing forest development, with its Forest Information System (SIF) and Forest Monitoring Program through the permanently updated National Forest Inventory. The DGF can also take direct action, using its regional technical staff to visit producer plants and firms to approve projects, inspect new plantings and deliver appropriate benefits as provided for by law.
- DGF has also fostered Sustainable Forest Management by organizing studies, conferences and other general discussion events aimed at improving the performance of producers or producer groups.
- DGF is also responsible for submitting annually the Planted or Native Area Stock Certificates to enable the Finance Ministry (MEF-DGI) or departmental governments to grant tax exemptions where appropriate (on Assets, Income or Rural Property).

Other departments of MGAP such as the Directorate General of Renewable Natural Resources (RENARE), the National Commission for Agro-Economic Soil Studies (CONEAT), etc. play a lesser role. These two agencies are nevertheless responsible for taking prompt action on certain aspects of forest management that are not essential for meeting sustainability goals. RENARE and CONEAT for example advise DGF on soil and water issues (i.e. certain priority land can only be planted subject to RENARE's Bureau of Soils and Water Directorate), resource classification (CONEAT, RENARE), and control of hunting and trafficking of protected species.

The Ministry of Labor and Social Security (MTSS) is another prominent public sector player in the forest system. Its General Labor Office manages the Wages Councils, establishes working conditions and regulates forestry companies (under Decree 372/99). Its team of inspectors and offices in the interior of the country are responsible for controlling and suppressing illegal practices in the labor sphere.

Other agencies directly linked to the State also play a role in the development of the forest sector by, for example, allocating financial resources, promoting production incentives or intervening to resolve problems at key points. In order of importance these are the Ministry of Economy and Finance (MEF), the Ministry of Tourism and Sport (MT&D), the Municipal Councils (*Intendencias*) and the Ministry of Transport and Public Works (MTOP).

The Bank of the Oriental Republic of Uruguay (BROU) has in the past been active in promoting planted forests. However, it is not, and has not been, a truly significant player given that it has failed to provide financial tools for improving the quality of forest timber products, boosting the production of non-timber forest products (NTFPs) or for developing a market in environmental services.

Science, Education and Technology Institutions

The University of the Republic (UDELAR) and the Uruguay Labor University (UTU) are likely to be the only academic institutions of relevance to a REDD+ process, given that they are the only training grounds for professional staff who might be able to satisfy the demands of the forest sector. However, despite efforts to upgrade the curricula in recent years, little progress has been made. In the early 1990s, UDELAR's College of Agriculture produced agricultural engineering graduates who had received some forestry training during the final two years of their course, but this would appear to have been optional. Recently-graduated agronomists are now basically generalists. Some go on to specialize at post-graduate level, hopefully emerging with an enhanced perception of forest issues and a better understanding of forest-related production processes.

The other institutions of education and NGOs (e.g. CINTERFOR, CARDIJN) are small-scale and of lesser importance, mainly devoted to human resources capacity building and training technologists.

INIA is the best institution for generating appropriate forest management technology.

Private Sector

The Producers and Industrialists Associations are the most influential private stakeholders. The **Forest Producers Society (SPF)**, with its roll-call of small, medium and large landowners, is a branch of the Rural Association of Uruguay (farmers who own most of the country's native forests), and has assisted in the formulation of the sector's regulatory and labor norms, the UNIT National Standard on Sustainable Forest Management, and the Forest Good Practices Code.

The SPF could play an extremely important role in the R-PP given that it represents the individual and corporate ownership of over 85% of Uruguay's planted forest areas. These are:

- Independent farmers diversifying away from traditional crops.
- Foreign and domestic firms exclusively engaged in forestry.
- Investment and pension fund management companies (domestic and foreign) with investments in commercial plantations.
- Technical personnel
- Services companies and nursery operators (for site preparation, planting, pest and weed control, pruning, thinning, firefighting and prevention, harvesting, etc.).
- Wood processing industries.

The majority of certificated products from planted forests are traded according to guidelines set by the Forest Stewardship Council (FSC) and/or the Program for the Endorsement of Forest Certification (PEFC). The products also have to conform to ISO 14000 sustainable environmental management certification standards. As a result, we have made very significant progress in our current forestry projects, incorporating

aspects related to primary forest conservation and monitoring the evolution of watersheds and biodiversity on an ongoing basis, with a view to mitigating the negative impacts of alien species growing in planted forests.

Given that plantations have increased significantly in Uruguay over the past 20 years, we consider that it is worthwhile directly linking our planted forest experience to the REDD+ process. Average annual planting rates, now running at 50,000 hectares, have created a substantial demand for quality forestry services in areas such as site preparation, planting, pest and weed control, silviculture, pruning and thinning management, in addition to harvesting and logistics. This growing demand has led to the emergence of small and medium forest service companies with expertise and qualified staff able to comply with the environmental certification conditions demanded by the sustainable management of natural resources.

The performance of producers and forest firms suggests that the REDD+ strategies would be viable, primarily in terms of absorbing and adapting experiences in reforestation and the management of forest sites with a view to establishing silvopastoral systems or focusing on the enhancement and regeneration of native forests.

Environmental NGOs are occasionally involved in public discussions, seminars, congresses or in SFM dissemination, and have their own views on the Uruguay's "Forest Model".

Two organizations represent the country's NGOs. One of them, the National Association of Non-Governmental Organizations (ANONG), is an umbrella group for over 95 organizations with multiple and diverse interests. Those most concerned with environmental issues are the following:

- Guyunusa Women's Action Group
- Uruguay Women's Union (UMU)
- Wild Life
- Life and Education
- YMCA - Institute of Human Development
- Union House of Women
- Information and Studies Center of Uruguay
- Center for Economic Research
- H2O Group - Santa Catalina
- The Cardijn Program
- Chuy Eco Group

A second, more specialized NGO, Environmental Uruguay - Uruguayan Network of Environmental NGOs, aims to:

a) Coordinate, promote, support and publicize actions related to the preservation and conservation of the environment and those aimed at improving quality of life in rural communities and a harmonious relationship with the country's natural and cultural heritage. It also acts as a focal point for discussion and action on subjects of interest to its associated environmental organizations.

b) Enhance Uruguay's environmental movement's efforts by: ensuring that the activities of its partners remain in the public eye; representing the interests of its members in national and international public sector or private fora; establishing links and coordinating activities with similar associations at international level;

and undertaking any other type of joint activity approved by the Members' Assembly and in conformity with Uruguayan laws.

c) Contribute to the institutional strengthening and development of its associates through training and other activities concerned with environmental management, organization and know-how; and to boost information exchange and liaise on activities of common interest.

The network consists of the following:

- The Young Ecology Group
- ASODERN (Soriano Association for the Defense of Natural Resources)
- MODEMAR (Rosario Environmental Defense Movement)
- DEMAVAL (Waldense Environmental Defense)
- ASU/INES (National Institute of Social Studies)
- CLAES (Latin American Center for Social Ecology)
- GERGU (Uruguay Study Group and Geographical Survey)
- The *La Proa* Neighborhood Commission
- ABOV (Association of Friends of the Botanical Garden)
- Community and Environment Environmental Forum
- CEUTA (Uruguayan Study Center on Appropriate Technologies)
- GEED (Durazno Eto-Ecological Group)
- Gandhi Group - Ecologists in Action
- APRAC (Association for the Recovery of the Arroyo Carrasco)
- CECN (Center for the Study of Natural sciences)
- JABI INSTITUTE
- CIEDUR (Interdisciplinary Center for Development Studies, Uruguay)
- CPP (Center for Popular Participation)
- FEMU (Mesology and Ethology of Uruguay Foundation)
- AUERFA (Uruguayan Association of Federal Republic of Germany ex-scholarship holders)
- APA (Friends of Environmental Conservation)
- The Porongos Group NGO
- BIOACQUA (Uruguayan Society for the Study and Conservation of Aquatic Life)
- AIDIS Uruguay
- FUNATURA (Pro - Nature United Forces)
- Arroyo Environment Group
- Santa Catalina H2O Group
- Orchard and Garden
- Wild Life
- Baha'i Group
- CEEJEMA (Jesus Maria Ecology Education Community)
- DESURCO (Rosario del Colla Sustainable Development Group)
- SOS-Rescuing Marine Life
- Nangapiré Ecology Group
- Birds of Uruguay

Regarding **indigenous peoples and/or indigenous communities** (see Subcomponent 2d on social impacts), no indigenous or peasant communities or peoples exist in Uruguay which are forest-dependent or associated with any specific territory. As shown by the last population census (2011), a mere 5% of the population

"believes that they descend from Indian stock" and only 8% claim "Afro or Negro ancestry". (www.ine.gub.uy/censos2011/index.html). Note however that as a country that has ratified the United Nations Convention on Biological Diversity, Uruguay fulfils its commitments to this convention with its compliance with Article 8 (j), which calls for respect, preservation and maintenance of traditional knowledge of indigenous and local communities, which in effect means taking interest in the conservation and sustainable use of biodiversity. People are also encouraged to apply such knowledge wherever feasible, subject to agreement by the communities concerned, on the understanding that the latter will eventually benefit in some way.

A number of descendants of Charrúa Indians have come together in NGOs to highlight indigenous issues and raise awareness of the existence of the tribe (the largest of the indigenous communities), creating alliances with other civil society actors aimed at acknowledging the value of their ancestral culture.

The largest of these organizations is the Charrúa Nation Council (CONACHA), which represents three indigenous pressure groups - *Inchâla Guidaí*, AQUECHA and *Basquadé Inchâla*. Other NGOs such as the Guyunusa Group, affiliated to the Uruguay Environmental Network, are active in the Department of Tacuarembó, and the Choñik Group in the Department of Soriano.

The above NGOs and others that will have been identified in the awareness workshops will be included in the process, and will be invited to participate in workshops and other events organised under the aegis of the R-PP to highlight anthropological interest in the forests and conservation linked to the development of eco-tourism.

The Afro-descendant population possesses a group known as *Mundo Afro* (Afro World) which is headquartered in Montevideo's historic neighborhood. As far as is known, this group has never undertaken any environment-related activities.

As for gender considerations, the Association of Rural Women of Uruguay (AMRU), comprising over 2000 women rural dwellers throughout the country, have firm ideas on how to respond to climate change and its integration into the National Adaptation Plan. Four AMRU workshops have taken place in which different proposals on climate change have been aired, as well as debate on the potential of each region's farming communities to respond and adapt to climate change. One group of women from AMRU gathers native plants for medicinal purposes and has even produced a guidebook of household remedies. The aims and activities of this group dovetail with the REDD+ strategy on non-timber forest products and multiple use of the forest.

It is clear from the above that participation of AMRU will certainly benefit the R-PP, given the women's experience and accumulated knowledge about the traditional rural culture of Uruguay, and also the opportunity that they afford as potential drivers, as well as beneficiaries, of the gender integration strategy in a rural environment.

1a.4 Existing National Coordination Mechanisms

The Ministry of Housing, Land Management and Environment has a clearly defined mission: to seek to improve the quality of life for the country's inhabitants and serve as the main organization for generating democratic, transparent and participatory policies on habitat and that contribute to sustainable and territorially balanced economic development. MVOTMA's overarching vision is for people to enjoy life in

an integrated, supportive and participatory country with high levels of social and territorial cohesion and environmental quality, within a system that also addresses the need for a suitable habitat for all.

In this context, we believe that is important for us to provide a detailed description of the currently existing areas of coordination that are directly linked to questions of Climate Change and Biodiversity:

The Technical Advisory Committee on the Environment (COTAMA), created by Decree No. 261/993 (as amended by Decree No. 303/94), is an inter-agency and multi-sector entity reporting to MVOTMA. Its main remit is: to cooperate in the formulation, implementation, monitoring and evaluation of environmental protection in the country; to serve as an inter-sectoral mechanism for coordinating the activities of public and private bodies with an interest in environmental conservation, protection and improvement; and, finally, to advise MVOTMA directly or the Executive Power (through the appropriate State Secretariat) on relevant subjects as and when requested.

The *National Climate Change Response System (SNRCC)*: responding to new commitments from the Executive on climate change, Decree No. 238/009 (May 2009) heralded the creation of the National Climate Change and Variability Response System, a new initiative under the aegis of MVOTMA aimed at the cross-sectoral coordination of actions undertaken by public and private institutions on risk prevention, mitigation and adaptation to climate change. In order to give practical expression to the system, a Coordination Group was formed comprising representatives of MVOTMA and the ministries of Foreign Affairs (MRE), Economy and Finance (MEF), National Defense (MDN), Industry, Energy and Mining (MIEM), Livestock, Agriculture and Fisheries (MGAP), Health (MSP), Tourism and Sport (MTD), plus the Office of Planning and Budget (OPP), the National Emergency System (SNE) and the National Mayors' Congress. An ad hoc Advisory Committee was also established, coordinated by MVOTMA, comprising technical staff from different ministries and from academic and research institutions, NGOs and representatives of the productive sector, as well as national experts.

SNRCC published in February 2010 the National Climate Change Response (PNRCC) which is effectively the strategic framework setting forth the actions and measures necessary for addressing adaptation by civil society and other sectors to climate change and variability impacts, and to mitigating GHG emissions.

The PNRCC's remit was as follows: to move towards comprehensive climate risk management; to feed adaptation and mitigation strategies into the productive sectors; to establish preventive adaptation policies to contribute to reducing risks to vulnerable people and their homes; to encourage participation by key players through education, training and raising public awareness.

Taking into account the principles of 'Sustainable Development, Precaution and Prevention, Comprehensiveness and Sectorality, Coordination and Cooperation, Decentralization and Subsidiarity, Participation and Consensus, Equality, Solidarity and Common but Differentiated Responsibilities', the PNRCC adopted a number of priority action steps related to the agriculture and forest sector, including:

- Promotion of silvopastoral production systems to form part of an integrated set of livestock management practices.
- Promotion of the use of protective forest plantations for safeguarding soils and water resources: rivers, streams and reservoirs at the water catchment area or Production Unit level.
- Promotion of sustainable management of native forests, integrated soil, water and landscape management.

- Updating the National Code of Forest Practice (CNBPF).

From the above it can be seen that a close linkage exists between the cross-sectoral coordination efforts on climate change already existing in Uruguay and the action priorities defined in the PNRCC and the R-PP. Note that many of the stakeholder groups that have been identified, together with future members of the REDD+ Committee, have contributed to the SNRCC since its inception, engaging on issues related to risk prevention, mitigation and adaptation to climate change.

The main entities dealing with Biodiversity and Protected Areas are:

- The National Commission for Protected Areas, which focuses on specific subjects related to protected areas. Its membership includes, among others, six farmers' associations (*gremios*).
- The Specific Advisory Committees for Protected Areas, comprising representatives of departmental and local governments and certain ministries, producers, NGOs and local people, serve as local consultation centers in each area covered by the system.

1a.5 Proposed National Coordinating Mechanism for Redd +

We consider that to ensure the degree of coordination required for complying with the REDD+ Strategy, the establishment of a plural and diverse "REDD+ Steering Group" (*Mesa*), would focus technical and institutional actions on forests, modernizing legislation, capitalizing on lessons already learned from previous norms and rigorously monitoring the measures already taken and their effect on the achievement of REDD+ goals.

Establishing the Coordinating Body

The REDD+ Steering Group must be formally established at the 1st National Workshop. This body will report directly to the Ministry of Housing, Land Management and Environment (the main environmental authority responsible for climate change and the focal point for UNFCCC) and to the Deputy Secretary of the Ministry of Livestock, Agriculture and Fisheries. This Group will be the hub for overall cross-coordination and for undertaking specific tasks related to REDD+.

Membership of the Steering Group should contain a broad spectrum of stakeholders: the State (to include representatives from other ministries linked to the subject); local Municipal Governments and Mayors (given their links with the forest-related population, these authorities must be fully committed to the proposal and prepared to collaborate, since many local issues are directly involved); technological research and education institutions; producer and worker associations; and, finally, environmental NGO networks and organizations involved in capacity building for rural workers.

As a first step towards the Readiness Preparation Proposal, a **Redd+ Readiness Committee (CPR)** will be established by the government to act as a facilitator in the initial stages of the process. This will be responsible for organizing the first national meeting at which the REDD+ Steering Group will be established. The latter will be subsequently charged with implementation of strategies, acting as a clearing house for projects submitted to it, establishing a National Emissions Reference Level, preparing and implementing the MRV system, monitoring progress on the R-PP and ensuring that Social and Environmental Safeguards are adhered to. Furthermore, the CPR will take steps towards bringing the

country into line with REDD+ Social and Environmental Standards and monitoring appropriate indices in a Strategic Environmental and Social Assessment (SESA) process, by hiring consultants to undertake these tasks with a view to satisfactorily achieving the proposed aims.

The government will task the CPR to begin work, ensuring that it has sufficient flexibility to modify the structure and define the responsibilities of the proposed REDD+ Steering Group during the first national meeting. While members of the CPR, or their replacements, may be subsequently assigned to the main Committee, the government representatives on this Readiness Committee will always be those nominated by the government to represent it.

The CPR will be staffed by representatives of the executive branch, under the aegis of the Ministry of Housing, Land Management and Environment (MVOTMA), represented by the National Environment Office (DINAMA), given its role as the focal point for the UN Framework Convention on Climate Change.

The Ministry of Agriculture and Fisheries (MGAP), with its General Forestry Department, will be jointly responsible with DINAMA for the R-PP process, given that it is the national authority responsible for overseeing and implementing forest policies.

Both departments will coordinate the start-up tasks of the R-PP, organizing the initial awareness workshops which will lead to the convening of a National Multi-Stakeholder Workshop, a forum for dialogue and participation, where the CPR will be phased out to be replaced by the REDD+ Steering Group.

The following ministries will also be involved at an early stage in the process: Economy and Finance, which handles budget allocations and taxation; Labor, responsible for establishing the standards and controls of forest personnel; and the Ministry of Foreign Affairs, which has a crucial role in terms of fulfilling Uruguay's international commitments.

To develop outreach activities in the selected locations and to ensure that regional institutions and leaders are correctly informed of progress on the process we consider that it is vital to engage with the local municipal councils by including their representatives in the CPR.

To develop these activities in selected locations, involving dialogue and discussion with local leaders and institutions, it is considered essential to involve departmental governments. Therefore a representative of the municipalities must be invited to join the CPR.

The Rural Schools are also worth targeting for developing awareness and knowledge raising events. Their premises are useful for hosting meetings of people living in rural areas. Local schoolteachers are certainly a useful point of contact for the R-PP, and it is therefore envisaged that a representative of the National Public Education Administration (ANEP) should also be appointed to the CPR.

The National Colonization Institute (INC) will also be one of the initial members of the CPR, given the importance of REDD+ for several rural colonies/settlements. It is hoped that the INC will benefit from the opportunities generated by the proposed strategies, encouraging its *colonos* to play a full part in reducing the risks of deforestation and degradation, as well as to take steps to increase carbon sequestration, expand forest areas for protection and develop silvo-pastoral systems.

The REDD+ strategies will include the need to strengthen research and generate knowledge about native forest management and the processing of forest wood and other products. Given that it is vital to expand the

knowledge levels of all those involved in forests, a representative of the Agronomy Faculty of the University of the Republic, and another from the National Agricultural Research Institute (INIA), possibly linked to the Institute's Forest Research Program, will be invited to join the CPR. The direct involvement of these institutions will ensure that research projects will be properly designed, thereby avoiding duplication of research efforts.

The CPR will also include a representative of the Rural Association of Uruguay (ARU), ensuring participation by the biggest owners of native forests in the country, who will obviously play an important role in promoting and implementing the projects to be developed. A further member of the CPR will be a representative of the Forest Producers Society (FPS), given that forest planters have gained invaluable experience and practical forest knowledge, and have created a substantial market in forest services. Their experience and knowledge will be a major asset for the implementation of REDD+.

Inclusion in the CPR of representative(s) of the Inter-Union Wood Workers Plenary and its Workers Union of Wood Industry Associations (SOIMA) ensures that strategies drawing on the experiences of the union in the exponential growth of the Uruguayan forestry sector will be incorporated in the R-PP. The union can usefully contribute its experience in terms of anticipating potential problems in the forest labor force, boosting the quality of human resources in the sector, respecting human rights, occupational health, etc.

Finally, a representative of the environmental NGOs will be included in the CPR so that the experiences and differing views of these organizations can be taken into account in decision making.

Participation in the CPR of private practitioners will also benefit the process in terms of dispute resolution.

Proposed CPR Institutional Members (future REDD+ Steering Group)			
Sector		Member	Role
		Institution	
State	1	Ministry of Housing, Land Management and Environment-MVOTMA	Leader of REDD+ Focal point for UNFCCC
	2	Ministry of Livestock, Agriculture and Fisheries - MGAP	Co-leader of REDD+ National Forest Department
	3	Ministry of Economy and Finance (MEF)	Budget allocations Taxation
	4	Ministry of Foreign Affairs (MRREE)	Monitoring international agreements
	5	Ministry of Labor and Social Security (MTSS)	HR capacity building, labor regulations, social security, Wages Councils.
	6	Mayors´ Congress	Departmental development, links with local communities, promotion of REDD+.
	7	National Public Education Administration (ANEP)	Knowledge dissemination and capacity building
	8	National Colonization Institute (INC)	To use links with settlers/colonists for developing businesses, community projects, etc.
R	9	University of the Republic	Research and outreach activities

	10	National Institute for Agricultural Research (INIA)	
Private	11	Forest Producers Society (SPF)	Linked to producers, awareness raising with REDD+, securing projects, funding, services, etc.
	12	Rural Association of Uruguay (ARU)	
	13	Inter-Union Forest Workers Plenary (PIT-CNT)	Links to forest workers, HR capacity building, working conditions ,etc.
	14	Environmental NGOs	Environmental projects

Proposed Sub-Committees

Two closely linked issues need to be considered within the R-PP to ensure that Socio-Environmental Safeguards are met: firstly, adapting REDD+ Social and Environmental Standards (SES) to Uruguay's REDD+ circumstances and working on a follow-up strategy for preparing an appropriate Strategic Environmental and Social Assessment (SESA) framework process; and secondly, to establish in advance the appropriate mechanisms for processing and addressing grievances and disagreements that may arise during the R-PP.

For the above we propose the creation of ad hoc sub - committees, whose primary objective will be to analyze and monitor the above issues, and to inform and propose solutions that facilitate decision making by the REDD+.

Two Sub-Committees are envisaged:

No. 1 - For adapting and monitoring Social and Environmental Standards (SES) and SESA during the development of the R-PP activities. This will report to the REDD+ Steering Group, in general terms, on the performance and progress of standards, and will provide technical advice aimed at securing adaptation of all the planned actions to conform to social and environmental standards.

No. 2 – As a Feedback and Grievance Redress Mechanism, uptaking, sorting, processing, verifying, tracking and resolving any grievances that may arise. These could include regulatory-type issues (overlapping or duplication of laws, etc.), or problems of a more social nature (displaced or excluded groups, job losses, negatively affected local communities, etc.). This committee will analyze and report to the REDD+ Steering Group, also in general terms, inquiries, grievances and disagreements, as and when they arise during the R-PP process, and will offer technical advice on the best ways of facilitating resolution of these issues.

Table 1a: Summary of Activities and Budget of the National Readiness Management Arrangements

Main Activity	Sub-Activity	Estimated cost (US\$ thousands)				
		2014	2015	2016	2017	Total
Establishment of the REDD+ Steering Group	High-level consultations	5				5
	Meetings/Workshops	15				15
	Technical Secretariat	10				10
	Travel arrangements for Steering Group Members	10				10
Permanent functioning of REDD+ Steering Group and of the project	Permanent Secretariat	48	48	48	48	192
	Technical Secretariat	85	85	85	85	340
	International Technical Advisory	35	20	20	35	110
	Social Assistants	36	36	36	36	144
	Legal Advisory	18	18	18	18	72
	IT expert	20	14	14	14	62
	Economic Advisory	10	10	10	10	40
	Training	15	15	15	15	60
	Workplace and inputs	20	20	20	20	80
Support for local organizations	Travel and operations	10				10
	Hiring economist	10				10
	Social Studies	12				12
Total		359	266	266	281	1172
Government *		100	100	100	100	400
FCPF		259	166	166	181	772
UN-REDD Program						0
Other development partner						0

* In cash

1b. Information Sharing and Early Dialogue with Key Stakeholder Groups

1b.1 Relevant information for readiness management

Information relevant to the national forest can be grouped under a number of different subheadings such as: forest resources, national GHG inventories, protected areas, social and economic issues, energy consumption, non-wood forestry products, trees outside the forest, wood products and land use changes. These items are assembled, analyzed and disseminated by different public and private stakeholders.

Information on forest resources is collected, analyzed and disseminated by the DGF. Meanwhile, MVOTMA, MGAP and departmental governments are responsible for processing information on protected areas. Socio-economic data is obtained from different sources such as the National Statistics Institute (INE- Presidency of the Republic), the Uruguay Central Bank (BCU), the Department of Agricultural Studies (DIEA) and the University of the Republic (UDELAR). The DGF has traditionally conducted socio-economic studies analyzing, compiling and disclosing social and economic data related to the forest sector, while the other above-mentioned institutions routinely undertake a similar task. In most cases the information is sourced from forest sector stakeholders themselves in the form of censuses and surveys. In certain cases, technical coefficients are used for presenting certain types of socio-economic information. Each of the above organizations disseminates its own data.

The data on national GHG inventories is prepared by MVOTMA in coordination with the ministries directly linked to the different sectors responsible for reporting on their particular areas (MIEM in the energy sector and MGAP in the agriculture, land use change and silviculture sectors).

The Ministry of Industry, Energy and Mining (MIEM), through the National Department of Energy, produces and discloses data on the consumption and production of timber used for electricity, industrial or household purposes. The Department of Energy also produces data from other energy sources. A complementary source of information is obtained by the DGF from a perusal of logging permits and authorizations for road extensions associated with transporting wood out of the native forest for use in electricity generation. The DGF analyses its own data, as well as that obtained by MIEM, and shares dissemination of such material with the latter.

With the exception of the data on apiculture (obtained, processed and disseminated by the *Junta Nacional de la Granja*) information on non-wood forest products is not complete. In most cases it can only be obtained from the private firms that trade in some of these products. The latter however represent only a small portion of timber extraction from the forests and so far are of limited economic importance.

As for trees growing outside the forest, information is fragmentary and not widely available. Data on urban tree planting, green areas, protective wind breaks, etc, is generally held by departmental governments and state agencies such as AFE and MTOP. Meanwhile, the DGF is a repository for documents and information on silvo-pastoral activity.

CONEAT, under the aegis of the MGAP Soils Department, collects and disseminates information on land use changes, together with the DIEA.

Information on forest products varies substantially, generally reflecting the reliability of the source (producer statements, information from industry associations, estimates on the basis of technical coefficients, surveys, censuses, etc).

The DGF generates, compiles and disseminates data jointly with others and occasionally also produces its own estimates.

1b. 2 Stakeholders

The main stakeholders described in Component 1 can be grouped as follows:

The **State** is represented by all the government departments directly or indirectly linked to the process of REDD+ preparation. Some of these are directly related to the forest and its ecosystem services and all are key players in terms of preparing public policies, establishing standards, undertaking disclosure, dissemination and outreach activities and assisting with timely decision taking and support for the important REDD+ initiative.

The **Municipal Councils and Mayors' Offices** maintain a close relationship with local people and forest-dependent communities in their respective departments.

Social welfare: although many of the welfare-based agencies are parastatal, such as the Notaries, Bank Employees or Academic Professionals Pension Funds, a number of non-State Pension Fund and Savings Administrations (AFAPs) also exist. The former have substantial investments in forests, as well as land containing native forests. The AFAPs also possess significant investment potential, although this is somewhat constrained by current legislation.

Agricultural producers obviously seek to benefit financially from the resources that they manage, but tend to possess a limited awareness of the profits they could obtain from their primary forest areas. Direct actions by farmers are the main cause of deforestation and, principally, degradation. Most of these are members of the Rural Association (ARU) and the Rural Federation (FedRur), through which many have participated in the preparation of labor regulations, the Labor Code, wage councils, the UNIT National Norm on Sustainable Forest Management and the Good Forest Practices Code.

Forest producers are grouped in the Forest Producers Society (SPF), a branch of the Uruguay Rural Association (ARU). These are either companies or individual businessmen whose main activity is forest planting, and while many are owners of native forest areas, they normally confine themselves to conservation of these areas only to comply with the FSC/ISO wood products certifications. This group of forest producers has accumulated vast experience in managing native forest areas and it is undoubtedly worthwhile capitalizing on this by feeding it into a REDD+ process.

Cellulose Manufacturers are investing heavily in producing pulp from round short fiber wood cuts. A pulp mill already operates on Uruguay's west coast (Fray Bentos), representing an investment in recent years of over US\$1,500 million, in addition to significant outlays made during the 1990s. This mill sources its raw material (pulpwood) from over 150,000 hectares of planted forests. Next year a new mill will open in the south-west of the country at Conchillas (in Colonia Department), with larger capacity and higher investment worth.

This group of stakeholders primarily aims to secure supplies of short fiber Eucalyptus wood from own plantations. The cellulose industries also have supply agreements with third parties and lease land from farmers for planting trees. While at present they are not putting pressure on the native forests, given the excessively wide variability of the fiber to be obtained therein, such forests are nevertheless being taken into consideration in these industries' environmental certification schemes.

Transport firms and timber merchants - this group consists of firms involved in selling fuelwood and wooden stakes (for barbed wire fencing), and truckers who purchase standing trees to sell after the end of the main harvest season.

Workers' Guild - most of the workers in this organization are affiliated to the Union of Industrial Timber and Allied Workers (SOIMA) which operates under the auspices of the Inter-Union Workers Plenary (PIT - CNT). Their main concern is to create quality jobs in terms of pay and working conditions in the booming timber industry.

Civil Society - comprising, inter-alia, groups of NGOs concerned with the environment and capacity building. The latter are non-profit organizations working in the rural environment (including in agribusiness), which aim to ensure proper management of natural resources and environmental conservation. The NGOs tend to raise objections whenever forest and farming practices negatively affect forest sustainability.

Many NGOs (associated under the ANONG network) specifically promote the protection and conservation of forests, while others who also work with forests are mainly driven by concern for environmental conservation as a whole. These groups have substantial social mobilization and awareness capacity and their positions on conservation and management projects associated with forest resources can be significant. Thus it is important to include them in any REDD+ process.

Some civil associations are particularly aimed at women, youth and children. We believe that special consideration should be given to establishing appropriate mechanisms for facilitating participation in the REDD+ by such groups.

The general goals of the civil society groups are, in summary: to take forward conservation activities related to biological diversity and natural resources, to restore destroyed or degraded forests, to foster better land use, promote citizen participation, publicize activities harmful to forests, encourage the spread of relevant information and undertake training and capacity building of forest workers. The few organizations dedicated exclusively to training are members of ADECA.

State enterprises - a number of state companies own forests on the banks of hydroelectric dams, (such as the electricity company UTE), or in public employees' vacation camps (e.g. ANTEL). These companies are also potential stakeholders in the eco-systemic services that the forest can provide.

1b.3 Relevant Background to Citizen Engagement in the early REDD+ dialogue

To initiate a REDD+ process the first steps that need to be taken are to disseminate general information on climate change, biological diversity and forests, with the aim of raising and maintaining the awareness level of the involved parties regarding the effects of climate change and the importance of implementing measures

for its mitigation and adaptation, and of the importance of biological diversity and the ecosystem services of forests.

It is extremely important to collect and compile relevant information for presenting to the population and, more specifically, to the productive sector.

Conferences, seminars, study groups and workshops involving the parties directly involved need to be organized to educate people about the goals of the project concerning reduction of emissions caused by deforestation and forest degradation, as well as the activities planned by the UNFCCC.

As already stated, environmental regulations exist in Uruguay that refer specifically to citizen participation, employing public announcements, hearings, meetings, etc. aligned with the provisions under our Environmental Impact Evaluation Law (No.16.466), the National System for Protected Areas Law (No.17.234) and Law No.18.308 covering Land Use and Sustainable Development. Moreover, the Freedom of Information Law has been in force since 2008, aimed at promoting transparency throughout the entire public service and guaranteeing the basic rights of individuals to access to public information.

The Climate Change Unit of the National Environment Office has established guidelines for public hearings for CDM projects awaiting national approval, which could form the basis for the consultative meetings envisaged as part of the REDD+ strategies (www.cambioclimatico.gub.uy).

To speed development of the Readiness Preparation Proposal we intend to start by mounting training programs for key central government employees. These will consist of capacity building courses on issues linked to climate change and REDD+, the social and environmental impacts of REDD+, and safeguards (WB, FCPF, Cancun). The government staff who will work on REDD+ will be precisely those who will interact with local populations (through the staff of the Local Councils, Mayors and City Halls). They will also be tasked with implementing the R-PP in collaboration with the REDD+Steering Group.

Following these internal training programs at central government level it is intended to extend the courses to locations selected for their REDD+ potential. Presentations, document distribution, videos, etc can be organized in these particular locations.

We expect that local consultation workshops will enable us to map the essential features of the local communities, and to listen to a range of different ideas and queries from participants. Efforts will also be made to detect the existence of vulnerable groups (if they exist). In short, information collected in this way will serve as a valuable blueprint for preparing the first National Workshop. More specifically, it will help us to target the type of information required for reaching out to communities and raising their awareness of the benefits and impacts of REDD+. As stated in component 2d, no original ethnic groups exist in Uruguay which can reclaim common rights over land. The rural populations most closely linked to the forests inhabit towns or villages near or adjacent to the forest ecosystems. These people, although not directly dependent on forest resources for their livelihoods, nevertheless extract wood and non-wood products. This is a situation which must be identified in a timely manner and taken into special consideration when preparing a strategy for these groups.

The probability of the existence of vulnerable populations from the point of view of location or language (isolation, no access to information, etc.) is low, but the existence of such groups interrelating with forest ecosystems can be significant and will need to be carefully considered at the preparation stage.

A key input for detecting vulnerable groups within the local communities is the socio-environmental diagnostic work undertaken by the National Protected Areas System (SNAP). These studies have targeted people living in the protected areas (or areas in the process of being recognized as such) which lie within forest ecosystems. An example of this is the protected area of the "Arroyo Laureles and Las Cañas River Basins" which covers around 62.500 ha, located in the extreme north of Tacuarembó Department and the north-west sector of Rivera Department. Another example is the "Queguay (Rincón de Pérez)" protected area which lies at the point where the Queguay Grande and Queguay Chico rivers meet in Paysandú Department near the city of Guichón, an area which we envisage as being of potentially significant interest for REDD+ projects.

The studies done by SNAP have identified forest-linked communities in these areas, as well as local leaders playing a key role in a social and work capacity. In Queguay, for example, the National Colonization Institute (INC) does valuable work in its settlements (*colonias*) Juan Gutierrez, Pintos Viana, José Batlle y Ordoñez and Inmueble 543, and with groups of smallholders in Colonia Juncal and Establecimiento las Pitangas, etc. Productive and development activities have also been undertaken in this region by the Agronomy Faculty of the University of Uruguay and by a number of NGOs such as CLAEH, ARPROLA, Quebradas del Arroyo Laureles Development Group, the Cañas Pro-Development Commission, and entities such as the School Number 77 Development Commission. Some forest companies are also a source of work for local people and collaborate in social accountability programs (Fymnsa, Colonvade, Los Piques, Forestales Chilenos, etc.).

It is expected that with the local workshops that we propose to organize as part of readiness preparation for REDD+ it should be possible to update and refine the studies done by the Protected Areas System in the above areas, and also to expand the databases on the social initiatives undertaken by the various firms working with the communities as a way of identifying new problems, or at least problems that were not apparent to the firms at the time.

1b.4 Early REDD+ Dialogue

Although dialogue between the different groups interested in developing the REDD+ process in Uruguay has not yet commenced, we intend with the R-PP to bring to public attention the situation as regards deforestation and forest degradation, informing the population in general, and particularly targeting those groups with a direct or indirect link to forest matters.

Formal and informal contacts have been maintained with different individuals and institutions directly involved, such as the National Colonization Institute (INC) and the Society of Forest Producers (SPF).

The president of the INC (former Forestry Sector Director-General, Under-Secretary and Minister of Livestock, Agriculture and Fisheries) is enthusiastic about the forest dialogue, especially with regard to Uruguay's native forest. The INC is responsible for a large number of primary forest areas that are currently the usufruct of INC settlers. It is also responsible for many areas within the Protected Areas System (SNAP). Many of the *colonias* or settlements are now seeking alternative production activities, and it is clear that the REDD+ process represents a challenge for the INC and its settlers, as well as an opportunity to undertake activities linked to Sustainable Forest Management. The INC is keen to see various settlements benefiting from the REDD+ initiative. These include those such as Juan Gutierrez in the Rincón de Perez between the Queguay Rivers, about to be regulated by SNAP as a protected area. A number of other INC settlements in the eastern part of the country (Treinta y Tres and Cerro Lardo departments) will also be interested in information sharing and learning of the REDD+ strategies.

The Society of Forest Producers (SPF) has also shown interest in participating in the initiative and incorporating its forests into the REDD+ process, beginning with clusters of native forest owned by SPF members on their properties, often serving inter alia as biological corridors. The majority of forest producers possess certification plans (Forest Stewardship Council and PEFC) related to their forests, where in some cases studies are currently being conducted on a number of subjects: water quality in micro water catchment areas (forested or used for other purposes); designs of buffer zones and their effects on bird and small mammal populations; and the mitigation of negative impacts on biodiversity in properties containing planted forests, etc. Many of these activities reflect the REDD+ goals and action proposals.

SPF directors have undertaken to encourage the Uruguay Rural Association to participate in the REDD+ process, given that the largest number of native forests is in the hands of farmers whose main activities are not forest-linked. Meanwhile, efforts will be made over the next few weeks to organize a presentation for the most receptive SPF interlocutors.

Although the steps taken so far are insufficient, we believe that in view of the good response shown to date we can expect that an early REDD+ dialogue will be positive and promising.

SCHEDULE																							
Work Plan		Indicators & Outcomes		2013				2014				2015				2016				2017			
				Quartile (Q):																			
				2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Start	R-PP proposal	Explanation of the Readiness Preparation Proposal																					
	Key stakeholders	Show interest in R-PP and propose actions)	
Readiness Committee (CPR)	Composition	14 members																					
	Dissemination	>N° of persons familiar with REDD+																					
	Action lines	Radio, TV, press articles																					
	IT consultancy	Organize website																					
	Governance consultancies	Proposal for R-PP information and governance program																					
	Legal consultancy	Work plan for addressing regulatory/legal issues																					
	Technical consultancy	Medium-term Research Plan																					
	Early dialogue	Government, INC, ARU, SPF, FedRur, Settlers Assoc., PIT-CNT, NGOs.																					
	Local awareness workshops	4 local workshops for presenting the R-PP, mapping stakeholders and evaluating local capacities																					
	National Workshop	REDD+ Steering Group established																					
REDD+ Steering Group	Membership of REDD+ Steering Group	Defined during 1st National Workshop (membership, N°of members and Plan)																					
	Dissemination	Participation in national events																					
		N° of articles in newspapers and magazines																					
		N° of visits to REDD+ website																					
		N° of queries (telephone,mail, web, etc)																					
		Meetings in schools and rural colleges, etc.																					
	Consultancies	Institutional Communication and Disclosure Plan																					
		Legal: N° of changes to Laws and Decrees																					
SESA: Social & Environmental impacts																							

1c. Consultation and Participation Process

As previously stated, we believe that the REDD+ process calls for a specific area of dialogue to serve as a permanent platform for the exchange of ideas and with the highest level of participation possible. In this respect, the establishment of a plural and diverse REDD+ Steering Group will focus action on forests and bring together institutional and technical expertise on this subject.

The R-PP is aimed at the participatory construction of a National Strategy involving different stakeholder groups with a view to strengthening their capacity to manage forests at both national and local levels. This implies possessing sufficient capacity to achieve the required long-range interagency and intersectoral agreements on forests.

1c. 1 Aims of the consultation process

To take forward the preparation process for REDD+ aimed at the construction, with broad consultation and participation, of a National REDD+ Strategy for Uruguay, permanent consultation mechanisms need to be established aimed at ensuring ongoing monitoring of the process, and based on which it will be possible in due course to define the National Consultation and Participation Plan to be implemented throughout the lifetime of the REDD+ process. The different stakeholders involved, as described in Component 1b.2, will have an opportunity to input their ideas, opinions, knowledge, experiences and interests, all of which will be an invaluable aid to ensuring that the issues raised will be incorporated into the CPP. Moreover, formulating this strategy in a participatory way will help, firstly, to avoid or anticipate disagreements that might arise and, secondly, to maximize intersectoral and interinstitutional synergies.

The main objectives of the consultation and participation process are to:

- Involve all stakeholders who directly or indirectly interact with forests.
- Educate and engage the target population.
- Identify existing capacities.
- Explain Uruguay's position on issues related to climate change and its other commitments to the UNFCCC.
- Disseminate the REDD+ initiative, and especially the readiness process that Uruguay intends to initiate.
- Raise awareness of the importance of action on forests, especially native forests.
- Provide details of the National REDD+ Strategy.
- Permanently monitor compliance with the principles of respect for the rights and duties of each stakeholder.
- Identify the requirements of different groups.
- Put forward ideas for inserting into the National REDD+.
- Raise awareness of the benefits and services of forests ecosystems and their important link with other productive activities.

1c.2 Mechanisms proposed for the consultation and participation process

It is worth noting that under Uruguay's environmental legislation a range of mechanisms for citizen participation have been established that have made environmental governance more transparent and participatory.

Laws No. 16.466 (Environmental Impact Assessment), No. 17.234 (National System of Protected Areas) and No.18.308 (Land Use Management) are particularly important in terms of providing opportunities for citizen participation (e.g. notices in the Official Gazette, local newspapers, public hearings, etc.) .

Law No.18.381(2008) on the Right of Access to Public Information, aims to promote transparency in all public bodies (state or non-state) and guarantee the basic right of citizens to access public information. Public information in this respect is that which issues from, or is held by, any public sector agency (state or non-state), with the exception of statutory secret, classified or other confidential material.

The readiness preparation process for REDD+ envisages the participatory construction of a National Strategy involving different stakeholder groups, with a view to strengthening their forest management capacities at national and local levels. In practical terms, this implies having the capacity to achieve long-term forest-related intersectoral and interinstitutional agreements.

Early Participatory Consultation Process

As explained in Component 1b, we intend to create at the initial stage of the readiness preparation process a coordinating body to be known as the **REDD+ Readiness Committee (CPR)**, which will act as a facilitator at the start of the process, responsible for convening the first National Meeting at which the definitive REDD+ Steering Group will be established and its members selected.

It is essential to note that the REDD+ readiness preparation process in Uruguay will call for, at the outset, a major awareness-raising and sensitization campaign to target the stakeholders described earlier in this document. Given that this is a new departure for our country, we believe that it is vital for us to invest time and effort to ensure a high level of commitment and involvement by stakeholders. It is for example vital to draw their attention to the various ecosystem services provided by forests (especially native forests), raise their understanding of issues related to reducing emissions arising from deforestation and forest degradation, and clearly set out the development prospects for Uruguay which could directly result from this readiness process. In short, before launching any specific consultation process, we intend to devote our efforts to this preliminary goal: to attract the genuine interest of the people, and especially the social stakeholders most closely linked to forested areas.

We anticipate that this preliminary motivational approach will lead to a higher level of participation in the national and local initiatives planned for a later date.

First National Workshop

The aim of the 1st National Workshop should be to assess and review the content of the Consultation and Participation Plan (CPP) and to discuss topics such as the Social and Environmental Strategic Assessment, the Feedback and Grievance Mechanism, land tenure issues and rights over forest resources.

This first national activity on REDD+ should include representatives of the stakeholders listed in Component 1b.2, especially:

- Government Departments directly and indirectly involved.
- 19 municipal councils, given that all possess forested areas to a greater or lesser extent.

- Mayors from forest regions.
- Representatives of local boards (*juntas*) in forest regions.
- Environmental and forestry-training NGOs.
- Forestry workers associations such as SOIMA/PIT- CNT.
- Farmers' associations (ARU, FedRur, CAF).
- Forest business associations (SPF, ACF).
- Education representatives (ANEP, UTU, UTEC, UDELAR, UCUDAL, UDE).
- Training Institutions (INEFOP).
- National Colonization Institute (INC)
- Other stakeholders that could contribute to preparing a National REDD+ Strategy.

The National Workshop will allow for plenary discussion and formal/informal exchanges of ideas among participants.

The CPR will be responsible for the logistical arrangements for this workshop (e.g. hiring professional events organizers). The CPR will also need to assess the prior knowledge levels and capacity constraints of the prospective target audience in order to ensure effective discussion leading to the commissioning of the REDD+ Steering Group and its proposed Sub-Committees.

The REDD+ Steering Group, duly installed, will assume responsibility for the entire REDD+ preparation process. It is also expected that general guidelines will have been determined for the specific R-PP Action Plan, on which detailed work will proceed at the behest of the REDD+ Steering Group.

Regular Events-Participatory Workshops

To achieve ongoing monitoring and ensure transparency and participation throughout the preparation process, regular events will be organized as part of the cycle of consultation. The events will be held periodically (at least once a year) with the aim of informing on progress on the REDD+ goals. Decisions will be taken at these events as and when necessary and appropriate.

The events will also be invaluable for monitoring specifically defined social indicators and will contribute to monitoring, reporting and verification of the actions to be implemented.

A cycle of four participatory workshops will be organized in towns in forest areas or areas with important protected forests. The end of the local workshop cycle will be marked with the organization of a National Workshop.

The entire consultation effort will be based on the following four stages, consistent with the Strategic Environmental and Social Assessment (SESA) process:

Stage1 - Preparation of REDD+ issues and disseminating them to the general public and stakeholders.

Stage 2 - Consultation proper.

Stage 3 - Systematizing and analyzing the results of Stage 2.

Stage 4 - Disseminating and exchanging results to ensure full transparency of the process.

Stage 1 - Dissemination through the mass media

The dissemination of REDD+ issues must be undertaken prior to any consultation activity in order to attract the interest of the public and all the stakeholders. To do this, support should be sought from national development agencies or from development agencies that operate within or under the aegis of the departmental governments.

The media effort would involve:

- Posting articles on REDD+ in newspapers, and providing national and local radio and TV stations with news items, information, interviews etc.
- Creating a webpage containing information about the relevant issues and offering readers the opportunity to log in with their own views and questions. Also to consider using social networks (Facebook and Twitter).
- Organizing audiovisual presentations and talks targeting the towns linked to forest environments. These events could take place in local schools or rural training establishments. We could consider also handing out brochures and providing information at other events such as the "*Wood Festival*" in Piedras Coloradas (Paysandu), "*Patria Gaucha*" in Tacuarembó, the *Soriano Expo-Activa*, agricultural shows, country fairs etc.
- At the national level, MVOTMA and MGAP can take advantage of the *National Livestock Expo* in Montevideo, where thousands of people, mainly from the farming and agro-industry sectors from all over Uruguay, congregate. This two-week event, one of the biggest in the entire River Plate area, is run annually in September.
- Other relevant events could also be considered for raising the profile of the REDD+ such as World Environment Day, the International Biological Diversity Day, World Tree Day on June 28 (nominated by the World Forestry Congress in 1969), Uruguay's Tree Day (June 19), International Combat Forest Fires Day (May 4), the FAO World Forestry Day (March 21). Even the creation of our government's General Forestry Department (DGF) is marked by a special day (December 28).

Stage 2 - Public Consultations

Local Workshops

The main objective of each local workshop campaign is to establish a dialogue on topics of REDD+ relevance and to form a basis for decision making within the R-PP implementation process. These activities will need to be broadly scoped.

The following locations have been preliminarily identified as possible recipients of a workshop:

- **Guichón**, in Paysandú (west), given its location in a heavily forested area (60 year-old planted forests) is one of Uruguay's most important spa towns. It is linked to the Montes del Queguay (SNAP) and Palmares.
- **Tranqueras**, in Rivera (north) is located within another important forest and logging area, with close links to the Lunarejo Protected Zone.

- **Treinta y Tres**, capital of the department of the same name (east), in a forested region that assumed importance in recent years. It possesses protected areas of *quebrada* forest such as Quebrada de los Cuervos.

- A fourth option would be to organize an event for **National Colonization Institute** (INC) settlers. This would be coordinated directly with the INC, which would determine the place, date and representation (settlers in general or from selected rural colonies).

The development divisions of the respective local councils and Mayors' Offices need to be directly involved in the organization of the workshops, helping to identify the needs of local communities, explaining the key issues to them, presenting the alternatives contained in the REDD+ strategy and outlining the projects proposed for each situation.

National Workshop

At the National Workshop, progress and achievements will be addressed and decisions will be taken that are needed for implementing the Action Plan.

Stage 3 - Systematization and analysis

It is proposed to establish a period before and after the local workshops (fifteen days before and after) to give time for participants' ideas to be fed into REDD+ Steering Group by conventional means (mail, telephone, fax, email and through the specially-created REDD+ Uruguay Webpage).

When the deadlines have expired, the REDD+ Steering Group will sort, process, verify and take appropriate action on the feedback and queries received and comments raised in the workshops. The Committee will then continue with the Work Plan.

Stage 4 - Dissemination and exchange of results

Once the input from previous stages has been received and dealt with, the final step will consist of disclosing the outcomes and conclusion to each and every stakeholder. This will ensure the transparency of the process and allow concrete actions and different projects to proceed effectively.

To ensure wide dissemination, the REDD+ Uruguay Website would appear to be the ideal vehicle. Note that Uruguay leads the region in Internet access (according to the UN Report 2011, 34.9% of the country's households are connected). In rural areas, for example, access to the network has been made possible due to the *Ceibal Plan* for primary schools which has been in operation since December 2006 (one laptop per child). Apart from providing connectivity in rural schools, students' families can also access the site. Other, more traditional, methods can of course be used to ensure the widest possible dissemination (radio, television, posters, etc.)

TABLE 1: CANNOT BE TRANSFERRED FROM SPANISH TEXT

CONSULTATION PLAN	Schedule				
	2013	2014	2015	2016	2017

			Quartile (Q)															
			2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	
Early Dialogue	Early dialogue stage	State and private shareholders show interest and agreement																
		Coordination meetings within the CPR																
		Training and research coordination (INIA, UdelaR, LATU, etc)																
		Meeting of CPR with qualified stakeholders from the SPF																
		Meetings with: INC, ARU, PIT-CNT, ANONG and NGO network																
		Hiring specialists in consultation arrangements																
		Proposals for qualified stakeholders to take part in the R-PP																
	Local Workshops awareness raising	Early dialogue with social leaders of the 4 localities																
		Allocating roles to local stakeholders																
		Organizing the workshops-introduction to CC and REDD+ proposal. Technical diagnosis of the region and its forests. Discussion and identification of local problems. Participants’ concerns, commitments for the National Workshop.																
		Processing of data and identified concerns																
	National Workshop	Disclosing and communicating national level consultation activity																
		Holding of the National Workshop-key issues of CC and REDD+. Description of the R-PP and establishment of the Steering Group. Identification of REDD+ strategies. Definition of a Work Plan.																
		Steering Group established, together with its sub-committees (Grievances and SESA).																
First cycle	Dissem.	Communication Plan for REDD+ Strategies and Mechanisms.																
	Local workshops	Identification of most appropriate strategies for each locality.																
		Investigating local capacities, studies and project developments.																
		Local training needs																
	National Workshop	Presentation of local strategies																
		National research lines for developing REDD+																
		National training needs																
		NFI and assessing the amount of knowledge about Sustainable Forest Management																
		SESA indicators and plan																
		Evaluation of the R-PP																
		Proposals of stakeholders and plenary discussions																
	Dissem.	Annual Plan and setting venues and dates for next meetings																
		Systematizing information																
		Receiving opinions and proposals post-National Workshop																
	Dissemination of results																	
Second Cycle	Dissem.	Communication Plan for REDD+ activities																
	Local Workshops	Monitoring and evolution of local strategies underway																
		Development of local capacities																

CONSULTATION PLAN			Schedule																		
			2013			2014			2015			2016			2017						
			Quartile (Q)																		
			2	3	4	1	2	3	4	1	2	3	4	1	2	3	4				
	National Workshop	Requirements for local improvements																			
		Evolution of the local strategies underway																			
		National Research for development of REDD+ strategies																			
		Indices of the evolution of national capacities																			
		NFI, state of knowledge and progress in REDD+																			
		SESA indicators and plan																			
		Evaluation of the R-PP																			
		Discussion in Plenary: Annual Plan and new proposals																			
	Dissem.	Systematization of the information																			
		Receiving opinions and proposals post-National Workshop																			
		Dissemination of results																			
Third Cycle	Dissem.	Communication Plan for REDD+ activities																			
	Local Workshops	Monitoring and Evolution of local strategies underway																			
		Results of local training																			
		Requirements for local improvement																			
		National Workshop	Evolution of the local strategies underway																		
	Status of National Research for REDD+																				
	NFI and the status of SFM																				
	SESA indicators and plan																				
	Evaluation of the R-PP																				
	Plenary discussion: stakeholder proposals																				
	Annual Plan and arrangements for next meetings																				
	Dissem.	Systematizing information and receiving proposals																			
		Dissemination of results																			
Fourth Cycle	Dissem.	Communication Plan for REDD+ activities																			
	Local Workshops	Status of local strategies underway																			
		Evolution of local capacities																			
		Perception of the localities about REDD+																			
		National Workshop	Evolution of local strategies underway																		
	National Research for development of REDD+ strategies																				
	NFI and SFM progress in REDD+																				
	SESA indicators and plan																				
	Evaluation of the end of the R-PP																				
	How to further proceed with REDD+ process																				
Dissem.	Systematization of the information																				
	Dissemination of results																				

Table 1c: Summary of Consultation and Participation Activities and Budget						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Outreach	Press articles	4	2	2	2	10
	Website	3	1	1	1	6
	Audiovisual & Conferences	6	4	4	4	18
	Agricultural, livestock and forest-related expos	10	6	6	6	28
Local Workshops	Coast	6				6
	North	6				6
	East	6				6
	INC - Settlers	6				6
National Workshop	Transport for participants from interior of country	5				5
	Logistics of meeting	8				8
	Speakers	3				3
Regular Workshops	Annual report for 4 localities		12	12	12	36
	Annual report on National Workshop		10	10	10	30
Annual REDD+ Report	Contracting articles	1	1	1	1	4
	Publishing and distribution	3	3	3	3	12
Total		67	39	39	39	184
Government*		30	10	10	10	60
FCPF		37	29	29	29	124
UM-REDD Program						0
Other development partner						0

* In cash

Component 2: Preparation of the REDD+ Strategy

2a. Assessment of Land Use, Land Use Change Drivers, Forest Law, Policy and Governance

2a.1 Background

In a chapter in his book "A Naturalist's Voyage around the World" (1831), Charles Darwin noted in a chapter on Uruguay that:

"The scenery has little of interest: you rarely see a house, a fence or even a tree to cheer you up. However, when you have been confined to a ship for some time you get a certain pleasure in walking on grassy plains whose boundaries appear to be limitless. Moreover, while the view is always the same, many particular objects are of utmost beauty. Most of the birds are brightly colored; the marvelous green grass cropped short by herds of cattle, is adorned with little flowers including one which looks like a daisy and puts me in mind of an old friend of mine. What would a florist exclaim if she were to see whole stretches of grassland so completely covered by ladyfingers that even from a long distance show marvelous shades of scarlet?" ...

Other travelers took home similar stories and observations of the sparsely-populated Uruguayan landscape and ecosystems, with its endless grasslands, few trees, and woods of any size limited to skirting the rivers and streams.

Given this peculiar geography, Uruguay over the years gradually developed its cattle-ranching tradition and livestock production system on its 17.6 million hectares of land. Throughout its evolution as an independent country, and as the recipient of many thousands of immigrants from countries with strong agricultural traditions (predominantly Central Europe), Uruguay developed its agro-pastoral systems in an area regarded as a large "wooded meadow", with very low forest cover (1.8MM ha. or about 10% of the land area).

Native forest ecosystems occupy 850,000 ha (4.8% of the territory - including palm groves). The forests are generally of the "lignose" type, growing along the banks of rivers and streams and forming gallery forests. Other types form so-called "mountain parkland" in the low altitude sub - mountainous regions on the southern edge of the Atlantic Forest biome, with a limited mixture of cord palmar areas. The existing forest is predominantly in private ownership and conforms to an effective legal conservation regime. The forest, which is of relative commercial value, contains a substantial variety of ecosystem services: natural resources protection (soils, water, flora and fauna, and genetic biodiversity) as well as wood for energy generation and local rural house building. The forests also function as biological corridors.

Planted forests were introduced into Uruguay in the mid-19th century. These consisted of small clusters and stands of eucalyptus (5 to 10ha.) basically providing shade for cattle. At the same time, pines were planted on the Atlantic coast and along the River Plate as a way of stabilizing sand dunes and demarcating sites for future beach holiday resorts. Subsequently, the first Forest Law (No. 13,723 of 1967) was introduced with the aim of encouraging the growing of trees in sandy places of limited agricultural use denominated "priority forestry soils", and to lessen pressure on native forests being increasingly used for timber and energy purposes. This law however had limited effect and a number of pioneering projects was implemented to develop the first plantations for industrial and commercial purposes based upon rapid growth species such as

eucalyptus, pines and elms. Following this, in the late 1980s the second Forest Law (No.15.939 of 28/12/1987) was introduced and is still in force. Unlike the previous law, the beneficiaries of forestry are not 'farmers' but investors in general. The Law also set forth conservation rules prohibiting logging in native forests, measures for land use and for prioritizing forest soils suitable for establishing plantations.

2a.2 Land ownership and use

Land occupied by towns or other urban centers and roads represents only 3% of the total land area (5,300 km²) of Uruguay, while reservoirs and ponds cover a further 4% (7,050 km²). The remaining land area is given over to agriculture and forests.

Land tenure is mainly in private ownership (97%). The land registration system is well-organized, transparent and effective. The National Land Registry of the Ministry of Economy and Finance is the central point for processing, organizing, updating and preserving detailed information on every property in the country, including boundary measurements, geometric features, type or standard of land occupied and its actual or potential purpose.

Beef cattle raising has been traditionally the dominant economic force in Uruguay and, according to the Agriculture Census (DIEA), occupies 75% of the total land area ($\pm 132,500 \text{ km}^2$), worked by 50,576 private farms. Meanwhile, rainfed agriculture occupies 7% of the land area ($\pm 11,600 \text{ km}^2$) and rice cultivation 0.9 % ($\pm 1,600 \text{ km}^2$). Finally, dairy production occupies 4.5% ($\pm 8,000 \text{ km}^2$) and fruit growing and horticulture together occupy 0.3% ($\pm 500 \text{ km}^2$).

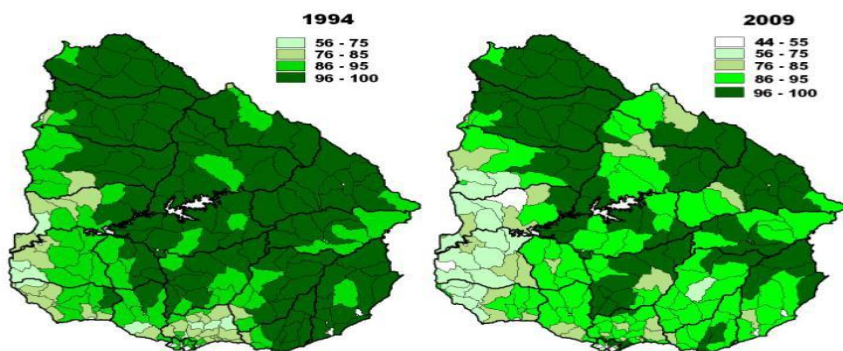
The agricultural sector in general has been the main driver of Uruguay's economic growth over the last 10 years. The agricultural sector has prospered thanks to increased foreign investment and global demand for grains (reflected in substantial price increases). Between 2000 and 2010, the country's agricultural exports tripled and the area devoted to agriculture substantially expanded: from a previous total of approximately 400,000 hectares to over a million and a half hectares today. Much of this growth resulted predominantly from a boost in rice growing and soybean production which now occupies most of the agricultural land area, followed by summer crops such as corn and sorghum, and winter crops such as wheat and barley.

Over the last decade milk production has increased substantially on land previously used for beef cattle raising. This industry has shown little interest in competing for space in forested areas and even less interest in native forests (Agriculture Census, MGAP-DIEA 2012).

Given that the livestock industry (beef cattle, sheep and wool) has recorded slower growth, despite a boost in the prices of its products, it has had to adjust its productivity levels and work alongside the other farming sectors. This has put some pressure on forest areas, with grazing systems encroaching on some forest areas. These systems need to be improved in order to avoid affecting natural forest regeneration, while at the same time achieving coherent and sustainable production.

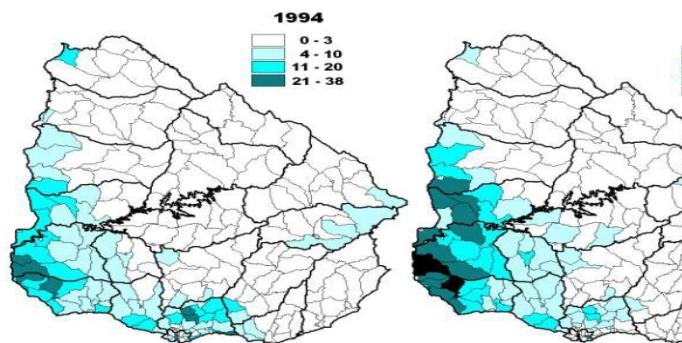
Maps showing land use changes (1994-2009)

Porcentaje de superficie ganadera por seccional policial en 1994 y 2009



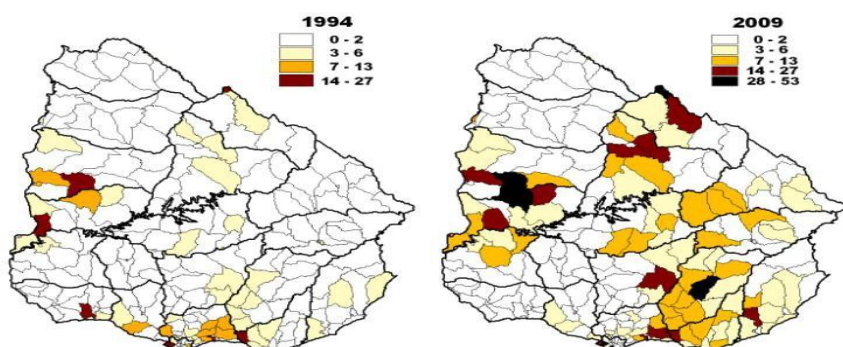
Fuente: elaborado por Tommasino (2011), con base en declaraciones juradas de DICOSE de 1993/94 y 2008/2009
Nota: por aspectos metodológicos, véase el artículo de Tommasino, H. "15 años de cambios en el agro uruguayo: Impacto en la ganadería vacuna" en el Anuario de OPYPA del año 2010

Porcentaje de superficie con cultivos agrícolas de invierno por seccional policial, en 1994 y 2009



Fuente: elaborado por Tommasino (2011), con base en declaraciones juradas de DICOSE de 1993/94 y 2008/2009
Nota: por aspectos metodológicos, véase el artículo de Tommasino, H. "15 años de cambios en el agro uruguayo: Impacto en la ganadería vacuna" en el Anuario de OPYPA del año 2010

Porcentaje de superficie forestal por seccional policial en 1994 y 2009

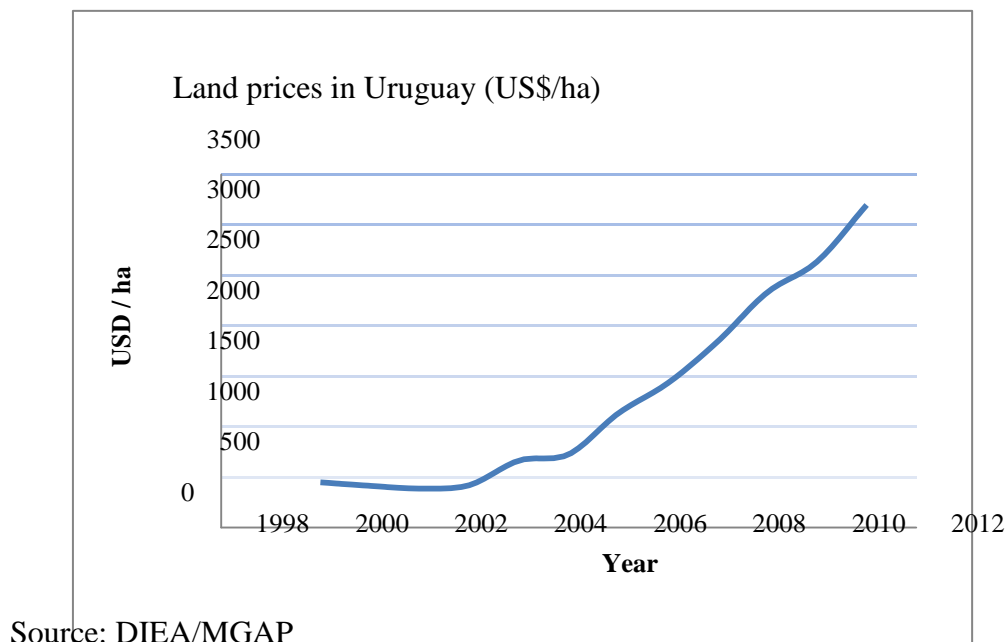


Fuente: elaborado por Tommasino (2011), con base en declaraciones juradas de DICOSE de 1993/94 y 2008/2009
Nota: por aspectos metodológicos, véase el artículo de Tommasino, H. "15 años de cambios en el agro uruguayo: Impacto en la ganadería vacuna" en el Anuario de OPYPA del año 2010

NOTE: The above maps show the cultivated forest area but it has not been possible to obtain historical maps to show evolution of the native forest drawn using the same methodologies to show in map form its evolution and degradation. Work to date has been based on superimposition of Landsat images and general data from the DGF.

Source: MGAP)

As a result of growth in the agriculture, cattle raising and forestry sector, the price of land (sales and renting) in Uruguay has increased considerably.



Around 10% of the entire land area is occupied by forest, of which approximately 850,000 ha correspond to native forest (4.8%) and the remainder to planted forests.

It is worth noting that land occupation in Uruguay is now very different from that recorded in 1994, where forests merely doubled in area due to the planting of rapid growth species (predominantly Eucalyptus and pines). The area of planted forest has since then increased 500% while areas of natural forest have increased by 15%.

SURFACE AREAS OF FOREST

Departamento	Bosque Natural*	Pino	E. grandis	E. globulus	Otros eucalyptus	Salicáceas	Parque	Costero	TOTAL
ARTIGAS	44.530	141	922	-	1.342	-	-	-	47.435
CANELONES	7.426	14.407	5.413	7.051	4.289	-	688	3.318	42.592
CERRO LARGO	63.215	5.023	15.673	23.928	7.090	-	-	-	114.929
COLONIA	17.514	1.779	3.054	7.849	2.890	-	-	495	33.581
DURAZNO	19.840	6.247	13.583	21.464	5.811	-	-	-	66.945
FLORES	7.943	-	299	559	1.707	-	-	-	10.508
FLORIDA	20.513	55	1.048	40.766	4.875	-	-	-	67.257
LAVALLEJA	59.008	318	1.508	64.881	5.963	-	1.342	-	133.020
MALDONADO	27.320	7.810	1.995	28.750	2.519	-	1.411	1.145	70.950
MONTEVIDEO	999	18	-	2	984	-	830	-	2.833
PAYSANDÚ	66.296	31.928	42.144	25.432	10.423	-	474	-	176.697
RÍO NEGRO	43.748	13.216	52.777	25.450	9.668	-	-	-	144.859
RIVERA	63.129	128.781	52.522	481	6.068	-	-	-	250.981
ROCHA	38.842	12.021	1.559	33.372	3.989	-	3.752	1.157	94.692
SALTO	51.617	40	490	-	4.297	-	-	-	56.444
SAN JOSÉ	16.066	1.839	1.241	2.862	2.899	1.767	-	943	27.617
SORIANO	34.838	2.554	6.721	17.569	2.138	-	1.133	-	64.953
TACUAREMBÓ	121.885	48.391	16.134	59.313	8.197	-	381	-	254.301
TREINTA Y TRES	47.429	-	465	8.659	4.511	-	-	-	61.064
TOTAL	752.158	274.568	217.548	368.388	90.160	1.767	10.011	7.058	1.721.658

*No incluye áreas de dispersión natural de Palmares

It is also worth mentioning that the increase recorded in native forest coverage is due, according to the general opinion of people working in rural areas, to introducing pioneering native species which colonized new areas where grazing had been abandoned for practical reasons (old railway lines, roads, abandoned smallholdings, etc). The composition of the flora of these areas will nevertheless be evaluated as part of the ongoing National Forest Inventory (IFN) field research sampling.

Development of land ownership

Available information sources indicate that the rural population of Uruguay underwent significant growth up to the mid-20th-century, but that it has dropped since then as many people have moved from the countryside to the towns. Studies on rural poverty based on empirical information reveal that from 1962 onwards, small farmers were identified as one of the larger groups suffering from rural poverty (together with salaried laborers and rural workers living in towns and villages).

With the robust restructuring of the sector which occurred towards the end of the 20th century (and which continues today), a drastic reduction can be observed in a number of productive family units and farms under 100 ha. 91% of the farms that have disappeared correspond to this segment.

Evolución 2000 - 2011 de las explotaciones según estrato de tamaño.				
Tamaño de la explotación	Total Nacional Explotaciones			
	Años		Diferencia 2011-2000	
	2000	2011	Absoluta	Relativa %
Total	57.131	44.890	-12.241	78,6
1 a 19	20.464	12.274	-8.190	60,0
20 a 99	15.581	12.657	-2.924	81,2
100 a 199	6.382	5.540	-842	86,8
200 a 499	6.783	6.473	-310	95,4
500 a 999	3.887	3.808	-79	98,0
1000 a 2499	2.912	2.970	58	102,0
De 2500 y más	1.122	1.168	46	104,1

• 91% de la disminución son explotaciones menores de 100 ha

13

Uruguay's rural problem was historically rooted in the stagnation of production resulting from large-scale cattle ranching with low productivity per hectare. With the takeoff of agricultural production in recent years this problem is on the way to being overcome.

Nevertheless, ranching continues to occupy more than 90% of Uruguay's territory, although the dynamics of change have been more noticeable in the non-cattle sector, with for example a significant increase in the forestry sector, a major expansion of the areas growing rice and soybean (on non-irrigated land). In this context, significant changes in land ownership have taken place involving the growth of very large properties. The old cattle *estancias* are being rapidly replaced by large farms in the hands of forestry and agri-business companies. Most of the latter are of foreign extraction: firms based in neighboring countries or

multinationals. The overall outcome has been the increasing marginalization of small and medium producers and family farms.

2a.3 Sectors that interact with the forest

Farming

During the 1990s the rapid growth of forest plantations caused concern among certain groups of farmers who claimed that the plantations were not integrated with the surrounding countryside or with other farming activities, alleging that large areas of planted trees had invaded cattle raising land and reduced sheep production capacity in the entire country. These concerns led to a number of specialist studies being undertaken which concluded that in general no significant reduction in cattle and sheep stocks had taken place over a ten-year period, but that cattle were being gradually replaced by sheep.

Comparing highly forested departments such as Rio Negro with sparsely forested ones such as Soriano, the trend towards reduced beef cattle stocks follow a similar pattern. This can be attributed to increased competition from the important and growing dairy and agricultural sectors in both departments. However the cattle/sheep ratio has substantially moved in favor of beef cattle in all departments regardless of whether these have experienced increases in forests or agricultural activity. Meanwhile, any decrease in the sheep sector can probably be more attributed to price falls in the international wool market than to other factors.

Little is known about the links between forested areas and the "*campos*" (the local name for the biome containing low pastureland with native seeds), but they constitute an important factor in terms of REDD+ strategies since the commercial scale silvopastoral systems possess a substantial development potential in areas where soils are suitable for growing trees.

The livestock sector, a crucial ingredient in the country's economy, is mainly based on converting pasture into meat, wool and/or milk. Uruguay has moved towards branding itself with trademarks such as "Natural Uruguay" and has exploited the incipient trend towards organic farming, as a result of which it can be expected that silvopastoral activities will gain importance in the mid-term. It would appear however that while private practitioners have so far kept a fairly low profile in this respect, these developments could play an important role in a REDD+ strategy.

The citrus growing sector competes with the forestry sector for certain sandy soils, mainly on the west coast. However these two activities are to an extent complementary and are able to make good use of available human resources, given that the forestry sector can employ most of the manpower freed up after the citrus harvest.

The agricultural sector which has shown greatest dynamism over the last 10 years is that of oil seed crops which compete strongly for forest sites. This sector uses modern technologies of direct sowing, dynamic control of nutrients and weeds, and the sandy soils have become a good alternative for expanding the growing of summer crops (soya bean and sorghum) or winter crops (barley). In the forests of the west coast, agricultural activities have also displaced native carob trees (*algarrobos*) and *andubays*. Palm groves (declared a natural monument) are now often interspersed with crops and trees (e.g. eucalyptus).

MGAP set in motion this year a national soil conservation strategy in view of the increase of major erosion problems resulting from agricultural activities putting pressure on land use by continuous rotation and the continuing advance into non-traditional agricultural areas.

Responding to these problems, the Department for Renewable Natural Resources proposes to regulate soil use and management, declaring that soil must be allowed to produce only in accordance with its sustainable capacity. Every landowner will henceforth be required to submit a Soil Use and Management Plan prepared by a professional agronomist, containing a soil map indicating the potential use of the property's different sectors and details of sustainable rotation planting in each sector.

Acceptable losses will involve a tolerance of 7 ton/ha of soil lost per year measured by the Soil Loss Equation calibrated for conditions in Uruguay.

This measure is simply one more effort to ensure that Uruguay can produce in a sustainable manner. It is also a way of restraining the occupation of land that is not suitable for agriculture. It should also act as a barrier to agricultural expansion into forest areas and other ecosystems threatened by destruction caused by land use changes.

Other crops that have done well are cranberry and olives cultivation and the winegrowing sector, all high-value products. These also compete for acid, well-drained, deep sandy soils, involve intensive production in fairly small areas at certain times of the year and compete with other sectors for rural labor.

Mining

While mining currently accounts for a relatively small share in the country's economy, it is considered to have significant growth potential, and will almost certainly have an impact on native and planted forests. Some exploration, drilling and other mining activities could well interfere with forests and it will be necessary to harmonize the legal and regulatory frameworks governing both sectors.

Tourism

Eco-tourism is showing clear signs of increasing in Uruguay and heralds a notable opportunity for the promotion and use of forest resources at the service of society as a whole.

It is an opportunity to forge a link between urban dwellers (both local and international) with the rural environment, including the forest. To do this a number of different approaches and amenities need to be fostered and developed to maximize the appeal of eco-tourism in terms of camping, trekking, bird watching, wildlife appreciation, photography, etc.

A good potential market for ecotourism already exists among people living in relatively nearby cities such as Buenos Aires, Montevideo and Porto Alegre. Meanwhile, Punta del Este and other seaside towns on Uruguay's east coast attract large numbers of visitors from e.g. São Paulo and, with their excellent transport infrastructure and connections, open up the prospect of attracting ecologically-minded tourists, particularly those fleeing the Northern Hemisphere winter, to travel from there to other parts of the country.

The development of a system of national parks and protected areas under public or private management is one of the action goals that could be included in a REDD+ process. The SNAP also needs to encourage more interest from the private sector in establishing Private Action Protected Areas (APAPS).

Energy

Wood as a source of renewable, clean and locally-produced energy is increasingly in demand in the domestic market.

Biomass currently supplies some 20% of the country's energy consumption. The increasing availability of waste from planted forests and the timber industry, coupled with high oil prices and the adoption of policies to promote renewable energy, point to wood biomass assuming an ever-higher profile in the energy mix in the coming years. In the medium term this could account for 15 % of electricity demand and over 30 % of Uruguay's overall energy consumption.

Transport and infrastructure

In the early 1990s a Chilean forestry development expert surprised Uruguayan forest producers with the statement that "forestry is a transport business". Although not entirely convinced by this, the latter nevertheless now agree, in the light of their experience in recent years that forestry is also a freight business.

Since the Fray Bentos pulp plant went on stream and agricultural activity increased generally, road use has intensified. Uruguay's highway network (including secondary roads) is overstretched to the point of collapse, and urgent modernization of the roads and accompanying structures is required. Road infrastructure upgrading could impact negatively on native forests, undermining their conservation as well as their role as biological corridors.

To further reduce pressure on the roads, the government plans to reactivate the use of the railway network (currently non-operational). If the expectations of securing foreign investment for renewing the railway lines and associated infrastructure are fulfilled this would present another challenge to be addressed in terms of minimizing impact on forests.

2a.4 Regulatory Framework

Uruguay possesses a regulatory and legal framework related to forestry which is considered adequate.

Forestry Law 15.939 is the basis for the conservation and afforestation program. It consists of a substantial body of laws and decrees pertaining to environmental, social, employment and promotion issues that determine the development of the sector. The rules governing the public-private agencies active in the sector are also well structured, adequately covering their coordination and efficient operation. Note however that the measures relating to participation, discussion and conflict resolution need improving and strengthening in order to conform to a decisive REDD + strategy.

Uruguayan law adopts a multifunctional view of native and planted forests, including the following precepts:

- i. Recognizes forest environmental services as agents of climate change mitigation.
- ii. Bans logging in native forests and protective forests.
- iii. Establishes a forest management system to foster plantations on "forestry priority" soils (according to CONEAT/MGAP criteria) or on soils at high risk of erosion and degradation; and in coastal protected areas and river basins.

- iv. Makes the adoption of forest protection measures mandatory.
- v. Encourages the establishment of forest plantations with fast growing species by providing tax exemptions and direct subsidies to develop timber resources.
- vi. Encourages the establishment of industries for processing wood from planted forests.

Environment

The contribution of forest ecosystems to climate is acknowledged by the 1987 Forestry Law (No. 15.939). The Law defines forests as: " ... *groups of vegetation predominantly containing trees of any size, exploited or not, and that are capable of producing wood or other forest products* or have an impact on soil conservation within the hydrological or climate regime, or provide shelter or other benefits of national interest " (Article 4) .

The later establishment of MVOTMA (1990) confirmed Uruguay's legal commitment to a national policy on the environment. This ministry would henceforth be responsible, under Law No. 16.112 (1990), for the development, implementation, supervision and monitoring of measures planned for the protection of the environment. Law 16.466 (1994) later reinforced these goals, stating that protection of the environment from any type of degradation, destruction, and pollution was a matter of national interest and that any negative impact or harm inflicted on the environment by human activities would have to be rectified by those responsible.

The Ministry of Housing, Land Management and Environment (MVOTMA) is the legally-constituted national authority responsible for the implementation and application of the Convention United Nations Framework on Climate Change and the Kyoto Protocol, according to Article 19 of Law No. 17.283 (28/11/2000) regulating Article 47 of the Constitution. This Ministry is charged with preparing mitigation and adaptation measures to address climate change, regulating GHG and coordinating the roles and functions of public and private entities concerned with the same. Article 22 highlights conservation and sustainable use of biological diversity as being of national interest and a fundamental part of national environmental policy. It also emphasizes the importance of implementing and applying the Convention on Biological Diversity. MVOTMA is responsible for adopting measures for the identification, monitoring and conservation of biodiversity and the sustainable use of the different components of biodiversity, as well as supervising other public and private entities in terms of the conservation and use of species and their habitats.

All afforestation projects involving equal to or over 100ha. are required to seek a Prior Environmental Authorization from DINAMA, in accordance with the provisions of Law No. 16.466, regulated by Decree 349/005. Wood processing is subject to the same rules as other industrial activities and also requires DINAMA approval and authorization.

Subsequent rules and regulations have contributed to the adaptation of forest systems for operating environmental services and for enhancing social awareness of the importance of preserving and improving native forest resources, having regard for the environmental value of forests, the importance of wholesome and sustainable management and the need to protect the most vulnerable ecosystems in the SNAP.

Conservation

The first Forest Law (No.13.723), introduced in 1967, contained measures designed to reduce deforestation of the Uruguayan native forest by exempting the land occupied by native forests from payment of taxes, and in the hope of boosting conservation and rational use of such areas.

The owners of land fully or partially occupied by these forests were thus required to submit a statement to the DGF requesting tax exemption.

This scheme however was not fully effective, and a subsequent ruling (Law No. 15.939) banned logging entirely from 1987 onwards. It also stated that fuelwood could only be taken for private use on owners' farms under a technically based and authorized plan. The law also led to the introduction of GDF guidelines for transporting and selling wood.

Land Use Management

For the next twenty years after the introduction of the last forest statute a framework of policies, institutional and legal instruments gradually emerged for managing the forest process. Consisting of a dynamic and coherent set of rules and decrees, this now effectively constitutes the legal and instrumental basis of all matters related to Uruguay's forests.

From 1990 to 2010, the areas of planted forests expanded rapidly. New forest (± 950 000 ha) was concentrated on four main regions, each with forest sites specifically reflecting local conditions, location and tree species and determining the use and exploitation of such sites for fiber production, solid timber, energy generation and/or forest-derived services. Meanwhile, the native forest areas also expanded (from 670-850.000 ha) based on a policy of conservation and monitoring, and due to the increasing supply of alternative wood products from planted forests.

The Land Management and Sustainable Development Law was introduced in June 2008 (Law No. 18.308), confirming that planning and use of the areas over which the Republic possesses sovereignty and jurisdiction is of general interest.

Protection

It is important to emphasize that the forest sector in Uruguay has emerged in the midst of a global debate on protection and care for the environment, giving rise to controversy about the effects of deforestation, the need to value water resources and the issue of global warming caused by GHG, as well as the various impacts of human actions on the environment now and in the future. Uruguay, by international comparison, presents a "sound" environmental profile and in terms of the emerging forest sector the country has succeeded in introducing a Code of Good Practice (CNBPF) and adopting sustainability principles and criteria in accordance with the laws and decrees enacted nationally and internationally. Assessment, certification and monitoring systems have also contributed to raising the environmental profile in forest production systems in a country where 75% of planted forests benefit from a certification process guaranteeing the sustainability of the resource.

Promotion and Incentives

Plantations with rapid growth species benefiting from a regime of tax exemptions and direct subsidies for developing wood resources have enabled Uruguay to become a producer and exporter of forest products and

services. Afforestation has made a significant contribution to the development of rural Uruguay. There has been, as a result, a significant increase in overall activity in our rural areas and towns in the interior of the country. This can be noted in the growth of the rural population, improved opportunities and working conditions and the multiplier effect on general infrastructure and a whole range of activities. The national impact is reflected in increased logistics and transport activities (road, rail, river and sea), increased activity in the ports, the emergence of small and medium forest-based agribusinesses and the growth of wood-based industries around small timber yards and factories making laminates and plywood panels, as well as the building of large plants (one in operation and the another under construction) for the manufacture of paper pulp for export made from short fiber wood.

This type of forest-based activity has generated substantial socio-economic benefits, resulting from an incipient industrialization process, the creation of numerous forest service companies, major state support for the construction and maintenance of infrastructure, and the availability of clean, home-produced alternative renewable energy. Some stakeholders have however raised concerns about the so-called "forest model", alleging that this has negative impact on society and the environment. These diverging or conflicting views still affect the debate on the forest question and represent a challenge to us to analyze the issues from a technical and scientific angle with a view to resolving these and other concerns.

Significant changes have been observed both in the economic sphere and also in the following:

- In the social sphere, where progress has been made in areas such as reversing rural-urban migration, generating over 14,000 rural jobs (out of a total of around 150,000), and providing more stability and opportunities for female workers while meeting their demands for better wage levels working conditions and services .
- In the cultural sphere, where forests have traditionally been undervalued by Uruguayan society. Protection measures and the increased supply of products from planted forests are gradually producing a change in attitudes towards the sustainability and responsible use and management of forests.
- In the environmental sphere, where the principles, criteria and good practices of sustainable forest use and management have been introduced.

2a.5 Native Forest Situation

Uruguay's native forests comprise various types of forest ecosystems according to the environment where they are located and the types of soils and topographic position that they occupy. There are generally grouped under five different categories, although they can also be subdivided by floristic composition and other characteristics:

1. Riverine Gallery Forest
2. *Quebrada* Forest
3. Mountain Forest (*Bosque Serrano*)
4. Parkland and Palm Forests (*Palmares*).

5. Coastal or psamophil forest and scrub.

The Riverine Gallery Forests occupy low-lying areas, generally on the banks of rivers and streams, with a single tree layer that completely covers the ground, and with understory vegetation and shade-tolerant herbaceous shrub layer. The species in these types of forests form strips parallel to the watercourse according to their water requirements (from the most hygrophilous near to the water level to the more xeric further from the water). In low-disturbance conditions these trees have a relatively straight shaft topped by a narrow canopy due to the density of neighboring trees which completely shade the ground. This type of forest also normally contains a number of different plant species such as epiphytes, parasites and climbers.

The *Quebrada* Forests can be compared to the above variety since they tend to follow smaller watercourses, mainly around springs and other water sources which deliver their water through "throats" carved into basalt or granitic rocks north and northeast of the country. Deep fertile soils containing plenty of moisture and air provide a favorable environment for growing trees similar to those found in subtropical forests. These have abundant understory strata, with small shrubs and a high level of natural regeneration, as well as abundant swards. The species also hosts many different types of epiphytes and climbers. The trees normally rise to 20 meters in height, with well-developed canopies, vying with a second layer of smaller shade-tolerant species.

The Hill Forest is more variable in terms of tree layer and can vary from a low to complete ground coverage. This type tends to consist of a few trees and shrubs occurring in small herbaceously separated circular clusters. The trees occupy hilly areas, generally on very stony ground, which results in short gnarled shafts and fairly well-developed tops in view of their low density per hectare.

The Parkland Forest has a low coverage, with trees sufficiently spaced to allow the lower herbaceous development. This type of forest can be typically found on the western plains of the River Uruguay (*Ñandubay* and *Algarrobo* varieties). It also includes clusters or stands of palms composed of individual single species of the *Arecaceae* family

The Coastal Forest grows along the coastal/river areas of the River Plate and Atlantic Ocean and is characterized by the presence of low and stunted trees and shrubs adapted to the extreme environmental conditions (strong wind, salinity, sand abrasion).

Some authors also refer to other tree formations such as Swamp Forests (*Capões*, as in Brazil). These formations occur in depressions that accumulate high water levels in the ground, generating a swamp-like environment conducive to the existence of dense tree cover, often associated with dense swards covered predominantly by ferns and bracken.

The floristic composition of the above forest types varies according to the presence and frequency of the different species and is normally determined by way in which they are distributed. Specific floristic composition depends on the area of the country where the trees are located. Riparian forests in the center of the country can have as many as 15-20 species of flower, while the forests on the banks of the River Uruguay and in the *Quebrada* forests of the Rivera Department can contain up to around 50 - 60.

As for the area occupied by each forest type, the riverine forests are the most extensive and can be found throughout the entire country. *Quebrada* forests are more common in the North - Northeast, while the mountain forests grow most frequently in the Eastern Sierras. Parkland Forest is found mainly on the west

coast. Note that the maps produced by the DGF do not show areas according to type of native forest. This will be one of the issues to be dealt with in our first proposal within the REDD + strategy.

Deforestation

All Uruguay's native forests have at some time in the past been exploited. Their usefulness as a source of fuel has been important, particularly during the energy crises during the two world wars and the Middle East oil crisis of the 1970s and 80s. At some time or other almost all the forests were cut down, but owing to their high regeneration capacity they have grown again (as secondary forest).

These past threats have however been effectively neutralized and the situation in Uruguay regarding deforestation is very different from that of the other countries of this continent. The increase in and recovery of the country's forested areas can be easily measured and viewed with the new resource evaluation technologies, remote censoring and by comparing old against new photographs, etc.

The updated legislation to protect forest stocks has been effective in boosting interaction between the state and landowners on forest issues, with the result that in under 25 years it has been possible to reverse deforestation, increase the forest mass and recover primary forest for rational and sustainable use.

The increase in native forest areas can be seen by comparing the cartographic surveys undertaken from 1960 to date by the Military Geographic Institute, the Uruguayan Air Force and the Ministry of Agriculture and Fisheries (MGAP). It has obviously been more difficult to compare maps prepared with different methodologies, aerial photographs of differing scales or satellite images.

Nevertheless, between 1980 and 2012 assessments of forest resources have been made based on Landsat TM, which has produced a good basis for making reliable comparisons.

In 1980, the Forestry, Parks and Wildlife Department of the Ministry produced its Updated Forest and Priority Forest Soils Map based on aerial photographs and maps published by the Military Geographical Service (1966-67 aerial photographic survey), which showed the number of areas that had been planted up to 1978 due to beneficial tax exemptions.

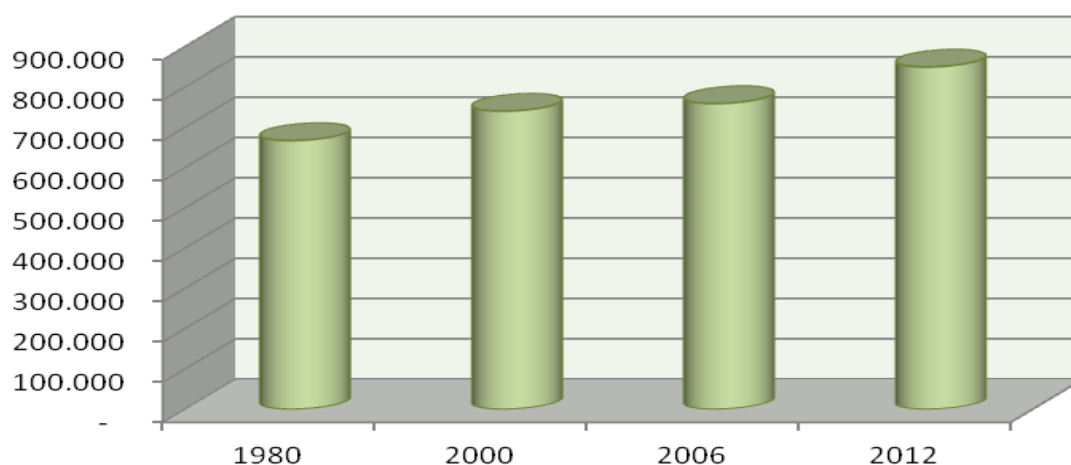
In 2000, work started on the "Basic Forest Map of the Oriental Republic of Uruguay", based on Landsat TM for the years 1997-1999, with digital processing. In 2006, working also on Landsat TM images from 2004, the GDF, in collaboration with the Renewable Natural Resources Department (RENARE) , produced the "Updated Forest Map for Uruguay: Year 2004 images. "

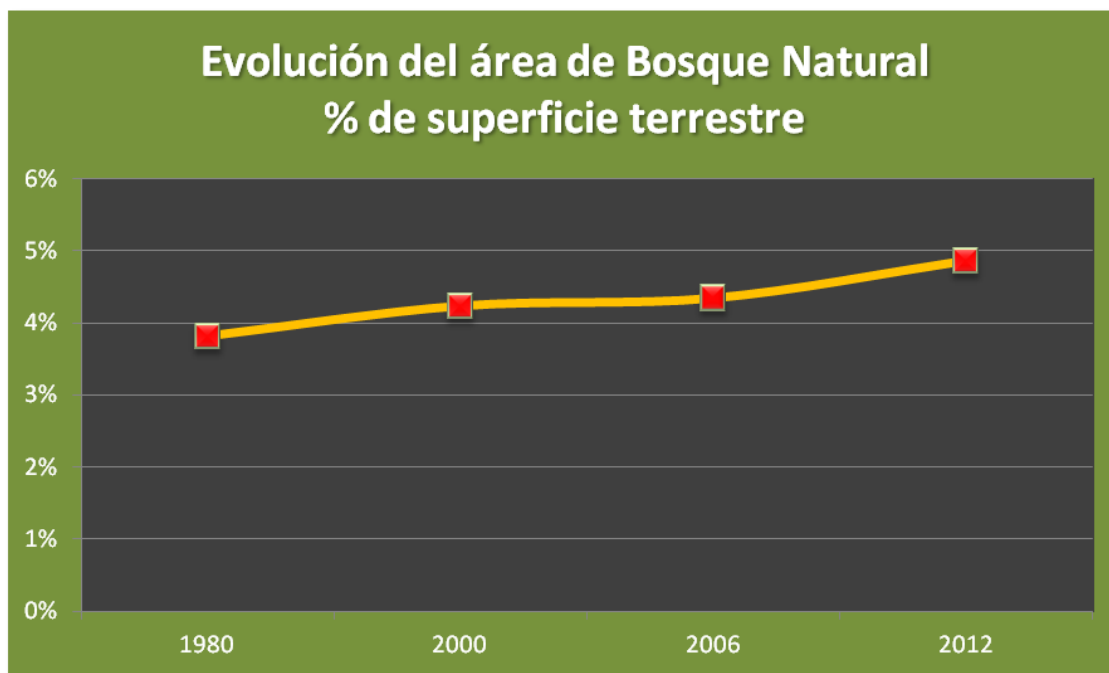
At present we have the latest updated map for year 2012 ("Updated Forest Map of Uruguay", based on Landsat TM of 2011, prepared by DGF, with support from PROBIO under UNDP Project URU/10/G31-486. This updated map is still being verified for inclusion in the fledgling National Forest Inventory.

From the above mapmaking efforts we can observe the growth of the forest resources in Uruguay, department by department, since 1980. In 1988, total forested area of 667.315ha was recorded, whereas in 2012 this total had reached 849.960ha, representing an annual average increase of 4% between 1980 and 2012.

Department	1980	2000	2006	2012*
Artigas	60.775	43.998	44.530	43.220
Canelones	6.618	7.439	10.744	22.282
Cerro Largo	61.223	58.034	63.215	65.987
Colonia	16.067	16.835	18.009	14.737
Durazno	17.382	18.734	19.840	23.249
Flores	9.738	7.559	7.943	4.737
Florida	17.984	20.172	20.513	30.976
Islas	-	39.507	-	-
Lavalleja	29.474	50.124	59.008	95.129
Maldonado	19.803	22.253	28.465	60.230
Montevideo	362	1.001	999	772
Paysandú	57.572	59.168	66.296	58.762
Río Negro	33.510	39.507	43.748	62.342
Rivera	39.843	62.358	63.129	53.639
Rocha	88.380	35.391	39.999	37.687
Salto	34.670	48.244	51.617	45.702
San José	16.003	15.091	17.009	21.258
Soriano	30.450	34.632	34.838	26.357
Tacuarembó	94.003	115.347	121.885	120.603
Treinta y Tres	33.458	44.939	47.429	62.291
TOTAL	667.315	740.332	759.216	849.960

Evolución del área de Bosque Natural





Source: DGF-MGAP, Ing.Agr. Ricardo Echeverria

Degradation

Photo interpretation tools are very effective in confirming the existence of forest areas and their development over time. However, these instruments have not yet been applied over the years to detecting the levels of forest degradation or relative or total loss of species. Research needs to be undertaken on these items by sampling different areas, with technicians present *in loco* at the time the measurements are being taken. This kind of exercise will obviously require more resources.

The Forest Monitoring Program based on the DGF's National Forest Inventory has already selected sampling plots in native forests and continues to assemble data on tree species and their frequency. By comparing these results with primary forests that have been saved on account of their inaccessibility and which now form part of the ongoing or prospective SNAP projects, it is possible to gain some idea of the amount of degradation that is taking place.

The IFN is planned as an ongoing inventory based on systematic repeated sampling. It is therefore considered to be a key tool for quantifying evolution of forest degradation.

A number of possible drivers of degradation can be detected. In the past degradation was due to the native forest being used to provide wood for house construction, furniture making, fencing and animal sheds, tool handles, etc. All these activities caused degradation due to the selective extraction of commercially viable species. Given that there are currently few remaining specimens to be removed, such practices have fallen into disuse.

Nowadays the main risk threatening development of the forest ecosystem is cattle which use the trees for shelter and to provide forage in periods of drought or winter cold. Compaction of the ground due to cattle traffic, and bark damage caused by animal bites negatively affects grown trees and prevent younger specimens from regenerating naturally. Private owners who have kept cattle and horses away from their

forests (either totally or partially) have experienced a significant change in the growth and development of some species not seen before in those areas.

On the other hand, using wood for domestic consumption in farms is officially allowed. Although the actual amount of timber likely to be extracted for energy generation and fencing, etc. is less than forest growth, nevertheless the quality of the wood and shafts available at least inhibits people from putting pressure on larger size, denser native species with better carbon sequestration conditions.

In short, the relative frequency of the most valuable native species in the ecosystems has declined either due to animal grazing, extraction of wood for farm buildings and fencing, or to substitution by invasive exotic species.

Forest research experts concur that “degradation of most of the forest ecosystems is a cause for concern.”

The difference in canopy height and tree density between adjacent areas - one suffering from grazing and the other free from invasion - is noticeable. Knowledge is lacking on this point and it would be perhaps one of the key points to address in a REDD + strategy.

Invasive species

It is easy to observe exotic trees gradually displacing the native variety in our forests (some of the invaders might be ‘native’ but come from other parts of the country) and constituting highly virulent invasive species.

The biggest problems are caused by two alien species, *Gleditsia triacanthos* ('Espina de Cristo' or 'Acacia de Tres Espinas') and *Ligustum lucidum* (glossy privet). Less common are *Melia azedarach* (White Cedar) and *Fraxinus sp.* (Ash).

A REDD + strategy is needed that promotes the controlled management of these species, to avoid cross-fertilization between invasive exotic and native forest species that could undermine the ecosystem or put at risk and/or alter wildlife populations present in the area.

Some conservation experiences

The legal framework described above provides a framework for conservation of the native forest, and it is true that some forest producers and companies have applied management practices on an experimental basis. These include excluding cattle from predetermined places.

Since the 1980s the initiatives taken by the Botanical Garden, PROBIDES and EUFORES with their livestock exclusion efforts in the Palmares de Rocha (Rincón de Molina), and on the West Coast (in Quebracho/Paysandu) have proved the capacity for regeneration of the *Butia yatay* (By) and *Butia paraguayensis* (Bp) species which are at serious risk from extinction. The seeds from these have shown significant germination and resistance power. Moreover, FYMSA has noted that these palms thrive within pine forests in Rivera Department, as well as among eucalyptus on the farms run by the INC in Quebracho, where rapid repopulation was noted after the trees were cut. A further interesting observation was the remarkable seed germination in Rivera after glyphosate had been applied to prepare the ground for planting exotic species.

The 'Forestal Oriental' company also undertakes experiments with different herds and management in the woods of the Uruguay River plains, with varying results.

In Rivera Department, COFUSA has conducted livestock exclusion practices and selective management of native forests by controlling invasive species. This company also tracks native forest populations focusing particularly on overall turnover and species richness, primarily by taking account of the substantial existing diversity produced by the different environments: swamp, mountain and riverine.

Other key experiments on natural regeneration have taken place on the banks and islands of the Uruguay River (Isla Del Zapallo, Carbonera and Misionera), where substantial recolonization capacity is currently observed as well as the formation of new gallery forest in areas that were previously devoid of trees due the building of the Salto Grande dam.

Experience so far, although not particularly wide-ranging, does show that practices such as excluding grazing from native forests and curbing extraction of invasive species, followed by planting higher value species, are highly efficient methods for better forest conservation and for reversing its degradation, protecting biodiversity, retaining the biological corridors and enhancing the capacity of forests as a carbon sink, with the resulting benefits for climate change mitigation, providing local jobs and improving the habitat quality - all fitting within REDD + objectives .

DGF Conservation Strategy

By providing the benefits still granted to the owners of native and protected forests (such as relief from national and departmental taxes), the State has sought to finance environmental services produced by the forest ecosystems by encouraging farmers to conserve and manage their forests in a sustainable manner.

This is a conservation strategy with various long, medium and short term goals.

- In the long term, Uruguay wishes to achieve native forest conservation in order to:

- ☐ Enable sustainable utilization of species in the ecosystems.
- ☐ Preserve genetic diversity.
- ☐ Maintain ecological processes of vital system.

- In the medium term we seek to:

- ☐ Obtain excellent management techniques which will allow us to zone and protect most of the native forest ecosystems. We have fixed a target of maintaining 80% of the forest area as a prohibited extraction zone, with the 20% remainder subject to a sustainable production system.

Finally, in the short term we aim to:

- ☐ Bring the domestic wood requirements of each rural property into line with market demand for the product, and to seek to exert maximum control over protection of the natural resources.

Registration Procedure

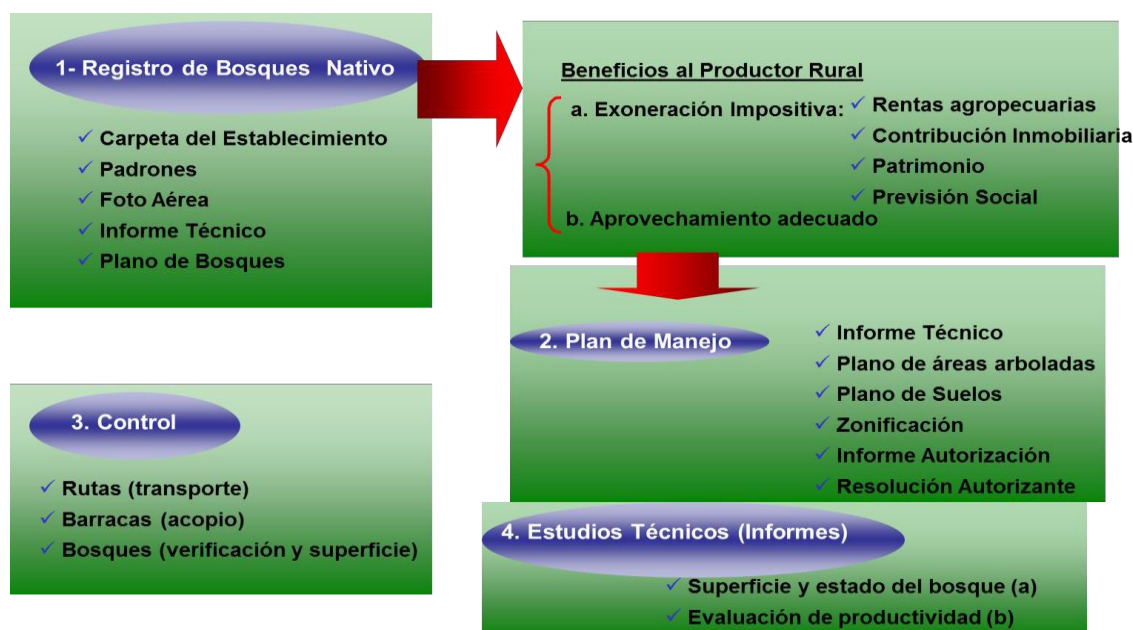
In order to establish appropriate native forest Management Plans, DGF has unified the various registration procedures in an overarching plan. This plan involves an owner submitting a technical report, signed by a professional agronomist engineer, which contains a qualitative and quantitative assessment of the species, frequency, ground cover, density, sanitary condition, estimate of standing timber, etc, accompanied by an aerial photograph, a plan of the forested area and measurements, together with land registration documents and proof of ownership of the areas, all certified by a notary. With these inputs, a standard numbered file containing the above documents is opened and after due evaluation and verification by DGAP technical staff, certificates are issued granting exemption from land taxes (Rural Property Tax), Tax on Accrued Assets (*Impuesto al Patrimonio*), Tax on Agricultural Rents and Social Security Bank tax liabilities.

These certificates are awarded annually against sworn affidavits regarding the status of an owner's forest area(s).

In the event that owners wish to manage forest for farming purposes, to provide shade and shelter for livestock, or to access water therein, farmers are also required to produce a Management Plan and Technical Report accompanied by relevant maps, operating schedules and estimates of the amounts of timber to be extracted, etc.

Once the Management Plan is approved the party concerned is awarded the appropriate permits together with guidelines covering the transport and sale of the extracted wood.

OUTLINE OF PROCEDURE



The DGF has generated 3,650 of these dossiers registering areas of native forest, totaling 500,000 ha. (with maps on a scale of 1:20,000) in 19 of the country's departments.

DGF has approved Management Plans for 1,650 rural producers (180,000ha of "authorized" forest) to date. These plans are at various stages of implementation: some interventions are already completed, some of the plans are in progress, while others are not yet in force.

The outcome of the process (Management Plans authorized) has led to 35- 40,000 tons of timber products (mainly fuelwood and stakes) being sold every year, and between 2,500 and 2,700 transport guides issued to 530 fuelwood sales points (*barracas leñeras*) throughout the country.

DGF technicians are responsible for doing a comparative analysis of the plans and approved transport guides against the annual consumption data of private firms, industries and households (MIEM). This reveals that some illegal logging of forests evidently takes place. When the same numbers are compared with the productivity of native forest ecosystems it is clear that there is still ample scope for conservation.

Institutional Capacity

In Uruguay all native forest owners (public or private) are prevented by law from cutting or degrading the forest in any way. They are individually responsible for conservation, and a system of penalties exists in the event of an owner breaching or defaulting on the existing statutory obligations regarding forest conservation.

A set of "practices" "activities", "standards" and controls" also exists basically used by private forest technicians and the forest service, which together are interested in promoting sustainable use and in situ conservation of forest biodiversity.

Illegal logging, detected as the result of complaints/allegations or remote imaging techniques, is dealt with

in the field by a technical team, which is responsible for applying the corresponding penalties. Similar procedures are applied to the permits (authorizations) system: these are inspected prior to any work being undertaken and during and after the work, to ensure that the appropriate technical criteria are met. In the event of serious anomalies being detected the DGF initiates an internal administrative process to calculate the penalties owed by the offending landowner.

For owning, transporting and selling native forest products, a key tool is the abovementioned "forest transport permit" (*guías de tránsito*) that links forest being harvested with the 'sales outlets'. These *barracas*, 530 in total, are required to be registered, keep a record of transport guides and produce sworn statements regarding the size of their stocks.

According to the DGF, an average of 96 inspections per year take place for various reasons (illegal handling, false registration of forest areas, etc). This involves teams of two inspectors, armed with the relevant files (described above) visiting farms or firms in an official vehicle (sometimes accompanied by police officers) to review and check the status of the relevant forest area, issuing an Inspection Notice to the owner of the property and drafting relevant technical reports. This procedure enables the government to track several thousand hectares per year, and in cases where owners have afforestation projects on their farms, the teams are able to present data obtained from previous inspections of neighboring forest areas.

An average of around 140 *barracas* is inspected per year. This involves qualified inspectors liaising directly with the police, enforcing the transport guide system, detection and control illegal possession and the unauthorized transport of forest products. They also are instrumental, together with the Highway Police, National Maritime Authority and the Customs Authority, in the detection and control of illegal logging.

The penalties applied as the result of monitoring *barracas* have varied from year to year: management of the scheme has been problematic, especially in the early days: in 1996, 78 cases were brought (38 initiated by police and 40 by the DGF); in 1997, 86 (36 by the police and 50 by the DGF). The total of penalties in subsequent tended to drop: e.g. only 40 in 2001 (13 by the police and 27 by DGF).

In summary, the above controls have resulted in significant penalties, and confiscation of machinery and equipment (e.g. chain saws, trucks and bulldozers).

Monitoring Forest Resources (National Forest Inventory - IFN)

The Forest Inventory forms part of the MGAP/GDF program to monitor forest resources. Its main function is provide well-researched, systematized and up to date information on forest resources, given that Uruguay has committed itself to the Montreal Process, etc and intends to comply with the criteria and indicators for the conservation and sustainable management of temperate and boreal forests contained therein.

The IFN provides tools for assessing and monitoring forest resources for the country's strategic planning. It is a permanent tool used for the assessment of forest resources and plays a key role in overseeing the methodology for collecting, processing and analyzing the information generated.

The IFN system is based on stratified sampling of forest resources using forest mapping obtained from satellite images. IFN goals include improving the quality of national level information to generate data in an increasingly efficient, cost-effective and reliable manner.

IFN methodology aims to build a large-scale forest inventory. In addition to assessing the usual dasometric information, it also assembles and presents data on the different types of forest, their different stages of development and the use to which the natural resources are put. The Inventory also includes a temporal analysis for estimating the dynamics of forest cover according to comparison years.

Updating information on forests requires methodologies that combine remote sensing and field data, to include aspects related to biodiversity, carbon storage and other forest-produced services.

Effective monitoring of forest resources and data recording is essential nowadays for assessing forestry trends and prospects. Dependable, timely and easily accessible information on forest activities serves as the basis for developing policies to promote Uruguayan and foreign investment in the forest sector and especially for addressing more effectively the challenges of mitigation and adaptation to climate change and reducing GHG.

The inventory methodology, defined some time ago by DGF experts, has been revised by inventory experts from INIA, the Faculty of Agriculture, DINAMA, and FAO (NFMA -Rome), UNDP and IDB.

The inventory has identified 4,769 permanent plots within the entire National Forest, taking each 361ha of forest as a sampling unit.

Two stages of the inventory have been completed: in 2009-2010, with UN (ONEUN Program) and FAO support; and in 2010 with support from the IDB. As a result, data has been obtained on over 1,600 permanent sampling plots equating to over 560,000 ha of native and planted forest (35% of Uruguay's forest resources).

The 2013-2014 stage is already in operation and we plan to work on 1,565 permanent sample plots of which 992 are natural forest and 573 planted forest.

Once this stage is completed we will have covered 70% of our entire forest resource.

The Forest Inventory is part of the Forest Monitoring Program undertaken by the DGF and approved by the National Budget Law for FY 2014. The DGF is fully committed to running the program with its own resources. Funds still need to be secured to ensure the IFN continues to operate as from 2015.

The IFN also has a number of other objectives: to address the quality of landscape, forest goods and services, estimate stock sizes according to different types of forest, establish quality indices, prepare production tables and estimate current and future wood production and extraction – all aimed at providing a picture of the forest industry's future and its labor requirements.

Secondary objectives include involving public and private institutions in the results analysis, improving technical skills and obtaining the appropriate equipment to ensure continued operation of a continuous forest monitoring system.

An Advisory Committee chaired by the DGF, consisting of representatives from INIA , DINAMA and the Faculty of Agriculture tracks implementation of the various monitoring tasks.

The continuous forest inventory has been designed to generate information on forest resources and their dasometric characteristics (species, ages, densities, volumes, growth rates and future projections) and on the phytosanitary situation, surfaces, soil types, flora, fauna and conservation status.

The inventory feeds the forest information system with the data for meeting the criteria and indicators for the conservation and sustainable management of temperate and boreal forests (Montreal Process).

It also provides specific information on surfaces, stocks and the situation of rapid growth forests, as well as on natural and protective clusters likely to experience fewer changes in surface and evolution. Measuring of the former is scheduled to take place at five-year intervals, and at ten-year intervals for the latter.

The first phase of IFN started in 2009. This defined the layers and sub-layers of forest areas with similar characteristics. Design of the sampling method was followed by the relevant fieldwork.

The surface surveys of surfaces occupied by forest produced the following result: Uruguay's forests total 1,721,658 ha, of which 969,500ha are planted forests. The latter account for 56 % of the total and native forests (not including 70,000 ha of palm) for the remainder (44%).

Tables of volume and other data on native and exotic species, frequency and density of the native forest are also available.

Uruguay, for the first time, has thus begun to undertake a forest inventory covering the entire national territory. At the same time, DGF expertise has improved in terms of methodological approach, operation, execution, storage, processing, analysis and reporting of results.

It remains for us to measure all the plots established. Sampling exercises in future will provide reliable information on the evolution of the forest. These exercises need to be complemented, particularly in the national forest, with quantified data on inter alia the types of soil carbon, roots, humus and biomass, to enable us to adapt better to the REDD + process .

One of the tasks of the REDD + strategy to be adopted should be to strengthen the IFN in order to establish both the baseline and set the stage for future developments.

2a.6 Institutional strengthening linked to the forest

We consider that it will not be possible for the DGF to achieve its strategic goals without greater knowledge of local forest ecosystems to enable it to establish the key criteria required for effective conservation of the real value of the ecosystem, rather than it simply achieving productive sustainability measured in terms of physical volume of wood products.

We possess limited knowledge of the ecological functioning of forests, and current forest management, although very important in terms of conservation efforts (which also meet the requirements of rural producers), leaves much to be desired, i.e. forest management needs to possess the objective means for calculating which species have greater ecological value, and whether this value correlates to a species' productive value.

In addition to the above problems, institutional constraints slow the implementation of the practices and controls necessary to ensure proper compliance with rules and plans. To improve this situation we need to:

1. Promote the development of institutional capacities by:

- a. Increasing the number of technical and semi-technical staff involved in management, to ensure development of all the activities;
- b. Putting together a suitably qualified team, to use its field experience and thus act as a generator and source of knowledge in the management and utilization of the forest resource is an essential requirement for overcoming existing technical and operational constraints;
- c. Training at national and international level, especially in planning, forest ecology and nature conservation;
- d. Decentralizing activities to take account of the country's forests in the different regions;
- e. Improving capacity for analyzing forest degradation using the DGF/IFN system;
- f. Using the IFN to measure carbon sequestration.

2. Develop further the protection and control systems aimed at:

- a. Intersectoral coordination, primarily with the Interior Ministry (MI) and its policing units within the Highway Police;
- b. Strengthening the transport permits system for shifting native forest products, and ensuring effective stock control by companies engaged in trading these products;
- c. Improving the legal impediments that limit efficient resource protection;
- d. The possible introduction of special regulations to shorten administrative processes in cases of illegal anti-environmental behavior.

3. Promote research and production management techniques, requiring:

- a. Closer monitoring of logging permits, using field survey data (the most effective monitoring method available to the government); correcting errors, collecting basic information and investigating forest management methodologies etc;
- b. Concluding R&D agreements with INIA, the Faculty of Agronomy (UDELAR) and other research and educational institutions with a view contracting studies, conducting surveys and processing information on the ecological values to be fostered in management plans;.
- c. Establishing production, vulnerability and resilience rates (i.e. recovery capacity of native forest areas once modifying action has finished);

- d. Organizing outreach meetings at different levels (technical, companies, farmers, forestry workers to disseminate plans etc;
- e. Incorporating ways and means for funding conservation activities.
- f. Undertaking research on the use of native forest as an NTFP producer. Note that Uruguay's primary forest has shown substantial ability to produce native fruits and as a source of germplasm for improving cultivable fruit species (guava, *guabiyú*, *pitanga*, etc.).

Challenges and Opportunities

Apart from the successes and failures experienced in the creation and implementation of regulatory and policy instruments to control the drivers of deforestation and forest degradation in Uruguay, admission to a REDD + represents a very good opportunity to upgrade and make more effective use of a natural resource of substantial importance.

We plan to undertake research and analysis within the R-PP by experts, in order to identify the options the country has for updating its relevant legal framework and implementing mechanisms to strengthen action against the drivers of deforestation and degradation.

The ban on logging of natural forests and tax exemption on forested land, together with the Management Permits issued by the MGAP, were valuable tools in the past which succeeded in containing and reversing deforestation (as evidenced by the comparison mapping described above), although they were ineffective in slowing degradation.

Admission to the carbon market mechanism for reducing emissions from deforestation and avoided degradation represents a challenge for us to upgrade and modernize our tools.

In the course of the R-PP we must decide how to incorporate the different type of producers, as well as the communities located near to forest areas but which do not regard forests as a source of work or of non-wood products or services. In this respect we need to work with advisors to address the following subjects:

- Legal - To study the possibility of updating and strengthening the law to make it more effective in controlling the drivers of deforestation and degradation and adapting to the new challenges of the carbon market;
- Forest - To design forestry systems for implementing sustainable forest management plans in line with local conditions;
- Education - Mechanisms to encourage awareness of the new techniques and to foster training.
- Socio-Environmental - Social and environmental monitoring methodologies.

Table 2a: Summary of Assessment of Land Use Land Use Change Drivers, Forest Law, Policy and Governance Activities and Budget (Follow-up activities needed)						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Analysis and proposals for strengthening the Legal Norms	Analysis of existing rules and their effects	15				15
	Proposals for updating regulatory framework for adapting it to the carbon market	10				10
Assessment of the sector and identification of the drivers of deforestation and forest degradation	Analysis of sectors competing for soil use	5				5
	Activities contributing to degradation	8				8
Examining experiences of MFS of native forest	Collect and list past and ongoing experiences	4				4
	Dissemination	8				8
Total		50	0	0	0	50
Government*		20				20
FCPF		30	0	0	0	30
UN-REDD Program						0
Other development partner						0

* In cash

2b. REDD+ Strategy Options

2b.1 Background

As we noted in Component 2a, the vast majority of the country's native forests were at some point more or less cleared to provide fuel for energy and timber for building houses and other rural facilities. This was the main reason for the Uruguayan forest to decline in the first half of the 20th century.

This process was effectively reversed in the second half of the century: planted forests became a viable and profitable option from the 1980s, informal logging was banned by law, and laws and regulations were introduced to control the extraction and selling of native woods.

The forests revealed a great capacity for regeneration and recovered quickly from over-exploitation. Moreover, virgin land was discovered for growing trees on appropriate soils in areas where forests had not previously existed. This increased the size of Uruguay's forested areas. As a result the country is now one of the few that can lay claim to negative rates of deforestation (i.e. no reduction of forest mass).

However, while objective evidence exists of the increased extent of native forest areas no assessment has yet been made of the state of degradation and depletion of valuable species from an ecological angle. As mentioned before, some signs exist of degradation can be seen by comparing the still-remaining areas of primary forest with secondary forest areas (the most common in Uruguay).

This degradation process continues today, as can be seen from the fact that almost all our native forest is open to cattle, horses and sheep (although fewer of the latter, owing to their vulnerability to attack by wild animals). The few surveys carried out by producers or research experts reveal that exposure of forests to grazing is slowing the natural regeneration of many species as well as stunting the growth of existing trees.

Native species are also being replaced by intruders (mainly *Gleditsia triacanthos* and *Ligustrum lucidum*), that seriously affect the habitat of wildlife species and run counter to biodiversity conservation, maintenance of native species germplasm and undermine the prospects for utilizing the areas for NTFPs and environmental and recreational services.

This situation presents a range of possibilities for a REDD+ strategy, given that steps are needed to encourage more proactive policies for the recovery of natural forests and to transform these into a new source of income and employment for producers and communities in the forest catchment areas.

Uruguay has been a pioneer among developing countries in implementing policies consistent with the objectives of the UNFCCC. We have submitted, for example, three National Communications to the Convention and, in 2004, in our 2nd National Communication we submitted a Program of General Measures for Mitigation and Adaptation to Climate Change, clearly showing the country's commitment. The 3rd National Communication included the National Response Plan to Climate Change, setting out the government's strategic guidelines for mitigation and adaptation.

The National Response Plan contains mitigation measures for the farming sector, and within this sub-sector measures for forests and afforestation, focusing especially on the following: 1) to promote the development of efficient forest plantations as carbon sinks, including "protective forests" to protect agricultural activity (i.e. shade and shelter), natural resources such as soil and water; silvopastoral systems and forests to produce knot-free sawing timber; 2) to foster the use of wood residues from the forest industry as alternative

energy sources; and 3) to promote and enhance the protection of native forests through more efficient implementation of existing legislation.

We believe that the actions contained in a sound strategy aimed at reversing deforestation of our national forest will contribute to climate change mitigation. Note also the priority initiatives being taken by our government to conserve forest ecosystems, preserve biodiversity and habitat and improve the quality of life local communities with, for example, the national SNAP protected areas program, and the monitoring by the DGF in an effort to learn more about forest conservation and other issues in accordance with its commitment to implement appropriate and effective sustainable forest management.

We have developed a number of research and training programs with international financial assistance which include the forest as a whole. This is the case for example of the National Forest Inventory (NFI) which has begun its task of collecting and analyzing data on both the native and planted forests.

The REDD + mechanism is a complementary opportunity that will help us to meet our ambitious goals of maintaining and improving levels of conservation, continuing to foster growth of the native forest, strengthening the capacities of relevant government departments which participate actively in the development of this new type of process for Uruguay, training staff in government departments who have in implementing the National Forest Program, reversing degradation processes, implementing processes for enriching the forest resource with species which, in addition to re-establishing themselves in the ecosystem, will increase carbon storage capacity, provide society with recreational services or non-wood forest products, protect biodiversity and serve as biological corridors and protectors of soils and water.

The REDD+ National Strategy prepared by Uruguay must fit into a framework of actions consistent with the national priorities mentioned, harmonize with the National Biodiversity Strategy (in compliance with Article 6 of the Convention on Biological Diversity) and with UNFCCC principles. In short, it needs to become a basic leveraging mechanism with its substantial potential to finance efforts to combat deforestation and forest degradation, enhance carbon and produce other long-term benefits.

The National REDD+ strategy will propose activities to address ways of controlling the drivers of deforestation. It will also focus on gaining knowledge about forest degradation and how to reverse it, managing invasive alien species, improving the NWFP and PES as a sink for CO², and establishing a national reference baseline to encourage public and private investment in forest carbon business.

We have discussed so far the basic thrust of the conceptual framework and design of the National REDD + strategy which must establish the methodological, technical and operational resources needed for leveraging and maximizing the efforts made to date and outline the future actions that we intend to take to address deforestation and forest degradation.

Uruguay is a smallish country with a fairly even geography and no huge contrasts between communities in different areas of the country, given the relative homogeneity of its people and territory. Although our forest ecosystems have been described as having differing characteristics, they have not in fact experienced markedly different processes with regard to deforestation or degradation. Therefore we do not consider that ecological, social or regional differences warrant stratification in the development of a REDD+ strategy. On the contrary, we believe that a single strategy taking the country as a whole into account would be much more effective for achieving our desired goals. The Government, in turn, hopes that the implementation of the National REDD + strategy will act as a springboard for highlighting the role of the ecosystems in the

country's development plans, and complement current and future public and private sector investments in the conservation and sustainable management of forests.

2b.2 National REDD + Strategy

The aim of this item is to analyze the actions that have been launched over the past few years, and demonstrate how they can link seamlessly with a REDD + strategy. Our purpose is also to set forth the options at our disposal for fighting the direct and indirect drivers of deforestation and forest degradation, enhancing conservation measures, enhancing forest carbon reserves and applying sustainable management and planning to forest areas.

Firstly, each option needs to be evaluated singly and separately in order to address each of the drivers identified. Based on these results, the strategy should define which actions can be implemented, where, how and in what type of area. At this particular stage of the readiness process a detailed analysis will be conducted of the drivers of deforestation and forest degradation and the best ways to address them, as well as how to coordinate ongoing with future actions. Following this analysis, it will be possible to specifically determine what to do, how to do it and in what areas.

As indicated in section 1a of this document, the Ministry of Housing, Land Management and Environment (MVOTMA) is the national authority on climate change and biodiversity conservation , and the Ministry of Livestock, Agriculture and Fisheries (MGAP) is responsible for formulating and implementing the National Forest Policy through the General Forestry Department (DGF) .

We have also mentioned a number of intersectoral coordination units also concerned with the environment, climate change, biodiversity and protected areas.

We therefore consider that to coordinate matters related to our REDD + strategy, the establishment of a REDD + Steering Group would help to focus actions as well as consolidate institutional and technical expertise on forests.

2b.3 Objectives of the National Redd + Strategy

A National REDD + strategy should have the following goals:

- Dependable reference levels and a robust national MRV system for carbon accounting. The strategy should prioritize research processes, capacity building and the creation of institutional structures required to establish national carbon accounts in a reliable way.
- It is essential to have a cross-sectoral view of the issue, seeking communication and liaison between the different productive sectors that generate or may generate deforestation and particularly forest degradation, preserve carbon sequestration and enhance the absorption capacity thereof.
- Plans must be made in a participatory manner. Arrangements must also be made to involve all relevant stakeholders at national and local levels, coordinating with departmental committees and departmental government development divisions, local councils and Mayors Offices, all of which are crucial for the proper implementation of the strategy. Local resource users, communities which interact with the forests, and farmers and settlers (*colonos*), must also be prioritized.

- We should seek to strengthen governance with a national vision of the issue while prioritizing decentralization of the management of the natural resource. The REDD + strategy must empower local governments to engage directly with the stakeholders involved in the decision-making processes regarding management of the resource, with a view to ensuring the successful operation of the process.
- Environmental and social safeguards need to be designed in a participatory manner, feeding a system which provides compliance guidance through the implementation of the REDD + mechanism.
- A cost/benefit analysis will be undertaken for the implementation of the activities, and a financial sustainability mechanism will be prepared taking into account all the international and national funding options.

2b.4 action lines REDD + strategy

The following matrix summarizes the options of the strategies analyzed:

ACTION LINES	ACTIVITIES	ENTITIES INVOLVED
To avoid deforestation by banning logging in native forests	<ul style="list-style-type: none"> • Institutional strengthening for: <ul style="list-style-type: none"> ○ Monitoring by remote sensing (support forest mapping update); strengthening capacities for IFN data processing, etc. ○ Processing data in each producer dossier: <ul style="list-style-type: none"> ✓ Geographic location. ✓ Forest type (primary, secondary, riverine, mountain, <i>quebrada</i> and coastal). ✓ Floristic composition of each canopy (technical report submitted). ✓ Frequencies by canopy of tree species (technical report submitted). ○ Field Monitoring and Inspections with field data collection: <ul style="list-style-type: none"> ✓ Floristic composition of each canopy (verification) ✓ Frequency of tree species (verification) ✓ Inventory of epiphytes, parasites, climbers ✓ Information on understory cover and mulch Types of soils and soil carbon content ✓ Data on type of wildlife/type of livestock usage ✓ Enforcement, infringements, penalties, etc. ✓ Updating penalties ✓ Penalties for repeated infringements. ✓ Formal and informal marketing. ○ Dissemination of the importance of the forest and its role in CC mitigation; extension activities in: <ul style="list-style-type: none"> ✓ Schools and colleges. ✓ ARU /SPF, Rural Federation, NGOs, etc. ✓ Forest-linked communities, Women's groups, Senior Citizens , local NGOs, etc. ✓ Training and capacity building of rural workers , women, youth, etc. 	MGAP MVOTMA MI MTSS UDELAR ANEP Local Govts. NGOs

ACTION LINES	ACTIVITIES	ENTITIES INVOLVED
Avoiding native forest deforestation and degradation through permits linked to SFMP	<ul style="list-style-type: none"> • Institutional strengthening for: <ul style="list-style-type: none"> ○ Monitoring by remote sensing (support forest mapping update); strengthening capacities for IFN data processing, etc. ○ Processing data in each producer dossier: <ul style="list-style-type: none"> ✓ Geographic location. ✓ Forest type (primary, secondary, riverine, mountain, <i>quebrada</i> and coastal). ✓ Floristic composition of each canopy (technical report submitted). ✓ Frequencies by canopy of tree species (technical report submitted). ○ Monitoring by remote sensing: <ul style="list-style-type: none"> ✓ Evaluation before and after harvest ○ Field Monitoring and Inspections with field data collection from each plot. <ul style="list-style-type: none"> ✓ Floristic composition of each canopy (verification) ✓ Frequency of tree species (verification). ✓ Floristic composition and tree frequency in remaining forest ✓ Inventory of epiphytes, parasites, climbers (pre- and post verification) ✓ Information on understory cover and mulch and its evolution after silvicultural treatment ✓ Types of soils and carbon stocks in soils ✓ Types of wildlife and type of livestock usage ✓ Timbre volumes extracted. ✓ Marketing methods and prices ✓ Environmental effects of logging work; tracks, stockpiles, etc resulting from logging activity ✓ Harvesting methods (manual or mechanical), using own or contract labor, enforcement of labor regulations, training of operators ✓ Monitoring forest transport permits. ○ Dealing with infringements, criminal allegations, penalties, etc ○ Control of marketing/sales channels • Analysis of data and results collected in the DGF databases <ul style="list-style-type: none"> ○ Establish Sustainable Forest Management Plans ○ Define potentialities ○ Investigate FWP,NWFP, PES and GHG 	MGAP MVOTMA MI UDELAR UTEC INIA UTU LATU Empresas forestales privadas

ACTION LINES	ACTIVITIES	ENTITIES INVOLVED
To avoid deforestation and degradation by enhancing local capacities	<input type="checkbox"/> Outreach activities focused on: <ul style="list-style-type: none"> Local schools and colleges Farmers (in coordination with ARU/SPF, Federación Rural, NGOs, etc). Forest-linked local communities including women's groups, Senior Citizen groups, etc Training and capacity building of forest workers <input type="checkbox"/> Dissemination of results in specialist publications, newspapers, magazines, etc.	MGAP MVOTMA UDELAR UTEC UTU INIA SPF NGOs
To avoid degradation and to promote conservation of carbon stocks by developing forest protection	<input type="checkbox"/> Forest fire fighting: <ul style="list-style-type: none"> Equipment Fire-fighting crews. Training in fighting forest fires <input type="checkbox"/> Prevention and warning systems for forest fires: <ul style="list-style-type: none"> Forest fire risk indices Surveillance and response systems Introducing rules for forest tourism Training in, and dissemination of, preventive measures <input type="checkbox"/> Precautions and prevention of environmental damage <input type="checkbox"/> Regulating and controlling hunting <input type="checkbox"/> Forest health <input type="checkbox"/> SNAPs.	MGAP MVOTMA MI UDELAR UTEC
To increase capacity for stocking CO2 through regeneration and colonization of native forest	<input type="checkbox"/> To promote effectively partial or total exclusion of livestock <input type="checkbox"/> To generate research and technological development for growing and regenerating native species <input type="checkbox"/> Collection of seeds; direct v plantation seeding <input type="checkbox"/> Study of successions <input type="checkbox"/> Isolating new areas in order to foster native forest growth <input type="checkbox"/> Buffer zones <input type="checkbox"/> Promote forest nurseries for growing native species	MGAP MVOTMA UDELAR UTEC INIA ARU
To avoid Def. and Degr. by using silvo-pastoral systems	<input type="checkbox"/> Financial incentives for developing systems <input type="checkbox"/> Generation of silvo-pastoral and agro-silvicultural techniques <input type="checkbox"/> Study native species in different systems <input type="checkbox"/> Collect data on experiences of silvo-pastoral and agro-silvicultural systems <input type="checkbox"/> Training	MGAP MVOTMA UDELAR UTEC INIA UTU
To avoid degradation by controlling species	<input type="checkbox"/> Promote control of invasive species by farmers with native forest areas on their land. <input type="checkbox"/> Studying and refining techniques and costs to ensure effective and efficient controls at lowest cost <input type="checkbox"/> Means of financing projects. <input type="checkbox"/> Training	MGAP MVOTMA UDELAR UTEC INIA UTU

ACTION LINES	ACTIVITIES	ENTITIES INVOLVED
Increase CO2 stocks by enriching with native species	<input type="checkbox"/> Studies on the ecological and timber value of the native forest species <input type="checkbox"/> Research on enrichment techniques <input type="checkbox"/> Monitoring enrichment systems <input type="checkbox"/> Quantification of conservation and enhancement of forest carbon stocks <input type="checkbox"/> Training	MGAP MVOTMA UDELAR UTEC INIA
Develop eco-tourism as a way of reducing def. and deg.	<input type="checkbox"/> Eco-tourism opportunities for owners and forest-linked communities <input type="checkbox"/> Benefits to eco-tourism of SNAP (protected areas). <input type="checkbox"/> Creation of trusts and other financial tools to facilitate private investment <input type="checkbox"/> Training	MGAP MVOTMA MINTURD
Reduce deforestation by focusing on selected farmers	<input type="checkbox"/> A large number of rural producers farm land under the aegis of the National Colonization Institute (INC). These could participate in native forest sustainable conservation and management schemes (e.g. Colonia Juan Gutierrez – Rincón de Pérez). <input type="checkbox"/> Farmers and communities located in a protected area (SNAP) could form a selected core of key stakeholders with an interest in reduction <input type="checkbox"/> These farmers could be introduced to silvo-pastoral systems <input type="checkbox"/> To seek project financing strategies	MGAP MVOTMA INC

1. Avoiding deforestation by banning logging of native forest

a. Existing legislation.

Logging of Uruguay's native forest has been banned since 1989 under the Forestry Law. Given the effectiveness of this measure, resulting in an expansion of the areas covered by natural forest, we believe that this approach fits in perfectly with the objectives of any REDD + strategy. One of our objectives will be to revisit this law with the aim of strengthening and bringing it up to date, and to introduce into it a set of measures to avoid degradation, conserve forest carbon stocks and increase the reserve capacity of forests.

b. Strengthening the DGF.

The strategy would include strengthening our national forest authority (DGF) with more human, technical and financial resources, in order to improve operations concerned with:

i. Remote sensing monitoring. The DGF is the government department responsible for preparing forest maps and managing the Forest Information System, including responsibility for the National Continuous Forest Inventory (IFN), both of which need to recruit qualified staff to meet the requirements of the Forest Monitoring Program (deforestation, forest fires, forest health problems, etc). Strengthening DGF manpower levels would have a positive impact on overall performance in all these tasks, in addition to alerting officials responsible for the supervision and control to visit the field to assess damage and repress unlawful activities.

ii. Data processing for producer dossiers.

Native forest records for tax exemption purposes are retained in files or dossiers assigned to each producer who has submitted a request for benefits within current law. These dossiers contain important information such as plans, surfaces and technical reports regarding the composition and status of the producer's forest, etc.

Resources are needed to build a database covering the more than 500,000 hectares of registered forest areas. This should contain data such as:

1. Geographic location and forest area per register.
2. Forest type, whether primary or secondary forest according to the various categories: fluvial, gallery, parkland, mountain, *Quebrada* or coastal.
3. Floristic composition of each canopy. The technical report on file must describe the species composition of the particular forest.
4. Frequencies: the same report to contain details of the number of individual species per surface unit in each canopy.

iii. Field Monitoring and Inspections, with data collection.

The file data must be verified *in situ*. However, given the high costs involved in examining each case, we propose to do this by focusing on sample cases. This procedure will involve verification and updating of the existing file data in the field, incorporating measurements on soil carbon content.

Financial resources are needed to do this, as well as technical resources such as surveying equipment and transport facilities. The appropriate entity (unit/department/office, etc) receiving these resources would be responsible for managing the field monitoring and inspections, or would contract the services out to third parties.

c. *Policing of infringements, imposing penalties, dealing with allegations, etc.*

The DGF leads on this, supported by the National Police. Manpower levels need to be increased and appropriate transport provided given that this task involves travel and considerable expenditure of staff time.

i. Updating the level of penalties.

Although penalties have been adjusted in 'Readjustment Units' in line with inflation and currently range from US\$400 to US\$12,000 per hectare, we need to put in place fast update mechanisms to reflect, for example, increasing land prices which can soon render the amounts of the penalties obsolete.

ii. Penalties for repeat infringements.

The law should be more severe in repeat cases of breaches by the same owners.

iii. Formal and informal marketing.

We need to examine more thoroughly the mechanisms involved in the sale (including informal sale) of native timber.

d. Promoting knowledge of forests and their role in climate change mitigation.

The native forest forms no part of the ordinary Uruguayan's cultural background and the general population is unaware of its economic and ecological importance, and still less of the role of afforestation in climate change mitigation and its benefits. It is extremely important therefore to organize the outreach activities which the DGF is already officially mandated to do. People with appropriate technical skills are needed for this task, to be focused on:

i. Schools and colleges, in coordination with the National Public Education Administration (NAPE).

ii. Trade, farming and business groups such as the Farmers Association and the Rural Association (ARU), the Forest Producers Association (SPF), the Rural Federation, and environmentalist NGOs engaged in rural training, etc.

iii. Women's organizations or groups, groups of senior citizens and local NGOs in towns and villages with links to the forest.

iv. Capacity building and training of rural workers who interact with forests, in coordination with the Ministry of Labor (MTSS) through its National Employment Committee (JUNAE), and the parastatal Committee INEFOP which runs training programs for rural workers, including women (PROMUJER) and youth (PROJOVEN).

2. To avoid Deforestation and Degradation by issuing permits for Native Forest Management Plans.

a. Existing legislation.

While the Forest law outlawing the felling of Uruguay's native forest has been effective in slowing deforestation it has not succeeded in halting degradation. The Law allows farmers to obtain Management Permits to intervene partially in forests on their land for providing shade and shelter for cattle, facilitating access to water, improving pastures, etc. Strengthening the management permit system to avoid degradation is in line with REDD + objectives. Also under this item it is necessary to reaffirm and update the Forest Law by incorporating provisions to prevent degradation and increase carbon reserve capacity.

b. Strengthening the DGF in order to facilitate:

i. Remote sensing monitoring. The DGF office responsible for forest mapping and managing the Forest Information System needs to possess the capacities for meeting the requirements of the Forest Monitoring Program focused on detecting degradation. Increasing the staff levels would have a positive impact on performance in all these tasks, in addition to alerting officials responsible for supervision and inspection to get out into the field to assess damage and halt unlawful activities.

ii. Management permit application data contained in individual producer dossiers forming the basis of a national database displaying:

1. Geographic location and surfaces managed.
2. Management in accordance with the type of forest.
3. The floristic composition of each canopy and their frequency by tree species.
- iii. Monitoring by remote sensing in order to appraise the situation before and after harvesting, verifying that surface areas conform to the management permit etc., granted. This will require evaluating the costs and benefits of using higher resolution images, etc.
- iv. Field inspections, with data collection related to each sample management plan in order to refine the database with information on :
4. The amounts of timber extracted compared with Management Plan estimates.
5. Sales methods and prices.
6. Indicators of the environmental effects of any work undertaken on e.g. opening access roads and logging tracks, etc.
7. A protocol describing logging methods, whether manual or mechanical, management by individual owners or outsourced contract labor, operator training and labor standards and controls.
8. Monitoring of transport guides issued.
- v. Policing of infringements, imposing penalties, etc in the event of non-compliance with management plans.
- vi. Controlling timber sales channels.

c. Analysis of data and results collected in the DGF databases

The above data will be a basis for a methodical analysis focused on the following:

- vii. Sustainable Forest Management Plans appropriate for each forest type.
- viii. Defining the potential of each group of forests as a source of timber and non-timber products and food (honey, mushrooms, fruits, etc.). Also to define payment for environmental services rendered by the forests in the protection of water resources and river basins, soils, biodiversity, landscape, and the trade-off in terms of GHG emissions caused by forestry tasks.
- ix. Coordination with the UDELAR Agronomy Faculty, UTEC, INIA, LATU, UTU, ANII, and private research and educational institutions and forestry companies, with a view to working up guidelines for Sustainable Forest Management (SFM), environmental quality indicators, and goods and services generation.

3. To avoid Deforestation and Degradation by Enhancing Local Skills

Since the native forest forms no part of the national tradition and the public is generally unaware of its importance from a cultural, ecological or economic point of view, Uruguayans generally fail to value its contribution to the environment and climate change mitigation. It follows that any effort to raise the public profile of the important subjects of conservation and sustainable forest management will contribute towards avoiding forest destruction and degradation.

Not even the rural communities or farmers are fully aware of the benefits of the forests they exploit. For most farmers the areas of native forest on their lands are a "wasted" asset and of no use to farming activities. Rural workers have the same attitude. Although this perception has recently improved with the increase in jobs and services produced by the forest industry, much remains to be done to transform society's passive attitude into one of proactivity in pursuit of the conservation and enhancement of forest ecosystems.

It is therefore important to undertake outreach, education and training activities as follows:

1. To target *schools and colleges* in the areas directly involved in afforestation, in order to impress on the new generation the significance of the native forest for future wellbeing.
2. To reach out to *farmers*, in coordination with ARU/SPF, the Rural Federation, NGOs, etc. in order to raise their awareness of the windows of commercial opportunity provided by forests on their lands, and to learn more about the carbon market and access to it. It is vitally important also to convey to these stakeholders the importance of taking a more holistic view of the sector in which they operate.
3. To engage the interest and commitment of *local people* living in the communities linked by geography to the forest or directly or indirectly dependent on forests. It is essential to encourage such people to have a positive view of this key resource and to take advantage of their legal right to free access to forests and surrounds for recreational purposes, while of course observing safety and accident prevention rules. Note that forest damage (forest fires, etc) is generally triggered by human error or neglect. People need to be aware that by not allowing herds of cattle into the forests and taking simple precautions (e.g. extinguishing camp fires) can contribute significantly to avoiding degradation and enhancing conservation.
4. To foster concepts and skills in *social groups in nearby urban communities* and groups in rural areas such as Women's, Senior Citizen and youth organizations. It is particularly important to attract younger people to take an interest in the forests as a potential source of work and which would avoid being uprooted from their birthplaces, families and friends. Disseminating knowledge of non-timber forest products and their production methods can inspire local people to engage in activities such as collecting, processing and selling edible fungi, native fruits (guava , *guabiyú* , *pitanga*, etc.), honey, handicrafts (using small pieces of wood, straw or wicker) or to provide ecotourism services on demarcated trails, and so on. Such opportunities need to be explored and exploited as a way of reducing deforestation and degradation.
5. To undertake capacity building and training of *rural workers*. Whatever their specific activity, rural workers must be encouraged to master the important concepts of caring for and preserving forest resources.
6. To disseminate results in specialist journals, as well as more generally in newspapers and magazines. Bringing the REDD+ theme to the forefront in the media, specialized or not, will make people aware of the importance of avoiding deforestation and forest degradation. Support should be provided to associations and guilds that publish monthly or weekly magazines, especially those that are already running campaigns on wildlife, forests and the environment.

4. Avoiding Degradation and Promote Promoting Carbon Reserves by Developing Forest Protection

Forest Protection in its broadest definition means any measures taken to prevent deforestation and protect the forest from degradation.

To meet the REDD + strategy goals we need to focus on the following actions:

1. Fighting forest fires, an activity which by law the Ministry of Interior and its Fire Department (MI / Bomberos) are responsible for. However, the Uruguayan Fire Department, mainly geared to firefighting in towns, has limited experience of forest fires in general and fires in native forest in particular. The Fire Department therefore needs strengthening in terms of:

a. Appropriate *firefighting equipment* for field use (4x4 vehicles, water pumps, tankers, etc) and individual firefighting accessories (backpacks, rakes, flails, etc).

b. *Human resources and crews*. Specialist crews should be stationed in highly dense forest areas able to move quickly to the affected area, and with appropriate leadership skills needed to organize the frontline human resources to help fight fires.

c. *Training the locals*. All the people living near to forests should be able to turn their hand to firefighting, as well as possessing first aid knowledge. It is therefore important to provide resources for local training in this respect.

2. Most companies in the forestry business possess forest fire prevention and alarm systems for their own forests and these should be extended to nearby native forests to provide protection for the whole sector. In order to capitalize on the procedures of private firms, the following need to be addressed:

a. To establish *forest fire risk indices* which can be understood easily and quickly by everyone in the population;

b. To implement surveillance systems and organize rapid response procedures;

c. To establish rules for preventing forest fires and other accidents caused by visitors. For this, studies are needed and expertise applied to dividing the forest into different sectors for ecotourism activities such as hunting, camping and photography;

d. Training and dissemination of preventive measures to raise awareness about the importance of extinguishing campfires and cigarettes and the negative effects on the forest environment of littering, discarding bottles and cans, etc .

3. Forest Health.

While natural forests are in natural balance with respect to pests and diseases, certain factors can upset this equilibrium to the detriment of the health of ecosystems. One obvious danger stems from the very expansion of the forested areas and the threat to native trees from bacteria and fungal diseases that currently affect the country's eucalyptus and pine plantations. Danger to native species also exists from the increasing inoculum. Thus the DGF, together with UDELAR/FAGRO, UTEC, INIA and forest producers (85%

belonging to the SPF), need to monitor and better understand the evolution of pests and diseases and take appropriate prevention and control measures to avoid forest degradation and reduced forest carbon stocks.

4. Environmental damage: prevention and precautions.

We need also to devote effort to investigating and disseminating the damage to the forest ecosystem by other productive activities.

We need, for example, to reinforce existing controls and regulations on hunting and set up new training arrangements together with the rural police and other relevant stakeholders for controlling this activity

The National Protected Areas System has taken the first steps in this direction which can be adjusted and continued under the REDD + strategy.

5. Increasing the Capacity to Stock CO₂ by Regenerating and Colonizing the Native Forest.

Farms generally contain areas which are marginal to their main productive activity and that could be better managed (e.g. by excluding grazing or by weed control), to encourage natural regeneration or by seeding native tree specimens.

To do this the following mechanisms need to be investigated:

1. To take effective steps to encourage farmers to partially or totally exclude cattle from forest areas, perhaps by introducing tax exemptions or increased benefits that would be worthwhile from a business standpoint.
2. To generate R&D of technology for growing and regenerating native species, with special focus on endangered species.
3. To develop seed collection, direct seeding and planting technology and to pay stricter attention to plant succession, etc.
4. To study the most effective procedures for isolating new areas on farms in order to promote native forest expansion in combination with buffer zones.
5. To foster installation and improvement of new forest nurseries to grow native species with a view to meeting the increased demand for saplings while the above stages are being developed.

6. Avoiding Deforestation and Degradation by increasing Forest Carbon Reserve Capacity with the Implementation of Silvo-Pastoral or Agro-Forestry Systems.

1. To provide financial incentives for developing these innovative systems. This involves seeking funding by the productive sector, in addition to Government efforts.
2. To generate appropriate silvo-pastoral or agro-forestry techniques.
3. Studies are required of the possibilities for including native species in these systems.

4. A number of isolated initiatives employing silvopastoral systems and agro-forestry exist which could be a useful source of data.
5. Capacity building of technicians and producers is needed.

6. Avoiding Degradation by Controlling Invasive Species

A phenomenon that has gained importance over in recent decades has been the emergence of exotic species in native forests. These have been responsible for overtaking native trees, rapidly transforming existing forests into mono-specific woodland, with serious consequences for biodiversity and other resources.

We believe it is essential to take specific actions to control invasive species (mainly *Gleditsia triacanthos*, *Ligustrum lucidum*, *Melia azedarach* or *Fraxinus sp.*), and to evaluate methods to enable us to control these species in order to prevent harmful interactions with native trees which can endanger the ecosystem and/or alter wildlife in the area.

Rules are therefore needed to:

1. Encourage forest-owning farmers to control invasive species.
2. Study and finetune techniques for introducing effective and efficient controls at the lowest cost.
3. Accelerate human resources training for work in this area.

8. Increasing CO2 reserves by introducing more valuable species.

Most of our native forest is the product of secondary forest growth resulting from the regeneration of trees which have been cut at some time in the past. In certain cases over-logging has taken place. This means that a forest often needs to be enriched with a greater variety of species of a higher ecological value, which in turn would lead to increased carbon reserve, one of the REDD + goals.

This strategic option should focus on:

1. Studies to determine the ecological and timber value of native forest species, in coordination with UDELAR, INIA and other valuable stakeholders.
2. Research on enrichment techniques: e.g. what to plant and how, how to best promote planting and growth of new saplings, etc.
3. Tracking enrichment systems to ensure use of the best techniques and to be in a position to properly evaluate increased carbon stocks (the main goal of this strategy).
4. Technical and other human resources training.

9. Reducing Deforestation and Degradation by Developing Ecotourism

One of the ways to curb deforestation and degradation is to seek alternatives that provide returns for farmers and local communities and which are in line with the conservation objectives of the REDD + mechanism.

A number of forest areas exist within the SNAP (or are in the process of being included in the system), or in private locations which are ideally placed for attracting eco-tourism from people living in relatively close large cities such as Montevideo, Buenos Aires, Porto Alegre and São Paulo.

The Ministry of Tourism (MITURD), UDELAR and DINAMA need to be closely involved in initiatives to:

1. Research ecotourism opportunities in the different native forest areas of the country, taking into account the different types of forest and the advantages that could accrue to local people and landowners.
2. Analyze steps already taken such as the incorporation of certain sites into SNAP protected areas.
3. Promote the creation of trusts to attract investment and provide project development alternatives, or consider other tools to facilitate private ecotourism initiatives.
4. Implement mechanisms for human resources training.

10. Reducing Deforestation and Degradation by Selecting Key Producers

A large number of farmers who manage land under the aegis of the National Colonization Institute could be encouraged to participate in native forest development projects (e.g. Colonia Juan Gutierrez - Rincón de Pérez).

For this to happen it is necessary to identify:

1. Settlers to take forward the REDD + initiatives aimed at adopting measures for conservation and forest SFM in INC-run native forests;
2. Encourage these settlers to adopt agro-forestry-pastoral techniques and systems (capitalizing on past INC experience);
3. Introduce Project Financing Strategies related to the various initiatives which could be adopted and progressed in an organized way by the settlers.

Strategy Options		Activity Area	Feasibility:			
			positive	positive		
			Policy and institutional	Sinergies with other strategies	Liable to generate conflicts	Leakages
Total ban on logging of native forest	Current laws have taken steps in this direction. However these legal provisions may prove to be insufficient for today's and future conditions	Legislation and regulations required for REDD+.	•	•	•	
		Monitoring by remote sensing or image technology.	•	•		
		Processing of data supplied from all individual farmers	•	•	•	
		Field monitoring and inspection, with data recorded and infringements appropriately dealt with	•	•	•	
		Suppression of breaches	•	•	•	
		Dissemination of the importance of the forest and its vital role in mitigation of climate change	•	•		
Permits for native forest management plans	Current laws in force have taken steps in this direction. However these legal provisions may prove to be insufficient for today's and future conditions	Analysis of data and results collected in DGF databases	•	•		
		Facilities (equipment and techniques) for monitoring via remote sensing	•	•		
		Sustainable Forest Management Plans to suit different types of forest	•	•		
		Definitions of the potentialities of each group of forests	•	•		
		Suppression of infringements	•	•	•	
		Controls on the marketing chains of native timber.	•	•		
To increase local capacities	To transform civil society's passive attitude to one of proactivity, in order to better conserve and improve the forests.	Improved training and availability of forest work force	•	•		
		Events to provide information and training for farmers	•	•		
		Development of opportunities for rural youth to gain diplomas or certificates	•	•	•	
		To train young people in local jobs in order to encourage them to settle locally	•	•		
		To increase capacity building of rural social groups (senior citizens, women, etc)	•	•		
		Dissemination	•	•		
To promote conservation of carbon stocks	Forest Protection means any practice that avoids deforestation and forest degradation	National Forest Protection System	•	•	•	
		Fighting forest fires	•	•		
		Prevention of environmental damage	•	•	•	•
		Regulating hunting and similar activities	•	•	•	•
		Forest health	•	•		
		SNAPs	•			

Strategy Options	Activity Area		Feasibility:			
			positive	negative		
			Policy and institutional	Sinergies with other strategies	Liable to generate conflicts	Leakage
Regeneration and colonization of the native forest	Manage areas with a view to promoting the regeneration or new planting of native forest	Provide effective incentives for partial or total exclusion of livestock from native forest	•		•	•
		Generate research and technical development for growing and regenerating native species	•	•		
		Seed collection	•	•		
		Study successions	•	•		
		Isolate new areas on farms and within buffer zones	•		•	•
		Promote forest nurseries growing native species	•	•		
Promote silvo-pastoral or agro-silviculture systems	Create financial and technical tools to develop SP and ASC systems	Provide financial incentives for developing systems	•		•	
		Generation of silvo-pastoral and agro-silviculture techniques.	•			
		Study of native species in different systems	•	•		
		Collect information on silvo-pastoral and agro-silviculture experiences			•	
		Training	•			
		Dissemination	•			
Combat invasive species	Provide more financial incentives for improving knowledge and techniques	Provide incentives for controlling invasive species by farmers owning land with native forests on it				
		Studying and fine-tuning techniques and costs for ensuring efficient and effective controls at lowest cost	•			
		Means of financing projects.	•			
		Commercial channels for timber originating from invasive species	•			
		Training	•			
		Dissemination	•	•		
Enrichment with higher value species	Provide more financial incentives for improving knowledge and techniques	Studies on the ecological and timber value of native forest species	•	•		
		Research on enrichment techniques	•	•		
		Monitoring enrichment systems	•			
		Quantifying the conservation and increase of forest carbon stocks	•			
		Training	•			
		Dissemination	•			

Strategy Options		Activity Area	Feasibility:			
			positive		positive	
			Policy and institutional	Sinergies with other strategies	Liable to generate conflicts	Leakage
Development of eco-tourism	To provide a variety of job opportunities	Opportunities for forest-linked communities and farmers with native forest on their land to benefit from eco-tourism	•			•
		Eco-tourism can benefit from the improvements already made in the protected areas system (SNAP).	•			
		Creation of trusts and other tools to encourage private investment in eco-tourism	•	•		
		Promoting the touristic attractions of forests	•		•	
		Training	•			
		Dissemination	•			
Selection of key farmers	An alternative productive activity for the INC	Identification of settler communities	•			
		Capacity building for INC settlers	•	•		
		Introduction of key farmers to silvo-pastoral systems	•	•		
		Strategies for financing projects	•	•		
		Mechanisms for interaction with non-INC farmers	•			
		Dissemination outside the ambit of INC	•			

REDD+ Costs and Benefits Plan

Within the context of our national development strategy, the REDD + process will be successful providing forest protection or its increased capacity for carbon sequestration is positive and beneficial to the country's development objectives.

It is necessary therefore to estimate costs and benefits at the time of project preparation, and to monitor the development of such costs and benefits throughout the lifetime of the process, since this information is vital for guiding future decision-making policies, research and investment.

In this estimate we need to take special account of the social and environmental benefits in terms of increased employment opportunities and improved working conditions, as well as considerations related to the environment and natural resources such as soil, water and biodiversity.

Our intention is to work with experts on the preparation of a plan for estimating the costs and benefits of the deforestation reduction strategies.

Preliminary proposal for cost/benefit estimation:

Costs of:		Topics	Cost
Opportunity	Conservation of the forest	Income REDD+ v grazing / ha.	
	Increasing carbon sequestration capacity	To increase stock of CO ₂ versus simple restoration	
	Reforestation	Agro-silvo-pastoral v agro-livestock raising	
	Difference of market prices for products	Marketing channels: CO ₂ versus agricultural basket	
Implementation	Land use planning	Options for managing areas	
	Regulatory arrangements	Modifying laws, etc as necessary	
	Forest protection, improvements in forest and agro-livestock management	Forestry v farming technologies	
	Increasing carbon sequestration capacity and carbón stocks		
	Workforce training	Good labor practices	
	Administration	Methods and procedures	
Transaction	Development of the REDD+ program	National Reference Level (RL or REL)	
	Negotiation	Agreements and disputes	
	Emissions reduction certification	Monitoring (MRV)	
	Stabilization, curbing leakages		

Assessment of leakage risks

As regards the project at national level we do not at present expect risks of leakage but factors that might cause such risks need to be monitored during the development of the process.

Experts will be engaged to monitor and evaluate leakage risks arising from the actions undertaken during REDD+ implementation.

Table 2b: Summary of the Activities and Budget of the REDD+ strategy

	Orgs involved	Activities or Sub-Activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
To avoid deforestation by banning logging of native forest	MGAP MVOTMA MI UDELAR ANEP, Local govts, MTSS, NGOs	Study of forest legislation	5				5
		Remote sensor monitoring	100	20	20	20	160
		Processing information from the dossiers of every farmer	10	10	2	2	24
		Field monitoring and inspections with data recorded <i>in situ</i>	80	30	30	30	170
		Suppression of infringements, criminal allegations, penalties, etc.	40	40	40	40	160
		Dissemination of the importance of the forest and its role in mitigating climate change	20	10	5	5	40
To avoid deforestation and degradation by issuing permits for native forest management plans	MGAP MVOTMA UDELAR UTEC INIA UTU MI LATU private forest firms	Equipment (apparatus and computers)	25				25
		Remote sensor monitoring	20	15	15	15	65
		Analysis of data collected in DGF databases	10	10	2	2	24
		Sustainable Forest Management Plans appropriate to each type of forest	50	20			70
		Definitions of the potentialities of each group of forests	15	10			25
		Criteria and indicators	15	3	3	3	24
To avoid deforestation and degradation through increasing local capacities	MGAP MVOTMA UDELAR UTEC UTU INIA SPF NGOs	Improved knowledge and availability of local workforce	5				5
		Information and training events	12	12	12	12	48
		Developing opportunities for locals to gain diplomas and certificates	8	8	8	8	32
		Dissemination	15	15	15	15	60
To avoid deforestation and degradation through increasing carbon stocks	MGAP MVOTMA MI UDELAR UTEC	National Forest Protection System	35	35	35	35	140
		Fighting forest fires	40	20	20	20	100
		Forest fire warning system	5	1	1	1	8
		Environmental damage	8	8	8	8	32
		Controlling hunting and similar activities	5				5
		Forest health	35	20	5	5	65
		Protected areas	15	5	5	5	30

	Orgs involved	Activities or secondary activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
Increase CO2 stocks through regeneration and colonization of native forest	MGAP MVOTMA UDELAR UTEC INIA ARU	To provide effective incentives for partial or total exclusion of livestock from forests	20	10	10	10	50
		Generate R&D for growing and regenerating native species	100	60	60	10	230
		Seed collection	5	5	5	5	20
		Study of successions	8	5	5	5	23
		Isolating new areas on existing farmland and in buffer zones	10	10	10	10	40
		Provide incentives for establishing nurseries for growing native species	20	20	20		60
Increase capacity of carbon stocks with the use of silvo-pastoral or agro-silviculture systems	MGAP MVOTMA UDELAR UTEC INIA UTU	Provide financial incentives to develop systems		20	80	80	180
		Generation of silvo-pastoral and agro-silviculture techniques	60	60	50		170
		Study of native species in different systems	60	60			120
		Collect information about different experiences of silvo-pastoral and agro-silviculture systems	8				8
		Training	35	15	10	10	70
Avoid degradation by combaten invasive species	MGAP MVOTMA UDELAR UTEC INIA UTU	Provide incentives to farmers owning land with forested areas on it to control invasive species	40	40	40	40	200
		Studies and finetuning of techniques and costs to ensure efficient and effective controls at lowest cost	80				80
		Means for financing projects.	30	30			60
		Training	35	15	15	15	80
Increase CO2 stocks by enrichment with higher value species	MGAP MVOTMA UDELAR UTEC INIA	Studies of the ecological and timber value of native forest species	50	30			80
		Research on enrichment techniques	30	15			45
		Monitoring enrichment systems	15	6	6	6	33
		Quantification of the conservation and increase in forest carbon stocks	10	10	10	10	40
		Training	35	15	15	15	80

	Orgs involved	Activities or secondary activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
Reduce deforestation and degradation by developing eco-tourism	MGAP MVOTMA MINTURD	Opportunities for forest-linked communities and farmers with native forest on their land to benefit from eco-tourism	25	10	10	10	55
		Eco-tourism can benefit from the improvements already made in the protected areas system (SNAP).	3				3
		Creation of trusts and other financial instruments to facilitate private investment	8				8
		Training	50	20			70
Reduce deforestation and degradation by selecting key farmers	MGAP MVOTMA INC	Identification of settler communities	5	5	5	5	20
		Capacity building for settlers	15	15	15	15	60
		Introducing farmers in this category to silvo-pastoral systems	30	5	5	5	45
		Strategies for financing projects	60	35	35	35	165
Total			1420	808	632	512	3372
Government*			800	400	200	200	1600
FCPF			620	408	432	312	1772
UN-REDD							0
Other development partner							0

* In cash

2c. Framework for implementation of REDD +

2c.1 National Legal Framework

The following are the key public policies designed by Uruguay over recent years which can contribute to implementing the REDD+ strategy at national level and the country's international commitments. We also describe liaison *modus operandi* between government institutions, producers and civil society as relevant stakeholders in the REDD + strategy implementation process.

According to the provisions set forth in Chapter 1, Article 133 of the Constitution of the Republic (Section VII on the proposal, discussion, approval and enactment of laws), "Any bill may originate in either of the two Houses as a result of proposals put forward by any of its Members or by the Executive through its ministers ... " and "Any bill determining tax exemptions will require initiating by the Executive... ". Law No. 15.939 of December 28, 1987, for example, referring to tax exemptions, was initiated by the Executive through the Ministry of Agriculture and Fisheries (MGAP).

In common with all bills, once a bill has reached the Legislature through one of its Chambers, it is submitted in the first instance to the relevant Committee for prior analysis, before passing into Plenary for the final decision. The Forestry Law was analyzed in the committee responsible for agriculture which provided an opportunity for different stakeholders to comment on the proposed bills in a spirit of active participation. Admittance to such hearings can be at the behest of the congressmen on the Committee or requested by stakeholders.

Decrees, originating in the relevant ministry and in due course signed by the President of the Republic and the Council of Ministers, are used to convey the major government policy guidelines emerging from approved legislation.

Certain formal and informal participative mechanisms provide a channel for public concerns to be fed into discussion on policy instruments.

In recent years informal participation has taken the form of well-attended (by environmental NGOs and others) outreach workshops on, for example, the Environmental Law, the Protected Areas Law and the Forest Practices Code. The environmental NGOs have emerged as new and active stakeholders in forestry matters, having kept a relatively low profile in the 1960s and late 1980s when the bases for forest development were first established (with the exception of the NGO Friends of Environmental Conservation which took an active role during the preparation and discussion of Law No. 15.939 of December 29, 1987). It is also worth mentioning that prior to the submission of the Forestry Bill by MGAP, considerable scope for participation existed and useful contributions were forthcoming from e.g. the Ministry of Industry and Energy, the Uruguay Rural Association, the Uruguay Rural Federation, the Association of Agronomist Engineers and the abovementioned APA environmental organization.

The Forest Act of 1987 is the main legal tool for the development of the Forest Sector, but given the complexity of the sector, other rules exist in the legal framework for implementation of a REDD + strategy.

The main policy instruments in this overall policy framework for the forest sector are the Regulatory Decrees contained in Law No. 15.939. These make it possible, given the general framework provided by the Forest Law, to coordinate forest policy with other sectorial policies as defined by the government. Thanks to the relevant decrees issued by the Executive, Uruguay's forest and environmental policy is substantially in line with the overall guidelines established by Congress in the 1987 Forest law.

As for the environment, Law No. 16.112 of 1990 led to the establishment of the Ministry of Housing, Land Management and Environment (MVOTMA) responsible for the formulation, implementation, monitoring and evaluation of plans for the protection of the environment and the implementation of relevant national policies.

Meanwhile, Law No. 16.466 (1994) ruled that protection of the environment against any type of degradation, destruction or contamination was of general national interest, and that cases of negative or harmful environmental impact caused by human activities should be duly rectified. The General Law of Environmental Protection (No. 17.283) awards MVOTMA specific responsibility for climate change and biodiversity.

Focused on forestry, Decree No. 435/994 of 21/09/94, regulating Law No. 16.112 of May 23, 1990, provided that plantings of over 100 ha, except DGF classified forests, would require, according to Decree No. 452/988 of 6/07/88, prior environmental authorization from MVOTMA. At the moment the DGF exception is not valid, meaning that all afforestation projects of over 100 ha. must have environmental authorization granted by the National Environment Department in accordance with Law No. 16.466 and its Regulatory Decree 349/005 on Environmental Impact Assessment. Forest-related industrial activities are subject to the same rules as the ordinary industrial sector.

The Forestry, Parks and Wildlife Department, established in 1966, highlighted the need for protected areas as "National Parks and Protected Areas". This responsibility was retained within what is now the MGAP and assumed by the National Parks, Protected Areas and Wildlife Division of the Directorate General of Renewable Natural Resources (RENARE).

As for policy on protected areas, MVOTMA is responsible for the National Protected Areas System under Law No. 17.234, which rules that the creation and management of a National System of Protected Areas is of general interest as an instrument for implementing national environmental policies and plans.

The appropriate conservation of land and water for agricultural purposes has been a constant concern of legislators and government authorities responsible for the protection, development and control of Uruguay's natural resources. It is also been a recurrent theme in Agrarian Law. Governing Law No. 15.239 of 1981 and a number of subsequent laws refer indirectly to land and water conservation (Decree No. 333 of 2004 and its amendments contained in Law No. 18.564, of 2009 and Decree No. 405 of 2008), sets forth the duties and responsibilities of

owners of agricultural land and farms of any kind where agricultural activities take place. These properties are required to conform to the basic technical standards approved by government and any practices that are considered to be improper must be avoided. Landowners are also obliged to submit their land use plans regularly to RENARE.

This regulatory framework is complemented by Law 9.481 of 1935 known as the Wildlife Law empowering the State to manage and regulate the use of wildlife. Article 208 of Law 16.320 (1992) confers powers of control and repression of crimes against wildlife throughout the entire national territory to police and customs officers, the National Maritime Prefecture and inspectors from the Wildlife Division of RENARE. The latter is also charged under Section 275 of Law 16.736 (1996) with issuing hunting permits and setting penalties for infringements (Article 285).

The Wildlife Law and subsequent rulings are regulated by a number of decrees, including Decree No. 164/996 (1996) which defines "hunting" as recreational hunting, commercial hunting, 'control' hunting, hunting for scientific purposes, free hunting, etc. The Wildlife Law also contains provisions about the use of animals and confiscated animal products.

Decree 104/00 (2000) authorizes sport hunting and sets rules on the transporting of certain species, the number of species that can be hunted and the hunting season applying to each of them.

As for health and safety in forestry work, Decree No. 372/99 (1999) sets forth in 16 sections regulations for defining the responsibilities and working conditions of all forestry staff; establishes training requirements; stipulates obligatory observance of rules regarding facilities (fixed and permanent installations, permanent or movable camps, temporary camps etc); sets standards for drinking water, food and first aid kits; regulates safe transport of personnel; establishes safety standards for handling machinery, tools, chemicals and other equipment; determines logging safety including the appropriate use of chainsaws and other equipment for manual or mechanical/manual logging and loading operations.

Since the introduction of these norms (a process involving the State, forest producers and workers, with ILO assistance), the Forestry Sector is now regulated in accordance with the demands of a growing sector and is proud to possess the highest globally-accepted standards of environmental certification.

As a result of the efforts to introduce labor and environmental regulations, a working group was set up to prepare and finalize a Code of Forest Practice. This group consisted of: the DGF (MVOTMA), the Ministry of Labor and Social Security (MLSS), the Faculty of Agronomy of UDELAR, the Uruguayan Agricultural Engineers Association (AIA), the National Agricultural Research Institute (INIA), the Forest Producers Society (SPF) and the Forest Contractors Association (ACF).

Uruguay has set itself the goal of achieving SFM in all its forests, including forest plantations.

LEGAL FRAMEWORK FOR IMPLEMENTATION OF REDD+STRATEGY				
Year	Law or Decree N°	Target	Tópica	
1967	Law	13.723	Legislature	1ª Forest Law
1987	Law	15.939	Legislature	2ª Forest Law
1988	Law	16.002	Legislature	Subsidies (Art. 45)
	Decree	431/88	DGF	National Register for Forest Contracts (<i>Prenda de Bosques</i>)
	Decree	849/88	DGF	Combating forest fires
	Decree	452/88	DGF	Declaration of forest land
	Decree	931/88	DGF	Subsidy for planting woodland
1989	Decree	247/89	DGF	Tax benefits for forests
	Decree	111/89	DGF	Fire prevention
1990	Decree	23/90	DGF	Transport of forest products
	Decree	333/90	DGF	Priority forest soils
1991	Decree	733/91	DGF	Tax exemptions
1993	Law	16.408	P. Legislativo	Ratification of Convention on Biological Diversity
	Decree	22/93	DGF	Protection of Native Forest
	Decree	26/93	DGF	New forest priority soils
	Resol.	17-36/93	DGF	Exemption from Social Security contributions for native and protective forests
	Decree	330/93	DGF	Management permit for native forests
1994	Law	16.466	P. Legislativo	Law on Environmental Impact Assessment
	Law	16.517	P. Legislativo	Adoption of UNFCCC
	Decree	435/94	DINAMA	Regulation of Law on Environmental Impact Assessment
1999	Decree	372/99	MTSS	Regulation of Forest Firms (Contractors)
2000	Law	17.234	P. Legislativo	Creation and management of a National System of Protected Areas
	Law	17.279	P. Legislativo	Adoption of Kyoto Protocol
2001	Law	17.283	P. Legislativo	General Law on Environmental Protection
2002	Law	17.453	P. Legislativo	Phasing out of the forest subsidy and its elimination as from 2007.
	Decree	188/002	DGF	Improved plan for protection against forest fires
2004	Code	-----	DGF	National Code of Good Forestry Practices *
2005	Law	17.905	P. Legislativo	Elimination of subsidies
	Decree	154/005	DGF	Repeals Decree 333/90
	Decree	349/005	DINAMA	Extends environmental assessment to commercial forests
2006	Decree	191/006	DGF	Modifies the law on forest priority soils
	Decree		DGF	Complements the above decree (191/006)
2007	Law	18.195	P. Legislativo	Development and regulation of agrofuels
2008	Law	18.308	P. Legislativo	Land management and sustainable development
	Decree	38/008	DGF	Quality timber and forests used by livestock

We have established over the years a set of policies and legal and technical instruments to define a reference framework for achieving the highest possible levels of economic, social and environmental efficiency. In addition, significant steps have been taken to comply with international agreements. These include defining the criteria and indicators for Sustainable Forest Management at national level, the introduction of the National Code of Forest Practices in 2004, together with the Forest Products Certification and Labeling efforts made by different private enterprises.

The National Code of Forest Practices highlights Uruguay as a country concerned with the sustainable management of its forests and associated natural resources.

The creation of the Forestry, Parks and Wildlife Department of the Ministry of Livestock and Agriculture in 1996 created the institutional framework for addressing the subject of National Parks and Protected Areas. Subsequently, this role was taken over by the National Parks, Protected Areas and Wildlife Division of the Renewable Natural Resources Department (DINARA) in MGAP.

A number of overlapping responsibilities resulted from the establishment of MVOTMA and the limits of competence of these bodies (MGAP and MVOTMA) are not entirely clear at present.

Law 17.234, enacted in 2000, declares of general interest the creation and management of a National System of Protected Areas (SNAP), as a tool for implementing national policies and plans for environmental protection.

Given that the Executive Branch is responsible for establishing the country's policy on protected areas, as part of its overall environmental policy, MVOTMA (through DINAMA) leads on the formulation, implementation, monitoring and evaluation of national plans related to protected areas.

The regulation of Law 17.234 identified the following areas as being a SNAP responsibility:

Uruguay: National Protected Areas System				
	Protected Areas	Current classification	Year of admission	Surface area
1	Parque Nacional de San Miguel	National Park	2010	1542 ha
2	Cabo Polonio y Costa Atlántica	National Park	2009	1650 ha
3	Esteros de Farrapos e Islas del R. Uruguay	National Park	2008	6327 ha
4	Localidad Rupestre de Chamangá	Protected Landscape	2010	12000 ha
5	Valle del Lunarejo	Protected Landscape	2009	30000 ha
6	Quebrada de los Cuervos	Protected Landscape	2008	4413 ha
7	Laguna de Rocha	Protected Landscape	2011	22400 ha
8	Rincón de Franquía	Habitat and/or species management area	2013	1150 ha
9	Grutas del Palacio	Natural Heritage Monument	2013	15 ha
10	Cerro Verde	Habitat and/or species management area	2011	8968 ha
Source: SNAP / MVTOMA				

Native forests are protected by the Forest Law. Of the five different types of forests existing in Uruguay, the riparian or fluvial forests throughout the country are genuine biological corridors, serving to protect the biodiversity of our native flora and fauna.

Logging in these areas is not only prohibited and their owners are encouraged, through government tax incentives to preserve them. To avail themselves of these tax reliefs owners of land containing native forests must first register their interest with the DGF.

The law allows extraction of wood from these native forests, but only for internal use by farmers. The amount of timber extracted is only a very small fraction of the total amount of annual growth in Uruguay. As mentioned previously, owners are obliged to submit a Technical Management Plan for permission to thin trees or undertake partial harvesting in order to open access to natural water sources or to provide fire breaks. The DGF issues a "Transit Guide" for wood produced in these cases. Over 1300 plans have been approved for a total area of 130,000 ha. (only 17.6% of the country's total forest resource).

Using this mechanism Uruguay has promoted the generation of veritable protection systems implemented by farmers and private companies in what could be called a private National Protected Areas System (APAP) (Nebel, JP - DGF/MGAP).

Regarding soil preservation, the Soil and Water policy is defined by the Decree Law on Soil and Water Conservation of 1981 and the Water Code (updated in 1992), both of which are designed to promote and regulate the use and conservation of soil and surface water for agricultural purposes. The main purpose is to prevent and control erosion and degradation to assist recovery and to ensure correct rainwater use and conservation.

DINARA (MGAP) is responsible for compliance with the provisions of the above Laws.

Wildlife regulations have been in place since 1935, which gives the State (under the Wildlife Law) powers to manage and regulate the use of wildlife. Police and customs officers, the National Maritime Wildlife Division and DINARA (Wildlife Division) have control over wildlife activities and enforcement. Hunting permits are issued by MGAP, which is also responsible for setting penalties for violators.

"Hunting" is defined under five categories: sports hunting, commercial hunting, 'control' hunting, hunting for scientific purposes, free hunting of certain limited species of animals and their transport (confined to authorized hunters in the relevant season).

2c.2 International commitments

As mentioned above, Uruguay is a signatory to a number of international agreements on environmental protection, most specifically to those related to climate change, biodiversity and forestry.

Under Law No. 16.517 Uruguay has been a signatory since 1994 to the UN Framework Convention on Climate Change, adopted in New York on May 9, 1992, and signed in Rio de

Janeiro on June 11 of the same year in the context of the UN Conference on Environment and Development. MVOTMA acts as the focal point for matters related to this Convention.

As a State Party to the UN Convention on Biological Diversity, Uruguay has made a proposal for National Strategy for the Conservation and Sustainable Use of Biological Diversity. This was prepared in 1998-1999 as part of a project funded by the Global Environment Fund, implemented by UNDP and undertaken by MVOTMA through the DINAMA.

Uruguay is also a signatory to the RAMSAR Convention on Wetlands and the Convention to Combat Desertification, for which MVOTMA has been designated as the national focal point, and to CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), with MGAP as the focal point.

Since 1995, Uruguay has subscribed to the Montreal Process involving the preparation of Criteria and Indicators for Sustainable Management of Temperate and Boreal Forests. The DGF (MGAP) leads on this.

2c.3 REDD+ Implementation Framework

In this regulatory context, implementing the REDD + comes at an opportune moment for achieving the goals established by Uruguay in its national plan for responding to climate change based upon sustainable growth together with social cohesion, within a process aimed at reducing poverty, social exclusion, inequality and sexual, racial, religious or cultural discrimination, as well as to improve the quality of life for all our citizens.

The goals set by our National Climate Change Response (PNRCC) include "coordinating institutional actions for an efficient response to climate change, to progress towards the comprehensive management of climate risk, to establish preventive adaptation policies which can contribute to protecting biodiversity and the ecosystems, to lessen the vulnerability of the population, to foster in the productive sector strategies of adaptation and mitigation that will tend to diminish vulnerability, to promote mitigation actions by taking advantage of the opportunities generated by the external framework for transferring technology, investment and access to the carbon market, to encourage participation by key stakeholders through education, capacity building programs, and to develop public awareness as well as to contribute to Uruguay's position in the UNFCCC negotiations and in the field of international politics. "

In the light of the above, the reduction of deforestation and degradation by undertaking actions to conserve and increase carbon reserves by involving the country in a REDD + process, is a priority objective for Uruguay.

Although we consider that we have kept pace with the parameters of a REDD + process, we believe that it is necessary for us to revisit some specific policies which, although they have been effective, nowadays would appear to be insufficient for avoiding deforestation, and particularly the degradation of our native forests, and for promoting the creation of new forest resources.

Regionalization

The smallish size of Uruguay (17.5 million hectares) and its relatively uniform geography, which is only 10% covered by forests (half of which is homogeneously distributed native forest) do not warrant dividing the country into REDD + development subregions.

Land ownership and carbon

Any REDD + strategy must, above all, take into account that land ownership in Uruguay is predominantly private (94%), with the exception of protected areas owned by the State.

As well as land being mainly in private hands, so are the rights over anything produced on it. This right is enshrined in the Land Management and Sustainable Development Law (No. 18.308 of 2008). Article No. 35 of this law (General Rights of Land Ownership) states that "the right of ownership of land includes the powers of normal use, enjoyment and operation of the property in accordance with its location, objective features and purpose in conformity with current legislation".

Note that in Uruguay the Surface Right to Real Property applies. This is also the case in Argentina where it is called the "Forest Land Real Property Rights Act" (National Law No. 25.509 of 2001), and Brazil where it is applied in both rural and urban areas (to buildings).

This right refers to the surface, not to the top layer of the earth's crust, i.e. not the earth in direct contact with the atmospheric space above it but to what is located in the soil and emerges from it. It is generally applied to buildings or to forest areas and effectively implies the status of "autonomous real right". This in certain circumstances can be temporary (as in Argentina where the maximum term for holding the right is 50 years). This right effectively grants to a third party the use, enjoyment and legal disposal of the surface of a property for the purpose of afforestation, acquiring dominion over a planted area or the purchase of an existing plantation or plantations, subject to taxation according to the real warranty right (*Derecho Real de Garantía*). The owner of a property retains the right to dispose of it and, in terms of land containing forests, any new purchaser of the property must continue to respect the right of previously constituted forest area.

However this provision does not apply to native forest. According to all jurists the abovementioned right must apply to 'artificial', protective or general purpose forests belonging to private individuals, but absolutely not to areas of native forest. Carbon rights obey the same criteria as other agricultural products and form part of the constitutional right to private property.

The constraints on property rights included in the provisions of Land Management instruments are considered to fall within the 'general interest' concept enshrined in Uruguayan law.

Owners of rural property are subject to the duties described in Article 37 of the Land Planning Law. These establish that the property must be put to good use and cannot be used for purposes contrary to those set forth in the Law's provisions. All property owners are required to maintain their property in safe, salubrious and attractive condition by undertaking appropriate conservation works to satisfy the requirements of the competent departmental government.

Furthermore, all owners are subject to the rules governing protection of the environment, natural resources and natural heritage, and must refrain from any activity which could prove detrimental. This includes the owner having a duty to protect the property from risky productive endeavors and to protect the cultural, historical, archaeological, architectural, artistic and landscape characteristics of the property. Finally, owners are subject to compliance with the rules on rehabilitation or environmental restoration in case of default on the above duties.

We propose hiring a legal consultancy as part of the REDD + project to assess the current situation with regard to specific legislation and to determine whether it needs to be updated or enhanced to achieve our goals.

REDD + Steering Group

As already proposed, we consider that for the purpose of achieving the necessary close coordination related to the REDD + strategy, establishing a REDD + Steering Group would focus actions and institutional and technical efforts on the important issues being addressed.

All public, private and civil society stakeholders involved should be invited to participate in discussions on upgrading the existing statutes as well as to consider introducing new rules.

Establishing the Steering Group, with the appointment of the relevant ministerial authorities, will form part of the preparation process for REDD + and it is intended that this Group would define a process in the space of its first year.

This Committee must be the body responsible for proposing a National Action Plan to reduce emissions from deforestation and degradation, and to promote the conservation of forest carbon with appropriate measures for increased capacity for retention; to work on the preparation of public policies for adapting the country's regulatory framework to REDD + (laws, decrees and regulations); to implement a National Register of REDD + activities; to decide on the national forest reference level; to observe the social and environmental impacts of REDD + strategies and safeguards; to work towards creating a dynamic system of monitoring, reporting and verification (MRV) and, finally, to facilitate access to the carbon market with a view to encouraging private investment in REDD + projects .

Given its dynamic and effective nature as a platform for horizontal integration between the different State bodies, the private sector and social organizations, this Steering Group will also serve as a grievance redress mechanism. It will also be in a position to organize technical advisory committees with expertise in specific subjects to maximize its overall performance.

1	REDD+National Plan of Action
2	Public compliance policies for regulatory framework
3	National Register of REDD+ activities
4	National forest reference level
5	Social and environmental impacts
6	Safeguards
7	Monitoring, reporting and verification
8	Access to carbon market
9	Foster private investment
10	Grievance redress mechanism
11	Training and dissemination

Given that the bodies representing forest companies and farmers will be represented on the Steering Group, we should be able to take advantage of the many studies and experiments that have been done in the private sector on forest ecosystems over the last few years in the context of the environmental certification process in which most have been involved.

Its other functions will include attending to the concerns presented to it, as well as to the various project requirements. As a State entity the Committee will also be in a key position to effectively promote investment by Uruguayan or foreign private agencies and to outline the appropriate tax policies to ensure an adequate return to society without stifling initiatives or affecting the correct distribution of social benefits.

As indicated in point 3 (table above) of the Committee's functions, this overarching entity will create a National Registry of REDD + projects and of the carbon trades emerging from each of them, publishing the details of these on its website to ensure that producers have access to the information they need and that the market is kept fully in the picture.

Funding Mechanisms

Given the slow return on forest investments in general it is necessary to examine different funding mechanisms that could potentially leverage long-term projects. These mechanisms are outlined below:

Tax Incentives

In Uruguay, tax incentives have played an extremely important role in the growth of the forestry sector, which for many years was a low-profile economic activity but which has quickly established itself as a major export earner together with meat and grains. These incentives have also contributed to the conservation of native forests, which have actually expanded in area. We now realize that not enough is being done in respect of conservation. The growth in forest areas

has to a certain extent become a negative factor given that little attention has been paid to managing them in the broadest sense.

An occupier of a native forest area can declare ownership, but is not obliged to improve it or to prevent its degradation. Few people have envisioned the valuable business opportunities which the carbon market presents, and even fewer have seen the value of protecting biodiversity, water and the landscape. Moreover few have been proactive in applying good forest management practices, given the complications that these can cause for production schemes.

We do not rule out the implementation of a tax regime to foster the application of modern and proven methods of sustainable forest management. This is one of the action lines we propose to study and propose within the REDD+ review and implementation process.

International Financing

International resources could be used for strengthening monitoring and evaluation mechanisms more transparently and efficiently and for facilitating access to existing technology, as well as for promoting projects and improving techniques and local scientific knowledge on deforestation and conservation.

Better knowledge and promotion of markets for non-wood forest products and payment for environmental services make sustainable management a feasible economic proposition. The Bank of the Oriental Republic of Uruguay would be the obvious body to take the lead on this.

Bank loans

Medium or long term bank loans are nonexistent at present. At the national level, the Bank of the Republic (BROU) played a major role in the initial development of the forest sector, with its long-medium term loans which included grace periods on interest and principal (10-12 years), achieved remarkable growth in the planted forest sector, and introduced a large number of small and medium investors to the timber market who otherwise would not have invested in this kind of business.

No credit lines existed at the time (and still do not exist) for managing native forests and therefore this is one more alternative worth exploring.

Private banks have shown no particular interest in this type of business, but they might be encouraged to intervene in certain REDD + projects which might produce intermediate profits rapidly from the sale of services and products such as non-timber forest products (NTFPs) or projects involving using timber for generating energy.

Other sources

Given the virtual non-existence of the above mechanisms we believe that companies interested in REDD+ should seek other channels distinct from the traditional credit organizations.

Alternative financial mechanisms should ideally allow investors to "enter" or "exit" credit arrangements quickly in order to avoid delaying project execution.

The Stock Exchange may be able to tempt investors with facilities such as Negotiable Debt Securities or some other arrangements for securing effective financing in line with REDD+ strategies.

Investment Funds, Securitization or Trusts to fund individual producers/groups of producers, Cooperatives and Investment Groups, might also be a reliable option.

A legal framework exists in Uruguay to facilitate non-bank financing. This is the 1999 Closed Funds and Securitization (Law No. 17.202), which defines the rules for the *modus operandi* of 'independent' funds consisting of assets owned by individuals or legal persons which can be used for investing in securities or other investment vehicles. These funds possess no legal status (*personalidad juridica*) and the shares must be controlled by an appropriate fund management firm which takes into account the risks and returns involved. This type of fund is not liable for the debts of its shareholders, depositors or asset managers.

Contributors to Investment Funds are co-owners of the goods which constitute the Fund's assets and these cannot be shared out while the Fund exists. However, potential creditors can however seek legal redress for realizing their holdings.

The Law provides for shares in an Investment Fund to consist of securities called named "bearer shares or units" (*titulos negociables*) and registered by the Fund Managers.

Investment Fund shares/assets may consist of securities registered in the Securities Registry of the Central Bank of Uruguay, government securities (domestic or foreign), bank deposits, securities issued and traded on the official markets of third countries and other assets authorized by the Central Bank.

Law 17.202 (1999) authorized the creation of closed-end funds whose specific investment goal consists of homogeneous or similar sets of receivables, mortgage or other guarantees, whose ownership is passed to the Fund. The Fund Management company may issue various classes of securities, representing multi-unit or credit shares.

All these provisions constitute the legal basis for the securitization of assets (sale of assets or long-term receivables, creation of titles or values). In the past such funds were set up for the forestry sector, channeling the savings of small and middle-grade investors, with more success than the companies promoting forestry investments with their public offers of land parcels for sale.

Subsequently, the Trust Law (No. 17.703) was passed in 2003. This described a Trust as an independent asset set up to provide income for a third party which is not permitted to dispose of the original asset. In this way it was possible to securitize the financial flows of an investment project.

Establishing a trust is an appropriate way to finance sustainable forestry projects, given that this vehicle is flexible enough to include and appraise different value categories (timber and non-timber products, forest-based services etc.) in a single project.

The Trust Law sets out a specific legal framework for financial trusts as financial instruments based on securities, goods, assets and trusteeship rights.

In the case of forestry projects, which involve highly diverse assets and rights, it is difficult to establish individual funding mechanisms. Moreover, the attraction of a sustainable forestry project is, as we know, its very diversity. Thus a Trust Fund by its very nature would be in a position to issue securities on different value categories such as timber products, non-timber products (mushrooms, fruits, oils, etc), forest services (grazing, shelter and shade,etc) and environmental services in the broadest sense (landscape, flora and fauna protection, carbon sequestration).

A major challenge to potential investors and others seeking to raise capital is to establish and quantify these value categories in a precise and suitable manner.

Two factors that can delay the process of setting up forest and/or environmental trusts are:

- 1 – Investors’ lack of knowledge of the carbon market and forest management activities and perceived uncertainty about future cash flows;
- 2 – Operators acting as Trust Managers or Trustees must possess (and demonstrate) a very strong ability to meet the demands of the businesses that they are proposing to invest in (i.e. to appraise sound and transparent projects).

While a forestry or environmental project itself may not be technically difficult, the sector’s overall profile as a sound investment proposition is still not assured. Potential investors often have little knowledge either of the actual content of the project or of the potential yields that could accrue from this kind of business.

Table 2c: Summary of REDD+ Implementation Framework Activities and Budget						
Main activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Financial strategies	Proposals for financial mechanisms	50				50
	Exchange of information with financial sector	5				5
Legal strategies	Study of legal framework	15				15
	Proposals for revising legislation	50				50
Total		120	0	0	0	120
Government *		10				10
FCPF		110	0	0	0	110
UN-REDD Program						0

2d. Social and environmental impacts during REDD+ preparation and implementation

2d.1 Social impacts

Uruguay emerged as an independent country with a small population of European stock and a few Amerindian groups, later to be increased in the course of the 19th century by large scale immigration from Europe.

By the middle of the century the population consisted of around 132,000 inhabitants, 62% living in rural areas. By 1900 the population had grown to over one million. The majority of newcomers headed for the cities, mainly for the capital Montevideo (the commercial center and thriving port), rather than taking up residence on the land, much of which was already appropriated by earlier settlers. The result was that although the rural population continued to grow in the early part of the 20th century, it represented an ever-decreasing percentage share of the total population. By the 1930s over 30% of Uruguay's people were living in Montevideo.

In more recent years, the total population has increased slowly as the result of the end of immigration and falling birth rates. As the result of mass movement from the countryside to the towns Uruguay now ranks as the most urbanized country in Latin America.

To understand what is meant in Uruguay by "rural population", we need to look at the criteria employed to describe the word "rural". This has been the task of the National Statistics Institute (INE) which since the 1963 Census has based its findings on the Populated Centers Law (No. 10.723) which gives departmental governments exclusive power to authorize the subdivision of land under their purview into "rural" and "urban" zones (the latter consisting of towns and

villages), and to take steps necessary for preparing street plans, building roads, etc within their domain. The “exclusive competencies” of the 19 departments have thus produced a country (and a population) divided into rural and urban areas.

At this point it is worth noting however that the departmental governments have not used commonly agreed criteria in this process. Some governments have for example employed purely fiscal criteria for awarding “urban” status to very small groups of houses and people, often containing fewer than 100 inhabitants. The outcome is that with the exception of the departmental capitals the country, according to the 1985 INE census, now has a total of 566 “population centers”, all with under 100 residents.

If the criteria normally adopted in the census reports of other countries (towns and villages of under 2000 inhabitants considered to be “rural”) 491 of the above population centers (87% of the 566) would be classified as “rural” and Uruguay’s genuine rural population would currently stand at 17% of the total population (from 13% in 1985).

In short, Uruguay is a heavily urbanized country. According to the most recent census data (2011), the total population is 3.286.314 (of which 52% are females) with an overall demographic density of 18 per km² which, despite being low, is nevertheless the highest of all the countries in the region. This population is predominantly of European stock (Spanish, Italian, French, Russian and German). Whereas the pre-Colombian peoples have died out, the population also contains a small number of afro-descendent and mixed-race people (8%).

According to the 2011 census only 176.000 (5.34%) are so-called rural dwellers, although a substantial contingent classified as living in small population centers actually work on the land. Of these only a very small number are forest-dependent.

As previously mentioned, assessment of the social impacts of REDD+ implementation on indigenous peoples and communities is not an issue in our case. Also, as noted, no ancestral land or resource-use claims exist in Uruguay.

There are however a few groups of small farmers and inhabitants who might see themselves as “affected”, and we must take this into account when implementing the REDD+ strategies, by ensuring their participation in prior and post discussions. This dialogue could result in highly positive alternatives being found for them to continue earning a living from the land. Discussions could also seek firm solutions to this group’s titling/tenancy problems in order for them to continue living permanently in the places where they have brought up their families.

Since no population groups live within the forested areas in any part of Uruguay (although some are linked to them), resettlement of individuals or families to other areas will not be necessary.

2d.2 Environmental impacts

We need to assess risks and identify the local environmental opportunities when considering the effects of future REDD+ strategies. The World Bank’s operating policies on environmental assessment (4.01) and forests (4.36) provide the framework for the present “readiness” proposal. Furthermore, Uruguay’s national legislation on the environment and forests constitute

a mandatory reference framework for designing the most appropriate tool for assessing the impacts of the REDD+ strategy.

We are hopeful that with the implementation of REDD+ activities we will be able to provide incentives for the conservation, appropriate use and rehabilitation of our forest areas. This calls for adopting measures to improve forest governance throughout the country.

2d.3 Framework for environmental and social risks management

With the goal of complying with the social and environmental policies and safeguards of the World Bank and the UNFCCC, as well as Uruguay's national legislation (and international legislation to which it is a signatory), and of guaranteeing the sustainability of the process, we propose to undertake a Social and Environmental Assessment (SESA) as an evaluation tool to be used before, during and after the entire process, with the aim of identifying the possible negative and positive impacts on different human groups and on the environment. The SESA will be used to consider the steps to be taken in response to these impacts and to measure the performance and outcomes of the proposed REDD+ strategy.

Although the SESA strategy is presented in the R-PP as a specific component of the proposal, its activities in effect cut across all the components and projects in terms of the potential impacts of REDD + well beyond the readiness stage.

An Environmental and Social Monitoring Framework (ESMF) will be devised in order to track SESA implementation.

During the information and early dialogue process in the local and national Consultation Workshops, the concerns of communities and rural workers regarding the potential impacts of a REDD + strategy will be identified. These concerns will be included in the agenda as part of the efforts to formulate a strategy to respond to this group's needs and interests.

Taking account the above concerns and technical guidelines for conducting environmental impact assessments, we propose to prepare a SESA containing the minimum elements that need to be considered when assessing REDD + impacts. Thereafter, we intend to continue analyzing the proposals received as part of the process of building the strategies, ensuring that the strategies all possess an environmental and social impact assessment framework and M&E indicators.

We propose to identify for the ESMF a set of social and environmental principles and criteria, together with their indicators, all of which will be defined in a participatory manner in line with environmental, economic and social development standards during the REDD + process.

World Bank Social and Environmental Safeguards

The social and environmental safeguards stipulated by the World Bank will be applied in line with UNFCCC safeguards (Cancun Safeguards) during the REDD + preparation phase.

Note that certain safeguards do not apply to REDD + processes, and among those that do apply, many are not necessarily relevant to Uruguay.

Specific safeguards such as that on Environmental Assessment (OP 4.01) is included in the ESMF, as is the safeguard covering transparent forest governance and participation of all stakeholders to comply with the general policies of environmental protection and social welfare (OP 4.36). These safeguards, in line with the goals of our National Forest Program and our international commitments, as well with our pledges under the Cancun Safeguards, are all taken into account in Uruguay's planned R-PP.

Given that that no indigenous peoples exist in Uruguay (or settlers in our native forests), the safeguards on the rights of indigenous peoples or resettlements (OP 4.10 and OP 4.12), do not apply. If any impromptu illegal settlements should occur these would be monitored and appropriate action taken.

Proposed Strategy for Environmental and Social Impact Assessment of REDD + Activities (SESA)

In a REDD + strategy the challenge is to establish a system of assessment and control based on key social, economic and environmental indicators in terms of governance, functionality and local autonomous development, including efforts to improve the quality of life of the population involved.

SESA and ESMF are ongoing processes during REDD+ implementation. Their scope will be defined on a participatory basis. We are planning to undertake evaluation and monitoring of impacts at both national and local level, building on the steps already taken by the National System of Protected Areas (SNAP), UDELAR and NGOs working in the respective localities.

Evaluation of Environmental and Social Impacts:

The following are the basic elements for assessing the environmental and social impacts of REDD + projects or activities:

1. Project Framework and Scope
2. Local Socio- Environmental Situation, with or without a project
3. Local social perception of REDD +
4. Potential impacts perceived by residents and local authorities
5. Identification of impacts on:
 - a. The environment
 - b. Society

- c. Local and national economies
- d. Cultural issues.
- 6. Possible impacts on:
 - a. Forests and forest services
 - b. Other ecosystems and ecosystem services benefiting from REDD + (Co-benefits)
- 7. Susceptible social, economic and cultural aspects
 - a. Customs and cultural practices
 - b. Leadership and governance
 - c. Livelihoods
 - d. Coordination with local and national organizations
- 8. Description of impacts

Environmental and Social Monitoring and Management Framework

To proceed with developing the ESMF monitoring of the impacts identified by SESA must continue, starting with:

1. Identification of impact indicators
2. An estimation of the magnitude of impact indicators
3. Definition of criteria for focusing the monitoring exercise
4. Revisiting the content of REDD + strategies in order to limit the impacts identified by the different stakeholders
5. Taking social and environmental prevention and mitigation measures
6. Agreement on an impact surveillance program
7. Designing a Socio-Environmental Management system to manage potential impacts
8. Establishment of a program of surveillance and social control
9. Agreement on dispute resolution mechanisms

SESA ACTION PLAN

Activity	Identification	Product	YEAR			
			2014	2015	2016	2017
CPR						
Public consultation						
Local sensitization workshops	Stakeholders,activity, cultural level etc.	Local social map Drivers of deforestation and degradation Causes of disputes Adjustment of dissemination methods Social monitoring indicators Identification of vulnerable areas and communities				
	Local social organizations					
	Women’ s groups					
	Local resources-communication, social,educational					
	Perception of REDD+					
	Perception of impacts (±)					
	Links with Mayor’s Office and/or municipal councils					
	Concerns					
National Workshop	National level stakeholders					
	National organizations					
	Human, technical resources, etc					
REDD+ SG						
Technical work						
Reports consultancies Technical development	Legal arrangements	Draft legislation (bills and norms)				
	Forests and services	Diagnoses and recommendations				
	Related ecosystems	Action lines to prevent impacts				
	Impacts and environmental damage					
Public consultation						
Local Workshops	Social impacts	SESA Framework				
	Economic impacts	SESA Procedures Protocol				
	Environmental impacts	Work Plan for Sub-Steering Group				
National Workshop	SESA Terms of Reference	SESA Monitoring Plan				
	Criteria and indicators for ESMF	Dispute resolution mechanisms for action by corresponding Sub-Steering Group				
Repetition of tasks and regular annual consultations						
End of R-PP						

Table 2d: Summary of Social and Environmental Impacts during Readiness Preparation and REDD+ Implementation Activities and Budget

Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Impact Assessment of REDD+ strategy	MGAS	80	50			130
	EESA	75	50			125
Dissemination	Documents	4	4			8
	Publications and distribution	8	8	8	8	32
Dispute Resolution	Audits	20	20	20	20	80
	Control measures	15	10	10	10	45
Total		202	142	38	38	420
Government*		10	5	5	5	25
FCPF		192	137	33	33	395
UN-REDD Program						0
Other development partner						0

* In cash

Component 3: Development of a National Forest Reference Emission Level and/or a Forest Reference Level

To measure the effects of activities that reduce emissions from deforestation and forest degradation and allow absorption or removal of carbon from the atmosphere through the conservation of forest carbon stocks, sustainable management of forests or increasing forest carbon stocks, requires an estimate of trends in forest cover and other land uses over time, in a scenario without REDD+ policy interventions. This trend estimation is then used to compare the performance of REDD+ interventions.

To determine a national or sub-national "national forest emissions reference level" (REL) or "forest reference level" (RL) (Decision 1/CP.16, Conference of the Parties to the UNFCCC),¹ a series of historical data and future assumptions is needed.

Information contained in this document will serve as a basis for future adjustments given that (i) the Convention United Nations Framework on Climate Change UNFCCC negotiations are still evolving; (ii) the guidelines on recommended practices of the Intergovernmental Panel on Climate Change (IPCC) have not been revised to address explicitly REDD +; and (iii) REDD + funding is still uncertain for many countries.

The purpose of this report is to prepare a tentative work plan to address data, methods and approaches that can be used for establishing a REL or RL for Uruguay.

3.1 Historical data available on the drivers of deforestation and degradation and other REDD + activities

a) Land use change, forest cover

The preface to the recently published *Map of Land Coverage in Uruguay (2007-2010)* highlights land cover and changes as issues of major importance if we are to satisfy the ever-increasing demand for reliable data to support studies and research at national, regional and global level aimed at understanding and analyzing phenomena such as climate change, carbon stocks accounting, agricultural development, natural disaster management, land use planning and management, biodiversity protection, etc.). Uruguay's Ministry of Agriculture and Fisheries, together with various other government agencies, has already undertaken various projects aimed at increasing knowledge and expertise on land subjects in our country.

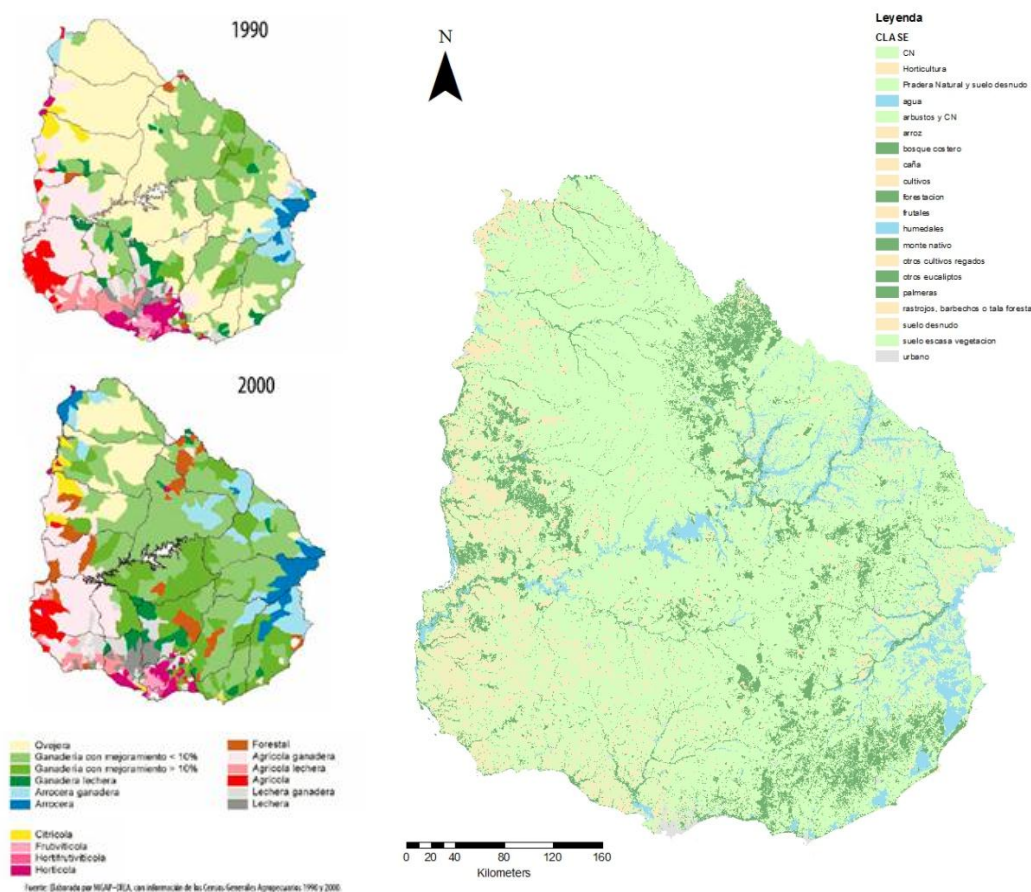
Uruguay has an area of approximately 176,000 km², with 93 % considered to be productive in one way or another. Widespread cattle ranching, taking advantage of the country's natural grasslands, occupies over 13.5 million hectares. Climatic and soil conditions also favor

¹ <http://unfccc.int/resource/docs/2010/cop16/eng/07a01.pdf>

agricultural production, an activity which has always been part of Uruguay's tradition, but which in recent years has expanded significantly in area and productivity with the advent of large scale soybean planting. Although the actual area devoted to farming is around 1 million hectares, afforestation (artificial planted forests and 'natural' or 'native' forest) comes second to cattle ranching in terms of land coverage (1.2 million hectares).

Note however that information on land use has been available only for a relatively short time in Uruguay (Figures 1 and 2). This means that there remains much to know and learn about land use past and present. It is particularly important to study the main drivers of change, which may or may not be replicated, but which could determine future changes in land use. Given that Uruguay is a major exporter of agricultural produce, with a highly privatized system of land ownership, land use and land use changes have not over the years followed any official land use policy or guidelines. In recent years, however, the State has woken up to the need to preserve and protect the environment, and nowadays oversees a whole series of laws and regulations governing the use of various components of the production system such as water, soil, workforce health, etc. The MGAP has also made a contribution, launching less than a year ago its Land Management Plan for land devoted to agricultural production, aimed at curbing the over-intensive use of agricultural land and preventing erosion. At the same time, good agricultural practices do exist which are not supported or mandated by any laws.

Figure 1: Land use in 1990 and 2000 according to DIEA (MGAP). Land use according to RENARE (MGAP, 2010)



As already mentioned in Component 1, afforestation is the most highly regulated productive activity in terms of laws and decrees applied to it. The first legal landmark was Law 13.723 (December 1968) which declared as ‘forest areas’ all land that was not suitable for any other permanent or advantageous use or purpose from the viewpoint of climate, location, altitude or soil conditions. This Law also provided for tax waivers for plantations deemed ‘protective’ or ‘productive’, and for native ‘protection’ forests and land adjacent to such areas and directly affected by them. It was not however until December 1987, with the enactment of Law 15.939, that the forestry sector saw its first major spurt of growth, as large tracts of unproductive poor land began to be planted with trees for commercial purposes, while native forest remained protected by law. These considerations (and others to be discussed later) are vitally important for developing RELs and RLs. The definition or development of this baseline scenario presupposes fixing a reference level to conform to the rules and regulations established to date. Since the terms are currently being negotiated and in a constant state of flux, our analysis will be based on historical data, trends and adjustments according to Uruguay’s particular circumstances.

One of the main issues to consider at future stages is a Uruguayan regional or national level for establishing reference scenarios. The different types of forests, both commercial plantations (*E. grandis* for sawn timber and *E. globulus* for pulp) and native forests (see table below), generally grow in different areas of the country and are surrounded by different activities e.g. farming on the west coast, ranching on the east coast. This means that the drivers of forest change or forest management can vary from region to region. It follows that a zoning scheme covering these components will be needed to provide a basis for determining a regional or national reference level.

As mentioned in the Guidelines, this basic research will include preliminary data collection and strengthening analytical capacities (using proven or unproven methods) that could probably prove to be of useful for the methods which UNFCCC and IPCC may eventually adopt vis-à-vis this specific topic. Once the R-PP implementation phase has commenced, Uruguay will undertake a more detailed study, assemble the appropriate data and proceed to establishing RELs or RLs. This general approach could well evolve during the course of the early work, possibly aided by additional guidance emerging from the international policy process which would help us to seek other data and improve our handling of the various methods and tools involved.

Types of native forest in Uruguay

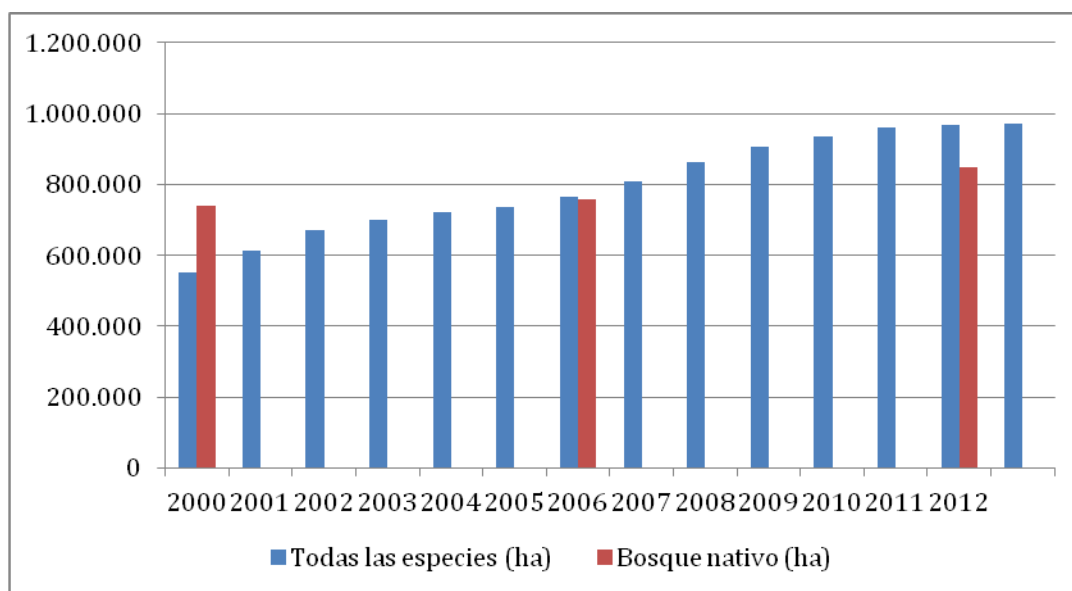
Type of forest	Description
Fluvial, riparian or gallery forest	The most extensive type of forest, this follows the country’s main watercourses
Parkland (<i>monte de parque</i>)	Typical of the banks of the Uruguay River, parkland or savannah forest consists of scattered clusters of different species on grassland and serves as a link between the fluvial forest and herbaceous communities

Hill forest (<i>monte serrano</i>)	The second most extensive type, hill forests grow in the highest part of the sierras (low mountain ridges), and given their proximity to the headwaters of virtually all Uruguay's rivers they fulfil a crucial role in the conservation of the hydrographic basins
Quebrada forest (<i>monte de quebrada</i>)	Quebrada or 'ravine' forest occupies the humid canyons and deep gorges of the north and northeast of the country. Characterized by high density, large sub-tropical species, this type of forest owes its better conservation status to its location, which makes logging difficult
Coastal or psammophile (<i>monte costero o psamófilo</i>)	Grows on the littorals of the River Plate and in lowland areas near the Atlantic coast. Although the species are no different from those in other areas, their association and localization constitute a unique formation.
Palm tree forest (<i>palmares</i>)	In the southeast <i>Butia capitata</i> occupies around 70.000 ha. while <i>Butia yatay</i> cover around 3.000 ha in the northeast. These palm formations have suffered the impact of livestock activities, with cattle feeding on young plants and preventing regeneration of the species.

Over the past twenty years the picture in the forest sector has been one of steady growth. Resources for forest monitoring have been regularly available since 1980, although the first aerial photographic survey was done as far back as 1966 by our Military Geographical Service, followed in subsequent years by National Cartographic Plans and Forest Maps produced by different ministries.

Among the various methodologies used for mapping the forests, Landsat images have made a major contribution. The "Assessment of Forest Resources in Uruguay with Landsat Images" project (MIE - FUNCATE, 1985) showed that Landsat images were, and remain, invaluable as a primary source of data for mapping forest areas and timber inventories nationwide, with one key limitation in certain cases: species recognition. Meanwhile, we adopted a simple method for estimating volumes of standing timber: *in loco* observation, linked to the classification of forested areas by using a two-stage inventory.

The Forest Map of the Oriental Republic of Uruguay (2000) was prepared in 1997-1999 and updated in 2006 and 2012 (funded by three different projects). Since all three mapping exercises were based on the same data source and methodology, the results can be easily compared (see Table below), which is not the case with the data from other studies done previously using differing methodologies.



The change in areas under the IPCC Land Use, Change of Land Use and Forestry (LULUCF) sector reflects the increased amount of land that has been forested over recent years. Although deforestation has not been a general issue in Uruguay, we must emphasize however that no exhaustive evaluation has ever been done to detect sporadic cases.

The information obtained from these predominantly MGAP studies, is passed to the Ministry of Housing, Land Management and Environment to serve as a basis for the Uruguay GHG National Inventories.

b) Biomass removal (harvesting native forest and commercial plantations)

The area size and cumulative growth figures for Uruguay's native forests and commercial plantations up to 2004 and 2006 are shown in the following tables (according to the DGF):

Collected up to 2004	Thousands of ha	IMA m ³ /ha/yr
E. grandis y E. dunnii	205.3	25
E. globulus	305.1	17
Pinus eliotii and taeda	211.2	24
Other planted forests	33	20
Native forest with little intervention	488.8	0
Secondary native forest	225.6	2
Native forest in formation	37.6	4

Collected up to 2006	Thousands of ha.	IMA m ³ /ha /yr
E. grandis y E. dunnii	211.0	25
E. globulus	328.4	17
Pinus eliotii and taeda	226.3	24
Other planted forests	60.2	20

Native forest with little intervention	488.8	0
Secondary native forest	225.6	2
Native forest in formation	37.6	4

The area numbers are obtained from DGF surface maps, while the annual growth data (in m³/ha/year) for *Eucalyptus* and *Pinus* species originate from the planting project applications submitted by private companies to the DGF. The figures reflect the real production of the private companies which run 100% of the plantations of these two species.

Growth data on native forests are based upon the expert opinion of DGF technical staff members, and therefore lack field verification and genuine scientific value. Although logging native forests is prohibited by law in Uruguay, except for special waivers approved by the GDF (see section 1.b.1), the reality is that little knowledge currently exists on the native forest's status in terms of area, growth or volume of wood in stock. Cutting from native forests is generally done for energy generation purposes, and although the Ministry of Industry, Energy and Mines and the MGAP possess (allegedly conflicting) data on fuelwood use, it is not clear how reliable this is. According to the GDF data from the abovementioned permits, whereas 20% of the native forest area is intervened (not for clear felling), only 6% is actually harvested thanks to the constraints imposed by such permits.

Although the native forest area has been steadily growing since the introduction of the laws to protect it, some infringements have occurred involving more cubic meters being extracted than officially authorized.

The native forest has traditionally been a ready target for lumberjacks (*monteadores*) or others who make a living from cutting and selling firewood in the towns and cities, regardless of Article 24 of Forestry Law No. 15.939 which prohibits "logging, cutting or any operation that threatens the survival of native forests," except in cases where the wood is intended for domestic use in or on rural properties, or when specifically authorized by the DGF. In recent years, the MGAP Native Forest Department has awarded more than 1000 "cutting" permits incorporating native forest Management Plans. These permits are inspected in the field by DGF technicians to determine how, how much and where cutting can take place. Such inspections can be before, during or after permits are issued.

Up to a few years ago, the DGF dealt with a yearly average of 60 infringements of native forest law. Complaints can be submitted on the department's hotline. Most of the serious infringements are committed by farmers and others who plant wheat, soyabean or pasture are not obliged to submit requests for specific authorization (e.g. agricultural or dairy firms), while forestry companies must register with the DGF if the land accommodates areas of native forest. The upshot is that MGAP has direct control of the native forest in some cases and in others supervision is based simply on a complaints procedure.

One example of successful government/public cooperation which could be replicated throughout the country was in 2007 in Florida Department where the DGF and the MGAP's Responsible Production Program authorized 10 *monteadores* to extract up to 2,500 kilos of glossy privet (*Ligustrum lucidum*) per week and receive in exchange horse-feed and fuel for chainsaws. Given that glossy privet is an invasive, exotic species which affects all the local

forests in that particular region, the permit was duly issued. At the same time, a campaign was mounted in Florida Department to draw public attention to the need to preserve the native forest and native species and assist tree regeneration by helping to keep invasive plants under control.

There are some circumstances however that simply fail to respond to planning controls or attempts to regulate the increasing volume of native forest timber now available. For example, a few years ago the fine for unauthorized logging of native forest timber was very low, and given the value of the land and the products that could be extracted from it (milk, meat, grains) induced many farmers to pay the fine rather than leave parts of their land " unproductive". These penalties have now been increased to reflect higher market prices, and additional rules have been introduced stipulating that any gains from auctioning machinery, fuelwood, etc. seized from illegal *monteadores* will be distributed to those responsible for preventing and/or reporting the illegal act in the first place.

One totally uncontrollable area is the 2,000 kg authorized limit on harvesting and transporting native forest timber. This amount can be trucked without operators needing to produce a DGF permit. Since no way exists to quantify these cargoes it is impossible to determine how much is being transported.

c) Livestock

According to the GDF, the area of native forest has increased over the past 20 years. In contrast to the majority of other Latin American countries, Uruguay not only does not suffer from deforestation but the native forest is actually increasing in size. On the other hand, we have certainly experienced the effects of native forest degradation.

One of the more noticeable drivers of degradation is due to cattle grazing in native forest, trampling and compacting the soils, thus preventing the successful regeneration of species and curbing the growth of adult trees. Management measures need to be taken to exclude temporal grazing is bound to lead to better tree development and prevent degradation.

Little data exists at present on growth rates or how much carbon Uruguay's native forest can stock.

d) Farming

Uruguay has experienced substantial changes in the farming sector, including the consolidation of a system of extensive farming/ agriculture typified by the growing number of agribusinesses occupying increasingly vast tracts of land. Owing to fierce competition for productive land, agribusiness has caused the displacement of some social type farmers both within the extensive agriculture sector and elsewhere.

Agribusiness targeted on growing grains for export and livestock fodder can limit, regulate and sometimes cause contraction of the country's forested areas. To date, large-scale agriculture has apparently not clashed with the forest areas since their soil types are totally different from one another and neither has been put under pressure. But, as the two major natural resource

components in Uruguay, agribusiness and the forestry industry will undoubtedly impact on one another at some time in the future, particularly in situations where opportunity costs favor one activity over the other.

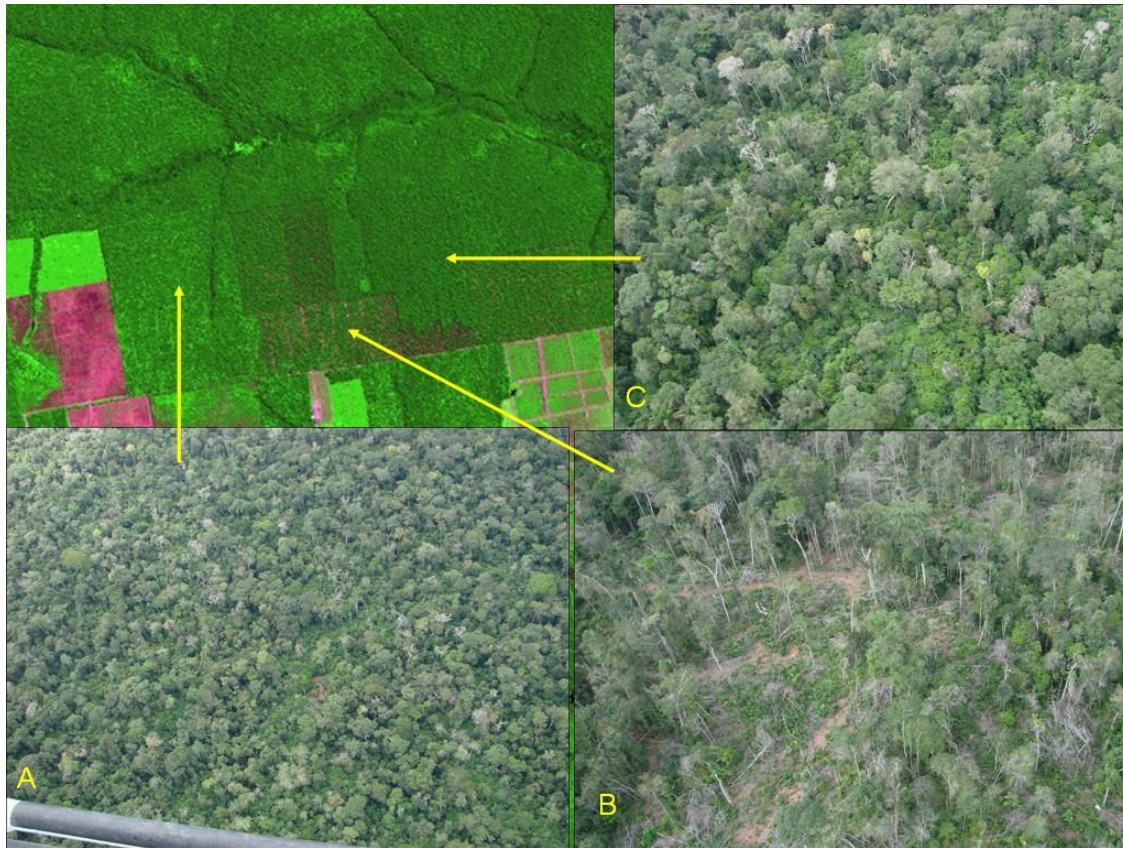
This issue certainly requires closer study as the project progresses.

Deforestation or degradation models

Taking into account all the variables that lead to deforestation and forest degradation, we could produce a report on Uruguay's past performance in terms of GHG emissions and removals, but given the paucity of data we could not guarantee its reliability. For example, we have data on the area under afforestation going back to 1966, but valid comparisons can only be made from 2000 onwards. Similarly, growth of the different forest types is speculative, based only on expert opinion in view of the lack of comparable data in the National Forest Inventory (see chapter 4b).

The reference level is based on the past as well as the future performance of deforestation and degradation, i.e. we need to determine a baseline scenario which reflects present and future situations, including of course the activities driving deforestation and degradation. To determine such a model involving links between cause and effect and to simulate different scenarios, a detailed study will be required of the various drivers of degradation and deforestation. We will also be faced with the need to expand and deepen our knowledge of our native forests, especially where diseases and pests, volume growth, invasion by exotic species, etc. are concerned. We expect that many of these aspects will be clearer once the second monitoring cycle gets underway (see section 4b).

Degradation in Uruguay's native forests is an extremely important issue requiring analysis. Expert opinion has been divided to date between those who deduce that the forest is generally in balance with some increases in volume, and those who argue that the native forest is in equilibrium in general, but with a tendency to deteriorate: loss of valuable species, invasion of alien non-forest species, increased plant diseases from commercial plantations, loss of volume, etc. Since no specific studies on native forest degradation exist, we propose to undertake a study of past and present degradation. Brazil's National Research Institute (INPE), for example, runs a program for monitoring Amazon deforestation and degradation which could be replicated in Uruguay. The INPE 'DEGRAD' system tracks the increases in degradation in the Amazon forest using data obtained by mapping deforestation areas where forest cover has not been completely eliminated. The Brazilian system uses Landsat and CBERS images to map the extent of areas degraded annually and likely to be converted to clearcut. The minimum area mapped by DEGRAD is 6.25 hectares. To better understand the process of forest degradation, INPE has developed specific techniques for image processing, involving processing satellite images by applying contrast enhancement to highlight signs of degradation. The degraded areas are then mapped individually. The following figure (image-enhanced) illustrates the patterns of degradation caused by logging.



The above picture shows:

- A. Moderate intensity degradation, area regeneration after logging.
- B. High intensity degeneration, active logging, large proportion of exposed soil.
- C. Mild degradation, evidence of access roads being opened.

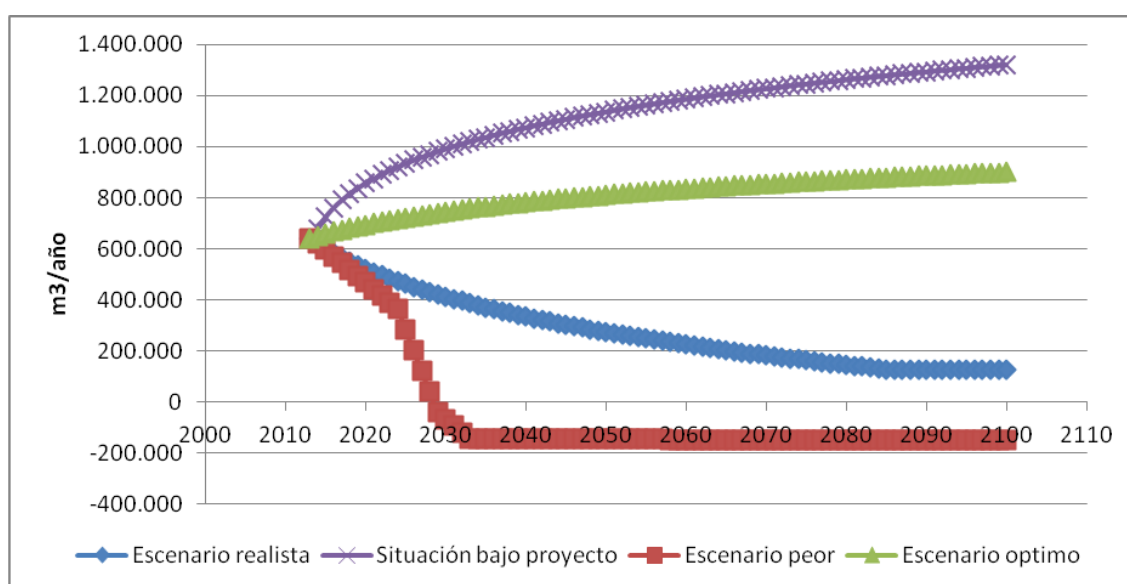
Since this system is based on Landsat images this study could be done retroactively to 1987 when the first Landsat images were produced in Uruguay.

Regardless of the above, certain assumptions can be made to determine the different stages of degradation of our native forests and their GHG reduction potential by implementing a REDD + program in Uruguay.

We conducted an exercise to estimate the RL of native forest emissions, assuming many parameters that need reviewing, analyzing and revising once we are in possession of field-measured data. Based on the growth data (m³/ha/year) for native forest provided by the GDF we assume three different scenarios (i) an "optimal" scenario where Mean Annual Increment rates remain constant due to the balance that may exist between the positive benefit of climate

change and increased forest pests and diseases; (ii) a "realistic" scenario which assumes that the Mean Annual Increment of primary forest remains at zero, and secondary forest IMA decreases by 2-1 m³/ha/year over a 20-year period and reaches an IMA of 0m³/ha/yr IMA at year 50 (i.e. maturity), and (iii) a " worst " scenario where the primary forest begins to lose wood volume due to the death of grown trees and the slow growth of saplings, where secondary forest reaches maturity (IMA = 0) over a period of 20 years (much earlier than in the previous scenario) and where forest formation has an IMA of 4 m³/ha/year only in areas that convert from another land use to forest land only once.

The assumptions made for a scenario with REDD + projects, as well as for the baseline, are based on expert judgment and lack field verification. It is assumed that the primary forest grows at a rate of 0m³/ha/year but that IMA is increased over time to 0.5 m³/ha/year in the year 100. The same goes for the secondary forests and those in formation which begin 2013 with an IMA of 2 and 4m³/ha/yr respectively, but end with an IMA of 2.5 and 4.5m³/ha/year. The graph below shows how the evolution in timber volume might be in each of the scenarios.



In all the scenarios loss of fuelwood, resulting from both legal and illegal logging in the native forest, was considered.

All these volume differences can be quantified in terms of tons of CO₂, taking account of certain general assumptions on the variables Biomass Expansion Factor, Basic Density, Root - to- shoot ratios and Carbon Fraction. In the optimal scenario, cumulative emission reduction of up to 2100 would be ktCO₂ 60.315 (691 ktCO₂/yr); in a realistic scenario, cumulative emissions reduction by 2100 would be ktCO₂ 157 989 (1,816 ktCO₂); and in a worst scenario emission reductions up to 2100 would be 222.655 ktCO₂ (2,559 ktCO₂). Note that these are general approximations, and calculations should be fine-tuned to estimate these values more accurately. A further point to note is that carbon is only considered in aboveground and belowground biomass and not in soil, mulch, dead wood or harvested wood products.

National GHG Inventories

Under the aegis of the National Environment Department (DINAMA), Uruguay has submitted three National Communications to the UNFCCC and prepared national emission inventories of GHGs for 1990, 1994, 1998, 2000, 2002 and 2004 (published and submitted to UNFCCC in the first, second and third national communications). Note that the inventory for 2006 is currently being prepared, to be reflected in the 4th National Communication to be published in the second half of 2013. These inventories include calculations of emissions and extractions planned for the different land use sectors, but do not specifically include REDD +.

From the inception of our National Communications, Uruguay has taken a firm line on deforestation. The 1st Communication reported that "the forested area in 1990 resulted in the retention of over 535,000 tons of carbon per year (around 2 million tons of CO₂ per year). This is the only sector representing CO₂ removal (907.2 kton CO₂). It should be noted that the removals referred to in this inventory only included the removals of GEI of the alien species planted for commercial purposes: *Eucalyptus*, *Pinus*, *Populus* and *Salix*. No mention is made of the native forest areas or of the GHG removals due to these species.

The 2nd National Communication (May 11, 2004) reports the GHG Inventory for Year 2000 and includes the first mention of the size of native forest surface areas: 660 hectares of native forest containing 635,000 hectares of exotic species. The communication also mentions that the practice of slashing and burning forests to free up land for crops or pastures did not exist in Uruguay. According to this inventory, the LULUCF sector generated in Year 2000 net absorption of over 9,200 kton of CO₂ (see Figure 3), exceeding by far the nationwide emissions from the Energy and Processing sectors and resulting in a net absorption of the order of 3,700 kton of CO₂.

CATEGORÍAS DE FUENTES Y SUMIDEROS	CO ₂				CH ₄			
	1990	1994	1998	2000	1990	1994	1998	2000
Energía	3607,98	3930,39	5384,44	5125,92	0,71	0,70	0,89	1,06
Procesos Industriales	229,95	279,11	517,93	392,29				
Agricultura					579,04	644,56	664,31	631,43
Cambio Uso Tierra y Silvicultura	1972,36	-865,21	-3945,34	-9226,68				
Desechos					51,82	58,13	60,13	64,45
Totales	5810,29	3344,29	1957,02	-3708,47	631,57	703,39	725,33	696,94
Variación 1994-1990 (%)		-42%				11%		
Variación 1998-1994 (%)			-41%				3%	
Variación 2000-1998 (%)				-289%				-4%
Variación 2000-1990 (%)				-164%				10%

Source: Uruguay 2^a National Communication to the UNFCCC.

The 3rd National Communication reports the 2004 GHG inventory, where the total forest area was slightly higher than in 2000. The size of the native forest increased by 83,500 ha, while commercial plantations increased by 73,400 ha. This indicated that native forest plantations had increased by 20,875 hectares per year and commercial plantations by 18,350 hectares per year. All this meant an increase of 1.122,15 kton of CO₂, totaling 10.348,83 kton of CO₂ (see Figure 4 for GHG removals from plantations, by forest type, for 2004):

MODULO CAMBIO DEL USO DE LA TIERRA Y SILVICULTURA							
SUBMODULO CAMBIOS EN LAS EXISTENCIAS EN PIE DE BOSQUES Y OTRA BIOMASA LEÑOSA							
HOJA DE TRABAJO 5-1							
HOJA 1 DE 2							
Paso 1							
			A Superficie de las existencias de bosques/ biomasa leñosa (kha)	B Tasa anual de crecimiento (m3/ha/año)	C Incremento anual de biomasa (miles m3)	D Fracción de carbono en la materia seca	E Incremento total de la absorción de carbono (Gg CO2)
					C = (A x B)		
Tropicales	Plantaciones	Acacia spp.					
		Eucalyptus spp.					
		Tectona grandis					
		Pinus spp.					
		Pinus caribaea					
		Mezcla de maderas duras					
		Mezcla de maderas duras de rápido crecimiento					
	Otros bosques	Húmedos					
		Estacionales					
		Secos					
Templados	Otros (especificar)						
	Plantaciones	E. grandis, E. dunnii, celulosa	82,79	22	1.821	0,5	2.471,19
		E. grandis, E. dunnii, sólido	61,13	27	1.650	0,5	2.322,01
		E. globulus, celulosa	180,49	13	2.346	0,5	3.898,95
		E. globulus, sólido	0,00	19	0	0,5	0,00
		Pinus	136,79	24	3.283	0,5	3.403,95
		Otros bosques plantados	100,40	20	2.008	0,5	4.285,07
	Otros	Bosques Nativos	743,50	2	1.115	0,5	2.318,60
Boreales							
Arboles en zonas no forestales (especificar el tipo)			A Número de árboles (miles de arb)	B Crecimiento anual (kt ms/miles arb)			
TOTAL							18.699,78

Source: Uruguay 3^a National Communication to the UNFCCC.

The annual growth rate for native forest presented in the 2004 Inventory does not match exactly the figures for the different types of native forest. Given the lack of a reliable figure for this variable we opted for a very general figure, although this can possibly be considered to be an over-estimate since the weighted average of the different types of forests is 0.8 m3/ha/year. For the 2006 National GHG Inventory, currently under final review, we revised the assumptions used so far for the estimates for the Land Use Change and Forestry, where the values of the annual growth rates of native forest for 2006 are consistent with those used in these estimates (area of forest in balance - biomass growth equal to 0; expanding area of secondary native forests - estimated growth rate of 2 m3/ha/year; area of native forest in formation - estimated growth rate of 4 m3/ha/year). In addition, the inventories for previous years (1990-1994-1998-2000-2002 and 2004) are being recalculated using the same assumptions.

None of the GHG Inventories mentions figures for deforestation since this activity does not exist in Uruguay. Nevertheless, the inventories draw attention to commercial plantations as areas that are vulnerable to climate change, as well as proposing adaptation measures to be taken. We also studied the vulnerability of the biodiversity sector: mountain forest and scrub; riparian forest and scrub; psammophila forest and scrub; *quebrada* forests in northeast gorges; *Butiá* and *Yatay* palms; and wooded grassland, etc. Biodiversity will be substantially affected by climate change involving decreased rainfall (e.g. river basin ecosystems). In scenarios with no

precipitation decrease, none of the ecosystems will be highly vulnerable. We conclude that both native forests and commercial plantations will be the productive activities likely to be affected by climate change. All the river basins, thickets and coastal forests, which contribute to the ecosystem as biological corridors, are highly vulnerable.

National GHG Inventories for the forest sector are based on GDF data which will be developed, updated and recalculated once the results of the present and future National Forest Inventory are published.

3.2 National circumstances that may affect the proposed reference level

Calculating the REL will have to take into account the national or local conditions which are likely to have the greatest impact on the future development of the native forest. Given Uruguay's socioeconomic and climatic conditions, we could perhaps present some justification as to why past degradation or other land use issues should be considered as the basis of future GHG trends in the forestry sector, such as increased land prices and production costs to promote more efficient use of forested areas.

Uruguay's agricultural and forestry sector, strongly export-oriented and with a very substantial potential for increasing output, is now responding to the growing international demand for food and fibers by making significant changes to its productive systems. Uruguay will continue to be a strong exporter of agroindustrial products, including wood products, effectively continuing and accelerating the processes that have been underway over the past 10 years: intensified production of meat and milk, together with the relative expansion of crop areas due to the increased adoption of irrigation in response to climate variability, the expansion of planted forests and, indirectly, of native forests.

In the agricultural sector, the rapid expansion of soybean cultivation has been the main driver of land use change. However it can be expected that its impact will be reduced as the result of higher land prices and MGAP's introduction of its "Land Use Plans". It is likely that agricultural systems will develop new ways of engaging with livestock systems, e.g. by providing grain and its subproducts for animal feed, and introducing new forms of crop and pasture rotation or annual fodder crops such as oats and ryegrass. The increased availability of water due to climate change, principally in the summer months, could result in a moderate expansion of rice cultivation. Furthermore, the increasing adoption of irrigation systems for growing corn and other crops will almost certainly lead to higher yields.

One final point: conversion of grassland to commercial forests will eventually result in a significant portion of the 'forest priority areas' being covered (around 40,000 km² or about 25% of Uruguay's land area). Planted forests at present occupy about 25 % of this area, so there is considerable potential for expansion.

No other variables exist apart from those mentioned above that could affect the reference level to be proposed (e.g. no land tenure or resource-use conflicts by indigenous or rural populations).

3.3 Potential approach to RL or REL

The forest reference level (RL) or national forest reference emission level (REL) will be based on the information available on current and prospective land use.

The method based on historical data would be based on the development of RL or REL from historical GHG emissions and removals trends in the forest sector. The time series to be used may vary according to the quality of information available. While the data will originate from different sources it is however important to note that the information available in Uruguay is fairly scarce, as we experienced with the recent launch of the first National Forest Inventory on different forest types (a wealth of data is generated by the private commercial sector but access to it is limited). Our study proposes to use remote sensing and other GIS tools and the 1990-2006 national GHG inventories series will be a useful input for data comparison with the reference scenario.

We will also need to consider future projections, including the quantification of forest land use and carbon stocks under current conditions, and after a set of assumptions is introduced on how the drivers of change in land coverage and macroeconomic trends (e.g. the growing demand for grains) and national development plans could change land use and carbon stocks over the coming years. These projections could employ a hypothetical approach, using historical trend data, as well as one or more sets of alternative assumptions to forecast future developments (e.g. continued or declining growth of the agricultural sector, forest conservation in a broader context, or a situation involving high prices and payments for carbon certificates obtained under REDD + projects).

As mentioned above, apart from the information currently available, we need to resolve the issue of data shortage and seek more accurate information in order to determine with some degree of reliability the past and recent changes in land use and GHG emissions or removals due to forest degradation. We have a particular knowledge gap in terms of historical developments and well as lacking National Forest Inventory data on future measurements according to different types of forests, especially with regard to:

- forested area before 2000 and after 2012 (i.e. to obtain a continuous record of forest area increases over time ;
- volume (stocks) of wood per hectare by forest type ;
- composition of species: amounts, dominance, frequency and a past and current Value Importance Index ;
- basic density of the species contained in native forest ;
- average density of trees per hectare;
- models to determine the over ground/underground biomass ratio, by species ;

- hypsometric models to determine carbon in the various pools: mulch, dead wood, over ground/underground biomass ratio and organic carbon in soil ;
- degree of erosion by soil type and other soil variables ;
- non-timber forest products ;
- grazing presence and intensity;
- demand for firewood by households or industry, native forest timber harvesting;
- industrial expansion using charcoal ;
- introduction of mining operations;
- crop patterns;
- timber harvests;
- expansion of transport infrastructure.

3.4 REL or RL integrated into the national mechanisms proposed for managing preparation

Uruguay possesses technical expertise in its various institutions involved, which could form the basis of a team to develop the REL. However, given the specificity and scope of this analysis, in a subject of which the country has no previous experience, we believe that we will require the assistance of experts in this field to help strengthen our institutional capacities.

As outlined in Component 1a. several relevant institutions exist in the private and public sectors that will be involved directly in the REDD + mechanism.

These include primarily the Ministry of Livestock, Agriculture and Fisheries (MGAP), which is in a position to supply the basic recent data needed for determining a RL or REL, in close coordination with the Ministry of Housing, Land Management and Environment, especially through its National Environment Division and with input from its other National Divisions (National Directorate of Land Planning, National Water Division, etc). Other public institutions will also be involved such as the Ministry of Economy and Finance which can assist the REDD + to prepare the RL or REL by presenting its views on future variables that could impact the country and on economic factors possibly affecting future land use development.

The various bodies mentioned have previous experience in assembling data for building reference levels and future scenarios taking account of substantial range of endogenous and exogenous factors. Of key importance in this respect is MGAP's Agricultural Planning and Policy Office (OPYPA) which does diligent work on reference scenarios for different sectors.

Decree 24/98 of 28.01.98 mandates this office to "advise the ministerial hierarchy on the formulation of public policies for the farming, agribusiness and fisheries sectors and on the management, conservation and development of renewable natural resources; on the implementation of the policies adopted; and to assist in the adoption of corrective measures to avoid damage to the various sectors involved " (www.mgap.gub.uy).

We are aware that all work done at office level to determine a GHG reference level must necessarily be supported by relevant prior field work. The National Forest Inventories will be an invaluable tool for designing our scenarios. Techniques are now available for determining, with the use of satellite images, past and current areas occupied by plantations, as well as their different levels of maturity or degradation, by studying the intensity of green color in the canopies (spectral analysis of satellite-generated colored bands). Moreover, more data on forests could be obtained periodically by the GDF. This would involve hiring more staff or outsourcing the work to private firms. Analysis of forest degradation using satellite imagery has to date not been done by the GDF because it has neither the skills nor the software to do this. With more resources the GDF could create this analysis capability internally.

3.5 Work Plan for preparing the REL or RL

The preparation of an REL or RL is not a routine task and no procedures or international protocols exist as guidance. We therefore consider that preparation on this should proceed in stages and with the widest possible participation.

A good starting point would be the National Workshops on REDD + under the aegis of the REDD+ Steering Group. Discussion at the NW should focus on identifying potential ways of achieving the REL or RL in accordance with Uruguay's regional and other circumstances and the need for appropriate data. The main goal of the work plan should be to collect all the 'missing' information considered necessary for producing the REL or RL.

Preparation of the REL or RL must in some way take into account "Assessment of land use, the drivers of changes in land use, forest law, policy and management" (item 2a. above). Furthermore, the REDD+ strategy activities must be integrated with Component 2.b ("REDD + strategy options") and with the "National Forest Monitoring System" (Component 4.a) , given that actions under the REDD + strategy must be in line with the REL and RL. Finally, the National Forest and GHG inventories will also need to be taken into account in discussions on REL or RL preparation as they provide useful bases of comparison.

At this first stage, we expect to formulate a cautious set of potential approaches to develop an REL or RL, guided by the most widely accepted international methodologies and substantiated in the relevant IPCC guidelines. An additional point: we should also consider the need or practicality of determining reference levels at sub-regional levels to assist in constructing forecasts of forest degradation according to "*business as usual* " criteria.

Work Schedule

The Work Schedule, previously formulated by the relevant public and private stakeholders and by technical staff from other parts of the country, will be under the control of the REDD + Steering Group.

We propose at this stage to take the following steps:

- 1) To form a multidisciplinary 'Working Group' coordinated by the REDD + Steering Group, to include private and public stakeholders, with a view to creating the governance policy and technical implementation structure required for executing and monitoring the development of a national reference scenario. This group should include, as a priority, experts from the economic and financial areas, given that it will be responsible for creating a work plan and budget for later stages and will need to base its deliberations on sound financial and economic advice.
- 2) The Working Group will need to have special training to enable it to undertake the tasks and goals planned for it in the later stages. Training could be provided by national or international experts recruited by the program. At this stage it would be advisable to consult, as appropriate, key stakeholders in deforestation and forest degradation issues: GDF, MGAP and other ministries, the Uruguay Rural Association, the Forest Producers Society, local communities, etc., all of which would need to agree on the best way to undertake the studies required for generating the reference scenario.
- 3) Information collection. The REDD+ Working Group will take the lead in collecting information and plugging gaps in the data so far obtained. This will reduce the costs of developing the baseline scenario. Past and present data is needed on, for example, the national and international drivers of forest degradation (e.g. increased commodity prices?). It is particularly important to engage the active participation of different ministries to avoid duplicating or replicating work. Intersectoral liaison is vital. At this early stage we should have access, at least, to maps showing specific forest cover and past, recent and current land use, data on critical variables for future scenarios, and deforestation and degradation projections.
- 4) Collection of missing data. Data gaps will become apparent after all the available information has been collected. A work plan and corresponding budget are needed to locate the missing data. Extra funding will be required in the event of certain data being non-existent.
- 5) Development of a baseline scenario by calculating removals or emissions. Using the information collected, we would intend to proceed to the next stage: to produce degradation models and calculate projected emissions. The projection at 5, 10 and 20 years should take into account a number of factors, such as the validity and availability of historical data, the level of precision required, the cost of processing (man-hours), the tools available and the future timeframe envisaged. Note that a future exercise of this type would benefit from new technologies, different agricultural practices and possibly changes in our government's (and international) economic policies. Although the baseline will not reflect past situations, historical background data on growth areas, increased productivity and so on will provide invaluable reference variables. The time series method for formulating the baseline might need to be

complemented in some cases by causal and subjective methods. The subjective method should be used when all the relevant facts or other information are not available, when data cannot be depended on for forecasting purposes or cannot be used for casting light on a particular variable. The causal method is employed when the degree of relationship of one variable to another to create a model that relates. These projections include assumptions about land use and land use changes according to BAU (taking into account the above-mentioned points). This task is crucial for determining the final outcome. Uruguay's capacity to construct these scenarios is limited and requires strengthening.

6) The reference level, once determined, needs to be validated and agreed by the authorities. These will take into account existing state policies and ensure that the reference level is in line with Component 1a. of this R-PP. Further observations at this stage will help to calibrate and adjust the final reference value.

7) Dissemination of the results found, and training in the procedures needed for preparing the reference scenarios are the next step.

8) Tasking staff to ensure the care and maintenance of data needed for revisiting the reference scenarios at a future stage.

The steps for the Work Plan are set out in tabular form below:

Task	Q1/14	Q2/14	Q3/14	Q4/14	Q1/15	Q2/15	Q3/15	Q4/15
Form a multidisciplinary working group								
Training of multidisciplinary working group								
General consultation on deforestation and degradation with key stakeholders								
Review and identification of information gaps on deforestation and degradation								
Design of a plan to obtain the missing data, including a budget								
Development of the reference level together with models to determine its variance								
Validation and dissemination of results								
Allocation of roles and responsibilities for sustaining data compilation for future use (e.g. for establishing future reference level).								

Table 3: Summary of Reference Level Activities and Budget						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Establishment of a Reference Level working group within the framework of the REDD+ Steering Group	Establish a multidisciplinary working group	5				5
	Training the multidisciplinary working group	20				20
Formulation of National Reference Level of forest emissions or national or regional Forest Reference Level	Collection of available data	80				80
	Collection of missing data	25	20			45
	Development of reference scenario	125	125			250
Validation and dissemination of the model	Validation and acceptance in conformity with Component 1.a		30			30
	Dissemination and training		20			20
Total		255	195			450
Government*		80	80			160
FCPF		175	115	0	0	290
UN-REDD Program						0
Other development partner						0

* In cash

Component 4: Design of systems for national forest monitoring and information on safeguards

4a. National Forest Monitoring System

This component aims to develop a national forest monitoring system to be managed and led by the agents and the national management mechanism involved in Component 1a (preparation). The system will serve to measure and monitor: (i) emissions and removals of GHG arising from forest degradation; (ii) conservation and enhancing carbon stocks; (iii) improving sustainable forest management as described in Component 2a ("Assessment of land use, drivers of changes in land use, forest law, policy and management"); and (iv) the performance of the REDD + strategies identified in component 2b ("Options for REDD + strategies"). Uruguay's national forest monitoring system should be designed so as to facilitate a comparison between the land surface and calculations of GHG emissions for the REL and RL (Component 3). The primary objective of this system is to calculate emissions and removals from the forest sector and to obtain more information on the spatial distribution and rate of change of the drivers of deforestation and degradation.

4a.1 Importance of MRV for REDD +

An effective system of Measurement, Reporting and Verification (MRV) would be a further area that has been identified as a priority for developing and implementing REDD + strategies.

A good national forest inventory, together with a comprehensive and updated system of national GHG inventories, would provide an ideal basis for developing this readiness component for REDD + .

A forest inventory would provide a wide range of information on the country's forests, specifically on ecosystems included in the REDD + strategy options, which the national GHG inventory should take as input for estimating GHG emissions and removals from this specific sector .

Uruguay is well positioned in the above respect given that it possesses an ongoing National Forest Inventory in execution and a robust processing and reporting mechanism with its National GHG Inventories system.

The need for infrastructure will be determined when the MRV system is defined in detail (Note: infrastructure and technical skills requirements must be considered for each of the activities).

The REDD + Steering Group will play a crucial role in detailing the design of the MRV. It follows that the system must reflect Uruguay's particular circumstances in an appropriate and effective way, and always within the framework of a transparent and eminently participatory development process.

4a.2 Elements for MRV: National Forest and Greenhouse Gases Inventories

The system for measuring, reporting and verifying to be considered in a REDD + process in Uruguay will be based on our existing inventory systems: the National Forest Inventory and the National GHG Inventories.

The National Forest Inventory, described in detail in Component 2a above, provides systematically updated information about Uruguay's forest resources, together with tools for monitoring and evaluating these resources for strategic planning purposes. The NFI is based on a stratified sampling scheme using forest mapping as well as traditional dasometric data on different types of forests, including their growth stage and information about the uses to which their natural resources are put. The NFI also includes a temporal analysis with dynamic estimation of coverage according to the years compared.

The NFI, together with the DGF's forest mapping analysis, are the core of the monitoring system. National Forest Mapping is done from time to time (no set period) by the DGF. The analysis is based on measuring the area of native and planted forest with Landsat images which determine the advance or retreat of the forest area throughout Uruguay. On the other hand, we do not possess the technical knowledge or tools to determine the existing degradation levels. The NFI underway at present will complete a 5-year measuring cycle. Forests identified by the National Forest Mapping are measured on the basis of permanent monitoring plots once every five years: by Year 5, 100% of the permanent plots are measured. The IFN also examines the 50 sub-watersheds.

Three regions have been measured in 3 different years:

- Year 2010: Cost: US\$ 350,000; 1242 Sampling Points. (FAO-UNJP-URU-027-UNJ Project). Preliminary results can be accessed [here](#).
- Year 2011: Cost: US\$ 125,000; 426 Sampling Points. (1643-OC-UR-MGAP-IDB Project)
- Year 2013 (ongoing): Cost: US\$ 528,000; 1565 Sampling Points. (IBRD Project 8099-UY: *Sustainable Management of Natural Resources and Climate Change*).

The measurement of all the monitoring plots will be completed for the first time in 2014. One detail worth mentioning is that the IFN exercise has been undertaken every year with different funding, which has rendered continuous measurement unstable. Furthermore, the GDF has gone through various modernization and adaptation processes, with varying results. Problems still exist in terms of budget (personnel, materials and equipment), all factors that limit its institutional development as well as its role in forestry control. Although the GDF is mandated by Forestry Law 15.939 to conduct forest resource monitoring, adequate resources for this are not always forthcoming. A pressing need exists for the GDF to work hard with the necessary tools in order to ensure that monitoring of forest resources is an institutionalized, ongoing task within its purview. For this reason the GDF plans to allocate in its 2014 budget, and thereafter, the funds required for completing the forest monitoring process for 2015 and following years.

The draft publication containing the results of the NFI states that "the information generated so far is very valuable. However it needs strengthening. It is clear that preparing a national forest inventory plays an important role in the ongoing monitoring of forest resources, which produces inter alia information on the various functions of the forests in terms of production, protection, conservation, economic and social benefits, etc. This initiative calls for technical and financial efforts to enhance our national and regional forest information gathering processes." In the context of developing a REDD + strategy, we believe that more variables could be included in this monitoring effort aimed at producing genuine, measurable data on deforestation and forest degradation.

Forest monitoring in Uruguay has been limited to updating data on forest or vegetation cover and has not focused on obtaining regular information on volume and biomass stocks, or on other resources and benefits associated with forests. While we have some good information from different years, the procedures for gathering this are not clearly established institutionalized activities but rather the result of isolated projects. This process has been constrained by the failure of the authorities to give sufficient importance to the issue, as well as by funding problems. The NFI's (and subsequent inventories') goal is to provide specific information on:

- Changes in forest cover through remote sensing
- The conservation status of native and planted forests obtained from field survey data.
- The development of forest resources and their environment, the size of areas covered by forest, the economic, social, cultural functions and the general environmental sustainability and maintenance of forests (biodiversity, carbon sequestration, soil protection, water regimes, etc.)
- Landscape quality
- Forest-based goods and services
- Stock volume in different types of forest
- Establishment of quality indices, local volume rates, local yield tables, in line with forest production
- Estimation of current and future timber production to assess whether a future can be guaranteed for forest industries and the forest labor force.

In addition the NFI aims to:

- Engage public and private institutions related to forest resources in the analysis of the technical aspects of the project.
- Improve technical capacities and equipment to ensure the permanent operation of a forest resources Continuous Monitoring System.

An important point to note is that the DGF does not possess the technical staff resources to analyse all the information from the monitoring of forests as suggested. To undertake the analysis it will be necessary to resort to, and liaise with, a number of different State agencies and universities, at least to avoid replicating and duplicating the work. The development of a work plan in REDD+ can lead to dynamic and flexible liaison between the various stakeholders as proposed in Chapter 1a. (REDD+ Steering Group)

This information also provides the basis for estimating GHG emissions and removals of the LULUCF sector of the National GHG Inventory.

Uruguay's National GHG Inventories, based on IPCC guidelines on the development of National GHG Inventories of Greenhouse Gases, are an effective tool for measuring, reporting and verifying GHG emissions and removals generated in the country. Our National Forest Inventory, together with the methodology used in the National GHG Inventory, will together serve (not one before the other) to determine reference levels and forest degradation. Such information has hitherto been unavailable in this country.

As mentioned in Components 2a and 3, Uruguay has drawn up national inventories of GHG for the years 1990, 1994, 1998, 2000, 2002 and 2004 (published and submitted to the UNFCCC in the 1st, 2nd and 3rd National Communications). The 2006 inventory is currently under final review prior to publication and the 2008 and 2010 inventories are to be presented to UNFCCC in 2014. This clearly demonstrates that Uruguay has been actively engaged in preparing and reporting GHG emissions, with its national inventories produced every four years from 1990 to 1998 and every two years since 1998. Furthermore, Uruguay will submit its first biennial report update to the UNFCCC in December 2014, together with the 2010 inventory. This means that from 2014 the country must report its national inventories to the UNFCCC every two years. Reporting on GHG emissions and removals will thus be constantly updated. It is also important to mention that the 4th National Communication to be submitted to the UNFCCC will include the inventory for 2012.

Considering the valuable experience that the country has in terms of constructing GHG inventories, coupled with the fact that the biennial updates will benefit from international consultation and analysis, it is obvious that this tool will provide an essential basis for developing a specific MRV system for REDD + .

To help us fine-tune the estimates of GHG emissions and removals in native forest ecosystems, research could also be undertaken to determine specific emission factors. In this respect it is worth recalling Uruguay's experience in developing national emission factors for methane from enteric fermentation produced by livestock, and for nitrous oxide from agricultural soils. Both these initiatives, of importance to the key agricultural sector, reveal the high share of these emissions in national totals. Thus, for the categories mentioned, a Tier 2 method of calculation could be used to estimate the emissions.

As for the National Forest Inventory, we expect that from 2015 substantial amounts of data on forests, comparable over time, will be available. We will need to enhance this data by including additional variables such as remote sensing of land cover changes and the main drivers, measuring other pools of carbon stocks (e.g. dead wood and mulch), etc. Meanwhile, repeat

measuring and monitoring exercises over time will feed information into the NFI on forest degradation and carbon density by forest type. Other tasks will focus on identifying cartographic information that is not currently available here (or is available, but whose time series is not comparable because it was developed with different methodologies). This will determine what data we need to produce specifically for REDD + to ensure that a reliable baseline can be defined for implementing the proposed measures efficiently and effectively. Furthermore, given that no basic information exists in this country specifically related to forest degradation, tools will need to be generated to monitor the measures taken to address the specific degradation issue.

Given that the prospective baseline can be applied to the entire country (which is not zoned like larger countries with a greater diversity of forest types), we see no need for monitoring leakage. On the other hand, the drivers of degradation not only relate to certain other productive activities (e.g. livestock affecting the native forest - see Component 2a), but may also be due to "non action" on the forests, such as an increase of uncontrolled diseases, the aging and death of trees which are not replaced by fast-growing secondary species, illegal logging for fuelwood or legal logging (up to 2,000 kg) causing an "ant effect" on the amount of timber accumulated. (see Chapter 2a). The monitoring and control of logging native forest is dealt with in Components 2a and 3.

The process of defining the measurement, reporting and verification system to be implemented for the REDD + process will be based on the same precepts of participation and transparency that characterize all the readiness preparation activities for REDD +.

The following Work Plan outlines the steps to be taken for adapting our National Forest Inventory and National Inventory of Greenhouse Gases to REDD + strategy.

Task	Sub-task	Q1/14	Q2/14	Q3/14	Q4/14	Q1/15	Q2/15	Q3/15	Q4/15
Adapt National Forest Inventory (NFI) to REDD+	Study of the variables monitored in the NFI and their relevance to REDD+								
	Analysis of the tools available within NFI of use to REDD+								
	Study of the current capacity for studying the drivers of degradation								
	Study of the current capacity for detecting deforestation								
	Analysis of new tools and variables for inclusion in the NFI								
	Propose the necessary changes to NFI								
Adapt GHG Inventory (INGEI) to REDD+	Analysis of the methods used in INGEl for calculating GHG removals								
	Study of the factors for calculating carbon in biomass (Biomass Expansion Factor, Root to shoot, Basic Density, etc) and their adaptation to native forest								
	Study of the factors for calculating carbon in otros pools (Organic carbon in soil, Dead Wood, Mulch, Harvested Products) and their adaptation to native forest								

Analysis of the drivers and causes of forest degradation and their incidence in GHG emissions									
Analysis of the drivers and causes of deforestation and their incidence in GHG emissions									
Study the possibility of implementing a plan for reporting and informing on land use changes									
Propose the necessary changes to INGEI									

4b. Design of an Information System for Multiple Benefits, Other Impacts, Governance and Safeguards

4b.1 Introduction

We need to design a national operating system for monitoring the key variables defined as priorities by Uruguay. The process for selecting these variables (livelihood of the rural population, conservation of biodiversity, environmental and social services, etc) must be open and inclusive to all the main stakeholders.

Uruguay is known for its commitment to complying with existing international rules on the environment and protection of forest resources. It is very important to ensure that all the measures proposed in the course of preparing this R-PP are compatible, coordinated and complementary with other ongoing projects in the country. Coordination should involve bringing together public and private agencies and stakeholders at the local and national levels of government. Proper account also needs to be taken of the international dimension.

The National REDD + strategy should form part of a group of activities that the government will implement alongside a number of sectoral GHG mitigation and reduction strategies aimed at achieving low-carbon development. These activities will be undertaken according to the Uruguayan government's capabilities and will be facilitated with international support under the aegis of the UNFCCC.

While transparency and effectiveness of national forest management structures is a fundamental pillar for developing a REDD + program, national laws and sovereignty must always be taken into account.

4b.2 Introduction to the development of indicators

Uruguay's circumstances and legislation, as well as the country's pertinent international obligations, must first be taken into account. Next, in order to correctly assess impacts, a baseline must be defined at the beginning of the Strategy to facilitate comparison with later assessments.

Impact assessment procedures need to be established for monitoring biodiversity and impacts on water resources, etc. These procedures must use the same standards as those used for other ecosystems. Duplication of effort must be avoided.

Methodologies for monitoring impacts will be established that result in development indices. Five basic areas will produce different indicators:

- Economic: indicators related to the impacts of economic activities of REDD + projects, improving pay and conditions of the labor force, enhancing forest workers' quality of life, improving livelihoods of people living near forest areas in terms of food, housing, energy, health etc.
- Environmental: indicators on protection of biodiversity, water quality, upkeep of water sources (springs etc) and replenishment areas, soil conservation, etc.
- Health and Recreation: access to and enjoyment of the natural environment, formal health service networks, impacts on traditional eating habits and nutrition resulting from improved supply and consumption of forest foods.
- Social and educational: indicators concerned with improving citizens' active participation in national and local civic life, increasing social cohesion and sense of belonging, assuming responsible attitudes to rights and duties. Education indicators to evaluate people's access to better education and training for developing human capital.

To ensure that the measures are compatible with native forest protection, conservation and biological diversity (i.e. to prevent them from being used to convert native forests), and to enhance the services and other social and environmental benefits derived from forest ecosystems, it is necessary to first develop a set of indicators to assess these benefits and services.

4b.3 Information on indicators

Since COP16 in Cancun, governments agree that safeguards are needed for the implementation of REDD +. To develop effective Safeguards Information Systems it is important to have a clearer idea of the actual content of the safeguards reported on. In other words, before establishing how we intend to collect and supply the information, we must agree the issues on which we need to be informed. We must also have a clear view of how the SIS fits within a framework of implementation and enforcement.

A multitude of different safeguard processes, institutions and initiatives exists. Some institutions have recently developed their own safeguard policies (GEF), while others are in the process of revising them (World Bank). The problem is that not all are compatible. This means that many countries fail to select agencies with higher safeguard standards.

The World Bank's Forest Carbon Partnership Facility (FCPF) has tried to address this problem by adopting a "common approach" to safeguard policies, agreeing minimum measures that all its implementing agencies ("implementing partners") will have to meet. This represents a first

step in the right direction. It is important to implement safeguards and robust, coherent policies in the various initiatives so that in due course these result in increasing harmonization at the UNFCCC level. The Common Approach focuses on the use of Strategic Environmental and Social Assessment (SESA) (see Components 1 and 2), particularly with regard to the upward development of the REDD + in a country. The main outcome of a SESA is the development of an Environmental and Social Management Framework (ESMF), also described in Components 1 and 2.

In summary, although different guidelines exist on the treatment of safeguards, we propose to develop these indicators as a preliminary basis for discussion in the REDD + Steering Group. Some actions at the preparatory stage will involve drawing up indicators and Tables to inform ourselves on how the social and environmental safeguards are addressed, with a view to ensuring that the REDD + implementation process generates, inter alia, a positive balance of social, economic and environmental benefits.

The following Table shows how the safeguards presented and agreed at COP 16 in Cancun (December 2010) chime with World Bank safeguards.

Cancún Safeguards	World Bank Safeguards
a) The actions complement or conform to the goals of the national forest programs and pertinent international conventions and agreements	OP 4.01: " Environmental Assessment " OP 4.36: " Forests "
(b) Transparent and effective national forest governance structures in accordance with national laws and sovereignty	Access to information policy: OP 4.04: " Natural habitats " OP 4.36: "Forests".
(c) Respect for the knowledge and rights of indigenous peoples and members of local communities by taking into account pertinent international obligations, the circumstances and national legislation within the context of the UN Declaration on the Rights of Indigenous Peoples	BP 4.36: "Forests" OP 4.10: " Indigenous peoples " OP 4.12: " Involuntary resettlement "
(d) Full and effective participation by the relevant stakeholders involved, especially indigenous peoples and local communities	OP 4.04: Natural habitats OP 4.36: Forests OP 4.10: Indigenous peoples
(e) The actions are in line with the conservation of native forests and biological diversity, with special attention paid to ensuring that they do not lead to the conversion of native forests but are directed to fostering the protection and conservation of the native forests and their ecosystems so as to enhance other social and environmental benefits	OP 4.36 Forests
(f) Actions to address the risks of reversion	OP 4.01: Environmental assessment OP 4.36: Forests
(g) Measures to reduce displacement of emissions	OP 4.01: Environmental assessment OP 4.04: Natural habitats, plus its Annex A

4b.4 Proposed Work Plan

The Work Plan (details below) will focus in general terms on developing activities that seek to identify gaps in our existing information on indicators, to take steps to obtain this missing information, to define specific indicators to appraise progress and outcomes of measures implemented and to identify indicators for monitoring the possible causes of leakage that may occur during the preparation process and subsequent implementation of REDD +.

Action/Activity	Q1/2014	Q2/2014	Q3/2014	Q4/2014	Q1/2015	Q2/2015	Q3/2015
Identify stakeholders linked to safeguards monitoring							
Allocate roles and responsibilities of each							
Review of international literature on safeguards							
Adapt safeguards monitoring methodologies to Uruguay's circumstances and creation of new methodologies							
Establish indicators for each social and educational, environmental, economic, health and recreational benefit							
Establish data collection methodology							
Validation of the indicators and their methodology with different stakeholders involved in the subject							
Publication of the final report							

Table 4-1: Summary of Monitoring Activities and Budget						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Measurement, reporting and verification	Expansion, improvement and adaptation of the NFI to meet the monitoring goals of REDD+	50	50	50	50	200
	Expansion, improvement and adaptation of the INGEI to meet the monitoring goals of REDD+	50	50	50	50	200
	Satellite monitoring to meet the monitoring goals of REDD+	30	30	30	30	120
Indicators	Economic, environmental, educational, health, recreational and participation indicators	15	15	15	15	60
Total		145	145	145	145	580
Government*		90	90	90	90	360
FCPF		55	55	55	55	220
UN-REDD Program						-
Other development partner						-

* In cash

Component 5: Schedule and Budget

5.1.Budget

Table 5: Budget						
Component	Sub-component	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
1. Organization and implementation of consultation process	a. National mechanisms for readiness management	359	266	266	281	1172
	b. Exchange of information and early dialogue	50	0	0	0	50
	c. Consultation and participation process	67	39	39	39	184
2. Preparation for REDD+ strategy	a. Assessment of land use, change drivers, Forest Law, etc	50	0	0	0	50
	b. REDD+ strategy options	1420	808	632	512	3372
	c. REDD+ implementation framework	120	0	0	0	120
	d. Social and environmental impacts during preparation and implementation of REDD+	202	142	38	38	420
3. Development of a national level of?????	-	255	195	0	0	450
4. Design of National Forest monitoring system and an information system on safeguards	(a) National Forest monitoring system (b) Information system	145	145	145	145	580
6. Design of M&E framework for the program	-	42	15	0	15	72
	Total	2710	1610	1120	1030	6470
Government*		1175	685	405	405	2670
FCPF		1535	925	715	625	3800
UN-REDD Program						0
Other development partner						0
* In cash						

Details of each component

Table 1a: Summary of Activities and Budget of the National Readiness Management Mechanisms						
Main activity	Sub-Activity	Estimated cost (US\$ thousands)				
		2014	2015	2016	2017	Total
Establishment of the REDD+ Steering Committee	High-level consultations	5				5
	Meetings/Workshops	15				15
	Technical Secretariat	10				10
	Travel arrangements for Committee Members	10				10
Permanent functioning of REDD+ Steering Group and the project	Permanent Secretariat	48	48	48	48	192
	Technical Secretariat	85	85	85	85	340
	International Technical Advisory	35	20	20	35	110
	Social Assistants	36	36	36	36	144
	Legal Advisory	18	18	18	18	72
	IT expert	20	14	14	14	62
	Economic Advisory	10	10	10	10	40
	Training	15	15	15	15	60
	Workplace and inputs	20	20	20	20	80
Support for local organizations	Travel and operations	10				10
	Hiring economist	10				10
	Social Studies	12				12
Total		359	266	266	281	1172
Government *		100	100	100	100	400
FCPF		259	166	166	181	772
UN-REDD Program						0
Other development partner						0

* In cash

Table 1b: Summary of Information Exchange and Early Dialogue with Key Groups of Stakeholders						
<i>Activities and budget</i>						
Main activity	Sub-Activity	Estimated cost (US\$ thousands)				
		2014	2015	2016	2017	Total
Raising public awareness	Press articles	5				5
	Website	3				3
	Audiovisual	12				12
	Expos & Tradefairs	8				8
	Conferences	10				10
Information exchange strategy	Consultations	3				3
	Technical work	9				9
Total		50	0	0	0	50
Government*		20				20
FCPF		30	0	0	0	30
UN-REDD Program						0
Other development partner						0

* In cash

Table 1c: Summary of the Activities for Consultation and Participation, and Budget						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Outreach	Press articles	4	2	2	2	10
	Website	3	1	1	1	6
	Audiovisual & Conferences	6	4	4	4	18
	Agricultural, livestock and forest-related expos	10	6	6	6	28
Local Workshops	Coast	6				6
	North	6				6
	East	6				6
	INC - Settlers	6				6
National workshop	Transport for participants from interior of country	5				5
	Logistics of meeting	8				8
	Speakers	3				3
Regular Workshops	Annual report for 4 localities		12	12	12	36
	Annual report on National Workshop		10	10	10	30
Annual REDD+ Report	Commissioning articles	1	1	1	1	4
	Publishing and distribution	3	3	3	3	12
Total		67	39	39	39	184
Government*		30	10	10	10	60
FCPF		37	29	29	29	124
UM-REDD Program						0
Other development partner						0

* In cash

Table 2a: Summary of the Evaluation of Land Use, Drivers of Land Use Changes, Forest Law, Policy and Forest Management						
Activities and Budget						
Main Activity	Main Activity	Main activity				
		2014	2015	2016	2017	Total
Analysis and proposals for strengthening the Legal Norms	Analysis of existing rules and their effects	15				15
	Proposals for updating regulatory framework for adapting it to the carbon market	10				10
Assessment of the sector and identification of the drivers of deforestation and forest degradation	Analysis of sectors competing for soil use	5				5
	Activities contributing to degradation	8				8
Examining experiences of MFS of native forest	Collect and list past and ongoing experiences	4				4
	Dissemination	8				8
Total		50	0	0	0	50
Government*		20				20
FCPF		30	0	0	0	30
UN-REDD Program						0
Other development partner						0

* In cash

Table 2b: Summary of the Activities and Budget of the REDD+ strategy

	Orgs involved	Main or Sub-Activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
To avoid deforestation by banning logging of native forest	MGAP MVOTMA MI UDELAR ANEP, Local govts, MTSS, NGOs	Study of forest legislation	5				5
		Remote sensor monitoring	100	20	20	20	160
		Processing information from the dossiers of every farmer	10	10	2	2	24
		Field monitoring and inspections with data recorded <i>in situ</i>	80	30	30	30	170
		Suppression of infringements, criminal allegations, penalties, etc.	40	40	40	40	160
		Dissemination of the importance of the forest and its role in mitigating climate change	20	10	5	5	40
To avoid deforestation and degradation by issuing permits for native forest management plans	MGAP MVOTMA UDELAR UTEC INIA UTU MI LATU private forest firms	Equipment (apparatus and computers)	25				25
		Remote sensor monitoring	20	15	15	15	65
		Analysis of data collected in DGF databases	10	10	2	2	24
		Sustainable Forest Management Plans appropriate to each type of forest	50	20			70
		Definitions of the potentialities of each group of forests	15	10			25
		Criteria and indicators	15	3	3	3	24
To avoid deforestation and degradation through increasing local capacities	MGAP MVOTMA UDELAR UTEC UTU INIA SPF NGOs	Improved knowledge and availability of local workforce	5				5
		Information and training events	12	12	12	12	48
		Developing opportunities for locals to gain diplomas and certificates	8	8	8	8	32
		Dissemination	15	15	15	15	60
To avoid deforestation and degradation through increasing carbon stocks	MGAP MVOTMA MI UDELAR UTEC	National Forest Protection System	35	35	35	35	140
		Fighting forest fires	40	20	20	20	100
		Forest fire warning system	5	1	1	1	8
		Environmental damage	8	8	8	8	32
		Regulation of hunting and similar activities	5				5
		Forest health	35	20	5	5	65
		Protected areas	15	5	5	5	30

	Orgs involved	Main or Sub-Activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
Increase CO2 stocks through regeneration and colonization of native forest	MGAP MVOTMA UDELAR UTEC INIA ARU	To provide effective incentives for partial or total exclusion of livestock from forests	20	10	10	10	50
		Generate R&D for growing and regenerating native species	100	60	60	10	230
		Seed collection	5	5	5	5	20
		Study of successions	8	5	5	5	23
		Isolating new areas on existing farmland and in buffer zones	10	10	10	10	40
		Provide incentives for establishing nurseries for growing native species	20	20	20		60
Increase capacity of carbon stocks with the use of silvo-pastoral or agro-silviculture systems	MGAP MVOTMA UDELAR UTEC INIA UTU	Provide financial incentives to develop systems		20	80	80	180
		Generation of silvo-pastoral and agro-silviculture techniques	60	60	50		170
		Study of native species in different systems	60	60			120
		Collect information about different experiences of silvo-pastoral and agro-silviculture systems	8				8
		Training	35	15	10	10	70
Avoid degradation by combating invasive species	MGAP MVOTMA UDELAR UTEC INIA UTU	Provide incentives to farmers owning land with forested areas on it to control invasive species	40	40	40	40	200
		Studies and finetuning of techniques and costs to ensure efficient and effective controls at lowest cost	80				80
		Means for financing projects.	30	30			60
		Training	35	15	15	15	80
Increase CO2 stocks by enrichment with higher value species	MGAP MVOTMA UDELAR UTEC INIA	Studies of the ecological and timber value of native forest species	50	30			80
		Research on enrichment techniques	30	15			45
		Monitoring enrichment systems	15	6	6	6	33
		Quantification of the conservation and increase in forest carbon stocks	10	10	10	10	40
		Training	35	15	15	15	80

	Orgs involved	Main or Sub-Activities	Estimated costs in US\$ thousands				
			2014	2015	2016	2017	Total
Reduce deforestation and degradation by developing eco-tourism	MGAP MVOTMA MINTURD	Opportunities for forest-linked communities and farmers with native forest on their land to benefit from eco-tourism	25	10	10	10	55
		Eco-tourism can benefit from the improvements already made in the protected areas system (SNAP).	3				3
		Creation of trusts and other financial instruments to facilitate private investment	8				8
		Training	50	20			70
Reduce deforestation and degradation by selecting key farmers	MGAP MVOTMA INC	Identification of settler communities	5	5	5	5	20
		Capacity building for settlers	15	15	15	15	60
		Introducing farmers in this category to silvo-pastoral systems	30	5	5	5	45
		Strategies for financing projects	60	35	35	35	165
Total			1420	808	632	512	3372
Government*			800	400	200	200	1600
FCPF			620	408	432	312	1772
UN-REDD Program							0
Other development partner							0

* In cash

Table 2c: : Summary of the Activities and Budget of the REDD+ Implementation Framework						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Fianancial strategies	Proposals for financial mechanisms	50				50
	Exchange of information with financial sector	5				5
Legal strategies	Study of legal framework	15				15
	Proposals for revising legislation	50				50
Total		120	0	0	0	120
Government *		10				10
FCPF		110	0	0	0	110
UN-REDD Program						0

Table 2d: Summary of Environmental and Social Impacts during Readiness Stage and for the Activities and Budget Execution of REDD+						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Impact Assessment of REDD+ strategy	MGAS	80	50			130
	EESA	75	50			125
Dissemination	Documents	4	4			8
	Publications and distribution	8	8	8	8	32
Dispute Resolution	Audits	20	20	20	20	80
	Control measures	15	10	10	10	45
Total		202	142	38	38	420
Government*		10	5	5	5	25
FCPF		192	137	33	33	395
UN-REDD Program						0
Other development partner						0

* In cash

Table 3: Summary of Reference Level and Budget Activities						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Establishment of a Reference Level working group within the framework of the REDD+ Steering Group	Establish a multidisciplinary working group	5				5
	Training the multidisciplinary working group	20				20
Formulation of National Reference Level of forest emissions or national or regional Forest Reference Level	Collection of available data	80				80
	Collection of missing data	25	20			45
	Development of reference scenario	125	125			250
Validation and dissemination of the model	Validation and acceptance in conformity with Component 1.a		30			30
	Dissemination and training		20			20
Total		255	195			450
Government*		80	80			160
FCPF		175	115	0	0	290
UN-REDD Program						0
Other development partner						0

* In cash

Table 4-1: Summary of Monitoring Activities and Budget						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Measurement, reporting and verification	Expansion, improvement and adaptation of the NFI to meet the monitoring goals of REDD+	50	50	50	50	200
	Expansion, improvement and adaptation of the INGEI to meet the monitoring goals of REDD+	50	50	50	50	200
	Satellite monitoring to meet the monitoring goals of REDD+	30	30	30	30	120
Indicators	Economic, environmental, educational, health, recreational and participation indicators	15	15	15	15	60
Total		145	145	145	145	580
Government*		90	90	90	90	360
FCPF		55	55	55	55	220
UN-REDD Program						-
Other development partner						-

* In cash

Table 6: Summary of Monitoring and Evaluation Activities and Budget of the Program						
Main Activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Design and implementation for M&E of the R-PP	M&E proposal	20				20
	Adjusting proposal with full participation of stakeholders	10				10
Indicators	Performance	6				6
	Adjustment, with participation of stakeholders	3				3
Verification and Dissemination	Outsourced audits		15		15	30
	Ways and means of dissemination	3				3
Total		42	15	0	15	72
Government*		15				15
FCPF		27	15	0	15	57
UN-REDD Program						0
Other development partner						0

* In cash

5.2.Schedule

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
1 a	Establishment of REDD+ Steering Group	High level consultations / meetings and workshops / Secretariat					
	Management of Project and of the REDD+ Steering Group	Secretariats/ Advisories / Consultancies / Capacity building					
	Support for local organizations	Advisories / Consultancies					
1 b	Mass media	Press articles Website & Audiovisual Expos & Conferences					
1 c	Exchange of ideas etc	Consultations					
		Technical work					
	Dissemination	Press articles					
		Audiovisual & Conferences					
		Agricultural, livestock and forestry fairs					
	Local Workshops	In 4 regions					
	National Workshop	In Montevideo					
	Talleres Regulares	Local workshops held annually					

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
			National Workshop held annually				
		REDD+ Annual Report	Articles and Publication				
2 a	Strengthening norms		Analysis of existing norms				
			Proposal for updating norms				
	Deforestation and degradation drivers		Analysis of land use				
			Analysis of degradation				
	MFS experience of the native forest		Current and past experiences				
			Dissemination				
2 b	Ban on Logging		Study of forest legislation				
			Monitoring by remote sensing				
			Native forest dossiers for each producer				
			<i>In loco</i> data collection				
			Suppression of infringements				
			Dissemination – forest and mitigation				
	Management Plans		Equipment (apparatus, PCs)				
			Monitoring by remote sensing				
			Analysis of DGF databases				

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
			SFM plans / forest type				
			Potentialities/type of forests				
			Criteria and indicators				
		Capacity building	Training and availability of human resources				
			Training events				
			Development of study options.				
			Dissemination				
		Conservation of carbon stocks	National Protection System				
			Fighting forest fires				
			Forest fire warning system				
			Environmental damage				
			Controlling hunting and other similar activities				
			Forest health				
			Protected Areas				
		Increase carbon stocks	Promote livestock exclusion				
			Research on enhancing growth of new native forest				
			Seed collection				
			Regeneration study				

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
			Buffer zones				
			Nurseries for growing native species				
		Stocking carbon through agro-silvo-pastoral systems	Financial incentives for development				
			Agro-silvo-pastoral techniques				
			Native species in silvo-pastoral areas				
			Collecting data on experiences				
			Training				
		Control of invasive species	Incentives for controlling invasive species				
			Cost studies				
			Ways and means for financing projects				
			Training				
		CO2 stocking by employing enrichment techniques	Ecological and timber value of species				
			Enrichment techniques				
			Monitoring enrichment systems				
			Conservation and increasing CO2 stocks				
			Training				
		Development of eco-tourism	Eco-tourism opportunities				
			Coordinate with SNAP (protected areas) initiatives				
			Investigate trusts and other investment tools				
			Training				
		Target key producers	Selection of key settlers				

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
			Capacity building of settlers				
			Insertion of settlers into silvo-pastoral systems				
			Financing INC projects				
2 c	Financial strategies	Engage with financial sector					
	Legal strategies	Updating/improving legal framework					
2 d	Assessment of impacts of REDD+ strategy	ESMF					
		SESA					
	Dissemination	Publications and distribution					
	Dispute resolution	Audits & Control					
3	Establishment of working group	Multidisciplinary working group					
		Training of multidisciplinary working group					
	National reference level	Collection of available data					
		Development of reference scenario					
	Validation and disclosure of model	Validation and acceptance					
		Dissemination and capacity building					
4	MRV	NFI activities for monitoring REDD+					
		INGEI activities for monitoring REDD+					
		Satellite monitoring for REDD+					
	Indicators	Economic, health, education, etc.					
6	Design and implementation of M&E of the R-PP	Monitoring and Evaluation proposal					
		Adjusting proposal with stakeholder participation					
	Indicators	Performance					
		Adjustment, with stakeholder participation					

Component	Sub Component	SCHEDULE					
		Main Activity	Sub-Activity	2014	2015	2016	2017
	Verification and disclosure	Outsourced audits					
		Disclosure					

Component 6: Design of a Framework for Monitoring and Evaluation of the Program

The Monitoring and Evaluation (M&E) program aims to track the performance of the proposed R-PP for REDD + in Uruguay and differs from the monitoring system described in Sub-Components 4a and 4b which refer to the monitoring of emissions and carbon removals, multiple benefits, other impacts and governance.

The REDD+ Steering Group will be responsible for the development and implementation of the R-PP implementation monitoring program. The Steering Group, established at an early stage in the process, must inform the relevant stakeholders of the monitoring results at 3-monthly intervals.

This program is based on the logical framework methodology which covers how implementation of the R-PP will be monitored, its progress and achievements. It will include overall strategic goals, development objectives, desired results, activities per component, and a set of performance indicators and means of verification, as well as assumptions on which elements can facilitate or limit the implementation of the program.

To ensure the objectivity of the review, external audits will be hired annually and follow-up meetings will be organized to adjust the program as required.

The REDD + Steering Group will be responsible for processing the M&E results, to be presented quarterly, and effective measures will be implemented to correct faults and improve procedures in order to achieve the planned targets.

Monitoring and Verification

Each component and subcomponent of the R-PP separately represents a basis for monitoring the progress, achievements and evaluation of constraints.

The Workshops will produce, after due discussion and deliberation, definitive criteria and indicators for improving performance, as part of a dynamic process initiated by the Readiness Committee (CPR) and developed by the REDD + Steering Group.

To guide the first stages, the stages of the R-PP will be matched with their corresponding main product, highlighting the following key criteria: (i) to ensure the normal operation of the REDD + Steering Group, which will establish indicators for frequency of meetings, attendance by all members, consultations and assessments required (number, frequency and targets reached); (ii) institutional liaison (disclosure, dissemination, workshops and other events); (iii) Uruguay's REDD + regulatory arrangement; and, finally, (iv) assembling field experiences and identifying the drivers of deforestation and degradation .

Next, each REDD + Strategy will be performance monitored (number of processed dossiers, operations verified, progress in capacity-building, controls, initiatives recorded, etc.). The impacts of each strategy, and disagreements arising, will also be quantified. By defining appropriate models, we aim to set the Reference Level by mapping the carbon sequestered. We also propose to establish protocols and other indices that might be posited *a posteriori* and which can be easily accessed in records and reports or via the Website for the benefit of the monitoring, reporting and verification exercise.

MATRIX FOR MONITORING AND EVALUATION OF THE R-PP:

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
1a	REDD+ Readiness Committee (CPR)	Coordinated implementation	Confirmation of implementation and well-defined roles	Minutes, notices of meetings and reports				
	REDD+ Steering Group	Does it meet? If the answer is in the affirmative, the number of meetings of the Committee is a good indicator that the R-PP is functioning properly.	Over 12 meetings must be organized over the period of 4 years (optimum 16). This would show that the Steering Group is functioning well.					
		How often? What is important is to ensure hard and continuous work by the Group, rather than simply getting together	Monthly meetings. The work load and progress made by the Steering Group can be assessed by the number of times it meets over a given period (quarterly, half-yearly or yearly). Measures can be taken on a year on year basis to ensure continuous effort by the Group and to examine the causes for any fall-off in attendance or performance and seek solutions for improvement.					
		Does everyone attend the meetings of the Group? In a REDD+ readiness process it is essential that all the key stakeholders be involved. Therefore the main criterion should be one of full participation in all the REDD+ Steering Group discussions	Monthly average. It is not feasible to expect 100% attendance for all meetings of the Steering Group, but close to maximum attendance by members would ensure full transparency and participation.					
		Is the REDD+ Steering Group structure ideal for intersectoral (public and private sector) work aimed at decision-taking across the sectors and does this chime with the needs of the wider population?	Number of decisions taken by the Steering Group Although all the decisions will not have the same importance, the number of decisions provides a reasonable indicator of the proper functioning of the Steering Group.					
		Consultations undertaken. The quantity and quality of the consultations and national (once yearly) and local workshops must be valuable for demonstrating R-PP progress. Proposals and plans from at least five workshops will require monitoring.	The total number of workshops is an indicator of progress, but it will only be possible to appraise their quality with indicators that exhibit the number of proposals and their subsequent implementation.					
		Contracting personnel and signing accords with	Number of staff and professionals contracted, as					

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
		other institutions such as universities, research centers and consultancies is important for evaluating the R-PP with regard to progress made by the REDD+ Steering Group.	well as the number of R&D projects covenanted with specialist institutions (LATU, INIA, UdelaR, UTEC, UCUDAL, ORT, etc) are indicators of progress.					
		Legal advice on the desirability or not of bringing norms and regulations into line with the REDD+ processes, to include suggestions for amending bills and decrees etc, can contribute substantially to good governance of the sector and is invaluable for highlighting the proper functioning of the R-PP.						
		Economic advice is essential for developing REDD+ projects and forms part of the criteria for ensuring the sustainability of the R-PP.						
		Social consultancy is vital for anticipating problems and for taking steps to correct them (if they arise) in conformity with the social and environmental safeguards espoused in the SESA strategies.	Number of consultancies planned and finalized is the best indicator of the professional work undertaken by the REDD+ Steering Group as well as an objective way to measure progress of the R-PP.					
1b	Dissemination	Press articles which serve to raise the profile of the R-PP and REDD+ nationally and locally.	Quantity and quality of the articles published, as well as the type, readership and reach of the chosen medium.	Reports				
		Website to ensure a wide audience and transparency of all the activities of the R-PP	Number of visits to the site is the best and most cost-effective indicator of the success of the outreach efforts.	Website				
		Expos and trade fairs where the details of the R-PP and the business opportunities afforded by REDD+ can be explained to a specific audience.	Number of fairs and expos is a valid indicator of R-PP progress in its public outreach effort.					
		Technical-type conferences to raise awareness among professionals and business practitioners working in the area with the aim of interesting them in the R-PP.	The number of national or international technical conferences organized or attended is an indicator of progress in technical capacity building of the R-PP.	Reports				
1c	Events	Successful national and local workshops and other	The number of workshops organized and held, and	Minutes				

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
		events are also worth taking into account when analyzing the outcomes of the Readiness Process.	their frequency, is the most direct way of evaluating progress of this aspect of the Readiness Process.					
		Scope of the workshops and other meetings.	Average number of attendees is an indicator of ability of R-PP to attract participants to the workshops and other events.	Participants				
			The ratio of attendees/relevant stakeholders indicates that the scope of workshops, etc includes all the various practitioners and interested parties; the workshops are also an invaluable channel for disseminating information about R-PP to as wide an audience as possible among different sectors of the population.					
2a	Strengthening of legal norms	Consultations at all decision-making levels indicate the level and depth of the R-PP work	The number of technical consultations finalized demonstrates progress towards achieving the REDD+ strategies.	Reports				
		Proposals for changes in legislation or ministerial/departmental norms are vital for maximizing REDD+ performance and for curbing the drivers of deforestation and degradation, as well as for promoting carbon sequestration and protection of the biodiversity and other natural resources.	Number of initiatives for proposed changes, and introduction of new laws.					
	Identification of drivers of deforestation and degradation	Technical consultations and research projects must be involved in the readiness phase of REDD+ in Uruguay.	Number of reports and covenants produced by individual technicians or scientists or by universities and research institutes.					
		Methodological analysis of the drivers identified as a prelude to finding ways of mitigating them	Number of drivers detected and number of controls proposed.					
	Marshalling experience	Dissemination of the specific experience of firms or individual professionals concerned with this subject as a basis for guiding research and for developing the R-PP.	Number of reports produced.					

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
2b	Progress of REDD+ strategies	The project dossiers processed by the General Forestry Department (DGF) to serve as criteria for evaluating progress of the R-PP.	Number of rural properties monitored by imaging or <i>in loco</i> field inspections is an indicator of the effectiveness of the strategies proposed by the R-PP.					
		Management operations verified, involving penalties in the event of infringements, and the measures to be taken for redress, are vital components of the R-PP.						
		Capacity building of human resources associated with the R-PP is vital for ensuring success of the strategies both during the Readiness Preparation process and in the period following REDD+.	Courses organized and effected by the Steering Group or the funding of training programs at different levels (technical, business, workers, etc.) are the most appropriate indicators for quantifying progress on capacity building and training, and annual reporting on these initiatives will ensure their continuing quality and effectiveness.					
		Monitoring degradation occurrences (voluntary and involuntary) to demonstrate progress or retrogression	Number of forest fires recorded and the degree of destruction caused to the ecosystem by the resulting GHG emissions.					
			Number of infringements detected indicate the importance of enhancing the government's control mechanisms. Strategies for strengthening the DGF would serve to reduce these occurrences.					
			Forest health problems. The R&D strategies are useful for health management of the forests and protection against disease and pests.					
		Improved knowledge is crucial for achieving the R-PP targets, especially in view of the scarce amount of knowledge available on native forests in a country with a relatively short history forest tradition.	Studies finalized or oriented towards obtaining the best technology available.					
		Control of invasive species as drivers of forest	Number of work contracts and projects recorded					

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
		degradation.	within the R-PP on thinning and removal of invasive species.					
		Eco-tourism initiatives which mainstream forest protection can help avoid deforestation and degradation.	The number of projects recorded in the course of the R-PP would denote progress on readiness for the REDD+					
		Engaging the interest of the <i>colonos</i> (settlers) of the National Institute of Colonization (INC) would underpin a strategy which promises to be of significant social benefit to the country.	Indicator would be provided by the record of the number of <i>colonos</i> incorporated into REDD+ projects within the INC settlements.					
2c	Implementation framework	Updated or amended legal norms are vital, and although these prove to be invaluable in the context of the R-PP, efforts must also be made to ensure that the norms appropriately reflect conditions at the time the REDD+ strategy is being planned.	Number of laws and decrees approved on the basis of the projects submitted by the R-PP or others that also reflect the efficacy of readiness preparation for REDD+ by highlighting the problematic situation and the need to address it.					
		Improved financial mechanisms are indispensable for leveraging the projects and private schemes initiated by the Process.	Number of credit lines offered by the financial market is a further indicator of progress.					
2d	Impacts de REDD+ strategies	The options and protocols consultancies are important tools for assuring the proper development of the monitoring process and for correcting any departures from the proposed strategies.	Number of products achieved.					
		Data collection and processing as a basis for researching and adopting more effective techniques within the SESA strategies.						
	Dispute resolution	Audits on each complaint received by the sub-group of the REDD+ Steering Group are important tools for redress as well as for preventing future disputes.	Number of complaints resolved.					
3	Reference Level	Establishment of the Working Group. Experts in various areas should be included and given training under the aegis of the REDD+ Steering Group.	Working Group formed or not? If formed, does it address all the requirements? For example, how many members have been trained?					

	Product	Criteria	Indicator	Mode of verification	2014	2015	2016	2017
		Compiling data required for preparation of the Reference Level.	Amount of information received v amount required.					
		Formulation of the Reference Level to include design of a deforestation and degradation model.	Reference Level established? Yes or no?					
4a	Forest MRV	Monitoring of the National Forest Inventory and the National Inventory of Greenhouse Gases and adapting them to the National REDD+ Strategy.	Has the data provided by the National Forest Inventory been successfully adapted to the IPCC methodologies used in National GHG Inventories? Is the methodology fully established for the REDD+ MRV employing these two sources?					
4b	MRV multiple benefits, management and safeguards	To establish indicators for each of the social, educational, environmental, economic, health and recreational benefits.	Have indicators been established with the key stakeholders in a participatory manner? Are the latter validated?					
5	Budget	Correct allocation of economic resources to fund the various stages of the R-PP is essential for reaching the desired targets.	The indicator in this case consists of evaluation or comparison of the budget with what has actually been disbursed. In the event of it being negative (i.e. expenditure out of line with the estimated budget) this must be corrected. If it is positive, no action needs to be taken.	Coordination Group reports				

Table 6: Summary of Monitoring and Evaluation Activities and Budget of the Program

Main activity	Sub-Activity	Estimated cost (in US\$ thousands)				
		2014	2015	2016	2017	Total
Design and implementation for M&E of the R-PP	M&E proposal	20				20
	Adjusting proposal with full participation of stakeholders	10				10
Indicators	Performance	6				6
	Adjustment, with participation of stakeholders	3				3
Verification and Dissemination	Outsourced audits		15		15	30
	Ways and means of dissemination	3				3
Total		42	15	0	15	72
Government*		15				15
FCPF		27	15	0	15	57
UN-REDD Program						0
Other development partner						0

* In cash

[illegible]