

The World Bank does not guarantee the accuracy of the data included in the Readiness Preparation Proposals (R-PPs) submitted by REDD Country Participants and accepts no responsibility whatsoever for any consequence of their use. The boundaries, colors, denominations, and other information shown on any map in the R-PPs do not imply on the part of the World Bank any judgment on the legal status of any territory or the endorsement or acceptance of such boundaries.

**Forest Carbon Partnership Facility (FCPF)**  
*Readiness Preparation Proposal (R-PP)*

**Country Submitting the Proposal: Argentina**  
**Date submitted (or revised): 11th January**

**R-PP Table of Contents**

<b>General Information</b> .....	2
1. Contact Information .....	2
2. R-PP Development Team.....	2
3. Executive Summary .....	4
<b>Component 1: Organize and Consult</b> .....	6
1a. National Readiness Management Arrangements.....	6
1b. Stakeholder Consultation and Participation .....	10
<b>Component 2: Prepare the REDD Strategy</b> .....	22
2a. Assessment of Land Use, Forest Policy and Governance .....	22
2b. REDD Strategy Options.....	49
2c. REDD Implementation Framework .....	58
2d. Social and Environmental Impacts.....	63
<b>Component 3: Develop a Reference Scenario</b> .....	66
<b>Component 4: Design a Monitoring System</b> .....	73
4a. Emissions and Removals .....	73
4b. Other Benefits and Impacts.....	79
<b>Component 5: Schedule and Budget</b> .....	85
Acronyms List .....	86

General Information
---------------------

## 1. Contact Information

Head of the Organization	Homero Bibiloni
Organization	Secretaría de Ambiente y Desarrollo Sustentable (SAyDS)
Address	San Martín 451. Ciudad de Buenos Aires
Telephone	5411-4348-8200
Fax	5411-4348-8300
Email	<a href="http://www.ambiente.gov.ar">www.ambiente.gov.ar</a>
REDD Focal Point	Leandro Fernández <a href="mailto:lfernandez@ambiente.gov.ar">lfernandez@ambiente.gov.ar</a>
Telephone	5411-4348-8329

## 2. R-PP Development Team

Name	Organization
Leandro Fernandez	REDD National Focal Point (SAyDS)
Jorge Menendez	Forest Directorate
Sergio Larocca	Undersecretary of Environmental Policies (SAyDS)
Nazareno Castillo	Directorate of Climate Change
Julieta Bono	Forest Directorate
Esteban Guida	Natural Forest and Biodiversity Project (PBNB)
Magali Taurian	Natural Forest and Biodiversity Project (PBNB)
Enrique Wabo	Forest Directorate
Gabriela Parmuchi	Forest Directorate
Eduardo Manghi	Forest Directorate
Facundo Bertolami	Forest Directorate
Eugenia Magnasco	Clean Development Mechanism Office
Gabriel Loguercio	CIEFAP

Ignacio Gasparri	LIEY Tucuman National University
Jorge Adamoli	Buenos Aires University
Vanesa D' Elia	Ministry of Economy
Jorge Fernández Busy	Federal Planning Ministry
Guillermo Varela	Labour and Environment Program (SAyDS)
Angela Gracia	Ministry of Agriculture

### 3. Executive Summary

The country has faced in recent decades an increasing process of deforestation and forest degradation. Only in the last decade, more than 2.5 million hectares of native forests have been deforested at a rate of 250,000 hectares per year. Facing this situation the National Government has decided to set actions to reduced deforestation, inter alia the National Congress approved Law 26.331 of Minimum Standards for the Environmental Protection of the Native Forests at the end of 2007, the operational rules under the National Decree 91 and the establishment of a pilot system program - the Experimental Program of Management and Conservation of Native Forests- in 2009. These initiatives had the direct participation of more than thirty environmental and social civil organizations and support of 1.5 million signatures of people from all over the country, demonstrating the high level of social consensus in regards to the program.

The law established a mandatory provincial forest land planning and financial resources investment in forest protection and management. Among others important aspects of the law is the participatory nature of the process for land use planning of the Natural Forests (OTBN, in Spanish); the moratorium on deforestation until each province implements its OTBN; the obligation to implement evaluations of the environmental impact and public audiences before authorizing deforestation plans, the ban on open air burning of the forest materials which result from deforestation, the explicit recognition of the rights of indigenous communities and small, rural producers bound to the forests and the creation of a National Fund with the objective of compensating land owners that conserve forest and the environmental services that provides.

The fund is composed of 0.3% of the national budget and 2% of tax imposed on export agriculture commodities, reaching a significant financial resource investment. The fund provides financing to strengthen technical and control capacities of provincial governments and to compensate land owners that conserve their forest. Also the fund could be used for sustainable development of productive activities of forest dwellers. According to the monitoring carried out by SAYDS in a deforestation hotspot area , the rate of deforestation fell by 60% on year after the sanction of the National Forest Law.

In 2009 Argentine Government invested about 27 millions dollars in direct incentives for forest conservation and management projects throughout the experimental program. This program actually has 12 million hectares under this incentives program. In 2010, the investment in this program will increase to reach almost 100 million dollars. The implementation of the Forest Law and the experimental program signified an unprecedented advance in environmental matters for Argentina, but also a significant achievement in the participation of civil society and the involvement of provincial governments in an environmental protection standard. However, the full implementation of Law faces several difficulties that should be addressed. Despite the tremendous progress made so far, there are still aspects to be work out to sustain and improves this progress. One of key issues to be address is the institutional capacities of provincial governments which has to be transform and improved at first. A control system with advanced technologies has to be set in order to address all

challenges for full implementation of forest program in large territory. An important technical support is needed to sustain current efforts and maximize results at the same time it creates a framework for the implementation of REDD. The financial resources available should be supported in the creation and perfection of delivery mechanisms that are cost effective and lead to the establishment of ambitious targets for reducing forest emissions. Due to the diversity of forest types and socio-economic conditions of the communities that inhabit them, and diversity as to the causes of deforestation in each of the ecoregions, it is necessary to develop eco-regional strategies to address all issues of REDD strategy for the specific conditions of each ecoregion. In this sense, more specific data and economic analysis is needed to improve the performance the ongoing program and to create other complementary initiatives, as necessary. Inter alia, the structure of land tenure systems and mechanisms to conflict resolutions must be improved in some cases and as well as a benefit-sharing scheme which has to be fair to the local communities. A National accounting and reporting system has to be created, including the environmental and social benefits. Mechanisms to improve the performance the incentives based program also is an important element of the strategy. Besides constituting the implementation of a domestic incentive-based policy to tackle deforestation, these initiatives offers a framework to preparing a strategy to prepare for REDD, to set a road map to reduce deforestation and forest degradation and increase forest removals, and in order to establish quantitative targets on scientific and empirical bases. Of particular interest to note that the country is currently under design a permanent plot forest inventory system and has a system for monitoring forest cover which has been operated since 1998. The country also is developing a climate change strategy, through an intergovernmental committee and is preparing the third National Communications to UNFCCC. The REDD strategy will be lose articulate with these process. The promotion of civil and scientific organization in this area has several years of experience and also the participation of the indigenous people at political and institutional has a good background, including National Parks Administration, the directorate for indigenous people en SAYDS, and the Participation Council of Indigenous people in the Social Development Ministry.

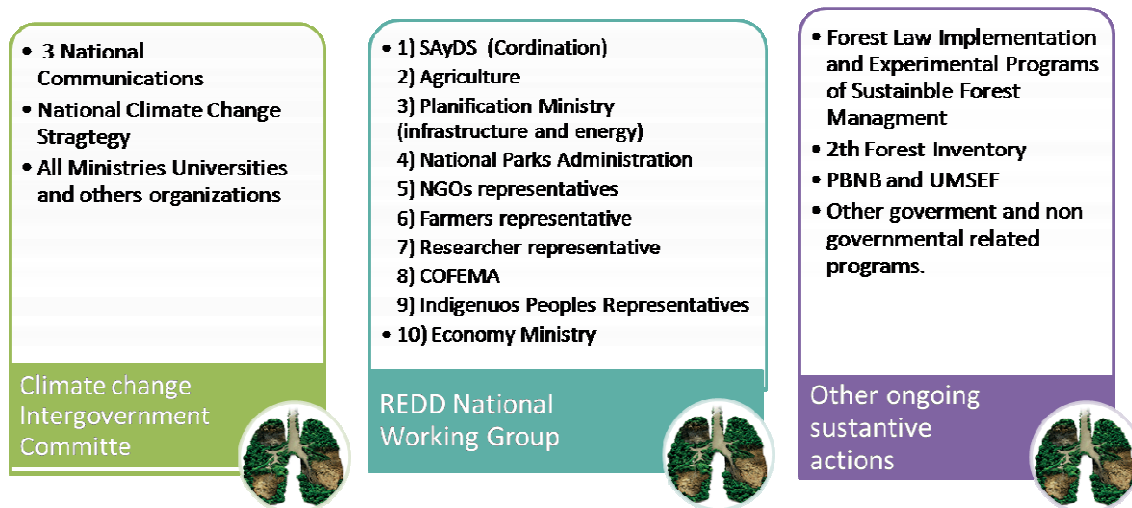
In this regard, management of national environmental governance has established a management paradigm that articulates a harmonious relationship of environment and production, including the creation of employment with decent quality and social inclusion as a priority bases its actions.

## Component 1: Organize and Consult

### 1a. National Readiness Management Arrangements

The objective of the National Readiness Management Arrangements is to manage the REDD readiness activities. The Ministry of Environment and Sustainable Development (SAyDS) is the national focal point of the UNFCCC, where management responsibilities regarding climate change issues are to address climate change. The SAyDS is the highest national environmental authority and is in charge of coordinate the REDD national Readiness process.

For the management of readiness activities, will establish a national working group on REDD (NWG-REDD, this group has been created and has operated informally for the preparation of R-PP) which shall serve as secretariat REDD, and will be the group executive responsible for coordinating all activities REDD in the country, and to formulate and implement policies and activities necessary for the advancement and promotion of readiness. The NWG-REDD was originally formed as a sub-working of the Government Committee on Climate Change, who is responsible for developing and implementing climate change strategy of the country and which is formed by all the Ministries and Secretaries of State National Government and scientific-technical organizations decentralized. Furthermore, the NWG-REDD is linked directly with relevant initiatives for REDD strategy, as shown in the chart below:



The NWG-REDD will be chaired by the SAyDS in as the body responsible for policies related to forest and climate change and will be comprised of representatives from all government

agencies and civil society actors relevant to REDD. Also, it will be formally linked to the Intergovernmental Committee on Climate Change.

The following table summarizes the composition of the working group and its main roles:

Institution	Main Responsibility	Participation on REDD strategy	Possible responsibilities
SAyDS	National Environment Authority	General coordination of the strategy REDD	Coordinación Institucional y responsable ejecutivo de las operaciones
Agriculture Ministry	Policies on Agriculture, Food and Cattle Ranch	Land Use strategies and drivers of deforestation analysis and policies	Design and implementation of policies for drivers and trends of the agricultural sector causes and their impacts on land use change.
Federal Planification Ministry	Planning on infrastructure, public investment, transport and energy	Link with the governmental bodies related to infrastructure and the provision of guidelines in transport and energy	Coordination with national and provincial infrastructure plans. Link with planning agencies territorial provincial
Economy Ministry	Policies in Economy and Finances	Link with the financial governmental bodies and economic policies	Responsible for coordinating economic studies and provide guidelines of macro economic factors
National Parks Administration (NPA) of Tourism State Secretariat	Body responsible for the management of national protected areas	Provide input and guidance in relation to the management of forest areas	Provide information on the different regions and linking REDD strategy with the programs of the federal system of protected areas and regional coordinators of the NPA
Indigenuos People representative	Indigenous People official representative in national government	Provide the vision of the IP and facilitate the process of informing and consulting the IP communities and stakeholders	Active participation in the implementation consultations and participation plans. Coordination of a group of observer IP organizations



Representative of Environmental Non-Governmental Organization	Environmental Non-Governmental Organization	Provide the vision of environmental organizations and facilitate the process of informing and consulting related stakeholders	Active participation in the implementation consultations and participation plans. Coordination of a group of observer IP organizations
Representative of Farmers Non-Governmental Organization	Farmers Non-Governmental Organization	Provide the vision of farmers and private sectors	Incorporate the visions of private sector in the REDD strategy and consult with other related actors
Federal Environmental Council (COFEMA)	Federal environmental policy coordination body	Represent the views and interests of provincial governments	Informing and consulting the other provinces. Coordination with provincial forest policies
Representative of the scientific institutions	Research in forest protection and land use and related issues	Provide the views and the information of the scientific sector	Independent review of issues such as the reference scenario and the MRV system. Propose methodologies and approaches for generating information on the strategy. Coordination of a scientific REDD group

The Intergovernmental Committee on Climate Change will propose over the next two years, a development strategy for low carbon in the context of a national strategy on climate change, of which the process REDD readiness and strategy will be one of the core components.

The REDD strategy will be closely linked with the ICCC, in a series of stages, including a first stage of work at the technical level through capacity building and strengthening within the ministries and institutions involved in the NWG-REDD. The 2nd stage will be a technical level detailed work in close consultation with the political level, to the development and definition of strategies and policy options and measures to implement the strategy, and for defining goals and objectives of the strategy towards 2015 and 2020. In the third stage, the NWG-REDD will work in the creation of a political body at the ministerial high level to implement the final stages of Readiness strategy and develop a platform for full implementation of REDD mechanism.

The GTN-REDD has operated informally for the preparation of R-PP and has prepared a draft rules of procedures. Is expected formalize the creation of this group, with its operating rules, by decision of the Chief of Ministerial Cabinet, in the first six months after the start of R-PP implementation. The GTN-REDD is formed by one representative and an alternate representative from each of the organizations, and will meet quarterly. Specific responsibilities for each member and the hierarchies levels, summarized in table, will assigned by the rules of procedures. The mechanism to handle potential disagreements will be based down vote of different hierarchy levels, as follows 1) a vote for SAYDS 2) a vote for

the other governmental institutions 3) a vote for representatives of civil society organizations. The disagreement in these three hierarchical level votes will be resolved by majority.

The NGOs and scientific organizations that take part in the NWG-REDD will be selected through a process. It will form working groups for each of these sectors represented, and these shall self elect their representative organization in GTN-REDD for a term of one year. The SAYDS will be observer of these sectoral working groups, which must also self-defined their rules of operation and submit them to the GTN-REDD.

In the process of elaboration of the R-PP, has been appointed on an interim basis to organizations to begin establishing the process. There have been some preliminary meetings of these groups and will proceed to establish the operational phase in the coming months. Semi-annual reports on progress, actions and conclusions will be published on the website of the SAYDS. Also, it will be brief reports by each of the institutions and sectoral working groups, which must be approved by the authorities of each of the institutions.

Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
REDD Working Group management	Meetings (e.g., travel for stakeholders on NWG-REDD)	\$15	\$15	\$15	\$15	\$60
	Dissemination of reports	\$10	\$10	\$10	\$10	\$40
Hire staff for working Group	Hire working group coordinator specialist	\$20	\$20	\$20	\$20	\$120
	Hire economist	\$20	\$20	\$20	\$20	\$80
	Hire rural development specialist	\$20	\$20	\$20	\$20	\$80
	Hire land planning specialist	\$20	\$20	\$20	\$20	\$80
	Hire a political science specialist	\$20	\$20	\$20	\$20	\$80
	Hire administrative personal	\$20	\$20	\$20	\$20	\$80

3 NGOs working group	Meetings	\$20	\$20	\$20	\$20	\$80
	Reports	\$10	\$10	\$10	\$10	\$40
Scientific working group	Meetings	\$20	\$20	\$20	\$20	\$80
	Reports	\$10	\$10	\$10	\$10	\$40
<b>Total</b>		<b>\$205</b>	<b>\$205</b>	<b>\$205</b>	<b>\$205</b>	<b>\$820</b>
Domestic Government		\$90	\$90	\$90	\$90	\$360
<b>FCPF</b>		<b>\$115</b>	<b>\$115</b>	<b>\$115</b>	<b>\$115</b>	<b>\$460</b>

## 1b. Stakeholder Consultation and Participation

### Initial consultations in the R-PP formulation

Since the beginning of discussions on avoided deforestation in the UNFCCC (2005), formed an ad hoc working group to discuss and develop the national position on the issue, with representatives from various areas of SAYDS, with expertise in the subject and jointly with the Ministry of Foreign Affairs and the Ministry of Agriculture of the Nation. This work led in some documents submitted to the UNFCCC, and the progressive installation of the subject within the national environmental agenda. For the development of R-PIN, the SAYDS established a working group and experts with specific areas associated with the theme: Climate Change Directorate coordinated the working group participants: addresses of forests, indigenous peoples, land and fight desertification, biodiversity conservation and wildlife and the working group on sustainable agriculture. Subsequently, the working group started to consult and incorporate extended gradually to other areas. He began work as a link with other ministries, such as the Ministry of Agriculture, National Parks Administration, Institute of Agricultural Technology, Federal Ministry of Planning and Ministry of Economy. These national bodies have been involved in developing the R-PP.

On November 7, 2008 in Bariloche, was presented the R-PIN at the meeting of the Federal Council for the Environment (COFEMA). This process resulted in the presentation by the province of Jujuy, of a R-PIN of the Province and the establishment of a dialogue and feedback with key provinces such as Chaco, Misiones, Salta, Formosa.

During 2009, were made the following presentations, that served to inform and consult with several stakeholders:

Events in which were consulted and inform several stakeholders			
Date and Place	Event and participants	Issues	Results and available information
18/02 SAyDS Buenos Aires	Informal meeting with several technical areas from SAyDS and forestry experts	Result from R-PIN review and set the next steps to work in the national REDD strategy	Slides presented
13 y 14/04 SAyDS Buenos Aires	Official launching of the process of drafting the REDD strategy. Were invited to participate more than 800 organizations, including environmental and OGNs public and private sector. There were about 100 participants from various sectors. Attached is the final list of participants.	General concepts and the process for REDD Readiness and the possible themes for the strategy and guidelines Argentina. A workshop was conducted thematic desks to receive proposals for RED Readiness strategy on 1) monitoring of forest cover and carbon 2) Legal, environmental and social 3) Experience and strategy options for REDD	An action plan from each working group resulted, and was used to guide for the development of the REDD strategy. This information was compiled in a report. Presentations and report were put available for comments on the website. <a href="http://www.ambiente.gov.ar/cambio_climatico">www.ambiente.gov.ar / cambio_climatico</a>  From this experience, we performed mapping of civil society actors and private potentially interested in REDD and its possible role
2/06 SAyDS Buenos Aires	Consultation meeting with experts from different organizations involved in forest issues. It was a	Information and consultation on the overview of REDD and LULUCF, to discuss general technical issues and the vision of Argentina's national experience and	A questionnaire was submitted for comment and a report with the comments received

	closed meeting with experts and representatives of key governmental agencies: INTA, Directorate of Forests, Ministry of Agriculture, University of Buenos Aires, Fundación ProYungas	circumstances.	
2/08 SAyDS Buenos Aires	Informal meeting with Universities and Research Centers, as part of preparation of the strategy on climate change	Meeting with researchers linked to the subject, and content elements of the strategy deforestation. An initial dialogue and exchange of information. Several scientific papers discussed at this meeting were used for the development of the R-PP	Some of the proposals of these researches joined in the development of the R-PP and finally some of them participated actively in its development
23/09 Hotel Hilton Buenos Aires	Side event "Climate Change and Desertification: financial and institutional opportunities for synergies" at COP 9 UNCCD	A presentation on the National and international perspectives of the issue of land use sector, including REDD	Slides presented
1/09 San Miguel	Five National Meeting and Regional Meetings of the Information and Consultation Draft Native Forests and Biodiversity (PBNB). Attended by about 100 provincial officials of the directions of forests and forestry sector regional	The objective of the meeting was receiving proposals to fill existing vacancies in the management of native forests at the national level and in every region of forests and their prioritization. In this framework, was presented the first guidelines and activities for the elaboration of national REDD strategy.	Was distributed to participants a summary and a questionnaire for comments and suggestions.  Report and presentation: <a href="http://www.ambiente.gov.ar/cambio_climatico">www.ambiente.gov.ar / cambio_climatico</a>

	experts		
23/10	World Forestry Congress Side Event "Forest and Climate Change strategy in Argentina" Event open to the congress public which was attended by about 80 participants	Were presented advances in the strategy to prepare for REDD, the proposed activities for the R-PP elaboration. Also were presented REDD related activities of other government departments and NGOs	For the realization of the event calls for different organizations to submit ideas and potential activities according to their possible roles in the strategy.  There were three separate REDD activity
10/10 Buenos Aires	Consultation Workshop on Working Guidelines for the Conduct of the Second National Inventory of Native Forests. Technicians and foresters from the provinces	Were presented the proposed guidelines for the permanent system of forest inventory. A questionnaire was formed to receive proposals	Proposal for National Native Forest Inventory for Argentina and Power Point presentation, and questionnaire available at <a href="http://www.ambiente.gov.ar/?idarticulo=6844">http://www.ambiente.gov.ar/?idarticulo=6844</a>
3/12 SAyDS Buenos Aires	Climate Change and the vision of native peoples. Attended by national organizations representing indigenous peoples. As well as other organizations interested in the issue	There were some advances in the development of R-PP and the next steps in the context of the REDD strategy and its link with the UNFCCC negotiations. Film materials were presented on Indigenous and deforestation	A call was made to establish a dialogue with indigenous communities and their representatives related to forests.  Information was presented on the draft prepared by the ONPIA to inform indigenous communities on REDD
4/12 Buenos Aires	Regular Meeting COFEMA. Political authorities of all provinces and the Nation	There were presented the components of the R-PP and the progress of the draft	Contributions were received by representatives of top environmental authorities of the provinces In particular, provinces with low forest cover, demanded the incorporation of existing and future forestation plans

**Other institutions that were directly consulted on the drafting process of the R-PP and that will play a role in the readiness plan implementation:**

- ProYungas Foundation
- Wildlife Foundation
- Argentine Network of Forestry and Environmental Law
- National Parks Administration. Secretariat of Tourism of the Nation
- Roundtable on Responsible Soy
- TEMA Foundation
- Directorate for Combating Desertification and soil conservation (SAYDS)
- Ministry of Federal Planning. Undersecretary for public investment planning.
- Environmental Management Unit. Ministry of Agriculture.
- Agricultural Risk Office. Ministry of Agriculture
- Coordinator of the Working Group on Biodiversity (SAyDS)
- Cooperative of Atlantic Mata
- Argentine Committee for MAB Biosphere Reserves
- Center for Forest Research and Extension Andinopatagónico (CIEFAP)
- Institute of Agricultural Technology.
- Organization of Indigenous Peoples and Nations in Argentina (ONPIA)
- Argentine Forestry Association
- Directorate of Forestry. Ministry of Agriculture.
- Ministry of Economy
- Greenpeace Argentina
- Environment and Natural Resources Foundation
- Ministry of Social Development
- INAI National Institute of Indigenous Affairs
- Scientific advisory committee on climate change
- National Advisory Commission on climate change
- Ministry of Science and Technology
- Secretary of Energy
- Laboratory of Ecological and Environmental Research. Universidad Nacional de La Plata.
- Regional Ecology Group. National University of Buenos Aires
- Ecological Investigation Laboratory Las Yungas. National University of Tucumán
- Argentine Association of Direct Sowing Farmers (AAPRESID)
- Regional Consortiums for Agricultural Experimentation (CREA)

**Consultations and Participation Plan**

The organization of the plan of consultations with different groups to which it is focused, is outlined in the following figure:



Is proposed to conduct a systematic plan of consultation and participation in three main phases:

Phase 1: Strengthening and expanding information and consultation process

Phase 2: Development and Validation of the participation plan

Phase 3: Implementation Plan participation

### **Phase 1**

This first stage would focus on strengthening and improving the process of information and consultations, and further expanding the number of stakeholders involved in them. In this sense, it is essential to involve in the consultation plans of local stakeholders and communities, which during the development of the R-PP could not be systematically informed and consulted. It will conduct 6 regional workshops of information and consultation, focusing on the participation of local stakeholders and communities. Another important issue in this stage will be the strengthening of sectoral working groups (discussed briefly in component 1 to explain how non-governmental representatives will choose the



expected that they will gain autonomy in the process of R-PP implementation. These groups are in charge of developing a plan for participation adjusted for sectoral interest and an expanded consultation. The organizations will self-define its rules of procedure and how to build consensus and articulate with other sectors. Is expected in principle that these groups are composed of no more than ten organizations, that must be organizations with expertise in the subject, links to the territory and preferably be formed by a partnership of organizations. In this sense, it will promote the participation of organizations or initiatives that functions like consortiums or dialogues strengthening the bond with existing initiatives. To cite one example, the Roundtable on Responsible Soy makes up an initiative formed by members of different segments that are linked to the value chain of soybeans, including producers, industry representatives, trade and finance, and representatives of environmental civil organizations.

To the academic and scientific work was done in close consultation during the preparation of R-PP, and have been incorporated directly into the team. It will formalize this process through government agencies: the Ministry of Science and associated scientific bodies. REDD's theme will be incorporated into their strategic plans and is preparing the realization of a national conference on climate change and forests. It also is developing a plan to make a call for the creation of research groups, in conjunction with the National Agency of Scientific and Technological Development, which funds research in innovative fields. Collaboration with Ministry of Science will be a key point in implementing the R-PP. External scientific audit of the MRV component and the reference scenario will carried out in this process.

Provincial governments will be consulted periodically throughout the COFEMA and COFEPLAT and within the framework of the consultations undertaken by the PBNB.

Provincial stakeholders also will be consulted throughout the OTBNs participation process.

Other institutions of the national government will be informed and consulted through meetings of the intergovernmental committee on climate change, which includes all ministries, secretariats and decentralized agencies.

For indigenous communities and representatives a specific consultation plan will be conducted, which is explained below.

The most important outcomes of this stage are: 1) dissemination and awareness, particularly at regional and local level and to communities. 2) A specific participation plans for each of the sectors 3) A final adjusted and validation of the R-PP document 4) basis for widening participation and consultation 4) graphic and video material to disseminate the consultation process.

It will establish a working group on communication and education, with the specific aim of disseminating and training on REDD and REDD strategy. It also will establish regional consult coordination's in partners institutions in each forest ecoregions that will responsible for conduct local communications activities.

The consultation process will have a systematic methodology and basic contents that has to

be adapted according to the target groups to be addressed:

- 1) General contents and relevant information on REDD, forestry and climate change
- 2) General contents of the components and activities of the R-PP
- 3) Options for the participation of groups consulted
- 4) A package of information to be sent to all organizations and communities to be consulted. This package will contain a guide and a form to make comments and suggestions.
- 5) All proposals received will be compiled and presented in the consultation events, with a NWG-REDD feedback for a second process for submissions and comments, and incorporate these in the activities to be performed.
- 6) Finally with all the proposals and feedback from the NWG-REDD develop a participation plan for communities and their representatives

## **Phase 2**

During this stage, the consultations will continue, but it will focus on specific topics that have been identified in the previous stage. It validates the participation plan developed with the implementation of pilot projects. These experiences will serve to review and adjust the plan for the end product of this stage a plan with various activities proposed and validated by the communities and organizations. The contents of this stage are closely associated with the options of the REDD strategy (component 2b), and the most important product of the same will be the evaluation and results of the pilot activities

## **Phase 3**

At this stage replicate the positive experiences and adjusted according to the revisions made in the previous phase, increasing the scale of activities including more regions, communities and organizations.

In addition, there will be a process of strengthening and expansion of structural institutional articulation for REDD. It is a national group REDD expanded on the basis of representatives NWG-REDD. Each of the representatives will work on intra-institutional training and dissemination to the levels of policy decision. The highest authorities of each institution must ratify all occurred during the early stages of implementation of the R-PP. Once this is achieved, is exercised by a group of high level political coordination formed by Chancellor, Chief of Cabinet of Ministers, Ministry of Economy, SAYDS, Representatives of the environmental committees of the Chamber of Senators and Representatives to create awareness in the high level of decision and make strategic decisions to address REDD framework implementation.

**Background and Consultation Plan Participation and indigenous peoples:**

In the SAYDS was conducted between 11 and 12 June 2008 the Seminar "Indigenous Peoples, Forest Act, Lands and Public Policy" in which information was exchanged between the different areas of the Secretariat and the organizations of the Native Peoples. In that first instance of training and exchange has been agreed the work on the survey of forested areas inhabited by the native peoples and assumed the aim of building a map that reflects this reality.

In various regional workshops and meetings of organizations were working to systematize the information that was dumped in the preparation of the map in the preparatory meetings of the event on Native Peoples and Forests, held under the World Forestry Congress, in October 2009.

We could list several instances in which were developed participation and consultation processes in recent years: PPI (Indigenous Participation Process finished with the National Forum on August 24 - September 2, 1997), STIP (the Working Committee of Indigenous Policy) independent government body that drafted and proposed the development of seven regional forums and the National Forum 2005, the Indigenous Participation Council (CPI), a institutional representative for indigenous people for the national government. The CPI created by order of INAI No. 152 dated August 6, 2004 expressed indigenous representation in the Coordination Council under the Act No. 23,302 and established indigenous representation by town and by county across the country, (built by eighty-five members), in order to ensure genuine participation in all matters affecting them.

For the elaboration of the National Land Survey of indigenous communities. Implementation of the Law 26.160, was consulted on CPI in the different regional bodies, having drawn up the relevant minutes of each meeting:

- Regional NEA: Formosa, october 2006
- Regional NOA: San Miguel de Tucumán, october 2006
- Regional Centro-Sur: San Carlos de Bariloche, november 2006
- Meetings of coordinator bureau: from november 2006 until today.

The indigenous representatives were consulted about these issues:

- The relationship with the territory they occupy.
- The traditional, current and public Community occupation of the land.
- How to specify in the survey process, the participation of indigenous peoples and communities in the demarcation of the traditional current occupation.
- How do the Survey in Indigenous Communities, which have a community not to possession and ownership, or communities that occupy urban areas.
- There was discussion about the involvement of other agencies and NGOs
- Contributions were solicited on the various stages of the Survey.

Subsequently, successive versions of the program were put to the consideration of the Coordinating Bureau of the CPI, to reach the final version for submission to the consultation and participation of the national meeting of indigenous representatives.

Under the second national meeting of CPI conducted in March 2007, after explaining, evaluating and discussing technical procedures and methodology for implementation, indigenous representatives approved the National Program "LAND SURVEY OF INDIGENOUS COMMUNITIES. IMPLEMENTATION OF THE Law 26.160. It agreed methodologies and mode of participation of the CPI and the Communities in the different stages of Survey.

- It was agreed with a proposal for indigenous representatives 'Task Force' and how do the Territorial Survey of Indigenous Communities in each province.
- The consultation and agree a draft decree regulating Law 26,160-and endorsed by the Coordinating Bureau of the CPI, for submission to the National Executive

This mechanisms and documentations will serve for guide and will be used for REDD consultation plan.

The National Meeting of Native Peoples Organizations is a national joint space of the indigenous peoples. Currently gathers 26 organizations territorial policies. This space was created in March 2009 with over 200 representatives of organizations agreed, looking toward intercultural proposal public policy.

The organizations and indigenous communities gathered at the "National Native Peoples Organizations for a cross toward the bicentennial state" decided form a Commission for Monitoring of Development of the Proposal for the Development of Participatory Public Policy and Intercultural.

The commission is mandated to continue the process begun at the meeting. Process that has to do with the strengthening of regional political organizations of peoples, communities and organizations in the provinces and municipalities or political parties. In turn articulate with organizations at regional and national resources to manage and administer the holding of forums, meetings, workshops, etc.. Encouraging joint spaces.

The Commission was composed of relating nominated by indigenous organizations that may be ratified or designates another member through their assemblies.

The space prompted the call for territorial political organizations Native Peoples to the Bicentennial, the joint space developed in a comprehensive and participatory the proposal entitled "Building the Bicentennial Covenant between the Native Peoples and the State: A Policy of multiculturalism."".

In these meetings discussed the impact of Indigenous Peoples in public policies both in terms of communication, initiating a proposal for a redistribution of the word, of the need to own means of communication to reflect the agenda of communities, villages and their organizations to enable new challenges of inclusion, which was reflected in the new Law on Audiovisual Communication Services. And other issues such as impact on identity development policies and their linkage with climate change, respect for traditional use of forests by indigenous peoples, water management and reforestation with native species within indigenous territories, and other domestic issues as the ratification of OIT Convention 169.

On these issues the organizations themselves identified the need to deepen knowledge of the Native Peoples, to achieve a more clear and strong position to strengthen decision making and proactive participation in national issues. Similarly, proposals to generate socio-culturally viable and economically viable for indigenous peoples and environmentally sustainable for humanity.

According to the mapping of indigenous forest organizations conducted by indigenous organizations themselves, will designate a reference person for REDD strategy for each of the indigenous organizations related to forests. In this regard, the Organization of Indigenous Peoples and Nations in Argentina (ONPIA), has developed, with technical advice from the REDD strategy, a plan for *information and training of indigenous peoples on climate change*, with the aim of facilitating the participation of Indigenous Peoples in the preparation process for REDD.

The goals identified by the representatives of indigenous organizations are:

- 1) Inform indigenous peoples on the current state of the environment caused by climate and the camber link between conservation and ecosystem protection in indigenous territories in order to facilitate participation by them in the REDD
- 2) Disseminate information on climate change and the process of Reducing Emissions from Deforestation and Degradation (REDD). In indigenous communities.
- 3) Open space for greater participation of indigenous peoples in the benefits generated by the application and development of REDD process in Argentina
- 4) Generate a space for dialogue to establish coordination mechanisms and the logic of inclusion of indigenous peoples in the implementation of REDD.

In this regard stresses that the plan of consultation and participation of indigenous communities shall be based on processes initiated mentioned. Especially in SAYDS indigenous representatives, recognized as representative to the National Initiative of the Native Peoples Organizations in the design, management and execution of the lines of environmental programs.

The consultation plan will include various agencies and associations have also been proposed by the Native Peoples Address:

At Government level: National Institute for Indigenous Affairs, National Institute Against Discrimination, Xenophobia and Racism, the Federal Council of Human Rights, Human Rights Secretary, Chancellor's Office, National Parks Administration.

At the provincial and municipal, indigenous organizations with the technical team will map local and regional actors both governmental and civil society interested in beginning to articulate with readiness process. Several organizations have expressed interest in participating in this process: the National Meeting of the Native Peoples Organizations

(ONPIA), Council of Indigenous Women of Argentina (CONAMI), the commission of the Native Peoples Area Open Letter, the Law Society Indigenous Law (AADI), and Commission of Indigenous Jurists Argentina (CJIRA).

Summarizing will undertake the following activities:

- 1) Plan for information and training for indigenous communities, based on the proposal made by the ONPIA
- 2) Specific training courses for indigenous organizations with expertise in forest
- 3) Regional workshops for discussion of strategies and regional issues
- 4) National Bureau of dialogue made by government institutions mentioned and related community organizations
- 5) Video documental of the process, to expand dissemination and information of indigenous communities and forest dwellers.

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2010	2011	2012	2013	Total
Information and capacity building plan	Phase 1 complementary approach	30\$	30\$	\$	\$	60\$
	Phase 2	60\$	60\$	100\$	\$	220\$
Consultation to the focal groups	Six regional meetings the first year and one by year the follow years	240\$	40\$	40\$	40\$	360\$
	Hire expert on capacity building and consultation process	30\$	30\$	30\$	30\$	120\$
Phase 3: Active participation	Travels and meetings	\$	50\$	50\$	50\$	150\$
	Hire specialist on programs design	15\$	15\$	15\$	15\$	60\$
Working on communications and educations	Design of communications strategy	20\$	10\$			30\$
	Disseminations and video and	30\$	30\$	30\$	30\$	120\$

	graphical media					
	<b>Total</b>	<b>425\$</b>	<b>265\$</b>	<b>265\$</b>	<b>165\$</b>	<b>1220\$</b>
Gobierno Nacional		100\$	50\$	50\$	50\$	250\$
FCPF		325\$	215\$	215\$	115\$	970\$

## Component 2: Prepare the REDD Strategy

### 2a. Assessment of Land Use, Forest Policy and Governance

#### Rationale

The purpose of the assessment of land use, forest policy and governance is to help the country identify key drivers of deforestation and/or forest degradation and review its past experiences with reducing deforestation and forest degradation, in order to identify promising approaches for the emerging REDD strategy.

Argentina has extremely diverse forest ecosystems in terms of their ecological and climatic conditions. Also, these forest types are subjected to socio-economic situations and pressures of deforestation and degradation specifically differentiated. Therefore, for a detailed assessment of the direct and indirect drivers of deforestation ecoregional evaluations are needed for each type of ecosystem.

The most important causes that have been cited for each region are:

**Chaco region:** The expansion of cultivated area, livestock operations, logging and fires.

**Atlantic Region:** Replacement for pine plantations; snuff, tea and yerba mate cultivation; Logging.

**Yungas region:** Exploitation of oil and infrastructure development

**Piedmont forest region:** Expansion of soybean crops, sugar cane and citrus

**Patagonia:** Forest fires, urbanization, post-fire livestock,

#### Assessment of drivers

The expansion of soybean in Argentina is the most important transformation that has occurred in land use in Argentina in recent decades. Soy has become, in recent years, the principal crop in Argentina, both surface and implanted in total production. In the 1988/89 cropping season were planted 4.6 million hectares and production reached 6.5 million tonnes. Only fifteen years later, in 2003/04, the area planted with this oilseed amounted to 14.2 million hectares and production was 7 times higher (34.8 million tonnes) than harvested in 1989.

These facts are part of a broader phenomenon known as the "agriculturization" of extensive production systems. This phenomenon is not limited to Argentine territory, but is also evident in other South American countries like Bolivia, Brazil and Paraguay. Faced with a growing foreign demand for food and fiber, increasing the agricultural land is inevitable. In the country, until the enactment of the Forest Act No. 26,331, in the 2007, that process was so unplanned and unregulated. In the Pampas region, built to agriculture in the early twentieth century (N of Buenos Aires and La Pampa, Cordoba SE, S of Santa Fe, part of Entre Rios), the expansion of agriculture came at the expense of land implanted with perennial forage crops. The available data do not permit a direct quantitative assessment, and evidence suggests that largely has been replaced by continuous cropping and livestock farming rotation in which the land was occupied for 4-5 years for annual crops and then for a similar period was implanted in a pasture-based mixtures of grasses and perennial legumes. However, the expansion of agriculture into marginal areas and particularly in the Chaco region occurred at the expense of native forest. In the northeast of Salta and in the crop year 2002/2003, 50.6% of soybeans, approximately 158,000 ha were planted in 1988/1989 in areas that were occupied by natural vegetation, while the rest was sown on agricultural areas that were already (Paruelo, 2005).

Climate change, the expansion in the use of techniques and implements minimum tillage and direct seeding, development of new crops, increases in international prices for some commodities, the change of scale and increased availability of capital associated with the emergence of consortia of planting, have been frequently cited to explain the underlying causes of changes in the Pampean agriculture and encroachment into extra-Pampean areas causing an increase in deforestation rates. La importancia relativa de los distintos factores variará de acuerdo a la zona, reflejando cambios en los factores subyacentes en los procesos de cambio del uso de la tierra. The relative importance of different factors will vary according to region, reflecting changes in underlying factors in the change processes of land use. The availability of technology interacts with soil characteristics, training of local manpower, climatic trends, the price ratio products / inputs and economic and fiscal incentives in determining the expansion rate of a given crop, a key factor being the profitability of land use.

In much of the province of Buenos Aires and Argentina's agricultural traditional area, the main limitation to the expansion of agriculture has been the availability of unrestricted land for salinity, alkalinity and water logging. In this case technology and / or infrastructure factor plays secondary rol. In the Chaco region in North of Argentina, however, the availability of good soils would not be the primary control of the rate of agricultural expansion. Moreover, climate change may promote or restrict agricultural expansion. The positive trend in rainfall observed in the Chaco region has been cited as one of the factors responsible for agricultural expansion in the east of Salta (Grau, 2005) and in Córdoba (Cabido, 2005). In this sense, it is necessary to identify the extent to which changes in water availability observed reflect a cyclical dynamic or correspond to a real trend. The beginning of a dry year can seriously affect the new agricultural poles developed without planning and without proper assessment of the sustainability of the activity, leading to degradation of productive land, which increases the need for other areas to cultivation, leading to more deforestation pressure.

## **Deforestation**



There was uncertainty over what the original forest area of Argentina. Some authors report a total of 42,000,000 hectares (ha) of forest and about 127,000,000 shrublands and savannas, ie 60% of the total land area (Morello and Matteucci, 1999). However, these estimates are based on assumptions that are difficult to substantiate at present and are dependent on what was considered as forest in each of the assessments.

The First National Natural Forest Inventory conducted in 2002 estimated a total area of 33,190,442 ha between forest lands and rural forest (SAyDS, 2003). These forests are converted to an approximate rate of 250,000 hectares annually, mainly in the Dry Chaco (70% of total), the Humid Chaco and the Yungas Forest (Gasparri and Grau). Some forest ecosystems, including jungle piedmont or "three quebracho forests" in dry Chaco are truly committed in a situation, given the intensity of transformation processes to expand the agricultural frontier for soybean crops (Brown and Adamoli). Even the deforestation is associated with the phenomenon of the introduction of pampean industrial farming model in Chaco region. In the eco-region of the Mata Atlantic Forest that is shared with Brazil and Paraguay, only remains the 7%, found mostly in the Argentine territory.

### **Overexploitation and Forest Degradation**

The forest exploitation and subsequent degradation of forest are process difficult to measure over large areas. This is due to the underestimation of the records associated with logging, lack of information on the area actually affected by exploitation and the absence of systematic studies on the subject and application of methodologies from satellite imagery by region. However, the degradation is a widely recognized process in the country, particularly in areas accessible to humans and livestock. Argentine Forest systems are exploited in very high rates, and there are very few spaces without intervening outside protected areas (PAs) and even within them, as is common operation prior to expropriation to create these areas. La mata atlantic forest has more than 89% of its remaining forests in medium to high levels of degradation and fragmentation, and only has less than 40,000 hectares of pristine forests (Mac Donagh and Rivero). The conventional logging system has a severe effect on the biodiversity of this eco-region (Placci and Di Bitetti,).

Los ambientes áridos como el Chaco Seco, Monte, la estepa patagónica y la Puna tiene una extensa e intensa presión de pastoreo, una actividad que generalmente se asocia a seguir contribuyendo al proceso de degradación (Adamoli).

Sólo en la ecorregión del Monte, en la última década, casi 10.000.000 de hectáreas se vieron afectadas por los incendios que representa alrededor del 30% de la ecorregión. En el Chaco húmedo, el área quemada de pastizales y de sabanas asciende a un valor entre 2 y 4.000.000 de hectáreas por año (Ginzburg y Adámoli,). Estos procesos de degradación asociados con el exceso de pastoreo, lo que lleva inexorablemente a aumentar la desertificación en los ecosistemas a escala regional, y también son observables en la eco-regiones húmedas como los Yungas y los bosques patagónicos. En los últimos años, el ganado ha alterado significativamente la composición florística y estructura de los bosques, incluso dentro de los parques nacionales, y el ganado en varios sitios ha impedido que la recuperación post-incendio de los bosques (Premoli).

### **Forestry sector**

The forest sector development has been compared with other countries in the region, much slower and less important in terms of formal participation in the economy. Especially, the sector has been recently considered in developing policies for a long, due to the preponderance of agricultural and livestock activities. However, this trend began to improve from the 90's, due to incentive policies provided by the national state. Specifically, it provided significant benefits to investment in forestry, by creating conditions such as incentives, industrial promotion zones, technical support, available bank loans, tax exemptions and subsidies. Despite this, the forest products trade balance remains negative in recent years and the sector comprises only 2% of country GDP.

Forestry Sector in Argentina						
Surface		Production		Commerce international		GDP%
Natural	Cultivated	Commodities	Secondary products	Exportation	Importation	
34.64 million has	800,000 has	7,033,860 Tm	1,981,000 Tm	260,000	930,300	2
Source: Directorate of Forestry -SAGAyP 2003						

#### Contribution of forest resources to the economy

The contribution of forest resources to the economies varies by region. In the case of the Chaco region, there is little their importance in the national totals for productive activities. Whereas the gross value added (GVA) for economic activities and industrial activities and services, representing 3% and 2.9% respectively of the national GVA in each of the sectors concerned. For the jobs held, employees represent 5.1% industrial and residential consumers 7% of the country's total.

Item	Amount (U\$S)	%
Furniture	1.821.000.000	38,8
Paper and paperboard	1.227.000.000	26,2
Wood products	1.341.000.000	28,6
Forestry	300.000.000	6,4

Source: Statistic Department, SAyDS

## Forest policies and governance

The Congress passed in 1948 Defense Act of Forests. For all cases, the law states that prohibits the destruction of forests and woodlands and irrational use of forest products (art. 11 °), and for owners, tenants, beneficial owners or holders in any capacity of natural forests may not start work to exploit them without the agreement of the competent forestry authority, which shall be requested to accompany the management plan (art. 12 °). This rule denotes the importance of forest wealth was to Argentina, but was far from being an effective solution to the problems facing forest ecosystems in the country.

Being a national law, its main scope of federal jurisdiction and, in case of accession by the provinces, the relevant enforcement authority shall be as established by each provincial jurisdiction (so that the application and the degree of compliance with the legal provisions will be subject to the conditions and institutional situation of each province), as well as to the specific regulations that punish each jurisdiction. A clear example of this failure is that some provinces that have adhered to the law are those with situations more alarming deforestation and degradation: this is the case in provinces like Salta (Act of Accession No. 5242) and Santiago del Estero (Act Accession No. 5113). Moreover, the only national event of possible intervention in the provincial territory is fuzzy interpretation: it must be protective forests and says explicitly that the rule-"the effects of this quality to bear on interests that are within the purview federal government is because it affects the general welfare, progress and prosperity of two or more provinces or a province and the federal territory.

Defense Law of Forests is one of the best examples of excellently designed laws based on advanced technical knowledge for their moment, trying to order the use and preservation of native forest masses and encourage further expansion of the masses in place. In its application, this is perhaps the most frustrated environment law experience of Argentina.

The main positive consequence of the legislation was the incentive for human resources training in the technical field because of the need to accompany all submissions with management plans and assessments by forest experts.

However, concerning one of its main objectives was to maintain and improve the country's natural forest has been totally ineffective; the provisions of the law have not been fulfilled in practice. The administrative mechanics of making surveys, inventory plans, prior authorizations, etc., was continued routinely in almost all provinces, but few of them were generated effective regulatory frameworks for forests, whether private or public. The control mechanisms responsible for implementing government agencies have been totally inadequate

in many cases by being deprived of adequate funding and minimum equipment necessary for the performance of that function.

### **The general environmental legal framework**

In 1994 was incorporated the environmental dimension to our constitution, in line with international recognition of the right to a healthy environment that follows the declaration of the environment as the common heritage of humanity. Expressed in this way by claiming that "all people are entitled to a healthy and balanced environment fit for human development and productive activities that meet present needs without compromising those of future generations" (Article 41).

The essential mandate for the State is specifically expressed "the authorities provide for the protection of this right, the rational use of natural resources, preservation of natural and cultural heritage and biodiversity, and environmental information and education" (Article 41). On the other hand, Article 43 of the Constitution establishes the judicial protection of constitutional rights by stating that this action may be brought, especially as regards the rights that protect the "environment, competition, the users and consumers, as well as collective rights in general. "

### **Minimum Standard of Environment Protection (MSEP)**

One of the powers delegated by the provinces to the federal government is in Article 41 of the Constitution when it states that "Nation shall correspond to the rules containing the Minimum Standard of Environment protection, and the provinces those necessary to reinforce them, without those altering their local jurisdictions. Consistent with this constitutional provision, the Congress passed in 2002 General Environmental Law, including MSEP.

Thus, respecting the local powers, the provinces have delegated to the federal government the basic standards that matter a common interest of sufficient magnitude to unify the criteria from the federation, leaving the remainder to the provincial competition, which is reserved for itself the power to make all the rules as they deem appropriate to regulate environmental issues in their respective territories in addition to those, and without affecting the minimum standard.

The LGA law establishes minimum standards for achieving a sustainable and proper management of the environment, preservation and protection of biodiversity and the implementation of sustainable development (art. 1). This implies that the minimum standard applies to the entire national territory subject to the rules made locally. It expressly provides that the various levels of government, integrated into all decisions and activities of an environmental nature, aimed at ensuring compliance with the principles set forth by law (art. 5), which should guide the interpretation and application of the LGA and any other rule or policy through which environmental policy is implemented (art. 4 °). These principles are: Consistency; Prevention, Precaution, Intergenerational equity, progressivity, Responsibility, Subsidiary, Sustainability, Solidarity, Cooperation.

These principles were incorporated as tools for decision making. Precise, functional and operational principles of the General Law of the Environment (LGA) are of vital importance in our system, as reflected undisputed lines within the Federal State and the provinces should drive the development, projection and implementation of environmental policies, as well as from all duties and exercise of functions. The national and provincial judiciary has repeatedly applied these principles as a tool to base their decisions.

### **Forests in the powers and jurisdiction federal system**

The system of demarcation of responsibilities in environmental matters established by Article 41 of the Constitution is supplemented by the constitutional provision through which the provinces have the original dominion over the resources within their territories, including control over forests (Art. 124 - National Constitution).

As part of the points mentioned above can be summarized that:

- the provinces of the federation have the original dominion over the natural resources within its territory,
- the environmental jurisdiction (competence) is preeminently local,
- But there may be jurisdiction (competence) on the same federal resources under certain circumstances provided by law, or delegated by the provinces.

In addition, the division of competences in forestry from the Ministry of Agriculture, Fisheries and Food, who is in charge of the forest plantations, and the S AyDS in charge of natural forests, has not been accompanied by an adequate level of coordination between two ministries. The division of powers has been strengthened weak valorization of natural forest , in productive and environmental point of view, by the national economic authorities and the national legislature, which is reflected in the difference between the two budgets.

As part of this strategy proposes greater coordination among enforcement bodies on forests and natural forests in place for joint planning, especially since the implementation provincial authorities hold both roles simultaneously. This coordination has been made in 2009 through a legal agreement to work together the issue between the two ministries

### **Forest Provincial Legislations**

In terms of innovation in policy and law relating to native forests at the provincial level, are the policy and acts of Misiones province. This province was a precursor to realize that the purely statutory law as the actual forest (No. 854 of 1979, inspired by country), do not guarantee the persistence of a minimum of native forests to meet conservation objectives, when compete with agricultural land use. As an example of searches that seek to combine forest law and land management with active policies to promote sustainable land use, it is the history of this Province. This is a Argentine provinces with forestry tradition, who has

lived in recent decades a regression of natural forest and a major expansion of the plantation forests of exotic species, mainly pine. Currently, federal promotion schemes of forest plantations bring to this province 24% of total subsidies in the country. The forest was heavily exploited In about 2/3 parts of the province were replaced by perennial industrial crops and plantations. In other cases, there was a selective logging operation, impoverishing the quality of the remaining forest timber. The intact forest has been reduced to a small portion. While the Misiones forest represents the largest remaining block of ancient “mata atlántica” forest that extended continuously from the State of Sao Paulo to Rio Grande do Sul, in Brazil, and eastern Paraguay. Despite this, deforestation in the bordering areas of neighboring countries was so intense that at present international borders can be seen in satellite imagery, by the abrupt change of land use beyond the borders. The Misiones Province in Argentina

today houses 60% of the last remains of non fragmented pieces<sup>1</sup>, with the adjoining Brazilian Parks of Iguazu and Turvo, this sector embraces 80% of the non fragmented forest. The strategic importance of its conservation was not translated in significant contributions from the international community. However, the Atlantic forest is still one of the most diverse ecosystems on the planet. Some 450 species of trees have been found in just one hectare of these forests and have a great value as it provides strategic environmental services has been recognizing by experts for their potentials for REDD activities

In this regard, the province design a set of laws in recent years that offers tools to native forests incentives through tax breaks of between 60 and 100% estate tax. One of the main limitations of this scheme is that municipal taxes are the largest in the province, so that the incentive had a limited impact on incentives for protection. Currently, the province of missions has developed a regulatory framework for environmental service payments, which could result a paradigmatic case for the country.

### **Mínimum Standard Forest Law**

the National Government has decided to set actions to reduced deforestation, inter alia the National Congress approved Law 26.331 of Minimum Standards for the Environmental Protection of the Native Forests at the end of 2007, the operational rules under the National Decree 91 and the establishment of a pilot system program - the Experimental Program of Management and Conservation of Native Forests- in 2009. These initiatives had the direct participation of more than thirty environmental and social civil organizations and support of 1.5 million signatures of people from all over the country, demonstrating the high level of social consensus in regards to the program.

The law established a mandatory provincial forest land planning and financial resources investment in forest protection and management. Among others important aspects of the law is the participatory nature of the process for land use planning of the Natural Forests (OTBN, in Spanish); the moratorium on deforestation until each province implements its OTBN; the obligation to implement evaluations of the environmental impact and public audiences before authorizing deforestation plans, the ban on open air burning of the forest materials which result from deforestation, the explicit recognition of the rights of indigenous communities and small, rural producers bound to the forests and the creation of a National Fund with the objective of compensating land owners that conserve forest and the environmental services that provides.

The fund is composed of 0.3% of the national budget and 2% of tax imposed on export agriculture commodities, reaching a significant financial resource investment. The fund provides financing to strengthen technical and control capacities of provincial governments and to compensate land owners that conserve their forest. Also the fund could be used for sustainable development of productive activities of forest dwellers.

According to the monitoring carried out by SAYDS in a deforestation hotspot area, the rate of deforestation fell by 60% on year after the sanction of the National Forest Law.

However, the full implementation of Law faces several difficulties that should be addressed. Despite the tremendous progress made so far, there are still aspects to be work out to sustain and improves this progress. One of key issues to be address is the institutional capacities of provincial governments that has to be transform and improved at first. The follow are some of the most important issues:

- 1) One of the main weaknesses of the country lies in the inability to control and audit with regard to the Implementation of the Law, in the vast country. It is necessary to strengthen the control systems and improve the monitoring technology and capacities for auditing.
- 2) Another important constraint is related to the irregular land tenure, that potential beneficiaries of compensation funds cannot access the benefits of Law 26,331 and REDD.
- 3) The lack of experience of significant scale in the payment for environmental services and the lack of organizations with proven effectiveness and reputation to undertake this task at local level.
- 4) Only three provinces have sanctioned their OTBN law. And there are still challenges for the implementation of OTBN, with consistent criteria across the border provinces and distributions of categories to reduce deforestation rates.
- 5) Despite broad public participation in the enactment of the law, it is still necessary to strengthen and increase awareness of strategic importance for the quality of life of the population, the permanence of the native forests. In effect, the country has a high rate of urban population, who live far away from forests, and hardly conscious in their daily lives of environmental services that they provide to society.
- 6) Institutional strengthening of management structures and capacity building mechanisms.

## **Forest Land Tenure**

Most forested land are often privately owned. Notwithstanding all the provinces have yet state government land in different proportions. We can cite the case of Chaco province as one of the information available to date and has still an important area with public forests: area of the province 9,985,980 hectares (100%) Private Lands 7,609,274 Has (76%), Public Land 2,376,706 hectares (24%). Many public lands have occupants without the title deeds. They may normalize their situation (after stay a certain number of years) and become owners of these lands to the extent they can afford the cost to rectify the situation, according to provincial and national laws. Unfortunately this last situation is not often occurring. There some cases of communal forest land.

From information obtained from the "Integral Study of the Chaco Park Region" arises in this forest formation which is included in 10 provinces, the land is:

Category	Percentage
Private Owners	63%-78%
Community lands	10%-26%
Occupants	1,8%-4,2%

It is also the category "Pastajeros" who are occupying pastors that paying to the owner of the property.

### Occupation of people in forestry, activities and areas

The structure of land tenure varies according to different regions within native forests. Below is a description of the context of each of the sub-regions identified:

- **Northeast de Tucumán y Salta**

In sub-humid Chaco there is concentration of land in the hands of corporations or private individuals. Clearance is made usually to clear-cutting, to enable land use to agriculture and livestock based on subtropical pastures. In the semi-arid Chaco, in addition to private owners, there are provincial public lands, both often without defined limits. Many occupants act as loggers or pastors.

- **Southeast de Tucumán y Santiago del Estero**

The vast majority of small farmers are squatters on private land or prosecutors. With 20 years of continuous occupation by peaceful and some improvement work, they bear the twenty-year possession. However, often lack the financial means to invoke it and thus ensure its ownership. The twenty-year trial of possession requires monthly costs and legal advice. This is generally unavailable to rural households so they end up being evicted from their possessions and moved into much smaller parcels. When villagers are more than a year in tax and private land, cease to be outsiders to become occupiers. The decline of forestry in Santiago del Estero in recent years is due to declining resources and the retraction of the markets. The technology is the same as fifty years ago.

The existing markets are:

- The private railway companies
- Coal and posts are sold mainly in Buenos Aires, Santa Fe and Cordoba. It also exports some coal bagged, ready for retail sale.

The furniture industry is working on the basis of white carob tree which is processed in the cities.

- **Chaco y Formosa**

The property's current work deals with the socioeconomic history of the region that was forest in nature. Logging activity and cotton generated high demand for labor and economic movement. But the subsequent crisis of these activities resulted in population movements to Buenos Aires, Rosario and Santa Fe, and small towns now have a general problem of unemployment. Rural people is increasing constituted by little children and the elderly



population. In the humid chaco logging was basically for tannin exploitation, but in recent years was more important the timber.

The logging has two destinations:

- Supply industry tannin
- Provision of poles, stakes, coal and firewood.
- **Chaco catamarqueño**

The expansion of the agricultural frontier from the '70s produces reduces the self-sufficiency logging, entering agriculture on that forest land. Since the modification of the native forest has been intense, the current forest resource utilization is low.

- **Chaco Cordobés**

This region has been profoundly transformed in recent years by expanding the agricultural frontier. Only the 6% of original forest cover remains. They are highly mechanized farmers who clear the land completely to the extent that moisture allows agriculture. At present it appears that there are areas that have been fully occupied by these new types of producers and some areas where they coexist with the old livestock producers and / or cutters of the Chaco region. For this reason it has generated a great first division into two subregions:

- Systems smallholder farmer / logger. Use the fodder from the forest and pasture under the existing natural forest.
- Agriculture and livestock in enterprise system, In the most arid region the native forest is in various degrees of degradation. Agriculture is irrigated, so that there is virtually nothing of the native forest on that land.

## Fores fires

Currently much of our territory there are considerable economic losses result of forest and grassland fires. According to statistical information obtained from provincial government agencies with responsibility in the matter, during the 2008 season in the country were burned 610,060 hectares and were detected 17,738 fire outbreaks. The distribution of these by type ecosystem and causes are presented in the following table:

Ecoregions	Numbers		Surface (has)					Causes				
			Total	Forest	Plantations	Savanna	Grasslands	Not determinate	Negligence	Intentional	Natural	Unknow
Porcentaje		100,00%	14,67%	3,33%	23,39%	58,20%	0,41%	21,37%	19,47%	5,07%	54,10%	
Total	17738	610060,70583	89485,1443	20323,86188	142706,18882	355057,01083	2488,5	3790	3453	899	9596	
Bosques Andino-Patagónicos	2185	25230,18713	11536,3533	843,29338	4518,93372	5843,10673	2488,5	251	1589	40	305	
Espinal	1243	110402,3	43320,6	1701,3	5604,7	59775,7	-	280	370	69	524	
Estepa Pampeana	10776	103073,5079	3743,0608	11612,6103	24570,193	63147,6438	-	1526	925	706	7619	
Monte	596	154524,7661	2339,5	110,3	37317,83	114757,1361	-	289	179	39	89	
Parque Chaqueño	1858	150119,03	26657,13	4725,4	34381,12	84355,38	-	1124	286	32	416	
Patagónica	6	52070,09	-	-	31844,09	20226	-	3	-	-	3	
Puneña	1	5	-	5	-	-	-	-	-	-	1	
Selva Misionera	551	1473,47	83,1	385,15	238,07	767,15	-	126	24	-	401	
Selva Tucumano-Boliviana	522	13162,3547	1805,4002	940,8082	4231,2521	6184,8942	-	191	80	13	238	

This issue is relevance by increased frequency and intensity of the phenomenon in recent years, especially due to inadequate use to clear land for agricultural and livestock. The country has developed a National Plan for Fire Management, which has regional branches, and produced a process of capacity building to control and manage this phenomenon adequately. During November 2009 a law was passed minimum standard for environmental protection for control burning activities, setting requirements for provinces to manage the management of rural fires, as an essential component for the conservation of ecosystems.

But still, it is still necessary to provide for a continued strengthening of the program, facilitating the incorporation of technological tools and develop capabilities to monitor, prevent and manage the activities of burning and forest fires. In some areas, like Patagonia forest this issue could be this most important strategy for reduce deforestation and forest degradation.

### **Infrastructure development sector and public investment**

The Ministry of Federal Planning, Public Investment and Services through the Undersecretary of Planning of the Public Investment, has defined the guiding objectives of the National State policy in this area. In "Argentina 2016: Politics and National Development Strategy and Land Management" (2004), defined the objectives and established the implementation of a set of planning tools, designed as tools to manage the achievement of those objectives . In this sense Territorial Development Strategic Plan as one of the key tools. The Plan aims to enable identification of the investments in infrastructure and equipment necessary for the spatial development of the Nation and the Provinces, which will help meet the guidelines set forth in state policy defined by the government.

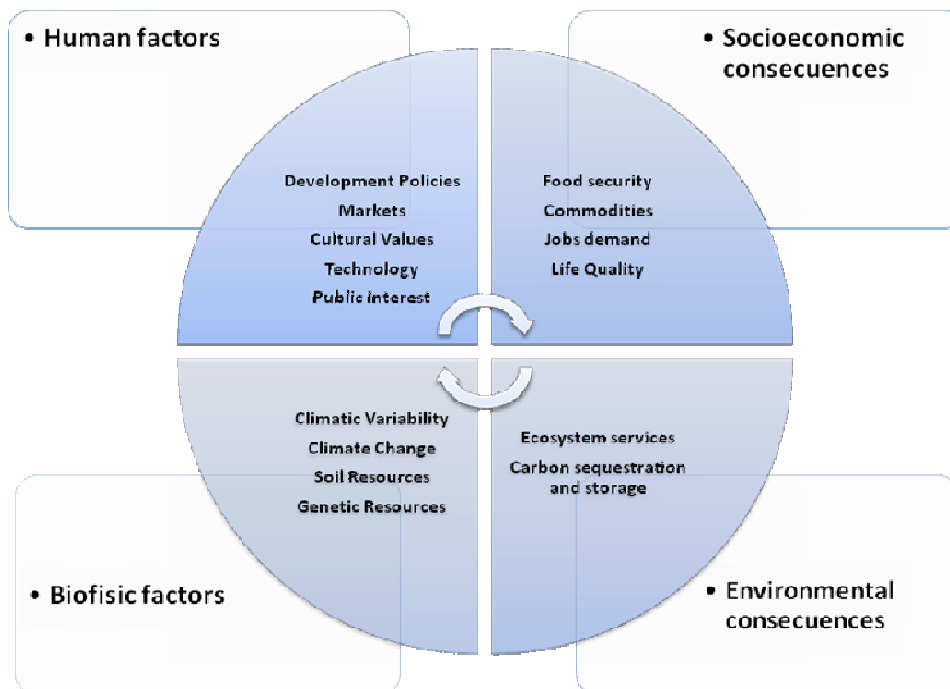
The program represents a diagnostic evaluation of the actual situation and the current territorial development model; model resulting from the characterization of environmental, social, physical and economic characterization and formulation of remedial strategies of conflict and promoters of the potential identified in the provincial territory, the vision of a "Best Land Use Model " and closely linked to this, the proposal "a portfolio of initiatives and infrastructure projects" functional to the construction of this model. Throughout this process took place in turn to a series of regional meetings in which they were able to address local issues from a viewpoint committed to the regional issue. Finally there were two national forums was aimed at the harmonization of standards at work implemented in each province. In parallel, conducted by technical staff of the Secretariat of Planning of the Public Investment an interconsultation with ministries with competence in each infrastructure sector. It was obtained strategic and policy guidelines with which is promoting investment in each sector and the bank launched projects, planned or identified for the horizon 2016. The work done so far allowed the recognition of the great features of public policy that is being promoted on a sectoral, as well as major national ranking projects that have strong regional impact. This, together with progress in binational and international forums (IIRSA - Initiative for South American Regional Infrastructure Integration) that helped set initiatives and regional integration projects, provided a first instance of evaluation and weighting of the diagnosis and local proposals and regional. This framework of information and organization will be used for assessments the infrastructure developments future impacts on deforestation. In this sense also be incorporated criteria relating to energy issues and biomass wastes in conjunction with the Ministry of Energy, and considerations of the Biofuels Act is implemented from February 2010, , which will generate increased demand for them and the

land available to produce it. Also will use the background study developed with WISDOM (Woodfuel Integrated Supply/Demand Overview Mapping)-FAO methodology, for biomass energy planning.

Conceptual framework for studying the dynamics of changes in land use

For planning the processes of land use changes, is needed accurate information and the development of appropriate conceptual frameworks and modeling. Considering three major factors in land use patterns and their relationships: 1) the dynamic 2) causes 3) consequences

It is necessary to obtain information to answer questions such as How fast expanding agricultural and forest areas? In what areas and how this expansion periods is more intense? What are the environmental, technological, socioeconomic and political controls processes? How do they affect production goods and services to society? The processes responsible for patterns of land use change depend on a number of factors of very different and whose analysis is complex. The following figure shows a preliminary analysis of the most important of these changes:



Argentina has extremely diverse forest ecosystems in terms of their ecological and climatic conditions. Also, these forest types are subjected to socio-economic situations and pressures of deforestation and degradation specifically differentiated. Therefore, for a detailed assessment of the direct and indirect drivers of deforestation ecoregional evaluations are needed for each type of ecosystem.

the most important causes that have been cited for each region are:

Chaco region: The expansion of cultivated area, livestock operations, logging and fires.

Atlantic Region: Replacement for pine plantations; snuff, tea and yerba mate cultivation; Logging.

Yungas region: Exploitation of oil and infrastructure development

Piedmont forest region: Expansion of soybean crops, sugar cane and citrus

Patagonia: Forest fires, urbanization, post-fire livestock,

#### Assessment of deforestation drivers

The expansion of soybean in Argentina is the most important transformation that has occurred in land use in Argentina in recent decades. Soy has become, in recent years, the principal crop in Argentina, both surface and implanted in total production. In the 1988/89 cropping season were planted 4.6 million hectares and production reached 6.5 million tonnes. Only fifteen years later, in 2003/04, the area planted with this oilseed amounted to 14.2 million hectares and production was 7 times higher (34.8 million tonnes) than harvested in 1989.

These facts are part of a broader phenomenon known as the "agriculturization" of extensive production systems. This phenomenon is not limited to Argentine territory, but is also evident in other South American countries like Bolivia, Brazil and Paraguay. Faced with a growing foreign demand for food and fiber, increasing the agricultural land is inevitable. In the country, until the enactment of the Forest Act No. 26,331, in the 2007, that process was so unplanned and unregulated. In the Pampas region, built to agriculture in the early twentieth century (N of Buenos Aires and La Pampa, Cordoba SE, S of Santa Fe, part of Entre Rios), the expansion of agriculture came at the expense of land implanted with perennial forage crops. The available data do not permit a direct quantitative assessment, and evidence suggests that largely has been replaced by continuous cropping and livestock farming rotation in which the land was occupied for 4-5 years for annual crops and then for a similar period was implanted in a pasture-based mixtures of grasses and perennial legumes. However, the expansion of agriculture into marginal areas and particularly in the Chaco region occurred at the expense of native forest. In the northeast of Salta and in the crop year 2002/2003, 50.6% of soybeans, approximately 158,000 ha were planted in 1988/1989 in areas that were occupied by natural vegetation, while the rest was sown on agricultural areas that were already (Paruelo, 2005).

Climate change, the expansion in the use of techniques and implements minimum tillage and direct seeding, development of new crops, increases in international prices for some commodities, the change of scale and increased availability of capital associated with the emergence of consortia of planting, have been frequently cited to explain the underlying causes of changes in the Pampean agriculture and encroachment into extra-Pampean areas causing an increase in deforestation rates. La importancia relativa de los distintos factores variará de acuerdo a la zona, reflejando cambios en los factores subyacentes en los procesos de cambio del uso de la tierra. The relative importance of different factors will vary according to region, reflecting changes in underlying factors in the change processes of land use. The availability of technology interacts with soil characteristics, training of local manpower, climatic trends, the price ratio products / inputs and economic and fiscal

incentives in determining the expansion rate of a given crop, a key factor being the profitability of land use.

In much of the province of Buenos Aires and Argentina's agricultural traditional area, the main limitation to the expansion of agriculture has been the availability of unrestricted land for salinity, alkalinity and waterlogging. In this case technology and / or infrastructure factor plays secondary role. In the Chaco region in North of Argentina, however, the availability of good soils would not be the primary control of the rate of agricultural expansion. Moreover, climate change may promote or restrict agricultural expansion. The positive trend in rainfall observed in the Chaco region has been cited as one of the factors responsible for agricultural expansion in the east of Salta (Grau, 2005) and in Córdoba (Cabido, 2005). In this sense, it is necessary to identify the extent to which changes in water availability observed reflect a cyclical dynamic or correspond to a real trend. The beginning of a dry year can seriously affect the new agricultural poles developed without planning and without proper assessment of the sustainability of the activity, leading to degradation of productive land, which increases the need for other areas to cultivation, leading to more deforestation pressure.

### Deforestation

There was uncertainty over what the original forest area of Argentina. Some authors report a total of 42,000,000 hectares (ha) of forest and about 127,000,000 shrublands and savannas, ie 60% of the total land area (Morello and Matteucci, 1999). However, these estimates are based on assumptions that are difficult to substantiate at present and are dependent on what was considered as forest in each of the assessments.

The First National Natural Forest Inventory conducted in 2002 estimated a total area of 33,190,442 ha between forest lands and rural forest (SAyDS, 2003). These forests are converted to an approximate rate of 250,000 hectares annually, mainly in the Dry Chaco (70% of total), the Humid Chaco and the Yungas Forest (Gasparri and Grau). Some forest ecosystems, including jungle piedmont or "three quebracho forests" in dry Chaco are truly committed in a situation, given the intensity of transformation processes to expand the agricultural frontier for soybean crops (Brown and Adamoli). Even the deforestation is associated with the phenomenon of the introduction of pampean industrial farming model in Chaco region. In the eco-region of the Mata Atlantic Forest that is shared with Brazil and Paraguay, only remains the 7%, found mostly in the Argentine territory.

### Overexploitation and Forest Degradation

The forest exploitation and subsequent degradation of forest are process difficult to measure over large areas. This is due to the underestimation of the records associated with logging, lack of information on the area actually affected by exploitation and the absence of systematic studies on the subject and application of methodologies from satellite imagery by region. However, the degradation is a widely recognized process in the country, particularly in areas accessible to humans and livestock. Argentine Forest systems are exploited in very high rates, and there are very few spaces without intervening outside protected areas (PAs) and even within them, as is common operation prior to expropriation to create these areas. La mata atlantic forest has more than 89% of its remaining forests in medium to high levels of degradation and fragmentation, and only has less than 40,000 hectares of pristine forests

(Mac Donagh and Rivero). The conventional logging system has a severe effect on the biodiversity of this eco-region (Placci and Di Bitetti,).

Los ambientes áridos como el Chaco Seco, Monte, la estepa patagónica y la Puna tiene una extensa e intensa presión de pastoreo, una actividad que generalmente se asocia a seguir contribuyendo al proceso de degradación (Adamoli).

Sólo en la ecorregión del Monte, en la última década, casi 10.000.000 de hectáreas se vieron afectadas por los incendios que representa alrededor del 30% de la ecorregión. En el Chaco húmedo, el área quemada de pastizales y de sabanas asciende a un valor entre 2 y 4.000.000 de hectáreas por año (Ginzburg y Adámoli,). Estos procesos de degradación asociados con el exceso de pastoreo, lo que lleva inexorablemente a aumentar la desertificación en los ecosistemas a escala regional, y también son observables en la eco-regiones húmedas como los Yungas y los bosques patagónicos. En los últimos años, el ganado ha alterado significativamente la composición florística y estructura de los bosques, incluso dentro de los parques nacionales, y el ganado en varios sitios ha impedido que la recuperación post-incendio de los bosques (Premoli).

#### Forestry sector

The forest sector development has been compared with other countries in the region, much slower and less important in terms of formal participation in the economy. Especially, the sector has been recently considered in developing policies for a long, due to the preponderance of agricultural and livestock activities. However, this trend began to improve from the 90's, due to incentive policies provided by the national state. Specifically, it provided significant benefits to investment in forestry, by creating conditions such as incentives, industrial promotion zones, technical support, available bank loans, tax exemptions and subsidies. Despite this, the forest products trade balance remains negative in recent years and the sector comprises only 2% of country GDP .

#### Contribution of forest resources to the economy

The contribution of forest resources to the economies varies by region. In the case of the Chaco region, there is little their importance in the national totals for productive activities. Whereas the gross value added (GVA) for economic activities and industrial activities and services, representing 3% and 2.9% respectively of the national GVA in each of the sectors concerned. For the jobs held, employees represent 5.1% industrial and residential consumers 7% of the country's total.

Item	Amount (U\$S)	%
------	---------------	---

Furniture		
-----------	--	--

	1.821.000.000	38,8
--	---------------	------

Paper and paperboard		
----------------------	--	--

1.227.000.000 26,2

Wood products

1.341.000.000 28,6

Forestry

300.000.000 6,4

Source: Statistic Department, S AyDS

### Forest policies and governance

The Congress passed in 1948 Defense Act of Forests. For all cases, the law states that prohibits the destruction of forests and woodlands and irrational use of forest products (art. 11 °), and for owners, tenants, beneficial owners or holders in any capacity of natural forests may not start work to exploit them without the agreement of the competent forestry authority, which shall be requested to accompany the management plan (art. 12 °). This rule denotes the importance of forest wealth was to Argentina, but was far from being an effective solution to the problems facing forest ecosystems in the country.

Being a national law, its main scope of federal jurisdiction and, in case of accession by the provinces, the relevant enforcement authority shall be as established by each provincial jurisdiction (so that the application and the degree of compliance with the legal provisions will be subject to the conditions and institutional situation of each province), as well as to the specific regulations that punish each jurisdiction. A clear example of this failure is that some provinces that have adhered to the law are those with situations more alarming deforestation and degradation: this is the case in provinces like Salta (Act of Accession No. 5242) and Santiago del Estero (Act Accession No. 5113). Moreover, the only national event of possible intervention in the provincial territory is fuzzy interpretation: it must be protective forests and says explicitly that the rule-"the effects of this quality to bear on interests that are within the purview federal government is because it affects the general welfare, progress and prosperity of two or more provinces or a province and the federal territory.

Defense Law of Forests is one of the best examples of excellently designed laws based on advanced technical knowledge for their moment, trying to order the use and preservation of native forest masses and encourage further expansion of the masses in place. In its application, this is perhaps the most frustrated environment law experience of Argentina.

The main positive consequence of the legislation was the incentive for human resources training in the technical field because of the need to accompany all submissions with management plans and assessments by forest experts.

However, concerning one of its main objectives was to maintain and improve the country's natural forest has been totally ineffective; the provisions of the law have not been fulfilled in practice. The administrative mechanics of making surveys, inventory plans, prior authorizations, etc., was continued routinely in almost all provinces, but few of them were generated effective regulatory frameworks for forests, whether private or public. The control mechanisms responsible for implementing government agencies have been totally inadequate in many cases by being deprived of adequate funding and minimum equipment necessary for the performance of that function.

#### The general environmental legal framework

In 1994 was incorporated the environmental dimension to our constitution, in line with international recognition of the right to a healthy environment that follows the declaration of the environment as the common heritage of humanity. Expressed in this way by claiming that "all people are entitled to a healthy and balanced environment fit for human development and productive activities that meet present needs without compromising those of future generations" (Article 41).

The essential mandate for the State is specifically expressed "the authorities provide for the protection of this right, the rational use of natural resources, preservation of natural and cultural heritage and biodiversity, and environmental information and education" (Article 41). On the other hand, Article 43 of the Constitution establishes the judicial protection of constitutional rights by stating that this action may be brought, especially as regards the rights that protect the "environment, competition, the users and consumers, as well as collective rights in general. "

#### Minimum Standard of Environment Protection (MSEP)

One of the powers delegated by the provinces to the federal government is in Article 41 of the Constitution when it states that "Nation shall correspond to the rules containing the Minimum Standard of Environment protection, and the provinces those necessary to reinforce them, without those altering their local jurisdictions. Consistent with this constitutional provision, the Congress passed in 2002 General Environmental Law, including MSEP.

Thus, respecting the local powers, the provinces have delegated to the federal government the basic standards that matter a common interest of sufficient magnitude to unify the criteria from the federation, leaving the remainder to the provincial competition, which is reserved for itself the power to make all the rules as they deem appropriate to regulate environmental issues in their respective territories in addition to those, and without affecting the minimum standard.

The LGA law establishes minimum standards for achieving a sustainable and proper management of the environment, preservation and protection of biodiversity and the implementation of sustainable development (art. 1). This implies that the minimum standard applies to the entire national territory subject to the rules made locally. It expressly provides that the various levels of government, integrated into all decisions and activities of an environmental nature, aimed at ensuring compliance with the principles set forth by law (art. 5), which should guide the interpretation and application of the LGA and any other rule or



policy through which environmental policy is implemented (art. 4 °). These principles are: Consistency; Prevention, Precaution, Intergenerational equity, progressivity, Responsibility, Subsidiary, Sustainability, Solidarity, Cooperation.

These principles were incorporated as tools for decision making. Precise, functional and operational principles of the General Law of the Environment (LGA) are of vital importance in our system, as reflected undisputed lines within the Federal State and the provinces should drive the development, projection and implementation of environmental policies, as well as from all duties and exercise of functions. The national and provincial judiciary has repeatedly applied these principles as a tool to base their decisions.

#### Forests in the powers and jurisdiction federal system

The system of demarcation of responsibilities in environmental matters established by Article 41 of the Constitution is supplemented by the constitutional provision through which the provinces have the original dominion over the resources within their territories, including control over forests (Art. 124 - National Constitution).

As part of the points mentioned above can be summarized that:

- the provinces of the federation have the original dominion over the natural resources within its territory,
- the environmental jurisdiction (competence) is preeminently local,
- But there may be jurisdiction (competence) on the same federal resources under certain circumstances provided by law, or delegated by the provinces.

In addition, the division of competences in forestry from the Ministry of Agriculture, Fisheries and Food, who is in charge of the forest plantations, and the SAyDS in charge of natural forests, has not been accompanied by an adequate level of coordination between two ministries. The division of powers has been strengthened weak valorization of natural forest , in productive and environmental point of view, by the national economic authorities and the national legislature, which is reflected in the difference between the two budgets.

As part of this strategy proposes greater coordination among enforcement bodies on forests and natural forests in place for joint planning, especially since the implementation provincial authorities hold both roles simultaneously. This coordination has been made in 2009 through a legal agreement to work together the issue between the two ministries

#### Forest Provincial Legislations

In terms of innovation in policy and law relating to native forests at the provincial level, are the policy and acts of Misiones province. This province was a precursor to realize that the

purely statutory law as the actual forest (No. 854 of 1979, inspired by country), do not guarantee the persistence of a minimum of native forests to meet conservation objectives, when compete with agricultural land use. As an example of searches that seek to combine forest law and land management with active policies to promote sustainable land use, it is the history of this Province. This is a Argentine provinces with forestry tradition, who has lived in recent decades a regression of natural forest and a major expansion of the plantation forests of exotic species, mainly pine. Currently, federal promotion schemes of forest plantations bring to this province 24% of total subsidies in the country. The forest was heavily exploited In about 2/3 parts of the province were replaced by perennial industrial crops and plantations. In other cases, there was a selective logging operation, impoverishing the quality of the remaining forest timber. The intact forest has been reduced to a small portion. While the Misiones forest represents the largest remaining block of ancient "mata atlántica" forest that extended continuously from the State of Sao Paulo to Rio Grande do Sul, in Brazil, and eastern Paraguay. Despite this, deforestation in the bordering areas of neighboring countries was so intense that at present international borders can be seen in satellite imagery, by the abrupt change of land use beyond the borders. The Misiones Province in Argentina

today houses 60% of the last remains of non fragmented pieces<sup>1</sup>, with the adjoining Brazilian Parks of Iguazu and Turvo, this sector embraces 80% of the non fragmented forest. The strategic importance of its conservation was not translated in significant contributions from the international community. However, the Atlantic forest is still one of the most diverse ecosystems on the planet. Some 450 species of trees have been found in just one hectare of these forests and have a great value as it provides strategic environmental services has been recognizing by experts for their potentials for REDD activities

In this regard, the province design a set of laws in recent years that offers tools to native forests incentives through tax breaks of between 60 and 100% estate tax. One of the main limitations of this scheme is that municipal taxes are the largest in the province, so that the incentive had a limited impact on incentives for protection. Currently, the province of missions has developed a regulatory framework for environmental service payments, which could result a paradigmatic case for the country.

#### Mínimum Standard Forest Law

Debido a los condicionantes mencionados anteriormente y frente a la situación del estado de los bosques, y en el marco de un proceso de sostenida participación y difusión pública, el Congreso Nacional aprobó a fines de 2007 la Ley 26.331 de Presupuestos Mínimos de Protección Ambiental de los Bosques Nativos. La sanción de la misma con el apoyo de más de treinta organizaciones ambientales y sociales, y con un millón y medio de firmas de ciudadanos de todo el país, lo que demostró el alto nivel de consenso social en torno al proyecto, y representa las bases de un nueva y contundente política forestal nacional. La Ley 26.331 establece, entre otras cosas, la necesidad de realizar un ordenamiento territorial de los bosques nativos (OTBN) según distintas categorías de conservación (alta, media y baja). Las áreas de muy alto valor de conservación (rojo) no tendrán posibilidad de transformación si bien pueden ser hábitat de comunidades indígenas y ser objeto de investigación científica. En áreas de mediano valor de conservación (amarillo) se podrá realizar aprovechamiento sostenible, turismo, recolección e investigación, y las áreas de bajo valor de conservación (verde) podrán transformarse parcial o totalmente dentro de los criterios de la Ley. A su vez,

la Ley 26.331 crea el Fondo Nacional para el Enriquecimiento y la Conservación de los Bosques Nativos, con el objeto de compensar a las jurisdicciones que conservan los bosques nativos, por los servicios ambientales que éstos brindan. Los fondos serán distribuidos anualmente entre las jurisdicciones que hayan elaborado y tengan aprobado por ley provincial su OTBN.

Entre otros puntos destacables de la ley aprobada se destacan el proceso de Ordenamiento Territorial de los Bosques Nativos (OTBN) con carácter participativo; la moratoria a los desmontes hasta tanto cada provincia realice su OTBN; la obligación de realizar evaluaciones de impacto ambiental y audiencias públicas antes de autorizar nuevos desmontes, la prohibición de quemar a cielo abierto el material forestal resultante de dicho proceso, y el reconocimiento de los derechos de comunidades indígenas y pequeños productores rurales vinculados a los bosques nativos. Otro aspecto importante que incorporó la norma es la constitución del Fondo Nacional para el Enriquecimiento y la Conservación de los Bosques Nativos “con el objeto de compensar a las jurisdicciones que conservan los bosques nativos, por los servicios ambientales que éstos brindan”.

Dichos fondos, conformados por el 0,3% del presupuesto nacional y el 2% de las retenciones a las exportaciones de los productos agrícolas, ganaderos y forestales, tienen como objetivo fortalecer la capacidad técnica y de control de las provincias 30%, y compensar a los titulares que realicen tareas de conservación y manejo sostenible, y fomentar las actividades productivas que los pequeños productores rurales y comunidades indígenas realizan en los bosques 70%.

La sanción de la Ley de Bosques significó un avance sin precedentes en materia ambiental para nuestro país, y también un logro significativo en la participación de la sociedad civil en la generación de una norma de protección ambiental. La sanción significó según datos de la UMSEF, la reducción del 60% en un año de la tasa anual de deforestación, en las zonas de mayor tasa de deforestación del país.

Sin embargo, la implementación efectiva y la aplicación de todo su potencial, enfrenta retos importantes. En primer lugar existe una necesidad de fortalecimiento institucional para la gestión del sector y un incremento y facilitación del proceso de creación de capacidades en las instituciones. Existen grandes áreas donde se necesita hacer adelantos para lograr la aplicación plena de la ley de bosques y lograr objetivos de escala relevante de reducción de emisiones por deforestación:

- 1) One of the main weaknesses of the country lies in the inability to control and audit with regard to the Implementation of the Law, in the vast country. It is necessary to strengthen the control systems and improve the monitoring technology and capacities for auditing.
- 2) Another important constraint is related to the irregular land tenure, that potential beneficiaries of compensation funds cannot access the benefits of Law 26,331 and REDD.
- 3) The lack of experience of significant scale in the payment for environmental services and the lack of organizations with proven effectiveness and reputation to undertake this task at local level.
- 4) Only three provinces have sanctioned their OTBN law. And there are still challenges for the implementation of OTBN, with consistent criteria across the border provinces and distributions of categories to reduce deforestation rates.
- 5) Despite broad public participation in the enactment of the law, it is still necessary to strengthen and increase awareness of strategic importance for the quality of life of the population, the permanence of the native forests. In effect, the country has a high rate of

urban population, who live far away from forests, and hardly conscious in their daily lives of environmental services that they provide to society.

6) Institutional strengthening of management structures and capacity building mechanisms.

## Forest Land Tenure

Most forested land are often privately owned. Notwithstanding all the provinces have yet state government land in different proportions. We can cite the case of Chaco province as one of the information available to date and has still an important area with public forests: area of the province 9,985,980 hectares (100%) Private Lands 7,609,274 Has (76%), Public Land 2,376,706 hectares (24%). Many public lands have occupants without the title deeds. They may normalize their situation (after stay a certain number of years) and become owners of these lands to the extent they can afford the cost to rectify the situation, according to provincial and national laws. Unfortunately this last situation is not often occurring. There some cases of communal forest land.

From information obtained from the "Integral Study of the Chaco Park Region" arises in this forest formation which is included in 10 provinces, the land is:

Category	Percentage
Private Owners	63%-78%
Community lands	10%-26%

Occupants 1,8%-4,2%

It is also the category "Pastajeros" who are occupying pastors that paying to the owner of the property.

## Occupation of people in forestry, activities and areas

The structure of land tenure varies according to different regions within native forests. Below is a description of the context of each of the sub-regions identified:

- Northeast de Tucumán y Salta

In sub-humid Chaco there is concentration of land in the hands of corporations or private individuals. Clearance is made usually to clear-cutting, to enable land use to agriculture and livestock based on subtropical pastures. In the semi-arid Chaco, in addition to private owners, there are provincial public lands, both often without defined limits. Many occupants act as loggers or pastors.

- Southeast de Tucumán y Santiago del Estero

The vast majority of small farmers are squatters on private land or prosecutors. With 20 years of continuous occupation by peaceful and some improvement work, they bear the twenty-year possession. However, often lack the financial means to invoke it and thus ensure its ownership. The twenty-year trial of possession requires monthly costs and legal advice. This is generally unavailable to rural households so they end up being evicted from their possessions and moved into much smaller parcels. When villagers are more than a year in tax and private land, cease to be outsiders to become occupiers. The decline of forestry in Santiago del Estero in recent years is due to declining resources and the retraction of the markets. The technology is the same as fifty years ago.

The existing markets are:

- The private railway companies
- Coal and posts are sold mainly in Buenos Aires, Santa Fe and Cordoba. It also exports some coal bagged, ready for retail sale.

The furniture industry is working on the basis of white carob tree which is processed in the cities.

- Chaco y Formosa

The property's current work deals with the socioeconomic history of the region that was forest in nature. Logging activity and cotton generated high demand for labor and economic movement. But the subsequent crisis of these activities resulted in population movements to Buenos Aires, Rosario and Santa Fe, and small towns now have a general problem of unemployment. Rural people is increasing constituted by little children and the elderly population. In the humid chaco logging was basically for tannin exploitation, but in recent years was more important the timber.

The logging has two destinations:

- Supply industry tannin
- Provision of poles, stakes, coal and firewood.
- Chaco catamarqueño

The expansion of the agricultural frontier from the '70s produces reduces the self-sufficiency logging, entering agriculture on that forest land. Since the modification of the native forest has been intense, the current forest resource utilization is low.

- Chaco Cordobés

This region has been profoundly transformed in recent years by expanding the agricultural frontier. Only the 6% of original forest cover remains. They are highly mechanized farmers who clear the land completely to the extent that moisture allows agriculture. At present it appears that there are areas that have been fully occupied by these new types of producers and some areas where they coexist with the old livestock producers and / or cutters of the Chaco region. For this reason it has generated a great first division into two subregions:

- Systems smallholder farmer / logger. Use the fodder from the forest and pasture under the existing natural forest.
- Agriculture and livestock in enterprise system, In the most arid region the native forest is in various degrees of degradation. Agriculture is irrigated, so that there is virtually nothing of the native forest on that land.

.

## Fores fires

Currently much of our territory there are considerable economic losses result of forest and grassland fires. According to statistical information obtained from provincial government agencies with responsibility in the matter, during the 2008 season in the country were burned 610,060 hectares and were detected 17,738 fire outbreaks. The distribution of these by type ecosystem and causes are presented in the following table::

This issue is relevance by increased frequency and intensity of the phenomenon in recent years, especially due to inadequate use to clear land for agricultural and livestock. The country has developed a National Plan for Fire Management, which has regional branches, and produced a process of capacity building to control and manage this phenomenon adequately. During November 2009 a law was passed minimum standard for environmental protection for control burning activities, setting requirements for provinces to manage the management of rural fires, as an essential component for the conservation of ecosystems.

But still, it is still necessary to provide for a continued strengthening of the program, facilitating the incorporation of technological tools and develop capabilities to monitor, prevent and manage the activities of burning and forest fires. In some areas, like Patagonia forest this issue could be this most important strategy for reduce deforestation and forest degradation.

## Infrastructure development sector and public investment

The Ministry of Federal Planning, Public Investment and Services through the Undersecretary of Planning of the Public Investment, has defined the guiding objectives of the National State policy in this area. In "Argentina 2016: Politics and National Development Strategy and Land Management" (2004), defined the objectives and established the implementation of a set of planning tools, designed as tools to manage the achievement of those objectives . In this sense Territorial Development Strategic Plan as one of the key tools. The Plan aims to enable identification of the investments in infrastructure and equipment necessary for the spatial development of the Nation and the Provinces, which will help meet the guidelines set forth in state policy defined by the government.

The program represents a diagnostic evaluation of the actual situation and the current territorial development model; model resulting from the characterization of environmental, social, physical and economic characterization and formulation of remedial strategies of conflict and promoters of the potential identified in the provincial territory, the vision of a "Best Land Use Model " and closely linked to this, the proposal "a portfolio of initiatives and infrastructure projects" functional to the construction of this model. Throughout this process took place in turn to a series of regional meetings in which they were able to address local issues from a viewpoint committed to the regional issue. Finally there were two national forums was aimed at the harmonization of standards at work implemented in each province. In parallel, conducted by technical staff of the Secretariat of Planning of the Public Investment an interconsultation with ministries with competence in each infrastructure sector. It was obtained strategic and policy guidelines with which is promoting investment in

each sector and the bank launched projects, planned or identified for the horizon 2016. The work done so far allowed the recognition of the great features of public policy that is being promoted on a sectoral, as well as major national ranking projects that have strong regional impact. This, together with progress in binational and international forums (IIRSA - Initiative for South American Regional Infrastructure Integration) that helped set initiatives and regional integration projects, provided a first instance of evaluation and weighting of the diagnosis and local proposals and regional. This framework of information and organization will be used for assessments the infrastructure developments future impacts on deforestation. In this sense also be incorporated criteria relating to energy issues and biomass wastes in conjunction with the Ministry of Energy, and considerations of the Biofuels Act is implemented from February 2010, , which will generate increased demand for them and the land available to produce it. Also will use the background study developed with WISDOM (Woodfuel Integrated Supply/Demand Overview Mapping)-FAO methodology, for biomass energy planning.

#### Conceptual framework for studying the dynamics of changes in land use

For planning the processes of land use changes, is needed accurate information and the development of appropriate conceptual frameworks and modeling. Considering three major factors in land use patterns and their relationships: 1) the dynamic 2) causes 3) consequences

It is necessary to obtain information to answer questions such as How fast expanding agricultural and forest areas? In what areas and how this expansion periods is more intense? What are the environmental, technological, socioeconomic and political controls processes? How do they affect production goods and services to society? The processes responsible for patterns of land use change depend on a number of factors of very different and whose analysis is complex. The following figure shows a preliminary analysis of the most important of these changes:

Some studies in the country have made progress in modeling the land use change in some areas. There has been some preliminary work using the STELLA model. The CLUE model has also been used experimentally. The use of these models can generate scenarios of land use change and from them to assess the implications and possible factors that control the process. It proposes the use of models to generate hypotheses about the probabilities of transition between types of coverage and generate risk estimates deforestation under various scenarios. The results of these tests will be integrated in the form of equations or rules in models of landscape dynamics. These models beyond their ability to predict, will serve as a tool to understand and integrate into a common framework the various dimensions that

influence land management, for use in making decisions with a scientific basis. It is necessary to develop a standardized methodology and common systems, covering all the country's forest ecoregions. It is proposed to conduct an evaluation of the models previously developed and applied in the country, and the selection of a methodology for designing an integrated system at national level, to develop estimates of the probability of transition between types of coverage. This system will include previously developed skills and initiative. Likewise, among the models will incorporate the social controls that can operate locally, nationally, regionally, through participatory methodologies and the incorporation of the vision of all actors with influence in the process.

Among the partners for these assessments are primarily the provincial governments, and participatory processes made during 2008 and 2009 of the OTBN, under forest law. The Federal Planning Council, which is the federal agency charged with developing the Strategic Plan Territorial (PET), and scientific institutions that have experimented with the development of models: a) Remote Sensing and GIS Laboratory, INTA Estación Experimental Agropecuaria Salta. b) Regional Analysis Lab and Remote Sensing (LART), IFEVA, Agronomy Department UBA, CONICET. c) Laboratory for Ecological Research. Universidad Nacional de Tucumán d) ProYungas Foundation.

### Summary of activities

- 1) Conduct a specific study by ecoregion on the causes of deforestation and degradation and associated factors in the mentioned sectors and previous identification of other indirect drivers specific to the ecoregion
- 2) Evaluation and implementation of land use change models, to set an integrated system covering the whole country.
- 3) Assessments the opportunity costs of land for eco-region, and the marginal cost of abatement in different territorial conditions, including future scenarios according to expected macroeconomic factors.
- 4) Study of tenure land system and possibilities for the improvement of systems of land tenure in the provinces, including the situation of indigenous communities associated with forests. An assessment of the status of forested public lands of the provinces.
- 5) Survey of possibilities and needs for capacity building control and monitoring of provinces. Development of specific proposals related to real-time monitoring and early warning systems, considering the provincial circumstances.

Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2010	2011	2012	2013	Total
Assessment of land opportunity cost by ecoregions	Hire 2 expert	120\$	40\$	\$	\$	160\$
	Regional Consults and information standardization	50\$	\$	\$	\$	50\$
Estudio de tenencia	Studies and	40\$	20\$	\$	\$	60\$



de la tierra y necesidades de fortalecimiento de los sistemas provinciales Study of Tenure Land System and needs for enforcement of provincial systems	assessments					
	Implementation of improved the provinces systems	30\$	120\$	120\$	\$	270\$
Elaboration of ecoregional integrated information system for drivers and associated factors	Assessment of deforestation and forest degradation drivers by ecoregions	90\$	\$	\$	\$	90\$
	Implementation of integrated systems for assessment	30	80\$	30\$	\$	140\$
Assessment of enforcement needs of provincial government		120\$	60\$	\$		\$180
Land Use Change Modelling		75\$	75\$	75\$		\$225
Assessment of National Fire Management Plans and proposal to improved their technology component		50\$		\$	\$	\$50
<b>Total</b>		<b>505\$</b>	<b>395\$</b>	<b>225\$</b>	<b>\$</b>	<b>1225\$</b>
National Government		200\$	200\$	150\$	\$	550\$
FCPF		505\$	195\$	75\$	\$	675\$

## 2b. REDD Strategy Options

The purpose of the REDD strategy is to develop a set of policies and programs of activities that address the causes of deforestation and / or forest degradation and to stimulate the increase in carbon pools of forests. The organization shall prepare and coordinate the design and organization of the REDD strategy is the SAYDS, in coordination with the institutions and mechanisms proposed in the component 1a.

But although the details of this strategy have not been evaluated or defined in detail, highlighting the general guidelines which should underpin the strategy Argentina.

First, the basic framework for the strategy represents the forestry law. In this regard, we believe that the REDD strategy draw on experiences from implementing the law and the challenges it faces. The Forest Act is a particularly interesting framework for developing a REDD strategy and its implementation. In this sense, we will work on two main approaches:

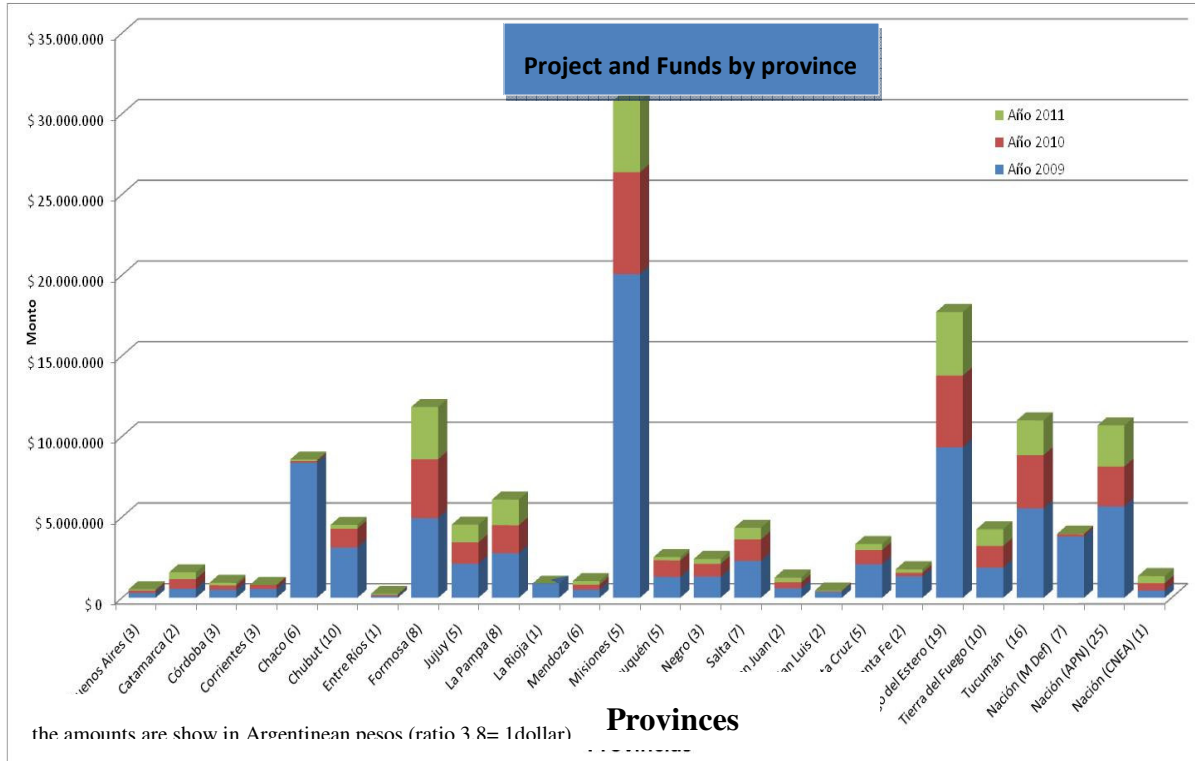
- 1) To establish systems and methodologies for assessing the impact of the new forests law, in reducing emissions and increasing removals
- 2) Identify and implement complementary approaches to the forest law, that leads to reduce emissions and increase removals, on matters where the law is not effective or does not tend to the targets set for REDD.

In this sense, the follows issues are some of previously identified to be part of the strategy:

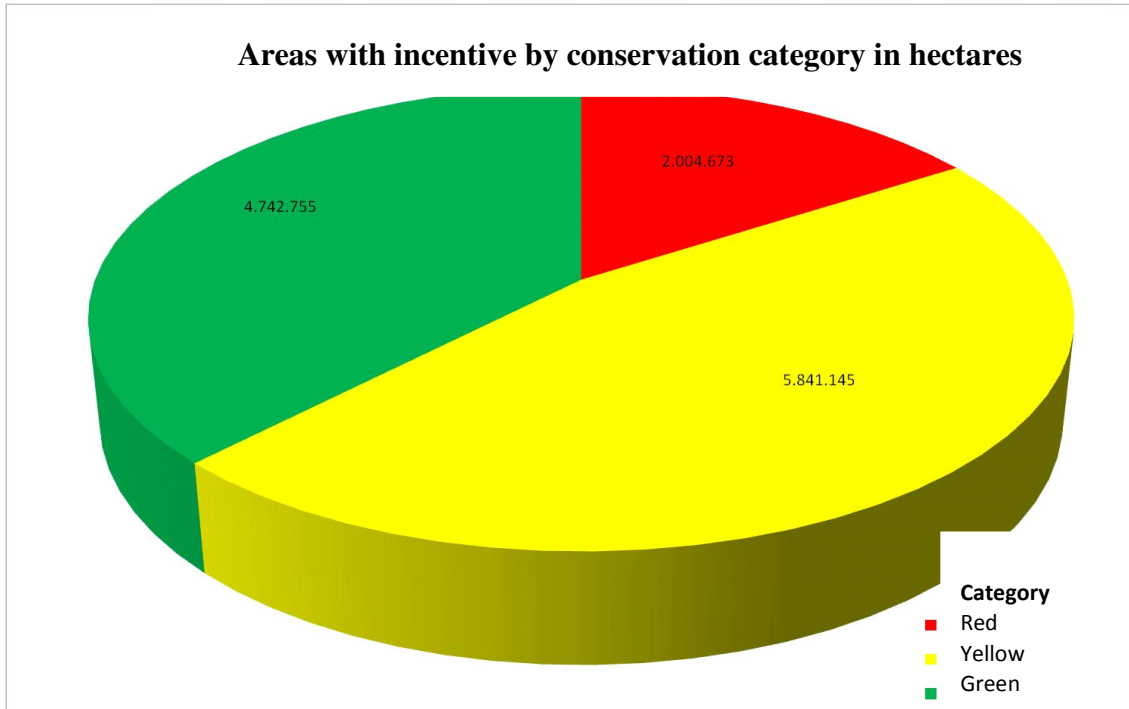
- A) The OTBNs are a tool included in the implementation of the Act, however, their impact on reducing the rate of deforestation is in direct proportion to the areas assigned to each category, and its distribution in the territory. In this regard, one strategy is to strengthen the implementation of criteria and goals OTBN related to REDD and to provide incentives for local jurisdictions to incorporate them.
- B) Strengthening of local jurisdictions and law enforcement authorities of the provinces, as its control capabilities, monitoring and planning.
- C) Strengthening systems of land tenure and creating incentives for conflict resolution.
- D) Development of criteria and systems to strengthen the implementation of incentives provided by law, and maximizes its impact in reducing emissions and removals.
- E) Develop a program for forest land income increase in the yellow and green areas.
- F) Design a framework to provide incentives for sustainable productive activities of small, medium and big farmers and indigenous forest communities.

Regulation of the Law 26,331, through Decree 91 February 2009, provided substantial progress and a major step in effective implementation of the law. Also during 2009 began implementing a pilot phase of national fund, overcoming the barriers imposed by the slow

progress of OTBN and circumstances of local governments. Through Resolution 256/09 the SAYS created the Experimental Program Management and Conservation of Native Forests, which provides funds for \$ 30 million to implement over 114 conservation and sustainable management projects by all provinces. In the following chart makes discrimination per year per provinces in the graph below.



These projects cover a total area of more than 12 million hectares. The following table shows the area corresponding to each category conservationist Norman by Law No. 26,331.



These projects consist of a variety of activities ranging from enforcement for conservation, sustainable forest management and reforestation activities. The projects area occurs in very different situations in terms of risk of deforestation and degradation. Thus, each project's contribution to reducing deforestation and degradation could be different depends of the particular situation of the project regions. As a first step in the development of the REDD strategy is necessary to evaluate and quantify the potential contribution of these projects in terms of reducing emissions and capture. It intends to develop specific guidelines to identify and quantify this contribution, based on the estimation of the carbon content and deforestation rates in the last 5 years for the reference area, and also taking account other factors related to the drivers of deforestation and degradation. These guidelines are being developed and will use to incorporate REDD criteria in the next call for projects in 2010. This framework for evaluating projects will create a system to identify and attempt to replicate projects that demonstrate emissions reduction for each of the areas considered.

It is also proposed conducting a study to assess and design strategies for improve the cost-effectiveness of projects with incentives provided by the Experimental Program and funds available through the law of forests, and identifies areas that are has more potential to reduce emissions and increase removals.

Moreover, the SAYDS is developing the Project Native Forests and Biodiversity IBRD 7520-AR, Block 1 of the Draft Sustainable Management of Natural Resources, whose main objective is to formulate an investment project aimed at strengthening the institutions dealing native forests of the provinces and nations, so as to achieve progressively the full implementation of Law 26.331/07. On the other hand, aims to develop a series of technological and management tools, that through awareness campaigns and outreach programs, are transmitted to all users of native forests to ensure sustainable management of forest resources of our country. A detailed budget

culminate in about a year.

According to partial data provided by the UMSEF, after the sanction of the Forest Act, the deforestation was reduced by 60%, in one year. Nevertheless, effective implementation of the standard adopted by Congress faces severe difficulties that must be resolved.

There are big issues where progress needs to be done to achieve full implementation of forest law, in scale to achieve significant emissions reductions from deforestation. The full implementation of the law is still in progress, and there is a demand for skills development and strengthening the structures of some provinces. The lack of effective controls mechanism and penalty systems will be a challenging task for 25 provinces. With regard to OTBN, so far only three provinces finalized and approved by provincial law the OTBN. Some of the other provinces have the OTBN not yet legislated or are in process of preparation. It is necessary to strengthen this process and provides additional incentives to set ambitious target of deforestation rates reduction. Also, take advantage of the experimental program to progress to the substance of the National Fund for the Enrichment and Conservation of Native Forests establish by the law.

#### Public Investment Plan for the forests management and protection

For the year 2010 is provided within the Draft National Budget Law, a fund of \$ 100 million dollars. In a 10-year projection, it is estimate achieve by 2020 the implementation of total funds available by law, with an estimated value of \$ 500 million dollars. These funds are composing by the 0.3% of the national budget and 2% of tax on agricultural products exportation. The progressive implementation is based on the need to establish and develop the skills needed primarily for the implementation of law, through oversight mechanisms, control and real activities, using the principle of progressivity of the General Environmental Law (Law 25,675).It provides a gradual increase in investment, with an average increase in the scale of 30 million dollars per year. It is also envisaged that the total funds available by law, also increase due to economic growth. However, the plan develops a policy to increase the percentage of implementation each year.

#### Potential REDD activities

As a complement to the actions of the strategy in relation to forest law is necessary to create a framework for the development and evaluation of potential policies, measures, programs and specific activities of the REDD strategy.

This framework will aim to design, consult with relevant stakeholders, evaluate and test proposals for action 3 main areas of strategy, using as support the models developed in the previous component:

- 1) Reduce the income of land use in agricultural frontier areas
- 2) Increase the income of forest land
- 3) Regulation of land use

It also proposes the development of specific ecoregion strategies to aid the design of specific policies of the local drivers and to the implementation of those policies by provinces and local jurisdictions.

A preliminary list of the potential REDD activities was developed, in order to have as a basis for discussion of preliminary ideas and guidelines. In this sense, we establish a framework to link these activities with the drivers through economic data and indicators. The implementation of the strategy will be implemented through the national working group on REDD, in case that of needs of coordination with other agencies and organizations, specific working groups will be created.

<b>PRELIMINARY PROPOSAL OF REDD STRATEGY ACTIVITIES</b>				
<b>Activities</b>	<b>Effectiveness</b>	<b>Cost</b>	<b>Viability</b>	<b>Sectorial integration</b>
<b>REDUCE THE INCOME OF LAND USE IN AGRICULTURAL FRONTIER AREAS</b>				
Program for responsible agricultural producers to establish goals and programs to limit deforestation, with prospects of a certification process for agricultural production	Medium	Low	High	High
Indirect economic incentives to the provinces and producers to discourage deforestation	High	Low	Medium	Low
Evaluate and propose macroeconomic measures that reduce incentives for deforestation	High	Negative	Low	Low
<b>INCREASING THE INCOME OF THE FOREST LAND</b>				
Development of a program of reforestation with native species, together with the Ministry of Agriculture	Low	Medium	High	High

Plans to promote Sustainable Forest Management at ecoregional level	Medium	Medium	Medium	Low
Creating a cluster of sustainable timber trade	Low	Low	High	Low
Development of an ecotourism program	Low	Low	High	High
Development of a program to promote forest beekeeping	Medium to High	Medium	High	High
Development of a program to promote sustainable silvopastoral activities	Medium	High	Medium	Medium
Developing an incentive scheme to promote forest certification	Medium	High	High	High
Design a mechanism for payment for carbon environmental services	High	High	Medium to High	Medium
Assess the possibilities of establishing payment mechanisms for other ecosystem services beyond carbon	High	High	Medium	Medium
<b>LAND USE REGULATION</b>				
Establishing new protected areas and indigenous territories protected again	Medium	Medium to High	Medium	Low
OTBN to develop goals for reducing deforestation based on models of future deforestation	High	Low	High	High
Design a proposal for the management of forested public land	Medium	Low	Medium	Low
Regulation of agricultural land use by region and cultivated area amounts	High	Low	Low	Medium to High

## **Strategies for issues of regularization of land tenure in Indigenous people and other forest dwellers**

In this issue there is the Law 26160 (extension 26554). Under this Act, is ordered to perform to the INAI a Technical Survey, Legal and Cadastral (Resolution 587/2007) about the ownership status of the lands occupied by indigenous communities. Also, must promote actions that are necessary with the Indigenous Participation Council (CPI), the Provincial Aboriginal institutes, national universities, national, provincial and municipal indigenous organizations and NGOs. By this Act establishes a fund allocated to the INAI, to meet the expenses incident to:

- a) The technical survey - legal - cadastral land in traditional, contemporary and indigenous communities occupies public land.
- b) The professional work and extra-judicial cases.
- c) Ownership Regularization programs.

In recent decades we have witnessed a revitalization of indigenous identity and consciousness that has been accompanied by a legal recognition of their rights in the constitution and several laws.

In the conviction that it is a process linked to the strengthening of the forms of organization of indigenous peoples and their communities. The INAI understood that is the fundamental the role and participation of the Council of Indigenous Participation in the construction of the guidelines in this Survey, to make it consistent with the aspirations and demands of every Indigenous community.

The INAI also put to the CPI, the possibility of integrating the Land Survey to a broader process that includes the following steps:

- Identification of Indigenous Communities
- Survey social community organization
- Survey technical, legal and cadastral Community territory
- Survey socio-productive and natural resources.

This proposal was presented to the Indigenous Participation Council (ICC) in the different regional bodies

In short, Law No. 26,160 seeks to ensure:

- The recognition of the possession and ownership traditionally occupied by indigenous communities.
- Promote indigenous participation - through the CPI-in the development, implementation and monitoring of projects, which derived from the Program



legal - cadastral ownership status of the lands occupied by indigenous communities.

In this regard, we propose the development of a provincial plan for institutional strengthening in coordination with existing programs and institutions in the field. Activities will be focused on facilitating the process of surveying information and provide new capabilities and technical and economic support to accelerate conflicts resolution where the land tenure is not regularized.

Main Activity	Main Activity	Estimated Cost (in thousands)				
		2010	2010	2010	2010	2010
Capacity enforcement of control and audit of Provincial Authorities	Establishment of "real time" monitoring tools	120\$	50\$	50\$	50\$	270\$
	Institutional Enforcement	300\$	100\$	100\$	100\$	600\$
Land Tenure Enforcement Plans		70\$	70\$	20\$	20\$	180\$
Dissemination and educations activities		30\$	20\$	20\$	10\$	80\$
Design of strategies ecoregions specific		360\$				360\$
Build a framework to assess potential REDD activities		90\$	90\$	120\$		300\$
Enforcement of OTBN to set target on rate of deforestation reduction		150\$	50			170\$
Assessment and Design of programs activities to reduce the agriculture income at agriculture frontier		60\$	60\$	60\$		180\$
Build guidelines to quantifies and optimize the reductions and removals by the experimental programs		60\$	30\$			90\$
Assess and design aditional rules to improved the land planning		35\$	20			55\$
Assess, disegn and propose programs and activities to increment the rent of forest land and the natural forest management and to promote the environmental services that provides.		80\$	80\$	80\$		240\$
Assessment for the potential to create new		20\$	\$	\$	\$	20\$

protected areas strategies and new indigenous territory.					
Design of a program for investment to increase removals in degraded forest	60\$	\$	\$	\$	60\$
Total	1435\$	520\$	390\$	\$	2605\$
National Government	900\$	300\$	300\$	\$	550\$
FCPF	535\$	220\$	90\$	\$	845\$

## 2c. REDD Implementation Framework

Some background for developing a work program on the framework for REDD implementation

On the way to establish a REDD strategy and particularly in regard to its implementation, it is raised a number of questions about the legal and institutional context. This background intended establish guidelines to carry out studies that help the country to meet the future regime is adopted.

### Legal Background:

First, it has identified the regulations related to the case that serves to establish the foundations of a work program that allows establishing guidelines and helping design an implementation framework for REDD as a mitigation activity.

Although no specific regulations for REDD, there some related rules that allow identifies examples and legal backgrounds. This it may allow us to define a flexible legal framework that underpins any of the possible scenarios of future climate agreement.

### Law 26331. Natural Forest

[http://www.ambiente.gov.ar/archivos/web/DB/file/decreto91\\_2009\\_reglamentacion\\_ley\\_26331.pdf](http://www.ambiente.gov.ar/archivos/web/DB/file/decreto91_2009_reglamentacion_ley_26331.pdf)

The law sets *“the minimum environmental protection standard for enrichment, restoration, conservation, and utilization of native forests and environmental services they provide to society such as sustainable management of water regulation, biodiversity conservation; Soil and water quality; emissions of greenhouse gases; Contribution to the diversification and scenic beauty; defense of cultural identity.”*

Also establishing its Article 1 for a system for distribution of funds for environmental services mentioned. This regulatory framework provides an explicit recognition that forests on public or private lands are likely to be compensated for the environmental services provided, including greenhouse gases.

In Art.30 establishes the creation of the *“National Fund for the Enrichment and Conservation of Native Forests in order to compensate the jurisdictions that retain native forests for environmental services they provide”*. In Article 31 provides for the integration of the fund, with several items of national budget and taxes, and in the point c lists the possible integration of international funds *“c) Loans and /or subsidies that are specifically granted by national and International”*. This article then recognizes as legal the possibility of

*international financial incentives for establishing incentives for environmental services of forests.*

At Art 35, set as funds should apply: *"Implementation of the Fund: Jurisdictions apply the resources of the Fund as follows: a) 70% to compensate land owners whose lands are preserved in natural forests, whether public or private, according to their conservation status. The benefit will consist of a non-repayable contribution, to be paid per hectare per year, according to the categorization of forest, creating an obligation on owners to make a management and conservation Plans and periodical updates, to be approved by the Enforcement Authority of the respective jurisdiction. The benefit is renewable annually for unlimited periods "*

Overall we can say that in this case, it is clear that the rights of forest environmental services, including carbon, are public or private owners. But, we should clarify that the system of this law is not intended to make any assessment of services provided by forests, but is a compensation for the full range of environmental services that forests provide.

Also, while there is no rule that establish expressly, in CDM project activities, the general was that the project proponent is who has the right on the reductions or removals achieved successfully. The project owner is the one who signs a sales contract ERPA emission reduction with the counterparty that it considers appropriate, maintaining the confidentiality thereof. The general rule is because there is one case where the reductions are not owned by the owner of the project. The reductions were transfer. This is the case made by renewable energy ENARSA public company. It can be deduced that whoever happens to be the holder of the carbon is who is the holder of the CDM project activity, which could be extended to "REDD activity". Notwithstanding the foregoing, this right could be transferred by a Standard issued by the body that is competent to do so.

It is also necessary to consider the Law of real right of forest surface domain.

<http://www.sagpya.mecon.gov.ar/new/0-0/forestacion/legales/real.pdf>

which states that "The real rights of forest area is a real right autonomous on its own and temporary, which grants the use, benefits and legal provision of the surface of someone else's premises with the power to conduct afforestation or forestry and to own what is planted or acquire ownership of existing forests, may encumber with security right "

### **Finance Management Controls**

Moreover, in the following citations are listed some of the mechanisms used to finance management: Article 36 provides the funding controls. *"The National Authority for the necessary means for effecting comprehensive controls related to oversight and audit by the Auditor General's Office and the Syndicate General's Office, as required by Law 24,156"*

Also in the regulation of the Forest Law states that "The National Endowment for the Enrichment and Conservation of Native Forests established by Law No. 26,331, may be implemented by a trust for its administration, to be operated by public banks, whose purpose is the fulfillment of the bequests of the Act and this Regulation " and highlights the provisions of the law as "for the purposes of financial management and control systems, the National Fund for the Conservation of Native Forests is governed by the provisions of Law No. 24,156 and its regulation" Decree 91/2009, of law 26331. [http://www.ambiente.gov.ar/archivos/web/File/ley\\_de%20bosques.pdf](http://www.ambiente.gov.ar/archivos/web/File/ley_de%20bosques.pdf)

Of these above-mentioned background can be considered some preliminary conclusions as to whether the law authorizes the entry of international funds, to produce a payment for environmental services provided by forests, including services related to greenhouse gases . And these could be implemented through the fund established by law, through a trust operated by public banks, mentioned in the rules of law. Furthermore, the law and regulations provide mechanisms and audit controls.

However, it is necessary to further analyze the practicality of adopting this mechanism for REDD. There are several complications in this respect. The most important is that the criteria established by law for distribution of funds, does not necessarily result in reduced emissions and the mechanism of law might be not applicable to that necessary to implement REDD. Moreover, the mechanism of law and territorial jurisdictions are in partial stages, making it difficult to assess its effectiveness today.

However, legal precedents show that it can be done, according to current Argentine legal framework.

On the other hand, we must determine how the financing will enter to the national system. If this is done through a grant by the government, and not to enter into the general funds of the state, should be constitute a trust, to reserve the use of this funds exclusively for REDD activities.

In the case that is made from a private to another (be it natural or legal person) should assess the possibility of continuing with the regime today is applicable to CDM projects or making a proposal applicable to the case. Taking into account the experiences the CDM, is proposed to develop with the Ministry of Economy an standard which allowed the entry of funds for REDD and exempting them from the reserve requirement. Also clarifying the tax regime applicable to it.

### **Enforcement Authority**

Decree 2213/02 establishes the Secretariat of Environment and Sustainable Development as an authority on the Application of the UNFCCC.

Another issue is to relieve the legal capacity of the provinces in terms of deforestation activities and illegal forest exploitation.

The proposed activities will have to do with the analysis and evaluation of the aspects mentioned above, based on existing legislation, including Law 26,331, the 24,441 Trust law and the rules and relevant case law.

In this regard, will evaluate the possible options for the implementation framework and design a suitable proposal for the circumstances and legislation of Argentina. It will also discuss the mechanism established under the Amazon Fund in the Brazilian Development Bank and the possible implementation of a similar mechanism in the National Bank of Argentina. Consultations are ongoing with both institutions.

The Argentina also has the Argentine Carbon Fund. This mechanism was created to promote activities related to CDM. We will assess the possibilities of use this mechanism for REDD initiatives and assess the role that this fund can play in the context of the strategy.

Decree Number: 1070/2005. That creates the Argentinean Carbon Fund provides that the Argentine Carbon Fund has among its aims *"to promote and channel the flow of international and domestic investment aimed at mitigating climate change in the priority sectors and to promote the consolidation of an adequate institutional in the national and technical architecture to realize these actions."*

It also has *"the purpose of seizing the opportunities arising from the entry into force of the Kyoto Protocol and maximizes participation in the international carbon market."*  
<http://www.ambiente.gov.ar/?aplicacion=normativa&IdNorma=256&IdSeccion=29>

It is also important to analyze in this framework the National Law 25,080: Forest Investment Promotion Act. <http://www2.medioambiente.gov.ar/mlegal/forestaes/ley25080.htm>

This aims to establish a system of promotion of investments made in new ventures in forestry and extensions of existing forests. The enterprises shall enjoy fiscal stability including the term of thirty (30) years counted from the date of approval of the respective project. This period may be extended by the Enforcement Authority at the request of provincial authorities, to a maximum of fifty (50) years

Decree 2213/02 was created the DNA in the SAyDS

The Act creates the office responsible for evaluating and approving projects for Clean Development Mechanism, and the resolution establishing its rules.

## **Summary of Activities**

This will create a program responsible for the assessment of the current regulatory frameworks and institutions related to the subject. This work program will have a stage (1st year) assessment, a second stage (2nd year) design and implementation framework in the third stage (3rd and 4rd year) pilot implementation of the operation of the system.

The studies and assessments of the first stage also include all the institutional reforms to ensure compliance with the roles and decentralized systems of forest management. This last issue is highly relevant to the Argentine circumstances. Furthermore, the designed system will also provide indicators to be integrated into the MRV system. Therefore, studies and assessments of this component will be coordinated with those made for the reporting and verification system and those related to the forest policies in component 2a. Studies also included assessments related to identifying the most effective systems in terms of equity and benefit sharing, particularly considering the situation of vulnerable social groups and their relationship with the national plans to reduce the poverty. The SAyDS proposed in all their policies a new relationship between production and environment, considering the quality jobs creation and social inclusion as the core of all environmental policies.

<b>Tabla 2c: Summary of Implementation Framework Activities and Budget</b>						
<b>Main Activity</b>	<b>Main Activity</b>	<b>Estimated Cost (in thousands)</b>				
		<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
Work Program for implementation framework	Design of Work Program for a implementation framework	25\$				25\$
	Rules assessments	45\$	20\$	\$	\$	65\$
	Institutional assessment and design of proposal to reform	35\$	35\$	35\$	35\$	140\$
	Design a environmental payment system, including national and international financing	20\$	70\$	70\$	70\$	230\$
	Design of follow up indicators system	\$	20\$	\$	\$	20\$
<b>Total</b>		<b>125\$</b>	<b>145\$</b>	<b>105\$</b>	<b>105\$</b>	<b>480\$</b>
National Government		20\$	20\$	20\$	40\$	100\$
<b>FCPF</b>		<b>105\$</b>	<b>125\$</b>	<b>85\$</b>	<b>65\$</b>	<b>380\$</b>

## 2d. Social and Environmental Impacts

The objective of this component is the design and implementation of an Environmental Strategy and Social Assessment (SESA). The SESA will assess the potential impacts (positive and negative) of the options in the REDD strategy and implementation framework, identified in Sections 2b and 2c, or those that will be identified during the preparatory work and implementation of R-PP. The central spirit is that REDD, starting with the design of REDD Readiness preparation, should have no negative impacts, and in cases where there were these risks, to identify and implement measures to counteract these impacts, as soon as possible, in a pro-active way. The SESA will create a framework to ensure that the actions identified in all components will have positive environmental and social impacts.

This component will basically be carried out in 3 stages:

- 1) Design of the SESA, including the specification of the ToR, for each of the activities to be done in SESA design, including a) initial Diagnosis b) preliminary analysis of impacts c) previous issues with conflicts. (6 months)
- 2) Implementation of the SESA, which will involve the implementation of activities identified in the previous section, including appropriate consultation, capacity building, and early identification of potential conflicts with the Bank safeguard policies, continuing the diagnostic process required. (2 years)
- 3) Integration of this process within the system of monitoring, reporting and verification of impacts. (from second year)

The phase 1 will be developed in close connection with the establishment of operational rules for component 1b, and presented in detail before R-PP signing agree.

While performing a program of Public Consultation and Disclosure (PCPD) in coordination with the point raised in 1b, but on expanded community-based and focused on the most vulnerable populations, which may have damage due to immediate and future actions strategy and potential conflicts that may arise during the development of the various stages of preparation REDD strategy.

The SESA will be focus in the involving the vision and interest of local stakeholders, to prevent problematic impacts of the REDD strategy from the perspective of members of the communities in the areas, especially where pilot activities are carried out from stage design



or its indirect effects. To this effect provides for the implementation of a series of activities for the purposes of both communities kept informed of ongoing studies, as well as relieving their views and concerns regarding the alternatives under consideration.

The main objective of the SESA is to improve decision-making process, and build an understanding with the groups and organizations relevant to the issues, providing timely information to stakeholders, and promoting active participation allows them to receive their views , suggestions, recommendations, and answer your questions and concerns so as to ensure that the remedial alternatives under consideration incorporate their views and interests.

The specific objectives of the proposal are as follows:

- Identify relevant stakeholders, ie individuals, groups and organizations that may be affected by environmental liabilities of the former foundry or be interested in the problem (authorities, informal leaders, private sector, NGOs, etc.).
- Report in a timely and understandable to those people on the ongoing activities, the alternatives considered and their potential impact on their lives and activities, particularly in view of communities and forest lands on which they depend.
- As of early and accurate information of the activities taking place in the area, obtain the consent of local authorities and individuals involved to perform them.
  - To give the communities the ability and opportunity to express their concerns, identifying the conditions, benefits and risks of each alternative, and, if necessary, propose alternative approaches.
  - Responding to the concerns, ideas and concerns that arise.
  - Confirm and update the socio-economic communities, relaying their needs, concerns and values, in order to arrive at appropriate decisions..

The proposed process will ensure:

- That all stakeholders have the opportunity to participate in the decision making process;
- That the decisions involving their needs, aspirations and concerns;
- That decisions regarding the alternatives considered is conducted in a transparent manner so as to build trust and support from the actors.

## Methodology

- 1) Identification of issues, local actors and preliminary evaluation

The consultation and communication strategy will be based on a clear understanding of expectations and needs of stakeholders. Identification and preliminary assessment of the key issues to address through the consultation process will collect the socioeconomic context in the strategy. Provide preliminary background information about the requirements and expectations of the community about the problem and identify the opportunities and restrictions of the process.

The identification of key social actors begins at the beginning of the evaluation activities, which will continue throughout their development. Through this process will take an inclusive attitude and flexible in identifying the actors, ensuring that the process reflects the diverse needs of stakeholders at different stages of the process.

The SESA will be worked in coordination with the authorities and local stakeholders to identify:

- needs, concerns and expectations of local actors;
- social, political and economic role in the region;
- methodologies and tools of communication;
- potential conflicts between the alternatives considered and the needs and interests of local actors.

As a result of this activity is obtained:

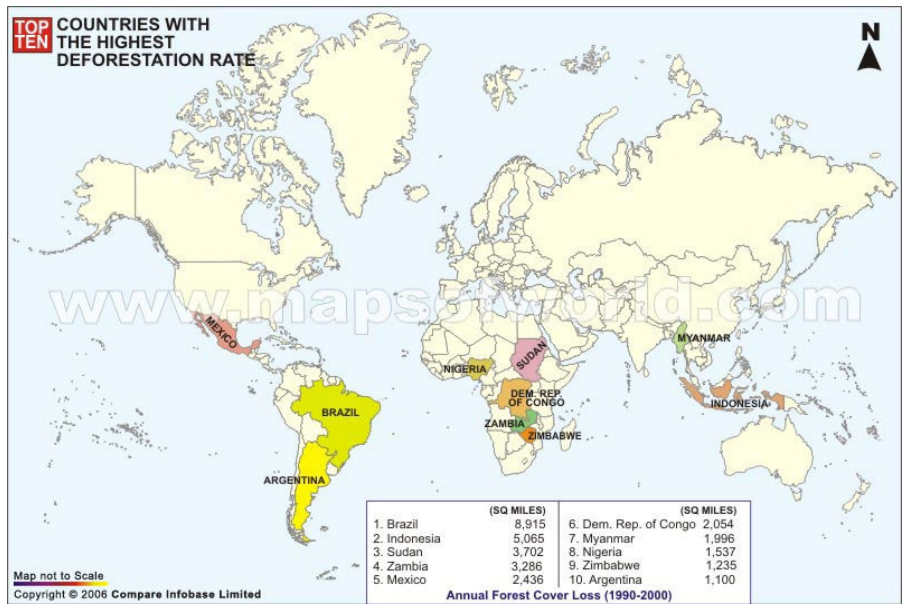
- A report on the main topics of interest to the local community that must be addressed through consultation and communication strategy
- A preliminary map of local actors and potential interest and conflicts, identifying which of them will participate in the process of consultation and outreach, as they will, and determining the type of relationship and information flow between them and establish the project team;
- A preliminary consultation strategy reflecting the different levels of participation and information needs of different groups;
- An updated electronic database of local actors, including their profiles, attitudes, interests in the project.

<b>Tabla 2d: Summary of Social and Environmental Impact Activities and Budget</b>						
<b>Main Activity</b>	<b>Sub-Activity</b>	<b>Estimated Cost (in thousands)</b>				
		<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
Design and implementation of SESA	Hire 2 experts in environmental and social impacts in policies programs	50\$	\$	\$	\$	50\$
	Phase 2	10\$	140\$	70\$	70\$	290\$

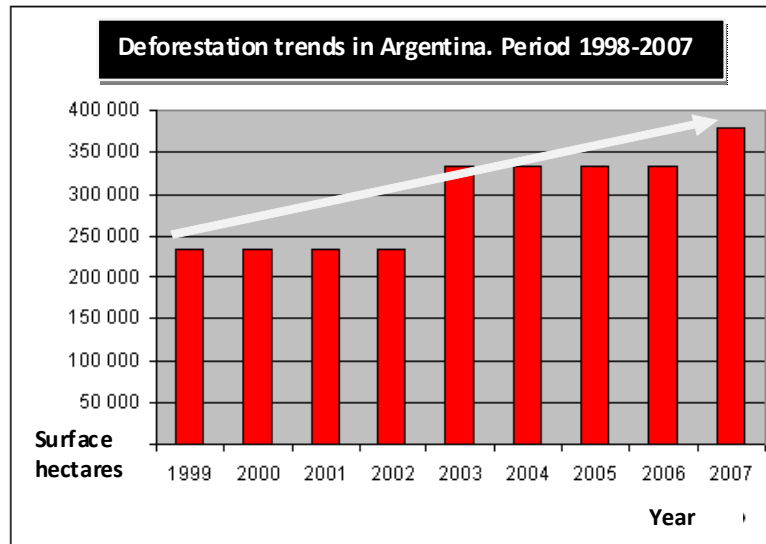
	MRV integration		20\$	40\$	40\$	100\$
SESA Consultation and dissemination activities	Consult workshops	90\$	90\$	90\$	90\$	360\$
	Dissemination materials	30\$	30\$	30\$	30\$	120\$
	Stakeholders mapping and database. Additional Information surveys	30\$				30\$
<b>Total</b>		<b>210\$</b>	<b>280\$</b>	<b>230\$</b>	<b>230\$</b>	<b>950\$</b>
National Government		50\$	150\$	150\$	200\$	550\$
FCPF		160\$	130\$	80\$	30\$	400\$

**Component 3: Develop a Reference Scenario**

Deforestation trends in the country were alarming and increasing, exceeding the global average deforestation rate. In absolute terms, Argentina was in the tenth place among the countries with the highest loss of forest cover during the decade 1990-2000, according to FAO data (see figure).



This situation has worsened in the last decade, deforestation has been growing rapidly and steadily, doubling in the term of four years (2002-2006) and reaches its peak in 2007, which was cleared over 380.000 hectáreas (see figure).



In 2007, was sanctioned the Act 26,331 of Minimum Standard for Environmental Protection of Native Forests, which (SAyDS) is the national authority for implementation. After the enactment of this Law, deforestation was reduced by more than half, in the area of highest deforestation rate in the country, in the provinces of Chaco, Santiago del Estero, Salta.(see table). Regarding this trends changes, it is appropriate set 2007 that starting point for the reference scenario, coinciding with the Bali decision, as part of the COP13.

	1998-2002	2002-2006	2006-2007	2007-2008
Chaco	117.974	127.491	x	x
Santiago	306.055	515.228	x	x
Formosa	19.977	30.296		
Salta	194.389	414.934	x	x
Misiones	67.233	62.412		
Córdoba	122.798	93.930		
TOTAL	654.000	1.244.000	316.943	136.081

In this context, considering the public investment component mentioned in 2b, the country establishes their preliminary target of reducing lost forest cover.

### Target of reducing deforestation

The country sets targets for reducing the rate of deforestation and associated CO2 emissions, of an order similar to the proposed targets for REDD in the negotiations under the group of long-term cooperative work of the Convention United Nations Framework on Climate Change (UNFCCC).

In this sense, is expected to reduce deforestation rates by 15% by 2015 and 30% by 2020, with the country's own resources, and scale of proposed investment in the previous graph.

It also sets a higher goal for the case to receive international funds through the REDD mechanism. Thus, the targets for reductions in deforestation would be 30% by 2015 and 60% for 2020, considering a contribution of international funding, similar in magnitude to the investment made by the country's own resources according the law.

The proposed national investment is between 100 to 250 million dollars per year, until 2015. The country intends to receive an additional amount around this magnitude, to provide everything necessary for a REDD mechanism, and reduce deforestation rates by 30% by 2015. Also, the scale of investment in the country, will increase until 2020. The scale of national investment, together with international funds, would stop the deforestation in 2030.

Regarding the national funds, the 30% of them has to be used by Law, to strengthen provincial governments (specifically to enhance its capacity for monitoring and control, and all the capabilities necessary for conservation and management of native forests), which are between 30 to 75 million dollars, that has to be split into 25 provinces, representing on average of 1,2 to 2,5 million dollars per province/year, but will depends on several factors including in the law. However, it could enhance the efficiency of this distribution for the 6 provinces with more deforestation (but this is not a unilateral decision of the national government), estimated that funding could rise to 15 million dollars investment.

The remaining 70% of the funds of the law is expected to be distributed mainly in yellow and red areas, to compensate the land owners.

To decrease deforestation rates in the short term, it is also necessary that the areas of low conservation value (green category) reduce their deforestation rate. Future REDD funding would go mostly to green areas. An assessment of potential green areas for REDD will be conducted to be categorized according to their potential and mitigation cost.

Government funding (red and yellow areas) in turn will serve to reduce the problems of leakage, and permanence, ensuring major carbon pools and giving financial sustainability for the proposal, and improving the capacities of developing sustainable forest management, representing a appropriate framework for REDD implementation, on a significant scale, and in conjunction with the implementation of the strategy to prepare for REDD.

On the other hand, the implementation of the law would have significant reducing emissions difficult to estimate for the methodological complexity, in the issue of forest degradation, and increased carbon pools by improving forest management in areas of medium conservation value (yellow class).

#### **Estimated impact of forest law in emissions from deforestation: possible future scenarios**

It makes an estimate of the carbon content for the forests of Argentina under Law No. 26,331, as well as an estimate of its potential for mitigating climate change under different effective implementation scenarios.

To determine the area in each categories of conservation for different provinces, we used the percentages that emerge from the OTBN that provinces has developed and that are available. For provinces that have not yet adopted an OTBN, were taken reference rates estimated by the SAyDS in the framework of the regulation of Law 26,331 listed in Annex III of the first draft.

Biomass values were applied for the type of forest area. The data for the categories Forest and other wooded land to the Misiones Forest, Chaco Forest Chaco and Tucuman Bolivian were obtained from Manghi, E et al (2009), for Andean Patagonian forest were obtained from Gasparri, I. and E. Manghi. (2004) and for Espinal forest were used for the values obtained in the National Inventory of Greenhouse Gases of year 2000.

### Carbon pools by conservation category

Table 1 highlights the content of total carbon dioxide (Native Forest and Other Forest land) for the whole country, which has a value of 25,928,636 Gigagrams (Gg) of CO<sub>2</sub>. This value is also presented by forest region discriminated categories conservation, which notes that approximately 70% of the CO<sub>2</sub> content would be under the yellow category (sustainable use), 21% under the red category (conservation) and the remaining 9% under the green (liable to be deforested).

Comparing the different forest regions highlighted that over 50% of the CO<sub>2</sub> is retained in the Chaco Park, followed by the Andean Patagonian forest with 24%. This pioneering initiative is relevant mainly to the high content of biomass per unit area of this forest formation.

Table 2 shows the total CO<sub>2</sub> content, status of conservation and for the ten provinces that contribute most to the total country, sorted in a decreasing manner. This allows us to see that only among the five provinces (Salta, Santiago del Estero, Chaco and Formosa Neuquen) is 50% of total forests in Argentina.

Table 1. Gg CO <sub>2</sub> x Forest Land Planning Categories				
Ecoregions	GREEN	YELLOW	RED	TOTAL
Parque Chaqueño	1.853.800	10.273.611	1.756.667	<b>13.884.078</b>
Bosque Andino Patagónico	-	3.598.919	2.565.883	<b>6.164.802</b>
Selva Tucumano Boliviana	361.476	1.860.591	504.071	<b>2.726.137</b>
Monte	41.418	988.591	542.296	<b>1.572.306</b>
Selva Misionera	41.372	776.490	103.133	<b>920.995</b>
Espinal	58.065	533.614	68.639	<b>660.318</b>
<b>Total</b>	<b>2.356.132</b>	<b>18.031.816</b>	<b>5.540.689</b>	<b>25.928.636</b>

Table 2. Gg CO2 x Forest Land Planning Categories						
Provincias	GREEN	YELLOW	RED	TOTAL	%	Z%
Salta	749.586	2.550.947	624.001	<b>3.924.534</b>	15%	15%
Santiago del Estero	405.746	2.395.523	444.697	<b>3.245.967</b>	13%	28%
Chaco	762.415	1.524.830	254.138	<b>2.541.383</b>	10%	37%
Neuquén	-	630.905	1.192.520	<b>1.823.425</b>	7%	44%
Formosa	60.109	1.527.481	180.328	<b>1.767.918</b>	7%	51%
Chubut	-	1.164.100	496.527	<b>1.660.627</b>	6%	58%
Tierra del Fuego	-	1.295.985	363.407	<b>1.659.392</b>	6%	64%
La Rioja	-	1.040.587	183.633	<b>1.224.220</b>	5%	69%
Río Negro	-	382.170	642.415	<b>1.024.586</b>	4%	73%
San Luis	75.537	823.853	107.766	<b>1.007.155</b>	4%	77%

Table 3 shows the values of CO2 content by category of conservation comparing the components Forest and other wooded land. In the same notes the important contribution made by the component Other Lands Forest to total more than 9,000,000 Gg of CO2 equivalent to 55% of native forest component.

Table 3 CO2 Gg by conservation category			
Category	Forest	Other forest lands	TOTAL
GREEN	1.904.676	451.455	<b>2.356.132</b>
YELLOW	11.515.767	6.516.049	<b>18.031.816</b>
RED	3.283.381	2.257.308	<b>5.540.689</b>
TOTAL	<b>16.703.824</b>	<b>9.224.812</b>	<b>25.928.636</b>

### Potential emissions versus different deployment scenarios of law 26,331.

For the analysis of emission reduction potential of Argentina established three possible scenarios for implementing the law 26,331: Optimistic scenario: This scenario considers a total 26,331 law enforcement, for which emissions are assumed to come only in the category green. Pessimistic Scenario: This scenario considers the 26,331 law is not applied, and where it is assumed that emissions will come from the entire category of green and yellow category for the provinces with historical deforestation rates. Intermediate stage: This stage is considered that the emissions come from the

green category and deforestation 50% of the yellow category of the provinces with historical deforestation rates.

Table 4 presents the potential emissions for three scenarios posed both for the two separate components to the total

<b>Table 4. CO2 emissions (Gg) by scenario</b>			
<b>Category</b>	<b>Forest</b>	<b>Other forest land</b>	<b>TOTAL</b>
<b>Optimistic</b>	1,904,676	451,455	<b>2,356,132</b>
<b>Intermedium</b>	6,668,055	2,330,886	<b>8,998,941</b>
<b>Pesimistic</b>	11,431,435	4,210,316	<b>15,641,750</b>

It proposes a study of detailed projection of future emissions, based on maps of deforestation and the assumptions listed above, require to develop models that incorporate socio-economic variables as the forest region such as infrastructure, localities, international prices of crops, etc.. It will also be important to consider future scenarios in the territorial jurisdictions of native forests (OTBN) from different provinces in which forests are classified under different conservation categories (high, medium and low) within the framework of Law 26,331 of Minimum Budgets Environmental Protection of Native Forests.

#### Summary of activities

- Review of data from the second national communication and estimating historical emissions
- Estimation of future estimates, according to land use are developed in the component 2a and models
- Development of a definitive reference scenario



<b>Tabla 3: Summary of Reference Scenario Activities and Budget</b>						
<b>Main Activity</b>	<b>Sub-Activity</b>	<b>Estimated cost (in thousands)</b>				
		<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>Total</b>
Review of National Communications	Hire Expert	30\$	\$	\$	\$	30\$
Estimation of future emissions, considering the forest land planning and the models in component 2a	Develop of deforestation model and associated biomass and land use change data	60\$	60\$	60\$	\$	180\$
	Conduct an Independent Expert Review	20\$	\$	\$	\$	20\$
Develop the final reference scenario	Workshop with national and international expert	120\$				120\$
	Hire 2 expert	70\$	70\$			140\$
<b>Total</b>		<b>300\$</b>	<b>130\$</b>	<b>60\$</b>	<b>\$</b>	<b>490\$</b>
National Government		130\$	50\$	50\$	\$	230\$
FCPF		170\$	80\$	10\$	\$	260\$

## Component 4: Design a Monitoring System

### Rationale

The purpose of the component is to design a monitoring system for (a) measurable, reportable and verifiable (MRV) emissions and removals of greenhouse gases, and (b) other benefits and impacts over time, in relation to a country's reference scenario.

### 4a. Emissions and Removals

Considering the experiences already developed and implemented as the system of monitoring of forest cover and forest inventory system, it is considered strategic to develop two independent MRV systems: 1) Release and catch 2) co-benefits, impacts and effectiveness of implemented strategies.

The objective of this component is to establish the requirements necessary to strengthen the current monitoring and inventory system in order to provide an annual estimate of national emissions and removals caused by changes in forest cover and its associated carbon reservoirs.

Another objective is to provide the national bases and guidelines for the implementation of a reporting and verification system, in accordance with the processes and definitions of the UNFCCC.

MRV system will be designed for all components of REDD +, with different priorities and pace depending on available capacities. In this regard, deforestation is considered the priority issue while other components of REDD + will be added to the MRV system gradually, since developing capabilities for monitoring degradation and other eligible activities implies more efforts and requirements. Also, it is important to identify priority regions or types of forests where it may be necessary to implement other REDD+ (case studies by ecoregion).

### Structure

In short, the system will be based on the following key components:

- A monitoring system of forest cover through remote sensing, which allows for annual changes detection map, as well as working at different levels of spatial and temporal scales, based on the approach 3 of IPCC GPG 2003.
- A permanent forest inventory system covering the entire forest area of the country, focusing on the compartments and areas identified as most dynamic.

- Coefficients and allometric equations based on tiers 3 for above-ground biomass and other compartments that are considered necessary.
- Creating a comprehensive information system, linked to the GHG inventory system that provides the structure and facilities necessary for public reporting and independent verification of the information generated.
- A process of continuous improvement system, based on the studies proposed and implemented under the strategy of preparation.
- Creation of a regional MRV forest region, including collaborative process for developing a MRV with neighboring countries with similar forest types.

### **Background summary**

Argentina has the First National Inventory of Native Forests (PINBN), which began as a goal of Native Forests and Protected Areas Project IBRD Loan 4085 AR, operation agreed by the National Government and the International Bank for Reconstruction and Development (IBRD), whose executor was the Secretariat for Environment and Sustainable Development (SAyDS) of Argentina. The PINBN covered all areas of native forest of the six forest regions in which the country was divided: Selva Misionera, Selva Tucumano Boliviana, Bosque Andino Patagónico, Parque Chaqueño, Monte and Espinal. It presents results of field inventory and mapping based on remote sensing techniques mainly of the year 1998. These estimates were made for biomass and carbon stock of forest area (tiers 1). Tiers 2 data were developed for Chaco and Atlantic forest regions.

In 2001, the SAyDS created the Forest Evaluation System Management Unit (UMSEF), which is in charge of native forest monitoring and quantification of changes in its structure and extension. It is now held every 4 years to update the forest maps of the regions with greater deforestation. So far it has the information for periods 1998-2002 and 2002-2006 from which the surface is called loss of native forests and deforestation rates. Progress reports have been made considering other intervals. It is planned to have information for the period 2006-2010.

The SAyDS, in order to fulfill its obligation authority for the application of Law No. 26,331, must keep the information about native forests area and their status of conservation. That is why in 2009, the SAyDS proposed the creation of a permanent inventory system (SIP) to assess the effectiveness of measures and policies implemented and the needs for forest policy reforms.

The SIP will aim to:

- Determine periodically the area, characteristics and status of the native forests of Argentina;
- lay the groundwork for future updates of the inventory in predetermined time intervals;
- provide a basis for provincial forest inventories design;

- Design guidelines to monitoring others environmental and social variables at national, regional and provincial (flora, fauna, timber forest products, water, soil, etc.),

As an initial step of the SIP, the Second National Native Forest Inventory (SINBN) will be conducted as a component of the project Native Forest Biodiversity Project Sustainable Management of Natural Resources (IBRD No. 7520-0-AR).

Furthermore, Argentina has made the first and second National Communication to the UNFCCC, which incorporate an inventory of GHGs in the forestry sector. Currently, the country is developing the documents and terms of reference for the completion of the third national communication, including GHGs inventory of the forestry sector. It is necessary to review these data and conduct an analysis of gaps in the estimates.

### **Land Forest Cover Monitoring**

At present the monitoring of native forest cover, is performed using Landsat satellite images of medium spatial resolution (mid-resolution; 30 m) and given that they are consistent sources of data for studies at regional / national and are easily accessible, intends to continue with the same data type. Anyway, have used images from other sensors (ASTER, CBERS, SPOT HVR) as ancillary information in areas with high cloud cover and / or to reduce uncertainties in the interpretation of LANDSAT images. Also the use of high resolution imagery (eg IKONOS, QuickBird) is incorporated to validate the results obtained in specific areas.

The deforested areas are clearly identified through a visual interpretation of satellite images present on screen (Figure). Different combinations of spectral bands that identify various elements of the earth's surface. Using a combination of false-color composite of the bands corresponding to red, near infrared and mid infrared, provides satisfactory results in distinguishing the forest. We work to an approximate scale of 1:50,000 with a minimum mapping unit of 10 ha and covering the whole forest of the forest regions of Argentina (wall-to-wall coverage). The visual interpretation procedure is suitable for detecting changes such as deforestation, as the replacement of forest to agricultural land and other common uses in the country represents contrasting changes in the spectral values of images as well as distinctive ways that favor identification. While this is a time-consuming method, represents a simple and robust tool that has proven successful. In areas of greatest difficulty for interpretation using images, is used different acquisition dates to facilitate the process, as multitemporal studies to observe the spectral response of different phenological stages of vegetation.

Before the process of interpretation, satellite images were geometrically corrected to obtain a lower mean square error to the pixel (30 m) using as reference images those provided by the Global Land Cover Facility (GLCF) at the University of Maryland, which have accuracy commensurate with the stated objectives. Since performing a visual interpretation, radiometric effects caused by topography and atmosphere do not require a radiometric correction. After the extraction of information, it is conducted an assessment of the accuracy from field data and/or high-resolution images ensure the quality of information obtained with higher accuracy 85%.

The core variables to be recorded in SINBN on dasometric type (species, diameter, height, state of health, regeneration, etc.), but will achieve a design that permits the incorporation of other environmental variables defined in the final design. It provides a program to develop volume equations for the exclusive use of forest inventory, will be introduced to the volumes of interest and observation variables to be used. Also there will be a quality control for the verification of compliance mechanisms under the proposed objectives of qualitative and quantitative measurement. Equations and models for biomass and carbon content following the guidelines contained in the Good Practice Guidelines IPCC 2003 and 2006, previously defining key categories be developed, as specific task of REDD strategy.

This will reach a tier 3 for above ground and underground biomass, and conduct studies to evaluate the appropriateness, on cost-effective basis, of incorporating other compartments at the level of tier 2 or 3.

Although a tier 3 methodology improves the accuracy of the estimates, in practice an inventory with a tier 3 in all carbon pools involves high costs and increased complexity of monitoring, hindering its implementation, especially considering the large and diverse Argentine territory. To improve the precision should assess the need for studies to the different compartments of the forest (above and belowground living trees, dead matter, down woody debris and litter, in non-tree in the understory vegetation and soil organic matter). It is propose studies of soil (collection and laboratory analysis), non-tree vegetation (destructive sampling, collection and determination of dry biomass and carbon stock) and down dead wood (collection and laboratory analysis), to assess the applications of different tiers for different compartments as the results recommends. The results will consider the necessity to include compartment in some specific ecoregions or forest type.

Moreover, we should consider whether the current design of sampling (grid 10ha) of SINBN has sufficient detail for carbon stock measurements required, and if not how could intensify in general or in specific areas of interest.

### **Forest Degradation Monitoring**

Regarding monitoring of the degradation of native forests, it presents several limitations from the methodological point of view. While the visual interpretation of satellite images can clearly identify deforested areas, identification of degraded areas that were not always obvious because in this case the change is gradual over a number of years, mainly by selective extraction tree. It is required in this case higher resolution images, further field work and methodology development chords. To go MRV incorporating the issue of degradation is proposed to first develop a definition of degradation in quantitative terms for different forest regions establishing levels of forest degradation. He intends to make drivers work in areas designated as areas of greatest risk of degradation for the development of methodologies based on remote sensing and field data.

The increase in carbon reservoirs occurs in parts of Argentina following the recovery of secondary forests. Particularly in the Atlantic Forest, shifting cultivation leaves deforested areas that are colonized by different species and after a process of

succession, form secondary forests, locally called "capueras", which generally have a composition of tree species and different dynamic the original condition. It also shows the recovery of secondary forests following shifting cultivation in some areas of northern and Salta on abandoned agricultural land in the Park Chaco region. While nationally the increase in secondary forest land is not a major process in the carbon balance could have a greater role to regional or local level. In this sense we may consider this process in terms of carbon sequestration as a possible incentive to recover deforested areas. To do this, as for avoided degradation, we have to identified, as first step, areas where these changes are the most important dynamic process in the carbon pools. The second will be developed a framework to conduct a quick assessment of the cost-effectiveness of monitoring and potential reductions of GHG.

The information generated from remote sensing and field data is an input for a study to define the potential of forests as carbon sink and the threat level that are subject to various areas of the country. The determination of the areas most threatened by deforestation is done through causal models that include environmental variables, social and economic. Furthermore, this study will incorporate planned changes to the implementation of Law No. 26,331, considering that from the OTBN be established areas of very high conservation value (red) without the possibility of transformation, others of medium conservation value (yellow) which can be made sustainable, tourism, collection and research, and areas of low conservation value (green) that may partially or completely transformed. Besides knowing the status of forests, requires an assessment of the profitability of the main productive activities that cause a change in land use as a basis for assessing the opportunity cost in different regions. Finally, joint analysis of all this information will determine the priority of different areas to establish the feasibility of implementing a reducing emissions from forest degradation and other related activities.

### **Carbon emissions**

To estimate carbon emissions need to combine measurements of deforestation and / or degradation with those of biomass present in the different forest types for different times.

As far one of the cases considered in the estimates is that all the carbon from deforestation is emitted to the atmosphere, it is proposed to conduct a study on the fate of carbon product use and deforestation and to calculate emissions carbon management alternatives or forest use.

We propose to implement the methodology in the forest regions, giving priority to those where there is greater deforestation or forest degradation and consequently a higher carbon emissions.

The guidelines of the SINBN include a 5-year cycle. Anyway, you should study the frequency of data acquisition needed for REDD evaluating whether to make annual estimates of deforestation in critical areas (eg areas of green category for Law 26,331). It also should consider the need to increase the detail of the maps generated using a minimum mapping unit of 1 to 5 has since at present is 10 ha. In this case, the previously proposed methodology remains valid.

Summary of activities

- Acquisition of satellite imagery and preprocessing.
- Visual interpretation of land cover.
- Identification of areas deforested (annually).
- Acquisition of field data as ancillary information and to evaluate the accuracy of digital coverage.
- Definition of degradation for different forest regions
- Development of monitoring methodologies based on remote sensing and degradation field data in high-risk areas in different forest regions. Training.
- Development of monitoring methodologies for increasing the carbon pools in the region based on remote sensing Atlantic Forest and field data. Training.

### Report and Verification

In this sense it aims to establish a working group at the Argentine Institute of Standardization and Certification (IRAM), which is the (civil society organizations) in charge of standardization and certification, and has a diverse background in the subject. Through this working group will convene experts from universities, research centers, NGOs, to develop guidelines and procedures to establish bases and mechanisms for public reporting of information and independent verification. This group will be based on models of work on ISO guidelines, and other certification standards (eg. those developed to establish the carbon neutrality of organizations)

It is emphasized that the SAyDS has already promoted through this mechanism, together with stakeholders, the developing of the following Standards: IRAM 39,801. *Sustainable forest management*, Principles, criteria and indicators for the management unit. 39,802. Sustainable forest management. *Chain of custody*, 39,804. Sustainable forest management. Guidelines for the audit process, 39,805. Sustainable forest management, *Group certification*. Eligible to receive the grant within the framework of Resolution No. 256/09 (pilot program of the Forest Act) and supplementary provisions.

Summary Table

	<i>Forest Cover Monitoring</i>	<i>Permanent Plot Inventory System</i>	<i>Annual National Forest GHG Inventory</i>
<i>Results</i>	<i>Forest cover changes and piloting experiences for other REDD issues</i>	<i>Estimated biomass, emissions factors and models</i>	<i>Changes in the carbon stocks monitoring (emissions and removals)</i>
<i>Current development</i>	<i>All country in 4 years. In deforestation hotspot could be done annually</i>	<i>In elaboration, first steps in the design of the 2th inventory. Consulting with experts and</i>	<ul style="list-style-type: none"> <li>a) <i>Review of National Communication</i></li> <li>b) <i>3th National GHG inventory</i></li> <li>c) <i>Work Plan to</i></li> </ul>

		<i>provincial governments. First draft of guidelines of the permanent plot forest inventory system</i>	<i>establish a GHG inventory system, as required for Annex I</i>
<i>Operational</i>	<i>2010</i>	<i>2012</i>	<i>2012</i>
<i>Capacity building</i>	<i>It is needed human resources (men-hours of trained people) to achieve annual monitoring in all country</i>	<i>It is needed, training for forestry experts and communities. Also for forest provincial government departments</i>	<i>Training in IPCC 2003 and 2006 guidelines and in the requirements for GHG inventory as developed country standard.</i>

**4b. Other Benefits and Impacts**

Considering that the monitoring system of forest cover and carbon emissions, has years of experience and a momentum of its own, is considered more appropriate that the monitoring system for co-benefits and impacts it will be an independent monitoring system, but linked to the previous in as necessary.

The overall strategy will be add start with some key indicators identified as necessary in the short term, and then add progressively to monitoring system more parameters, as they are identified and studied as pilots, with the progress of R-PP implementation. The objective of this component is to design and implement a monitoring, reporting and verification system for the co-benefits, impacts, drivers of deforestation and degradation and related governance and policies.

For biodiversity monitoring will include sampling some variables in the permanent plot system of forest inventory. Indicators relating to with recognized standard - Climate, Community and Biodiversity Alliance and IUCN Red List- will adapt and use for set appropriate and cost-effective biodiversity monitoring and to develop a sampling plan with key species indicators to monitor the actions based on the strategies.

Some kind of locally or community-based monitoring of natural resources will apply as much as possible. We will consider a broad range of approaches, from self-monitoring of harvests by local resource users themselves, to censuses by local government staff, or inventories by amateur naturalists. In all of these approaches, the monitoring is carried out at a local scale and by individuals with no or only limited formal science training. In other hand, we will use landscape indicators. Some studies using this kind



of indicators has been carried out by the SAyDS, showing the importance for biodiversity conservation and species survival of ecosystem connectivity. The increase in the agricultural area not only determines changes in landscape composition (proportion of different types of coverage) but also in its configuration (pattern with the spread of different types of coverage). Within the latter, there is a particular fragmentation of the original vegetation cover. The concept of fragmentation primarily describes the disruption of the spatial continuity of a cover type associated with human disturbance. Knowledge of the degree of fragmentation of a system provides information from which to infer changes on structural aspects (eg.: Biodiversity) and function (eg.: Biogeochemical cycles) at the ecosystem, even when there are known details of the ecological processes involved. This approach will be used to develop indicators related to biodiversity and forest condition. Also monitor indicators of landscape fragmentation an indicator of forest ecosystem wellbeing, with methodologies that have been used in the deforestation hotspots areas.

### **Socio-economic factors**

The country has monitoring through the INDEC, the NBI, which measures various social parameters and micro-economic. This information is available by department, and an adjustment of this methodology to suit the monitoring needs of the REDD strategy in the areas subject to deforestation. Also evaluate the possibility of including some social data relevant to the design of forest inventory, which can be carried out in parallel in the plots.

Particularly, socio-economic monitoring will be related to poverty reduction and job creation indicators. Some data in the country shows that deforestation also reduce the number of jobs and may contribute to the development of poverty in communities associated with forests. In this issue, we are consulting the some stakeholders that are working in the matter. Labour and Environment Program, that works with trade union and AFOA, which has conducted a study related the employment factors in the forestry sector.

### **Drivers of deforestation and forest degradation**

The monitoring of the causes of deforestation and degradation, will be disaggregate level of specific eco-regional nodes, and they will monitor the key categories identified in component 2.

The country maintains an information system on land use based on an approach 1 and 2 of the IPCC guidelines 2003. A proposal was designed to make these explicit geographical databases, moving to an approach 3. This proposal will have accurate information on the dynamics of land use throughout Argentina, particularly in the areas of deforestation hotspots.

The final product will set a National Land Use Monitoring, through the organization of existing institutional capacities. Using data from remote sensors will be evaluated on a regular basis national information on a) current land use, b) vegetation and land

occupation, c) land devoted to major crops, and d) changes or changes in the nature and the countryside.

It has been organized in two phases of 2 years each. In the first (preparatory phase), is expected to operate the system by defining the structure of the System and Method. To this end, interaction with existing projects at INTA in particular, enhance and redesign a network of laboratories currently operating Geomatic, distributed nationwide. Be defined in a preliminary way, the nomenclature for classification of land use and occupancy of land throughout the country, technical protocols and agreed on methodology for the survey covers and conducting agricultural estimates.

During the second year of the project, coordinated at national level, will be conducted surveys on the types of coverage available in natural and modified environments, exploratory scale (E. 1:500.000), according to agreed technical protocols. From secondary sources and auxiliary information, will lead the coverage map or occupation of land in a map of "land use".

Will agricultural estimates of major crops in the central provinces (Buenos Aires, Cordoba, Santa Fe, La Pampa and Entre Rios), Northwest (Jujuy, Salta, Catamarca, Tucumán and Santiago del Estero), and the province of Corrientes . We will work to semi-detailed scale (1:100,000 E.), and standardized methodology for the entire study area. In the remaining provinces will be carried out pilot projects on priority crops in areas and levels of detail to be determined.

The first phase will result in a) a National Land Use Monitoring Network organized b) the first national cards and land use at exploratory c) Agricultural statistics objective of most of the territory country's agricultural and d) pilot projects on crop survey in all ecoregions.

In Phase II, is planned for a new national survey and land use, increasing the level of detail in both the spatial scale (E.1: 100,000) as in the field, according to the classification nomenclature preset in the first phase of the project. Then carrying out agricultural statistics of the main national and regional cultures, for the whole country. In the last year of the second phase will analyze the spatial dynamics of territory by techniques aimed at detecting changes in different agro-ecosystems and landscapes during the time period for analysis.

At the end of the second phase there will be a monitoring system in operation, with the technology of newspaper survey covered tight and available nationwide. In addition it will have obtained the following products: a) covers digital cartography and its dynamics, b) inventories of land use, c) methodological protocols for the survey of environmental and agricultural statistics to obtain objective, for different regions of the country d) equipment and trained technical infrastructure updated survey of environmental information.

## **Governance**

Is proposed to design indicators to monitor two aspects of the situation Argentina: 1) Degree of implementation and enforcement of laws relating 2) Capacity building for monitoring and control by the provincial authorities.

## Report and Verification

This issue will work in the same workgroup and the same way as in the previous section

**Summary table**

	<i>Cobenefits</i>	<i>Governance</i>	<i>Drivers</i>
<i>Output</i>	<i>Socio-economic and environmental indicators monitoring system</i>	<i>Laws enforcement Provincial capacities for control</i>	<i>Geographically explicit identification of the causes of deforestation and degradation. Designing a database on land use approach 3</i>
<i>Current development</i>	<i>Some partial studies. Methodology design in the permanent plot forest inventory</i>	<i>Not developed</i>	<i>Database of land use approach 1 and 2. Approach 3 partially implemented in some regions. The information is scattered in various systems. Progress has been made toward designing a national approach 3.</i>
<i>Operational</i>	<i>2012</i>	<i>2012</i>	<i>2013</i>
<i>Requirements</i>	<i>It requires the development of pilot testing and integration of existing systems</i>	<i>It requires the design of a methodology and pilot testing</i>	<i>It requires new skills, only increased availability of human resources and coordination of existing initiatives</i>

**Tabla 4: Summary of Monitoring Activities and Budget**

Main activity	Sub. Activity	Estimated cost (in thousand)				
		2010	2011	2012	2013	Total
Capacity Development for forest cover	software to automatization current process	70	20			90

	and supervised classification					
monitoring	Set methodologies to forest degradation monitoring based on remote sensing and field data, for risk zones between the different forest regions. Capacity building and workshop.	120	30	30	60	240
	Set methodologies for increasing removals monitoring based on remote sensing and field data, for the atlantic forest region. Capacity building and workshop.	60	30			90
Permanent Forest Inventory system according the requirements for REDD	Final Design of Forest Inventory	60				60
	Biomass surveys	200	100	100	\$ 100	500
	Development of ecuations and coefficients	50	100	30	\$ 30	210
	Dasomotric inventory	140				140
	Development of volumen equations	15	15	15		45
	Quality control process	20	20	50	\$ 50	140
	Studies and	120				120

	surveys to assess the relevance of different forest carbon pools, in the different forest regions.					
	Studies to assess the need of inventory grid intensification for assess changes in carbon stocks	30				30
Working on report and verification		60	40	40	20	160
Design of monitoring system for co-benefits, impacts, and drivers of deforestation		130	100	80	50	360
<b>Total</b>		<b>1075\$</b>	<b>455\$</b>	<b>345\$</b>	<b>310\$</b>	<b>2185\$</b>
National Government		500\$	200\$	200\$	200\$	1100\$
FCPF		575\$	255\$	145\$	110\$	1085\$

<b>Component 5: Schedule and Budget</b>
---

Estimated cost (in thousand)					
Main Activity	2010	2011	2012	2013	TOTAL
Arrangement for National Readiness	115\$	115\$	115\$	115\$	460\$
Consultation and participation plan	325\$	215\$	215\$	115\$	970\$
Assessment of land use, forest policies and governance	505\$	395\$	225\$	\$	1225\$
REDD strategy options	535\$	220\$	90\$	\$	845\$
Implementation Framework	105\$	125\$	85\$	65\$	380\$
SESA	160\$	130\$	80\$	30\$	400\$
Reference Scenario	170\$	80\$	10\$	\$	260\$
Monitoring, Reporting, and Verification System	575\$	255\$	145\$	110\$	1085\$
<b>TOTAL FCPF</b>	<b>2490\$</b>	<b>1535\$</b>	<b>965\$</b>	<b>435\$</b>	<b>5425\$</b>

## SPANISH ACRONYMS

SAYDS	Secretariat of sustainable development and environment
GTN-REDD	National Working Group on REDD
OTBN	Natural Forest Land Planning
PBNB	Native Forests and its Biodiversity Project
TCN	Third National Communication to the UNFCCC
COFEMA	Federal Council of Environment
MSEP	Minimum Standard of Environment Protection
UMSEF	Forest Evaluation System Management Unit
CPI	Indigenous Participation Council
INAI	National Institute of Indigenous Affairs
COFEPLAT	Federal Council of Territorial Planning
INTA	National Institute on Agriculture Technology
LGA	General Environmental Law
CN	National Constitution
ONPIA	National Organization of Indigenous People of Argentina