

URUGUAY  
Rural Development and Biodiversity Management

**GEF Project Brief**

Latin America and Caribbean Region  
LCSER

|  |             |   |                |             |             |             |  |
|--|-------------|---|----------------|-------------|-------------|-------------|--|
| <b>Date:</b> March 2, 2004   |             | <b>Team Leader:</b> Michael G. Carroll                                    |                |             |             |             |  |
| <b>Sector Manager/Director:</b> John Redwood   |             | <b>Sector(s):</b> General agriculture, fishing and forestry sector (100%) |                |             |             |             |  |
| <b>Country Manager/Director:</b> Axel van Trotsenburg  |             | <b>Theme(s):</b> Rural development (P), Biodiversity                      |                |             |             |             |  |
| <b>Project ID:</b> P077676/P070653   |             |   |                |             |             |             |  |
| <b>Lending Instrument:</b> Specific Investment Loan (SIL) and Grant  |             |   |                |             |             |             |  |
| <b>Project Financing Data</b>  |             |   |                |             |             |             |  |
| <input checked="" type="checkbox"/> <b>Loan</b> <input type="checkbox"/> <b>Credit</b> <input checked="" type="checkbox"/> <b>Grant</b> <input type="checkbox"/> <b>Guarantee</b> <input type="checkbox"/> <b>Other:</b> |             |   |                |             |             |             |  |
| <b>For Loans/Credits/Others:</b><br><b>Total Bank Financing (US\$m): 30.00</b><br><b>Total GEF Financing (US\$): 7.00</b>  |             |   |                |             |             |             |  |
| <b>Borrower Rationale for Choice of Loan Terms Available on File:</b>  |             |   |                |             |             |             |  |
| <b>Proposed Terms (IBRD):</b> Variable-Spread Loan (VSL)   |             |   |                |             |             |             |  |
| <b>Commitment fee:</b> 0.85%   |             | <b>Front end fee (FEF) on Bank loan:</b> 1.00%                            |                |             |             |             |  |
| <b>Financing Plan (US\$m):</b>   |             | <b>Source</b>   |                |             |             |             |  |
|  |             | <b>Local</b>  | <b>Foreign</b> |             |             |             |  |
|  |             | <b>Total</b>  |                |             |             |             |  |
| BORROWER   |             | 3.00  | 0.00           |             |             |             |  |
| IBRD   |             | 22.90   | 7.10           |             |             |             |  |
| GEF  |             | 5.40  | 1.60           |             |             |             |  |
| <b>Total:</b>  |             | 31.30   | 8.70           |             |             |             |  |
| <b>Borrower:</b>   |             |   |                |             |             |             |  |
| <b>Responsible agency:</b>   |             |   |                |             |             |             |  |
| CNA  |             |   |                |             |             |             |  |
| <b>Estimated Disbursements ( Bank and GEF FY/US\$m):</b>   |             |   |                |             |             |             |  |
| <b>FY</b>  | <b>2004</b> | <b>2005</b>   | <b>2006</b>    | <b>2007</b> | <b>2008</b> | <b>2009</b> |  |
| <b>Annual</b>  | <b>1</b>    | <b>5</b>  | <b>8</b>       | <b>8</b>    | <b>8</b>    | <b>5</b>    |  |
| <b>Cumulative</b>  | <b>1</b>    | <b>6</b>  | <b>14</b>      | <b>24</b>   | <b>32</b>   | <b>37</b>   |  |
| <b>Project implementation period:</b> 5 years, from late calendar year 2004 to 2009  |             |   |                |             |             |             |  |
| <b>Expected effectiveness date:</b> 30 October 2004 <b>Expected closing date:</b> 31 August 2009   |             |   |                |             |             |             |  |

## A. STRATEGIC CONTEXT AND RATIONALE

### 1. Country and sector issues

**Key Development Issues.** Uruguay is well endowed with natural resources for livestock and agricultural production, and the combination of agriculture and agro-industry sectors represent up to 23 percent of the Gross Domestic Product (GDP) of Uruguay. But, even this figure belies the combined importance of these two sectors to the economy as a whole; over half of their output is exported, and in the early 2000s represented over 70 percent of Uruguay's total export earnings. For agriculture to continue its role of supporting economic development, it must increase even more its outward orientation, paying particular attention to production specialization, quality improvement and processing; and on the exploitation of Uruguay's particular advantages, such as its counter-season relationship with the northern hemisphere and its capacity for natural, organic and "green" agriculture and livestock production.

The increase in agricultural production must come from increased productivity, precisely because the geographical frontier was reached long ago. For long-term sustainability, it is essential that such intensification must not prejudice the natural resource base that supports it. There are encouraging signs that the erosion and degradation of soils provoked by inappropriate cultural practices established half a century ago have been significantly reduced over the past 20-30 years. The reduction in the total cropped area has largely eliminated the cultivation of the marginal and vulnerable soils, and has been accompanied by the adoption of rotations (including planted pastures) and agricultural practices (such as minimum and zero tillage) that significantly reduce erosion. During the last years, an increase in the land planted with soybeans is providing an alternative to the rural economy, but at the same time another threat to natural resources, especially to biodiversity.

Increase in livestock production will come largely from increased productivity in its extensive beef production sector and from improved management of natural pastures, which constitute the basis of this production system. While a reduction in the size of the national sheep flock (from 26 to 12 million) during the 1990s has removed one of the main threats to natural pastures from over-grazing, the extensive beef production system remains fragile and its long-term sustainability threatened by the risk of natural pasture degradation.

Although land and pasture degradation has been reduced over the past quarter century, many of the activities that make up the current production systems present new environmental challenges that need to be addressed within a context of sustainable development. A lack of profitability at the farm level could provoke an inappropriate and eventually detrimental use of natural resources, to the extent that producers are forced to lower their planning horizon and place emphasis on the achievement of immediate and short-term solutions to cash flow shortages. This is particularly true in the case of extensive beef production sector, which uses 80% of the country's land, 70% of which is under natural pastures. Additionally, biodiversity has seldom been considered by farmers as an integral element of their production strategies. Uruguay must, therefore, develop strategies and mechanisms to exploit fully the attributes of its natural resources, such as its natural pastures, the potential for organic farming and sustainable use of agricultural biodiversity, in the pursuit of market opportunities presented by ever-more-aware and demanding consumers.

Significant changes have taken place also in the way producers utilize and manage water resources in Uruguay. Reduced crop pressure on land and livestock pressure on natural pastures has been accompanied by the dramatic expansion of irrigated agriculture, partially supported by the Bank-financed Natural Resources Management and Irrigation Development Project, PRENADER I, (Loan 3697-UY). As pressure grows on available water resources, an expansion of irrigated agriculture would have to be accompanied by improved efficiency of water use and management in the agricultural sector that will require a broad range of initiatives, from investment in irrigation technology and improved water quality to proper management of livestock-related effluents through to the establishment of a more systematic groundwater monitoring systems.

In tandem with an agricultural use of natural resources that emphasizes natural products and integrated production systems approach, biodiversity conservation and the maintenance of healthy eco-systems offer additional opportunities for the rural economy. The conservation and management of biodiversity requires the establishment of a framework of

incentives to private landowners to promote land-use practices that exploit the synergy between conservation and new opportunities for rural income generation.

The forestry sector, though of little importance for the national economy in the past, has shown recently a very rapid increase due to incentives for plantation forestry. The area under plantation has grown by close to 800% in the 1990s, and today the total area under plantation forestry covers 400,000 ha. The economies of scale that have been achieved allow for industrial processing that can be internationally-competitive. Such industry is not, per se, supportive of biodiversity conservation since it relied on introduced species with various negative environmental impacts. Nevertheless, it can benefit from diversification and can increase its ecological value through associated native forest conservation and regeneration of native species

The global significance of Uruguay's biodiversity is based on it being a confluence of Amazonian and Chaco domains, with mosaic-like habitats dominated by grasslands, interspersed with marshes, spiny woodland ("espinal"), gallery forest, and bodies of standing water ("esteros"). Because of Uruguay's comparatively small size, relatively regular topography, and absence of major geographical accidents, the country tends to be uniform from a biological perspective when compared with other countries in the Neo-tropical region. The grassland ecosystem ("pastizal") is the most representative area of the country, periodically-inundated and interspersed marshes, espinal, gallery forest, and esteros. The relative importance of these habitats and the clear dominance of the grassland (pradera) ecosystem are shown in Table 6.

**Table 6: Principal Natural Habitats and Land Use in Uruguay**

| Habitat Type                          | Area<br>(million ha) | Percent |
|---------------------------------------|----------------------|---------|
| Savanna, currently rangelands         | 14.00                | 79.4    |
| Natural Forest                        | 0.60                 | 3.5     |
| Wetlands and other Aquatic Ecosystems | 1.14                 | 6.5     |
| Permanent Agriculture                 | 0.92                 | 5.2     |
| Urban and Infrastructure              | 0.30                 | 1.7     |
| Plantation Forests                    | 0.40                 | 2.2     |
| Other                                 | 0.26                 | 1.4     |
| Total                                 | 17.62                | 100.0   |

The richness at ecosystem and site level is enhanced by its having transboundary ecosystems. Uruguay holds one of the world's few "savanna" ecosystems, which in turn is very important from a global standpoint, having being recognized as being of "bioregionally outstanding" value with around 1,200 species of vertebrates, including 580 of fish, 41 of amphibians, 62 of reptiles, 434 of birds, and 111 of mammals. The other eco-regions represented in the country include the Humid Chaco and the Brazilian Atlantic Coast Restingas.. Of the 111 species of mammals present in the country, four have already become extinct, and an additional 5 are in danger of extinction. Being an Endemic Bird Area, Uruguay holds 3 restricted-range *Sporophila* species, one of which is in critical condition, another endangered, and the third nearly threatened. From a botanical perspective, Uruguay has over 2,500 plant species of which the great majority are herbaceous species or shrubs corresponding to the dominant savanna ecosystems. Almost exclusive Private ownership of land, the weakness of the protected areas system, and public policy decision that biodiversity conservation must be secured mostly outside of protected areas, makes this project a unique opportunity to develop sound practices for rural development in harmony with nature conservation and based conservation of biodiversity through appropriate use. The country has declared 31 protected areas under different types of management categories accounting for 302,364 hectares.

The specific habitats present in Uruguay do not occur in isolation from each other but are interspersed, with a series of localized geographic features which include rocks, hills, small ravines and a highly-branched hydrological network; it

is this “mosaic” pattern that defines the uniqueness and importance of the eco-region from a biodiversity perspective and, under natural conditions, allows it to maintain its species diversity. The following are the main eco-systems present in the country:

- Savanna – which includes a heterogeneous herbaceous community (2000 species, of which 400 are graminidae), whose diversity is determined by the relative complexity of the soils. There are also various legumes with importance from a range management perspective, as well as shrubs.
- Native Forests – which includes various distinct types, among them gallery forests (along rivers and other water courses), ravine forests (which appear in patches and benefit from specific micro-climate conditions), “bosque Serrano,” palm forests (including the important and endemic “Butia” association covering 70,000 ha), “monte de parque,” “algarrobal,” and litoral spiny forests (“monte espinoso del litoral”).
- Wetlands – which are primarily located in the south-east, especially in the Laguna Merín watershed and the coast of Rocha.
- Coastal Ecosystems - which are productive and have an important associated wildlife. They occur along the two main coasts of the country, the River Plate coast (460 km) and the Atlantic coast (220 km).

Within this richness in terms of biodiversity, livestock production (primarily cattle and sheep) has developed and been the main pillar of the rural economy for several hundred years. From the beginning, livestock production was based on the use of natural pastures, at first extensive but gradually with increasing intensity, including enclosure with fencing in the 19th century and significant attempts to improve its grazing capacity in the latter half of the 20th century with investments in fertilizer, exotic pasture species, drinking water storage and electric fencing. The original savanna ecosystem with associated forests (a product of rich soils and a temperate climate) has thus been heavily altered and, with it, the natural features of the landscape have changed substantially.

These changes have produced some effects including: a) localized effects, which include a change in the composition of species (primarily grasses) both from the invasion of exotic species (such as introduced grasses) and from the selective effects of grazing (which favors certain species over others, and thus alters the natural competitive forces). In addition, grazing causes soil compaction which also distorts the ecological forces present in the absence of widespread grazing; and b) ecological effects, which are larger-scale changes resulting from the alteration (due to range management practices) of flooding patterns, fire cycles, and natural succession cycles, which in turn create a savanna ecosystem different from its original natural condition, with the consequent change in species composition and dominance patterns. Another major alteration of natural habitats (directly or indirectly associated with range management practices) has been the heavy loss of native forests, with the consequent loss of biodiversity habitats, biological corridors, and ecosystem services. Fortunately, both main habitat types (savanna and native forests) are fairly resilient and, unlike many tropical habitats, they can be the subject of restoration efforts that can be cost-effective and feasible in time.

Soil erosion has also altered natural habitats. Some 30 percent of all agricultural land has suffered from some form of erosion. Nevertheless, soil erosion seems to strongly depend on the appearance of periodic heavy rain episodes (associated with El Niño Southern Oscillation events), with the resulting damage being heavily correlated with the type of land use present, which is minimal under permanent forest. Wetland loss and degradation has also occurred to a substantial degree because of a variety of factors, including the early expansion of rice cultivation which both replaced the habitats and degraded them through the application of fertilizers and pesticides. This effect has been particularly important in the Wetlands located eastern part of the country (Baños del Este). Invasion by exotic species (both animals and plants) has also caused significant impacts. For example, since the 1960s the growth of the livestock sector has been based in part on the improvement of natural pastures via the introduction of improved grasses and legumes and the use of fertilizers, with the consequent ecological impacts already discussed. Fortunately, from a biodiversity perspective, of the 16 million ha that are appropriate for livestock and agriculture, 91 percent is still under natural pastures. These natural pastures are under vulnerable conditions because of fragmentation of habitats thus resulting in isolated plant populations and threatening fauna associated with these native grasslands. Some herbaceous

vegetation, mainly gramineae and some leguminosae are currently suffering from habitat isolation and land use changes.

The previous analysis of threats to biodiversity supports that although the agricultural sector has a demonstrated capacity to further innovate by adopting technology and diversifying both production and markets, there is a growing recognition that the need to expand production and to increase productivity must be compatible with the protection and conservation of the natural resources on which it is based. In addition, it must be recognized that the issues and challenges of the rural areas go beyond the ability of agriculture alone to solve. A large part of the public sector's role in promoting development of the rural areas is to provide a supportive framework of public goods, while encouraging the private sector to identify and exploit the opportunities made available by world markets. There is also an important role for government in using public expenditures, both in support of infrastructure and in the application of specific incentives to achieve a demonstration effect in selected sub-sectors. The achievements in irrigation development and commercial forestry over the past fifteen years are good examples to expand and replicate.

As in other countries, even if Uruguay would allocate 10-15% of its territory under some sort of protection (which is very expensive and may be not applicable for Uruguay), this wouldn't be sufficient to maintain large-scale ecological processes and to ensure sustainable biodiversity conservation over the long term. The government of Uruguay is convinced on the need to complement its fledging system of 31 protected areas, conservation efforts outside it. Fortunately, the ecological characteristics of the country, the synergies that can be found between the types of ecosystems found and the generation of rural income opportunities, and the resilience and restoration potential of Uruguay's ecosystems are all very important supportive elements for such an approach. The key concept to achieve biodiversity conservation outside Uruguay's system of protected areas would be the promotion of biodiversity-compatible, multiple land-use practices, within a landscape approach. Under this approach, it is possible to promote the adoption of land-use practices that exploit the synergies that exist between biodiversity conservation and opportunities for rural income generation. Some of these practices of "integrated ecosystem management" may include a combination of the following land-uses, whose relative emphases will be determined by the local conditions, the feasibility of implementing an incentive framework, the ability for market-based mechanisms to support these land-uses, and their relative contribution to conservation: as a) maintenance of scenic beauty for rural tourism and recreation, b) wildlife ranching, c) integrated savanna ecosystem management, d) silvopastoral systems, e) wildlife hunting, among other arising opportunities. Besides, this contribution to the conservation of natural areas, the project would support Uruguay to advance in the conservation of protected areas, either public or private by identifying mechanisms to conciliate conservation and biodiversity conservation in management units, thus contributing to the CBD's recent agreement to expand the areas conserved by the signatory countries.

Uruguay's policies take into consideration that these possibilities do not need to be implemented in isolation from each other. In fact, even though they may be relatively modest from an economic perspective when analyzed individually, they can become a major alternative to inappropriate land-use practices through income diversification and complementarity to traditional practices. From a biodiversity perspective, what is key is the promotion of a geographic configuration that maintains the mosaic nature of Uruguay's original habitats, restoring biological corridors through a diversified rural landscape. As in many other countries and region, many of these possibilities are still fledging; therefore, they can be sharpened and benefit from additional research and the establishment of pilot activities. Eventually, and with the growing international trends that are favoring the competitiveness of organic and environmental-friendly markets, biodiversity conservation offers vast opportunities for the future well-being of Uruguay's rural economy and for the regeneration and maintenance of healthy ecosystems in the country.

While the entire project will have a national scope, the GEF-funding will be devoted to savanna and native forest ecosystems, these two holding heterogeneous herbaceous community and its associated areas of native Forests, including gallery forests (along rivers and other water courses), ravine forests (which appear in patches and benefit from specific micro-climate conditions), and mainly the "bosque Serrano". The project has already identified two key

areas, one in the north and the other in east where the “quebradas” are the last remaining areas of native vegetation associated with water springs and water courses. Main threats to grassland ecosystems are livestock/agriculture production systems in some cases incompatible with biodiversity conservation which produce the loss of carrying capacity of livestock areas, loss of productivity and soil compactation, loss of native herbaceous vegetation with the recurrent water pollution, changes in the vegetation Features and the loss of shelter and food for wildlife. In the “serranías”, some of the areas are under increased pressure because of the need of more land for agriculture and livestock production. Traditional productive systems in these areas would eliminate the last remnants of wildlife and plant species and may alter the capture and distribution of water into the “quebradas” for use by native species. By providing incentives for the conservation of key species and habitats using innovative tools for private initiatives (easements, certification, private reserves, land tax exemptions, and others) and by providing economic value to biodiversity by making proper use and perpetuating the issue of the resource, the country will have appropriate mechanisms to incorporate biodiversity into the productive alternatives of the rural sector. At the same time, the diagnosis has highlighted the need for Capacity Building.

**Government Commitment.** The Government is keen to expand the work initiated under the PRENADER Project, but with more emphasis on natural resources and biodiversity conservation and management. To that end, the Bank prepared a sector review to analyze the main issues related to natural resources management in Uruguay (*Uruguay: the Rural Sector and Natural Resources, Report No. 24409-UR*), which was well received by Government. The Ministry of Agriculture, with the agreement of the Ministry of Economy and OPP, requested World Bank technical and financial assistance for the preparation and execution of the proposed project. Furthermore, during 2003, the local preparation team, with the assistance of an FAO Technical Cooperation Project (*TCP/URU/0167: Preparación de un Proyecto de Manejo Integral de los Recursos Aguas y Suelos*), has already prepared background information and a preliminary proposal for a possible natural resources management project. Finally, with the financial assistance of a GEF PDF Block B Grant, the Ministry of Agriculture is currently finalizing a proposal to provide a comprehensive analysis of the status and trends of agricultural biodiversity and of their underlying threats; mainstream biodiversity in on-farm investment projects to improve natural resources management; and strengthen the capacities of farmers and their organizations, local and central authorities to manage agricultural biodiversity. Uruguay ratified the Convention on Biological Diversity (CBD) on May 11, 1993. In compliance with art. 6 of the CBD, The National Biodiversity Strategy (NBS), was prepared during 1998 and 1999 (Project URU/96/G31) by DINAMA with financial support from the GEF. The Uruguayan NBS was published and officially presented by MVOTMA on December 29, 1999 and submitted to the CBD Secretariat. The project will provide support to advance in the commitments from Uruguay to advance in the conservation of biodiversity as derived from the recent Conference of the Parties carried out in Malaysia (Feb’04).

Cattle ranching has been and is important for the national economy, Uruguay is lowly populated with an early disappearance of native communities, very high urbanization rate and the very high proportion of lands under private ownership: all these have prevented Uruguay from developing a “Protected Area System” of similar characteristics to those of other Latin American countries with some ad-hoc created areas covering less than 1,6% of the national territory. In order to correct this situation, a recent law created the National System of Protected Areas. On the other side native forests are protected under law, but this legal protection, although necessary, is not a sufficient condition to ensure that native forest ecosystems recover their ecological functionality. This functionality requires the existence of contiguous areas of a minimum size, the maintenance of habitat quality, the proper configuration of forest patches in biological corridors, etc. Furthermore, there is a lack of effective incentives for reforestation with native species, which given the losses already occurred, is a pre-requisite for the recovery of these ecosystems.

It was thus understood and political assumed that the future of biodiversity in Uruguay cannot be analyzed in isolation from the government policy regarding rural development, and ranching in particular. This resulted in a government ranching strategy (through MGAP) based upon three main pillars: (a) sectoral growth based on productivity increases, (b) equitable sharing of the costs and benefits of this growth, and (c) conservation of natural resources. Over the long term, the strategy prioritizes diversification, increase in productivity, product differentiation, product value-added, and

increase in quality. The future of Uruguay's biodiversity is intimately linked to this sector, and it is thus critical to develop and implement a biodiversity policy that can be effectively applied within this context.

At the international level, Uruguay has been an active participant in the Convention on Biological Diversity since its ratification on May 11, 1993 by Law n° 16408. The Operational Focal Point for the CBD is DINAMA, and the national agency responsible for the implementation of the CBD is MVOTMA/DINAMA<sup>1</sup> according to National Government Decree 487/993. The GEF Operational Focal Point is also DINAMA. The National Biodiversity Strategy contains the principal recommendations and instruments for the implementation of the CBD in the country and is the result of a participatory process. Within this strategy the need to mainstream biodiversity into the rural landscape has been established based upon and agreed by about 125 delegates representing 58 institutions from the public and private sectors (Ministries, local governments, educational and research institutions, NGOs, farmers associations, etc.) and from the University, among others, who attended the thematic workshops during the project period. The NBS includes recommendations on the directions upon which the proposed project is based, with emphasis on *in situ* conservation, research, capacity, and information exchange, and education and public awareness. A letter of endorsement was provided by Uruguay's GEF focal point on November 7, 2001. The Uruguayan Government has expressed its support and interest in the development and implementation of this project, which would be executed by MGAP, and explicitly acknowledges that it is in agreement with, and supportive of, the NBS. This project will also support Uruguay to advance in the consolidation of its natural areas system as committed in the recent COP 7 of the CBD carried out in Malaysia in February 2004.

## **2. Rationale for Bank involvement**

The Government of Uruguay and the World Bank have collaborated for more than fifty years in the development of the agricultural sector. Most of this effort was directed towards the productive aspects of agriculture, but during the past decade a broader approach has been adopted in the rural areas; in particular, emphasis has gradually been increased on environmental issues and on the achievement of long-term sustainable production systems, mainly through improved natural resources management. Lessons learned from the recently completed Bank-financed project (PRENADER I) and the conclusions of the ESW, indicate that any future operation in the agricultural sector in Uruguay should go beyond irrigated agriculture and dairy production and include natural resources management in the extensive livestock production sub-sector, which uses over 70% of the land, extensive crop production as well as conservation and management of agricultural biodiversity. The long standing collaboration with Government in the country's agricultural development and the recent experience with the implementation of the PRENADER I Project, plus the Bank's experience with GEF-financed biodiversity projects in other parts of Latin America, would make the Bank a privileged partner to support Government efforts to improve natural resources and biodiversity management. The main purpose of 2002 CAS was to define the best strategy for the Bank to assist the Uruguayan Government to deal with the economic and financial crisis that was affecting the country that year. Consequently, its conclusions and recommendations are irrelevant for investment project lending.

## **3. Higher level objectives to which the project contributes**

The project is consistent with Biodiversity Strategic Priority of Mainstreaming Biodiversity in Production Landscapes as it will address the development of systemic and institutional capacities of government agencies and other stakeholders and management procedures, disseminate relevant knowledge, and promote partnership building between agencies and local communities and private sector that secure biodiversity conservation. The promotion of better practices in which natural resource management would be enhanced, including biodiversity in the production matrix,

---

<sup>1</sup> MVOTMA: Ministry of Housing, Land Planning and Environment  
DINAMA: National Environmental Office

would be evaluated in terms of the country's area under sustainable use, the number of species and habitats conserved and the economic value of biodiversity for the rural sector.

This project is consistent with the guidelines of the GEF's Biodiversity Operational Program 13: Conservation and Sustainable Use of Biological Diversity Important to Agriculture. The project focuses on managed ecosystems and biological habitats that provide a broad range of goods and services important to human development and the global environment, as well as on maintaining diverse farming systems and conserving biodiversity in agricultural landscapes. This strategy would promote positive impacts and at the same time mitigate the negative impacts of agricultural systems and practices on biological diversity in agro-ecosystems and their interface with other ecosystems. It would also promote the conservation and sustainable use of genetic resources. These activities would contribute to the objectives of the CBD in the area of agricultural biological diversity, thus providing significant means for improving living conditions in rural areas while increasing productivity of biological and rural resources. The project would achieve these goals by providing technical and financial assistance to local producers in Uruguay and creating demonstration pilot areas to address constraints that are currently preventing the introduction, dissemination and widespread use of ecologically sound and socially responsible management concepts, which have good prospects for sustainable, multiple focal area benefits. The Uruguayan Government, through this GEF project that will be fully blended with a World Bank-financed project, intends to create a management system that could be replicated in other areas of the country and the region to generate multiple local area benefits and to enhance the potential of the rural landscape. Therefore, the project includes systematic reviews of experience gained, documentation of good practices, and dissemination of lessons learned and know-how. The project would develop also local capacity for the monitoring of carbon sequestration and balance.

## **B. PROJECT DESCRIPTION**

### **1. Lending instrument**

The project would be financed through a GEF Grant fully blended with Bank loan.

### **2. [If Applicable] Program objective and Phases**

N/A

### **3. Project development objective and key indicators**

The proposed Bank/GEF blended project would assist Government in its efforts to promote the adoption of economically and environmentally viable integrated production systems among small and medium farmers and livestock producers. Within a context of holistic ecosystem and natural resources management, the project will improve natural resources management, conservation of soils, water and rangelands, while increasing productivity and mainstreaming biodiversity conservation in producers' investment and production decisions, thus ensuring the economic and environment sustainability of agricultural and livestock development. Within this integrated production system approach, the project aims to promote also increased understanding of role of biodiversity in agricultural landscapes and the potential impact of the various land use practices upon biodiversity and their economic and ecological sustainability.

The Project would provide financial incentives and technical assistance to medium- and small sized farmers, emphasizing plans by groups of farmers, to invest in sustainable agricultural practices and mainstream biodiversity in their investment proposals, in order to ensure the conservation and sustainable use of natural resources and biodiversity and consolidate productive investments made under PRENADER I.

The project would strengthen the Ministry of Agriculture's overall natural resources management capabilities through training of staff and expanding the Geographical Information System and related natural resource management tools



developed under PRENADER I. Additionally, the project would support an institutional capacity building program at the central and regional level for the development and implementation of national strategies for the conservation and sustainable use agricultural biodiversity and to promote their mainstreaming and integration in sectoral development programs.

The promotion of better practices in which natural resource management would be enhanced, including biodiversity in farmers’ production matrix, would be evaluated in terms of the country’s area under sustainable use, the number of species and habitats conserved and the economic value of biodiversity for the rural sector. The specific targets for the indicators would be agreed upon during project appraisal. The key performance indicators would include improved management techniques and procedures adopted: adoption of innovative market incentive, such as certification and easement implementation; number of biodiversity-friendly projects implemented; area under sustainable use of natural resources; and number of species and/or populations under conservation. The baseline information for the country and the establishment of key indicators to measure the evolution of this project’s implementation and the degree to which it complements a broader approach to natural resources management would be developed during preparation.

**Project global environment objective and key indicators.** While the integrated production systems in agricultural and livestock landscapes would be applied at the national level, integrated systems in key biodiversity areas would be supported by the GEF component, with support being provided to finance the incremental costs of project interventions. The Project’s overall objective would be achieved by providing technical and financial assistance to farmers to develop and implement appropriate technologies for increasing the productivity of agricultural systems (crops, pastures, livestock), while ensuring biodiversity conservation, promoting the adoption of production systems to conserve soils, reducing the impact of grazing, reducing the risk of erosion and enhancing the efficient use of water resources (understanding the carbon sequestration potential of various land-use practices and delineating a strategy to promote carbon sequestration in Uruguay’s productive landscapes). The main project instrument would be the implementation of demand-driven subprojects that would be complemented by a series of supporting activities such as technical assistance, training aimed at raising awareness of biodiversity conservation in the productive sectors and building institutional and landowners’ capacity for holistic management of natural resources, integrating biodiversity conservation in productive landscapes.

**4. Project components**

The project would be financed through a Bank loan of US\$30 million, a GEF Grant of US\$7 million, and Government counterpart funds of about US\$ 3 million. If beneficiaries’ contributions (in cash or kind) of about US\$50 million are included, total project costs would be about US\$ 90 million.

For the GEF-supported activities to be executed within the framework of the entire project, with a total cost of US\$ 19 million, the GEF contribution would be about US\$ 7 million, with co-financing of US\$ 7 million of the IBRD and US\$ 5 million from GOU and beneficiaries,.

The US\$7 million GEF contribution to match incremental costs would be allocated in the following manner: US\$4.5 million (64.3%) for demand-driven support from the Fund for Promotion of Sustainable Biodiversity Practices; US\$1.5 million (21.4%) for the implementation of pilot areas, US\$0.7 million (10%) for institutional strengthening, and US\$0.3 million (4.3%) for project coordination.

Based on a blending of GEF-financing with an IBRD loan, the project would finance four main components:

| <b>Component</b> | <b>Indicative Costs</b> | <b>% of Total</b> | <b>Bank financing</b> | <b>% of Bank financing</b> | <b>GEF financing</b> | <b>% of GEF financing</b> |
|------------------|-------------------------|-------------------|-----------------------|----------------------------|----------------------|---------------------------|
|                  | <b>(US\$ M)</b>         |                   | <b>(US\$ M)</b>       |                            | <b>(US\$ M)</b>      |                           |
|                  |                         |                   |                       |                            |                      |                           |

|   |             |              |             |              |            |              |
|---|-------------|--------------|-------------|--------------|------------|--------------|
| <b>1. Natural Resources and Biodiversity Management Component,</b> through the establishment of a Fund, the project would provide technical and financial assistance to demand-driven activities aimed at promoting sustainable management of natural pastures and rainfed agriculture. The GEF contribution to the Fund would support mainstreamed demand for biodiversity initiatives in priority ecosystems. | 29.0        | 72.5         | 22.5        | 75.0         | 4.5        | 64.3         |
| <b>2. Establishment of Pilot Areas,</b> to implement pilot demonstrations of sustainable use of natural resources in key micro-watersheds of biodiversity.  | 1.5         | 3.7          |             |              | 1.5        | 21.4         |
| <b>3. Support Services,</b> which would include training and technical assistance to farmers, institutional strengthening of local and central authorities(through improved GIS and studies), and specialized training for technical staff providing technical assistance to farmers.   | 7.5         | 18.8         | 5.8         | 19.3         | 0.7        | 10.0         |
| <b>4. Project Coordinating Unit,</b> which would be responsible for overall project execution and the Monitoring and Evaluation System.   | 2.0         | 5.0          | 1.7         | 5.7          | 0.3        | 4.3          |
| <b>Total Project Costs</b>  | <b>40.0</b> | <b>100.0</b> | <b>30.0</b> | <b>100.0</b> | <b>7.0</b> | <b>100.0</b> |
| <b>Front-end Fee</b>  |             |              | <b>0.3</b>  | <b>1.0</b>   |            |              |
| <b>Total Financing Required</b>   |             |              | <b>30.3</b> | <b>101.0</b> |            |              |

## 5. Lessons learned and reflected in the project design

Key lessons learned from implementation of the PRENADER Project include:

- the importance of adequately targeted Government incentives to promote irrigation development and production diversification into high-value export crops, particularly in an environment that has been traditionally dominated by extensive agriculture and livestock production like Uruguay.
- In a country where extensive agricultural and livestock production are predominant, natural resources management programs should address issues related to soil, water, pasture management and biodiversity conservation and sustainable use in an integrated manner.
- The project was successful in promoting sustainable agricultural practices among small farmers,
- through a micro-catchment approach in areas of intensive agriculture and demonstrated the importance of

- the participatory approach and farmers organizations to a successful natural resources management program. Through adequate monitoring and evaluation of results, pilot experience can establish the foundations for a scaled-up nationwide program.
- In order to maximize the impact and sustainability of financial incentives to promote the expansion of privately-owned irrigation infrastructure, procurement procedures should encourage beneficiary ownership and reduce, or eliminate, reliance on public institutions for O& M.
- Continuity of TA services beyond the duration of the project is therefore essential to the long-term impact and sustainability of investments.
- In addition to agronomists, the establishment of professional teams for the delivery of extension services in programs related to Natural Resources Management (specifically sociologists, engineers and economist), enables a project to be better prepared to respond to multiple demands of producers.
- The incorporation of private organizations in the implementation of applied research programs (as in the case of AUSID) increases the possibilities of collaboration between researchers, producers, extension specialists, and local institutions, and consequently provides an effective synergism and potentially higher adoption rates. Adequate beneficiary ownership and participation is also instrumental to the effective implementation of government programs aimed at promoting diversification and exports of nontraditional products.
- A holistic approach is key to develop a sustainable agricultural production systems among small farmers in order to include other elements relevant to the increase in competitiveness of production, beyond mere productivity, such as awareness of commercial opportunities, product quality, certification, integration with commerce and with agro-industry in promoting joint action by producers.

General lessons learned from other related GEF projects are:

- innovative financing and supportive mechanisms are needed to conservation biodiversity in the long term, especially outside of protected areas
- address the true root causes of biodiversity loss as its links to social and political aspects as in the case of Uruguay where biodiversity is the main productive landscape but not appropriately incorporated into the productive matrix.
- provide the necessary mechanisms to avoid the tendency for biodiversity to be stand alone and include it into the economy of the country.
- the sustainability of approach once the GEF-support is finished needs to be guaranteed, thus providing the ways for the continuation of sound practices for biodiversity conservation.
- interventions should be based on conservation of sites and ecosystems, thus providing alternatives for *in situ* conservation of globally important species.
- capacity building at the local and regional level is essential to provide the necessary skills and knowledge not only to promote biodiversity conservation but also to ensure that an adequate legal and policy framework is in place.
- stakeholders' participation should be promoted since the very beginning of the project's conception, enhanced during project preparation to raise all issues related to biodiversity conservation and management and creating the sense of ownership.
- biodiversity projects should adopt a holistic approach to the protection of biodiversity of global importance, such as land degradation, forest conservation, freshwater management combining global benefits from individual focal area projects.

- the private sector should be incorporated into biodiversity management, especially outside protected areas where, as in the case of Uruguay, the conservation of biodiversity is in private hands.

## 6. Alternatives considered and reasons for rejection

The initial idea was to propose a project to reactivate the sector following the economic crises that affected the country in the early 2000s. Such a project would have been strictly production-oriented to promote increased agricultural and livestock production, including some activities to promote improved natural resources management, combined with a stand-alone GEF Project for biodiversity conservation and management.

Recent performance of the agriculture sector, however, indicated that, in general terms, the sector was reacting positively to market signals and did not require special assistance to increase growth. There was, nevertheless, an underlying threat that, if special incentives and technical assistance were not given to farmers there was a real danger that high rates of growth in agricultural and livestock production would be achieved at the expense of the country's natural resources base.

Lessons learned from the implementation of other GEF-financed biodiversity conservation and management projects in Latin America, indicated that project impact on biodiversity conservation was greatly enhanced when they were fully blended with Bank-financed natural resources management projects.

Consequently, in the light of the conclusions of the ESW and the Bank experience with other biodiversity conservation and management projects, it was decided to opt for a project that would concentrate on promoting improved natural resources management and mainstream agricultural biodiversity through support to integrated on-farm natural resources management plans.

## C. IMPLEMENTATION

### 1. Partnership arrangements (if applicable)

N/A

### 2. Institutional and implementation arrangements

Based on the current institutional framework in the sector and the lessons learned from the PRENADER I Project, the proposed institutional framework for project implementation would be as follows:

- CIDAP** (Inter-Ministerial and Inter-Departmental Committee for the Support of PRENADER II): The CIDAP will be coordinated by a member of the UPCT of MGAP, assisted by the coordinator of the Project Implementation Unit, and also composed by a member of each of the following institution: OPYPA (MGAP), RENARE (MGAP), and DINAMA (MVOTMA). This committee would approve the basic rules and general criteria of the project, as well as the annual plans and budgets.
- Public Entities:** Public entities, such as RENARE (MGAP) and DINAMA (MVOTMA), will be responsible for specific components according to their specialty (i.e. GIS in the case of RENARE and carbon sequestration in the case of DINAMA). Respective roles and responsibilities as well as arrangements for project implementation would be agreed at appraisal and reflected in the Operation Manual.
- PCU** ( Project Coordinating Unit): The PIU will be based in Montevideo and will have minimum of 7 members: 1 coordinator, 1 agronomist, 1 biodiversity specialist, 1 monitoring, evaluation and acquisitions

specialist, 1 accountant, and 2 support staff. This team would be responsible for project management and implementation, final approval of proposals, and interaction with the World Bank.

- d) **CRDRISs:** The Rural and Sustainable Development Regional Councils (CRDRIS), will be created in each of the regions and will be composed of the following: (i) Municipalities, (ii) rural farmers associations, (iii) rural farmers and workers unions, (iv) farmers cooperatives; (v) NGOs involved in sustainable rural development; and (vi) central Government representatives. These councils main role will be the approval and prioritization of sub-projects.
- e) **Municipalities:** The 18 Municipalities of the country, with the exception of that of Montevideo, would be involved through the Directorate of Rural Development. Their role would be to be the “main entry point” for sub-project proposals.
- f) **Farmers:** Farmers or groups of farmers, eligible for project assistance, would prepare the sub-project proposals, with the assistance of private consultants, cooperatives or farmer organizations.
- g) **Private Sector:** The Private Sector will take part of the project through: (i) technical consultancies to assist sub-project proposal preparation, or (ii) by providing goods and services related to the activities to be carried out under the sub-projects approved.

### 3. Monitoring and evaluation of outcomes/results

Given the demand-driven nature and strong stakeholder participation for sound practices in natural resources management, this project would employ an adaptive management framework characterized by regular monitoring and concurrent evaluation, mid-term review and final assessment. Regular monitoring would be the responsibility of the coordination unit which would prepare semi-annual reports on implementation progress. This would cover reporting on the progress achieved vis-à-vis the Operational Manual’s timeline for project activities, the Procurement Plan and schedule, and agreed Work Plans for the year, among other aspects. The outputs of the M&E plan as part of the Operational Manual would be used as feedback for the different components of the project cycle, and would confirm the value of current practice or suggest the need for change. Advanced control and rectification needs would be addressed by the M&E. An annual report would be prepared indicating project achievements, experiences, problems and lessons learned during the year for discussions each year with stakeholders.

Indicators will be developed and discussed during the preparation phase and agreed upon during the project appraisal. Within these indicators measurements of number of biodiversity-friendly projects implemented, area under sustainable use of natural resources, number of species and/or populations under conservation and capacity created in the country. The baseline information for the country and the establishment of key indicators to measure the evolution of this project’s implementation and its complementarity to a broader approach to natural resources management would be developed

As required for all GEF-funded projects, a final evaluation/review of the project and its execution would be undertaken at the end of the project. The coordination would carry out such a review with the assistance of independent consultants acceptable to all parties. The project would support a review workshop or Implementation Completion Report stakeholder meeting, wherein all participating parties (farmers, farmers associations, academia, NGOs and governmental agencies) would participate to review and assess the project’s findings and develop a sustainability plan for project activities in the post-project period, including the strategy with its pertinent changes into Uruguay’s rural Development Policies.

#### 4. Sustainability

This newly developed approach in the rural landscape of Uruguay would develop and promote a different way of “doing business as usual” without changing the productive context but including improved practices for natural resources and incorporating biodiversity into this sector, bringing country-driven information, advisory, technical and extension services and drawing special attention to viable farming and silvo-pastoral practices that help conserve and sustainable use biodiversity in the agricultural landscape. It would ensure public participation in a new means of getting products from rural sectors, promote the identification and development of new marketing and business opportunities for more diversified production systems including eco-friendly produce, and create a sense of belonging for native biodiversity. In turn, it would establish the human and institutional capacity to promote sustainable solutions to agro-silvo-pastoral initiatives beyond the project while at the same time conserving biodiversity, including training, demonstration, and technology transfer, among others. Incremental costs for this different way of doing business and for mainstreaming biodiversity into the rural landscape would be covered by the GEF. The sustainability would be also confirmed by the demand for investments in which farmers would have to contribute partially refundable investments for natural resources management operations. Though this project is based upon a land-use strategy, a legal-based research would provide national opportunities (as easements already considered in the legal framework) or bringing international experiences to provide incentives for conservation of biodiversity.

Demonstration areas in micro-watersheds of importance to biodiversity would be developed jointly with small- and medium-sized local farmers. These demonstration pilot projects would remain in place after project completion, given that farmers would be the owners and the proponents of these activities in partnership.

**Replicability.** As a locally-based set of initiatives, implemented by the demand and interest of small- and medium-sized farmers in previously defined key biodiversity areas in Uruguay, the project would only be able to invest in some of these sites while the entire project would be working at the national level. This is an obvious indication of the potential opportunities for replication of biodiversity initiatives. The ecosystems of Uruguay’s natural habitats, consisting mainly of interspersed savannas and forests, wetlands and hilly tracts of lands, are also shared by neighboring Brazil and Argentina. There is a strong possibility that this project could be used for replication units not only within Uruguay but also outside the country where a similar type of habitat combination may be found. Even without a similar combination of habitat types, the mainstreaming of biodiversity in the rural sector and the value added to rural land production based on sound practices may be replicated elsewhere with a strong communications scheme as planned in the project. The academic sector and civil society organizations would be key elements to disseminate and bring into concrete actions the lessons derived from this initiative.

#### 5. Critical risks and possible controversial aspects

| Risk Assessment  |        |   |
|--|--------|---|
| Cause  | Rating | Mitigation  |
| <b>Co-financiers do not provide committed resources in a timely manner</b> | Low    | <b>Broad ways of communications to launch the project once the co-financing is secured. Participatory development of the project and its implementation, clear communications on benefits and its impacts on the economy, inclusive</b> |

|   |          |  |
|---|----------|--|
|   |          | project implementation and capacity building in the different sectors.   |
| Lack of governmental commitment to establishing the necessary and appropriate institutional framework for biodiversity conservation and promotion of sustainable use of natural resources | Low      | Creation of local and regional constituencies for biodiversity conservation and ecoregion consolidation. Creation of alliances with the private sector, civil society organizations and the academia to support the Government   |
| The project does not generate enough demand from farmers willing to work with governmental sector in natural resources management   | Moderate | Strong communicational campaign and extension work. Definition of Critical site management, environmental technical assistance, training for local and regional landowners and communal initiatives. Community training and Environmental education activities, demonstration projects and technical assistance on natural resource sustainable use. |
| There are natural disasters that contribute to destruction of sub-region's biodiversity   | Low      | The project considers alternatives to rare climate conditions such as drought by irrigation. No natural disasters are expected to occur.   |
| Non-conventional rural components such as biodiversity cannot create economic opportunities   | Moderate | Integrated Environmental Monitoring, biodiversity management intervention support, community training and demonstration projects on natural resources sustainable use  |
| The rural population's economic situation is not viable to co-invest in pilot projects including non-conventional rural products  | Moderate | Standardization and control, biodiversity management intervention support and certification mechanisms. Introduction of environmental patterns with public political actions for infrastructure and existing public equipment re-adequacy, in sustainable way .  |
| Uruguayan small- and medium-sized farmers are unwilling to experiment with new tools for producing integrally on their lands  | Low      | A menu of environmentally sound agricultural & livestock technologies and alternative economic activities including biodiversity, would be introduced in these areas and micro-corridors over the implementation period  |
| Insufficient and suitable capacities are available at national level for project management   | High     | Intensive training and capacity building with local, regional and international experts, strong commitment of capable professionals from all sectors.  |
| Needed macroeconomic and fiscal policies are not in place to stimulate economic opportunities being created in key areas for  | Low      | Identification of value-added sources for biodiversity production, identification of innovative ways to finance biodiversity conservation  |

|   |     |  |
|---|-----|--|
| <b>biodiversity conservation</b>  |     | <b>(i.e. certification, environmental services, etc.)</b>  |
| <b>Lack or insufficient appropriate policy, institutional and legal framework for biodiversity management in general and at farmers' level specifically</b> | Low | <b>Sector meetings, motivation through innovative ways for promoting biodiversity in the rural landscape. Availability of an integrated information system</b> |
| <b>Local communities and regional authorities are not participating fully in the establishment and management of initiatives</b>                            | Low | <b>Capacity building at the governmental and community/landowner levels, with standardization and control, and environmental technical assistance</b>          |

**Sectoral Critical Risks and controversial aspects.** The financial crisis that affected the country in the last two years severely reduced investment in the agricultural sector, and there is a risk of low demand for investment resources under the project. But, the recent substantial recovery of agricultural growth would indicate that the investment environment is improving in the sector and that this risk has been largely minimized to a large extent.

In general terms, farmers' indebtedness is very high, which would reduce their access to long-term financing for investment, thus affecting project implementation. However, closer look at the problems of farmers' debt with commercial banking, would indicate that this debt is highly concentrated among a relatively small group of farmers. Consequently, most of the farmers have a relatively sound debt situation which should not affect their investment possibilities.

As a result of the country's financial crisis, there has been a decline in the supply of long-term credit from commercial banks, and there is a risk that farmers will not be able to find sufficient financial resources to undertake their part of the proposed investment. It is expected that, with the financial crisis over and the country in clear economic recovery, this will not be a major problem.

Lack of counterpart funds delayed implementation of the last project (PRENADER I). The current fiscal situation would indicate that a similar risk exists, although again if economic recovery continues at its present rate, there is likely to be a sound fiscal situation during project implementation.

Implementation of the PRENADER I Project showed that, overall, the Project Executing Unit (PEU) had the institutional capacity to handle project execution issues, although there were some weaknesses regarding procurement issues, which will be address under the proposed project through specialized training and technical assistance in procurement for the PEU.

From a strict biodiversity standpoint, small- and medium-sized farmers should be willing to experiment new tools for an integral production of their lands, and should be able propose the PEU innovative ways of making sound practices for biodiversity conservation and use. Also, the expected demand for projects is expected to be fulfilled by making a pertinent campaign for project demands. Weather conditions and macroeconomics policies are not expected to be a risk for the component of biodiversity, though extensive periods of drought or waving national and international markets for biodiversity production could impact on the project. The legal framework currently hold by Uruguay is expected to continue promoting biodiversity conservation and no changes are expected to be constraining the use of the animal and plant richness of the country. Capacity at the local and national level may be a constraining point due to its limited capacity and the need to have a structure for extension and generation of the necessary demand in innovative ways of biodiversity management.



## 6. Loan/credit conditions and covenants

The Preparation of the final draft of the project's Operational Manual would be a condition of negotiations.

### D. APPRAISAL SUMMARY

#### 1. Economic and financial analyses

Given the demand-driven nature of activities to be executed under the project, it is not possible to determine *a priori* the exact composition of the universe of investment sub-projects that will be financed under the project. Consequently, as only activities identified and presented by potential beneficiaries would be considered, an ex-ante determination of costs and benefits of productive investments would not be feasible. Therefore, economic return estimates were based only on a sample of investment sub-projects likely to be demanded by beneficiaries, following the experience of PRENADER I. The impact of these investments on natural resources and biodiversity management, agricultural productivity and farmers' income was analyzed with the help of farm models illustrative of typical farming situations in the main agro-ecological zones, and situations in which biodiversity was mainstreamed into the farmer's investment decisions. Assumptions regarding yield increases are conservative to reflect the risk-minimizing production strategies that normally characterize farmers. The estimated overall rate of return of the project, is estimated at about 23%. Although the estimated rate of return took into consideration only part, albeit a substantial part, of the possible investments to be financed under the project, is presented here to give an order of magnitude of the economic returns that can be expected from the proposed project.

Economic return calculations included the cost of incremental on-farm productive investment and recurrent expenditure for the adoption of sustainable agricultural production systems promoted under the project. The analysis of the sample of representative subprojects indicated that economic returns on most investments by crop farmers and livestock producers are likely to be above 18%; farm models with ERR of less than 12% were excluded from the analysis as this will be the minimum rate of return that any sub-project would have to have in order to be eligible for financing under the proposed.

The financial analysis was carried out to assess the financial viability of a sample of productive investments most likely to be demanded by irrigation farmers, along the same lines followed for the economic analysis. The financial viability of these investments was analyzed within the framework of the most common production systems used by producers using the same set of farm models prepared for the economic analysis. As is to be expected, given the level of subsidy provided, the selected farm model showed relatively high financial rates of return. Input and output prices were assumed constant, as was the real exchange rate, throughout the 20 year time horizon used in the financial analysis. The discount rate was assumed to be 12%.

#### 2. Technical

The project is considered technically sound, given that:

- The main constraints to improved productivity of extensive livestock and crop production have been adequately identified during project preparation and included in the implementation strategy of the project.
- Farmers' participation in investment decision making process and the demand-driven approach that will characterized project execution have already been tested by implementing agencies.
- The main technical aspects of the on-going matching grant scheme that would be adopted by the project have been defined during preparation.
- The compliance of individual beneficiary sub-projects with acceptable technical standards would be ensured through a combination of instruments, including the participatory preparation of sub-projects, provision of

technical support for the identification and preparation of farmers' investment proposals, and the establishment of detailed monitoring and evaluation assistance.

From a biodiversity standpoint, the project is consistent with the general state-of-the-art conclusions, and involves a holistic approach to the main areas of interests of GEF and the Bank to mainstream biodiversity in the productive sector in rural areas. Thus, from this viewpoint, the project is technically sound given that it:

- a) Provides a focused and innovative way of financing and supporting conservation biodiversity in the long-term by providing alternatives uses of biodiversity in the rural landscape.
- b) Addresses the true root of biodiversity loss in Uruguay by including biodiversity within a strategy of natural resources management thus avoiding the generally ineffective stand-alone approach.
- c) Assures sustainability by involving biodiversity as a productive factor in the rural landscape with a biological vision from which the key biodiversity areas will be derived and prioritized for project financing.
- d) Provides the needed capacity and the creation of other innovative knowledge tools to have a sound management toolkit for biodiversity.
- e) Provides a strong and broad framework of stakeholders' participation to assure ownership while at the same time several other key cross sectorial issues are included such as freshwater, forest conservation, land degradation, etc.
- f) Presents a demand-driven approach to promote ideas and innovative ways of adopting sound biodiversity practices and its combination with other natural resources in a broader scope of rural landscape management.
- g) Includes private sector participation in biodiversity management especially outside protected areas where as in the case of Uruguay, the conservation of biodiversity is in private hands within a biological vision of key biodiversity areas.

### **3. Fiduciary**

Implementation of the PRENADER I Project showed that, overall, the Project Executing Unit had the institutional capacity to handle project execution issues, although there were some weaknesses regarding procurement issues, which will be address under the proposed project through specialized training and technical assistance in procurement for the PEU.

Implementation of the PRENADER I Project as well as the Foot and Mouth Emergency Recovery Project suggest that, overall, the Project Executing Unit (PEU) has adequate institutional capacity to handle project execution issues, including procurement. While some weakness were identified with respect to procurement processes carried out under the former project, key staff in the PEU are experienced and familiar with Bank fiduciary requirements. The said weaknesses will be address under the proposed project through a more appropriate project design (i.e. demand-driven, beneficiary executed subprojects with appropriate technical assistance, monitoring and supervision arrangements), and additional procurement training and technical assistance for the PEU.

In addition to a limited amount of procurement (primarily technical assistance), the PEU will be responsible for: (i) selecting eligible beneficiaries on the basis of established criteria; (ii) signing with beneficiaries a standard project agreement approved by the Bank; (iii) approving the beneficiaries' annual procurement plans; (iv) providing or supervising technical assistance to the beneficiaries for sub-project preparation and implementation; (iv) supervising procurement carried out by the beneficiaries; and (v) managing a MIS with comprehensive procurement and financial

information on the subprojects. It is anticipated that the subprojects will be pre-financed by the beneficiaries who will be reimbursed by the UEP, provided that agreed procurement procedures have been used.

The contracts financed by the subprojects are expected to be small works and small value goods to be procured on the basis of standard documentation and procedures and shopping or commercial practices, respectively. However, subprojects may also include technical assistance provided by individual consultants to be selected on the basis of comparison of highly decentralized and demand driven qualifications and experience of three qualified consultants, whenever possible.

#### **4. Social**

Given that the proposed project would be difficult to implement without the participation of local and regional stakeholders. Stakeholders are the main actors in the scenario planned by this project. For most of the areas, information is scarce and fragmentary and thus policy makers, community members, small- and medium-sized farmers, the academic and NGO sector are the indispensable local and regional stakeholders for project implementation. All these stakeholders will be involved in the project's specifics, the main areas of interventions, etc., and this involvement will be done through information dissemination, consultation, and stakeholder participation.

Stakeholder involvement will improve the performance and impact of the project as it would enhance ownership, and accountability, will address economic needs of involved people and communities, build from the very beginning partnerships among the project executing agency and stakeholders; and finally make appropriate use of skills, experiences, and knowledge, in particular, of community and local groups, private sector and NGOs, in the design, implementation, and evaluation of project activities.

Representatives of pertinent key stakeholder groups would be involved and be part of the coordinating mechanisms. Local groups would be in charge of project oversight, of support for the coordination and maintenance of institutional networks, and of articulation and collaboration with stakeholders. The networks of project beneficiaries would be key for disseminating the project's outputs. An annual report would be prepared indicating project achievements, experiences, problems and lessons learned during the year for discussions each year with stakeholders. This project would demonstrate that stakeholders must be engaged in co-managing resources, especially key biodiversity areas and where there is a need to improve weaknesses in institutional capacity in public sector agencies. These groups comprise a broad spectrum of the key national stakeholders who are instrumental in generating policies on natural resources management in general, and on biodiversity conservation in particular. The project has already identified and classified the stakeholders involved in this project.

#### **5. Environment**

Given the nature of biodiversity conservation scope, the interventions are expected to have a strong positive impact on the environment by means of:

- a) Providing sufficient tools and mechanism for incorporating biodiversity as another source of income for the rural areas and promoting its conservation in perpetuity due to its incorporation into the national economy
- b) Working on areas where the Prenader has already been developing activities in the past years and biodiversity conservation should be incorporated into the production of these areas, thus including a new "item" for the rural landowner.
- c) Improving and/or rehabilitating areas where Prenader has already worked and will be prioritized by its biodiversity importance during project implementation.

d) Complementing the natural resource management in key biodiversity areas derived from a biological vision of the rural Uruguay.

e) Improving, restoring and increasing animal and plant densities of local, regional and global importance areas where biodiversity has been depleted or reduced due to its competition with unfriendly practices

## 6. Safeguard policies

| <b>Safeguard Policies Triggered by the Project</b>                        | Yes  | No   |
|---|------|------|
| <a href="#">Environmental Assessment (OP/BP/GP 4.01)</a>                  | [x ] | [ ]  |
| Natural Habitats ( <a href="#">OP/BP 4.04</a> )                           | [ x] | [ ]  |
| Pest Management ( <a href="#">OP 4.09</a> )                               | [x ] | [ ]  |
| Cultural Property ( <a href="#">OPN 11.03</a> , being revised as OP 4.11) | [ ]  | [x ] |
| Involuntary Resettlement ( <a href="#">OP/BP 4.12</a> )                   | [ ]  | [x ] |
| Indigenous Peoples ( <a href="#">OD 4.20</a> , being revised as OP 4.10)  | [ ]  | [x ] |
| Forests ( <a href="#">OP/BP 4.36</a> )                                    | [x ] | [ ]  |
| Safety of Dams ( <a href="#">OP/BP 4.37</a> )                             | [ ]  | [x ] |
| Projects in Disputed Areas ( <a href="#">OP/BP/GP 7.60</a> )*             | [ ]  | [x ] |
| Projects on International Waterways ( <a href="#">OP/BP/GP 7.50</a> )     | [ ]  | [x ] |

## 7. Policy Exceptions and Readiness

N/A

\* By supporting the proposed project, the Bank does not intend to prejudice the final determination of the parties' claims on the disputed areas

## **Annex 1: Country and Sector or Program Background**

### **URUGUAY: Uruguay Rural Development**

Uruguay is well endowed with natural resources for livestock and agricultural production, and the combination of agriculture and agro-industry sectors represent up to 23 percent of the Gross Domestic Product (GDP) of Uruguay. But, even this figure belies the combined importance of these two sectors to the economy as a whole; over half of their output is exported, and in the early 2000s represented over 70 percent of Uruguay's total export earnings.

For agriculture to continue its role of supporting economic development, it must increase even more its outward orientation, paying particular attention to production specialization, quality improvement and processing; and on the exploitation of Uruguay's particular advantages, such as its counter-season relationship with the northern hemisphere and its capacity for natural, organic and "green" agriculture and livestock production.

The increase in agricultural production must come from increased productivity, precisely because the geographical frontier was reached long ago. For long-term sustainability, it is essential that such intensification must not prejudice the natural resource base that supports it. There are encouraging signs that the erosion and degradation of soils provoked by inappropriate cultural practices established half a century ago have been significantly reduced over the past 20-30 years. The reduction in the total cropped area has largely eliminated the cultivation of the marginal and vulnerable soils, and has been accompanied by the adoption of rotations (including planted pastures) and agricultural practices (such as minimum and zero tillage) that significantly reduce erosion. During the last years, an increase in the land covered by soybean plantation is providing an alternative to the economy of the country, but at the same time represents another threat to natural resources, especially to biodiversity. Increase in livestock production will come largely from increased productivity in its extensive beef production sector and from improved management of natural pastures, which constitute the basis of this production system. While a reduction in the size of the national sheep flock (from 26 to 12 million) during the 1990s has removed one of the main threats to natural pastures from over-grazing, the extensive beef production system remains fragile and its long-term sustainability threatened by the risk of natural pasture degradation. Natural pastures are under vulnerable conditions because of fragmentation of habitats thus resulting in isolated plant populations and threatening fauna associated with these native grasslands. Some herbaceous vegetation, mainly gramineae and some leguminosae are currently suffering from habitat isolation and land use changes.

Although land and pasture degradation has been reduced over the past quarter century, many of the activities that make up the current production systems present new environmental challenges that need to be addressed within a context of sustainable development. A lack of profitability at the farm level could provoke an inappropriate and eventually detrimental use of natural resources, to the extent that producers are forced to lower their planning horizon and place emphasis on the achievement of immediate and short-term solutions to cash flow shortages. This is particularly true in the case of extensive beef production sector, which uses 80% of the country's land, 70% of which is under natural pastures. Uruguay must, therefore, develop strategies and mechanisms to exploit fully the attributes of its natural resources, such as its natural pastures, the potential for organic farming and sustainable use of agricultural biodiversity, in the pursuit of market opportunities presented by ever-more-aware and demanding consumers.

Significant changes have taken place also in the way producers utilize and manage water resources in Uruguay. Reduced crop pressure on land and livestock pressure on natural pastures has been accompanied by the dramatic expansion of irrigated agriculture (partially supported by the Bank-financed Natural Resources Management and Irrigation Development Project - Loan 3697-UY). As pressure grows on available water resources, an expansion of irrigated agriculture would have to be accompanied by improved efficiency of water use and management in the agricultural sector that will require a broad range of initiatives, from investment in irrigation technology and improved water quality to proper management of livestock-related effluents through to the establishment of a more systematic groundwater monitoring systems.

In tandem with an agricultural use of natural resources that emphasizes natural products and integrated production systems approach, biodiversity conservation and the maintenance of healthy eco-systems offer additional opportunities

for the rural economy. The conservation and management of biodiversity requires the establishment of a framework of incentives to private landowners to promote land-use practices that exploit the synergy between conservation and new opportunities for rural income generation.

The forestry sector, though of little importance for the national economy in the past, has shown recently a very rapid increase due to incentives for plantation forestry. The area under plantation has grown by close to 800% in the 1990s, and today the total area under plantation forestry covers approximately 400,000 ha. The economies of scale that have been achieved allow for industrial processing that can be internationally-competitive. Such industry is not, per se, supportive of biodiversity conservation since it relied on introduced species with various negative environmental impacts. Nevertheless, it can benefit from diversification and can increase its ecological value through associated native forest conservation and regeneration of native species.

The global significance of Uruguay's biodiversity is based on it being a confluence of Amazonian and Chaco domains, with mosaic-like habitats dominated by grasslands, interspersed with marshes, spiny woodland ("espinal"), gallery forest, and bodies of standing water ("esteros"). Because of Uruguay's comparatively small size, relatively regular topography, and absence of major geographical accidents, the country tends to be uniform from a biological perspective when compared with other countries in the Neo-tropical region. The grassland ecosystem ("pastizal") is the most representative area of the country, periodically-inundated and interspersed marshes, espinal, gallery forest, and esteros. The relative importance of these habitats and the clear dominance of the grassland (pradera) ecosystem are shown in Table 6.

Table 6: Principal Natural Habitats and Land Use in Uruguay

| Habitat Type                          | Area (million ha) | Percent |
|---------------------------------------|-------------------|---------|
| Savanna, currently rangelands         | 14.00             | 79.4    |
| Natural Forest                        | 0.60              | 3.5     |
| Wetlands and other Aquatic Ecosystems | 1.14              | 6.5     |
| Permanent Agriculture                 | 0.92              | 5.2     |
| Urban and Infrastructure              | 0.30              | 1.7     |
| Plantation Forests                    | 0.40              | 2.2     |
| Other                                 | 0.26              | 1.4     |
| Total                                 | 17.62             | 100.0   |

The richness at ecosystem and site level is enhanced by its having transboundary ecosystems. Uruguay holds one of the world's few "savanna" ecosystems, which in turn is very important from a global standpoint, having being recognized as being of "bioregionally outstanding" value with around 1,200 species of vertebrates, including 580 of fish, 41 of amphibians, 62 of reptiles, 434 of birds, and 111 of mammals. The other eco-regions represented in the country include the Humid Chaco and the Brazilian Atlantic Coast Restingas.. Of the 111 species of mammals present in the country, four have already become extinct, and an additional 5 are in danger of extinction. Being an Endemic Bird Area, Uruguay holds 3 restricted-range Sporophila species, one of which is in critical condition, another endangered, and the third nearly threatened. From a botanical perspective, Uruguay has over 2,500 plant species of which the great majority are herbaceous species or shrubs corresponding to the dominant savanna ecosystems. Almost exclusiveThe country has a weak protected areas system with relatively ineffectively protected area of 300,000 ha located in 31 different sites.

The specific habitats present in Uruguay do not occur in isolation from each other but are interspersed, with a series of localized geographic features which include rocks, hills, small ravines and a highly-branched hydrological network; it is this "mosaic" pattern that defines the uniqueness and importance of the eco-region from a biodiversity perspective and, under natural conditions, allows it to maintain its species diversity. The following are the main eco-systems present in the country:

- Savanna – which includes a heterogeneous herbaceous community (2000 species, of which 400 are *graminidae*), whose diversity is determined by the relative complexity of the soils. There are also various legumes with importance from a range management perspective, as well as shrubs.
- Native Forests – which includes various distinct types, among them gallery forests (along rivers and other water courses), ravine forests (which appear in patches and benefit from specific micro-climate conditions), “*bosque Serrano*,” palm forests (including the important and endemic “*Butia*” association covering 70,000 ha), “*monte de parque*,” “*algarrobal*,” and litoral spiny forests (“*monte espinoso del litoral*”).
- Wetlands – which are primarily located in the south-east , especially in the Laguna Merín watershed and the coast of Rocha.
- Coastal Ecosystems - which are productive and have an important associated wildlife. They occur along the two main coasts of the country, the River Plate coast (460 km) and the Atlantic coast (220 km).

Within this richness in terms of biodiversity, livestock production (primarily cattle and sheep) has developed and been the main pillar of the rural economy since the last century. Livestock production was always based on the use of natural pastures, at first extensive but gradually with increasing intensity, including enclosure with fencing in the 19th century and significant attempts to improve its grazing capacity in the latter half of the 20th century with investments in fertilizer, exotic pasture species, drinking water storage and electric fencing. The original savanna ecosystem with associated forests (a product of rich soils and a temperate climate) has thus been heavily altered and, with it, the natural features of the landscape have changed substantially.

These changes have produced some effects: a) the localized effects, which include a change in the composition of species (primarily grasses) both from the invasion of exotic species (such as introduced grasses) and from the selective effects of grazing (which favors certain species over others, and thus alters the natural competitive forces). In addition, grazing causes soil compaction which also distorts the ecological forces present before widespread grazing; and b) ecological effects, which are larger-scale changes resulting from the alteration (due to range management practices) of flooding patterns, fire cycles, and natural succession cycles, which in turn create a savanna ecosystem different from its original natural condition, with the consequent change in species composition and dominance patterns. Another major alteration of natural habitats (directly or indirectly associated with range management practices) has been the heavy loss of native forests, with the consequent loss of biodiversity habitats, biological corridors, and ecosystem services. Fortunately, both main habitat types (savanna and native forests) are fairly resilient and, unlike many tropical habitats, they can be the subject of restoration efforts that can be cost-effective and feasible in time.

Soil erosion has also altered natural habitats. Some 30 percent of all agricultural land has suffered from some form of erosion. Nevertheless, soil erosion seems to strongly depend on the appearance of periodic heavy rain episodes (associated with El Niño Southern Oscillation events), with the resulting damage being heavily correlated with the type of land use present, which is minimal under permanent forest. Wetland loss and degradation has also occurred to a substantial degree because of a variety of factors, including the early expansion of rice cultivation which both replaced the habitats and degraded them through the application of fertilizers and pesticides. This effect has been particularly important in the east (Bañados del Este). Finally, invasion by exotic species (both animals and plants) has also caused significant impacts. For example, since the 1960s the growth of the livestock sector has been based in part on the improvement of natural pastures via the introduction of improved grasses and legumes and the use of fertilizers, with the consequent ecological impacts already discussed. Fortunately, from a biodiversity perspective, of the 16 million ha that are appropriate for livestock and agriculture, 91 percent is still under natural pastures.

Almost exclusive private ownership of land, Uruguay has a weak protected areas system, and public policy decision that biodiversity conservation must be secured mostly outside of protected areas, makes this project a unique opportunity to develop sound practices for rural development in harmony with nature conservation and based conservation of biodiversity through appropriate use. The country has declared 31 protected areas representing an

estimated 300,000 ha. under different types of management categories. The presence of a fledging system of protected area is a contribution to provide ways of conserving natural habitats to unite these yet to be established protected areas. As in other countries, even if Uruguay were able to place 10-15% of its territory under some sort of protection (which is very expensive and may be not applicable for Uruguay), this wouldn't be sufficient to maintain large-scale ecological processes and to ensure sustainable biodiversity conservation over the long term.

The government of Uruguay is convinced on the need to complement its fledging system of protected areas with aggressive conservation efforts outside it. Fortunately, the ecological characteristics of the country, the synergies that can be found between the types of ecosystems found and the generation of rural income opportunities, and the resilience and restoration potential of Uruguay's ecosystems are all very important supportive ingredients for such an approach. The key concept to achieve biodiversity conservation outside Uruguay's system of protected areas would be the promotion of biodiversity-compatible, multiple land-use practices, within a landscape approach. Under this approach, it is possible to promote the adoption of land-use practices that exploit the synergies that exist between biodiversity conservation and opportunities for rural income generation. Some of these practices of "integrated ecosystem management" may include a combination of the following land-uses, whose relative emphases will be determined by the local conditions, the feasibility of implementing an incentive framework, the ability for market-based mechanisms to support these land-uses, and their relative contribution to conservation: as a) maintenance of scenic beauty for rural tourism and recreation, b) wildlife ranching, c) integrated savanna ecosystem management, d) silvopastoral systems, e) wildlife hunting, among other arising opportunities. Besides, this contribution to the conservation of natural areas, the project will support Uruguay to advance in the conservation of conservation units, either public or private by identifying mechanisms to conciliate conservation and biodiversity conservation in management units, thus contributing to the CBD's recent conclusions on expanding the areas conserved in the signatory countries.

Uruguay's policies have established that these possibilities do not need to be implemented in isolation from each other. In fact, even though they may be relatively modest from an economic perspective when analyzed individually, they can become a major alternative to inappropriate land-use practices through income diversification and complementarity to traditional practices. From a biodiversity perspective, what is key is the promotion of a geographic configuration that maintains the mosaic nature of Uruguay's original habitats, restoring biological corridors through a diversified rural landscape. As in many other countries and region, many of these possibilities are still fledging; therefore, they can be sharpened and benefit from additional research and the establishment of pilot activities. Eventually, and with the growing internationally trends that are favoring the competitiveness of green and environmental-friendly markets, biodiversity conservation offers vast opportunities for the future well-being of Uruguay's rural economy and for the regeneration and maintenance of healthy ecosystems in the country.

This ecological importance has been in conflict with traditional rural development, mainly with biodiversity conservation not being included as a key part of the productive sector. The conservation and management of biodiversity require the establishment of a framework of incentives to private landowners to promote land use practices that exploit the synergy between conservation and new opportunities for rural income generation. In this project, agricultural use of natural resources would emphasize natural products and an integrated production systems approach, biodiversity conservation and the maintenance of healthy ecosystems to broaden the supply of additional opportunities for the rural economy. By providing incentives for the conservation of key species and habitats using innovative tools for private initiatives (easements, certification, private reserves, land tax exemptions, and others) and by providing economic value to biodiversity by making proper use and perpetuating the issue of the resource, the country will have appropriate mechanisms to incorporate biodiversity into the productive alternatives of the rural sector

In summary, although the agricultural sector has a demonstrated capacity to further innovate by adopting technology and diversifying both production and markets, there is a growing recognition that the need to expand production and to increase productivity must be compatible with the protection and conservation of the natural resources on which it is based. In addition, it must be recognized that the issues and challenges of the rural areas go beyond the ability of



agriculture alone to solve. A large part of the public sector's role in promoting development of the rural areas is to provide a supportive framework of public goods, while encouraging the private sector to identify and exploit the opportunities made available by world markets. There is also an important role for government in using public expenditure, both in support of infrastructure and in the application of specific incentives to achieve a demonstration effect in selected sub-sectors; the achievements in irrigation development and commercial forestry over the past fifteen years are good examples to expand and replicate.

**Government commitment.** The Government is keen to expand the work initiated under the PRENADER Project, but with more emphasis on natural resources and biodiversity conservation and management. To that end, the Bank prepared a sector review to analyse the main issues related to natural resources management in Uruguay (Uruguay: the Rural Sector and Natural Resources, Report No. 24409-UR), which was well received by Government. The Ministry of Agriculture, with the agreement of the Ministry of Economy and OPP, requested World Bank technical and financial assistance for the preparation and execution of the proposed project, and would like to start implementing the project in July/August 2004. Furthermore, during 2003, the local preparation team, with the assistance of an FAO Technical Cooperation Project (TCP), has already prepared background information and a preliminary proposal for a possible natural resources management project. Finally, with the financial assistance of a GEF PDF Block B Grant, the Ministry of Agriculture is currently preparing a proposal to provide a comprehensive analysis of the status and trends of agricultural biodiversity and of their underlying threats; mainstream biodiversity in on-farm investment projects to improve natural resources management; and strengthen the capacities of farmers and their organizations, local and central authorities to manage agricultural biodiversity. The proposal would be submitted to GEF for financing and would be an integral part of the Natural Resources and Biodiversity Management Project under preparation that would be financed by the Bank.

Cattle ranching has been and is important for the national economy, Uruguay is lowly populated with an early disappearance of native communities, very high urbanization rate and the very high proportion of lands under private ownership: all these have prevented Uruguay from developing a "Protected Area System" of similar characteristics to those of other Latin American countries with some ad-hoc created areas covering less than 1,6% of the national territory. For correcting this situation, a recent law created the National System of Protected Areas with no implementation until now. On the other side native forests are protected under law, but this legal protection, although necessary, is not a sufficient condition to ensure that native forest ecosystems recover their ecological functionality. This functionality requires the existence of contiguous areas of a minimum size, the maintenance of habitat quality, the proper configuration of forest patches in biological corridors, etc. Furthermore, there is a lack of effective incentives for reforestation with native species, which given the losses already occurred, is a pre-requisite for the recovery of these ecosystems.

It was thus understood that the future of biodiversity in Uruguay cannot be analyzed in isolation from the government policy regarding rural development, and ranching in particular. This resulted in a livestock strategy (through MGAP) based upon three main pillars: (a) sectoral growth based on productivity increases, (b) equitable sharing of the costs and benefits of this growth, and (c) conservation of natural resources. Over the long term, the strategy prioritizes diversification, increase in productivity, product differentiation, product value-added, and increase in quality. The fate of Uruguay's biodiversity is intimately linked to this sector, and it is thus critical to develop and implement a biodiversity policy that can be effectively applied within that context.

**Country Eligibility.** Uruguay ratified the Convention on Biological Diversity (CBD) on May 11, 1993. In compliance with art. 6 of the CBD, The National Biodiversity Strategy (NBS), was prepared during 1998 and 1999 (Project URU/96/G31) by DINAMA with financial support from the GEF. The Uruguayan NBS was published and officially presented by MVOTMA on December 29, 1999 and submitted to the CBD Secretariat. The project will provide support to advance in the commitments from Uruguay to advance in the conservation of biodiversity as derived from the recent Conference of the Parties carried out in Malasya (Feb'04).

**Country's Drivenness.** The Government of Uruguay and the World Bank have collaborated for more than fifty years in the development of the agricultural sector. Most of this effort was directed towards the productive aspects of

agriculture, but during the past decade a broader approach has been adopted in the rural areas; in particular, emphasis has gradually been increased on environmental issues and on the achievement of long-term sustainable production systems, mainly through improved natural resources management. Lessons learned from the recently completed Bank-financed project, the Natural Resources Management and Irrigation Development Project (PRENADER I), indicate that any future operation in the agricultural sector in Uruguay should go beyond irrigated agriculture and dairy production and include natural resources management in the extensive livestock production sub-sector, which uses over 70% of the land, and extensive crop production, as well as conservation and management of agricultural biodiversity. The second phase of PRENADER is therefore committed to include biodiversity as another component of the rural productive sector.

At the international level, Uruguay has been an active participant in the Convention on Biological Diversity since its ratification on May 11, 1993 by Law n° 16408. The Operational Focal Point for the CBD is DINAMA, and the national agency responsible for the implementation of the CBD is MVOTMA/DINAMA<sup>2</sup> according to National Government Decree 487/993. The GEF Operational Focal Point is also DINAMA. The National Biodiversity Strategy contains the principal recommendations and instruments for the implementation of the CBD in the country and is the result of a participatory process. Within this strategy the need to mainstream biodiversity into the rural landscape has been established based upon and agreed by about 125 delegates representing 58 institutions from the public and private sectors (Ministries, local governments, educational and research institutions, NGOs, farmers associations, etc.) and from the University, among others, who attended the thematic workshops during the project period. The NBS includes recommendations on the directions upon which the proposed project is based, with emphasis on in situ conservation, research, capacity, and information exchange, and education and public awareness. A letter of endorsement was provided by Uruguay's GEF focal point on November 7, 2001. The Uruguayan Government has expressed its support and interest in the development and implementation of this project, which would be executed by the MGAP, and explicitly acknowledges that it is in agreement with, and supportive of, the NBS.

This project is consistent with the guidelines of the GEF's Biodiversity Operational Program 13: Conservation and Sustainable Use of Biological Diversity Important to Agriculture. The project focuses on managed ecosystems and biological habitats that provide a broad range of goods and services important to human development and the global environment, as well as on maintaining diverse farming systems and conserving biodiversity in agricultural landscapes. This strategy would promote positive impacts and at the same time mitigate the negative impacts of agricultural systems and practices on biological diversity in agro-ecosystems and their interface with other ecosystems. It would also promote the conservation and sustainable use of genetic resources. These activities would contribute to the objectives of the CBD in the area of agricultural biological diversity, upon which part of the Uruguay economy is based, thus providing significant means for improving living conditions in rural areas while increasing productivity of biological and rural resources. The project would achieve these goals by assisting local producers in Uruguay and creating demonstrative pilot areas to address constraints preventing the introduction, dissemination and widespread use of ecologically sound and socially responsible management concepts which have good prospects for sustainable, multiple focal area benefits. The Uruguayan Government, through this GEF project and fully blended with the loan, intends to create a management system that would be replicated in other areas to generate multiple local area benefits and to enhance the potential of the rural landscape. Therefore, the project includes systematic reviews of experience gained, documentation of good practices, and dissemination of lessons and know-how. The project will be also creating capacity at the national level in carbon sequestration and balance, but this contribution would be a minimal contribution from the GEF financing.

---

<sup>2</sup> MVOTMA: Ministry of Housing, Land Planning and Environment  
DINAMA: National Environmental Office

## Annex 2: Major Related Projects Financed by the Bank and/or other Agencies

### Uruguay: Uruguay Rural Development

The Government of Uruguay and the World Bank have collaborated for more than fifty years in the development of the agricultural sector. Most of this effort was directed towards the productive aspects of agriculture, but during the past decade a broader approach has been adopted to the rural areas; in particular, emphasis has gradually been increased on environmental issues and on the achievement of long-term sustainable production systems, mainly through improved natural resources management. Lessons learned from the recently completed Bank-financed project, PRENADER I and the conclusions of the ESW, indicate that any future operation in the agricultural sector in Uruguay would have to go beyond irrigated agriculture and dairy production and include natural resources management in the extensive livestock production sub-sector, which uses over 70% of the land, and extensive crop production, as well as conservation and management of biodiversity. In addition the Bank is financing a the Regional Project "Environmental Protection and Sustainable Integrated Management of the Guarani Aquifer" which deals with a unique source of water indirectly related to this project in that irrigated farms depend on the aquifer for irrigated water supply. Additionally, the main purpose of 2002 CAS was to define the best strategy for the Bank to assist the Uruguayan Government to deal with the economic and financial crisis that was affecting the country that year. Consequently, its conclusions and recommendations were exclusively oriented toward adjustment operations. Uruguay's Ramsar site Bañados del Este received a GEF financing sponsored by the UNDP giving the basis for land use in an area of importance for rice production but also of great importance for biodiversity conservation. Other projects that deserve mentioning are a) the IFAD - Uruguay Rural, b) the IDB - Competitiveness Livestock Project (follow on under preparation, Livestock Development Project), c) UNDP - Institutional Strengthening and Enabling Activities to Comply with the UNFCCC, d) UNEP - Enabling Activities for the Stockholm Convention on Persistent Organic Pollutants (POPs): National Implementation Plan for Uruguay, e) IBRD - Landfill Methane Recovery Demonstration Project, Climate Change, f) IBRD - UY Road Maintenance Project, and g) IBRD - Foot and Mouth Disease Emergency Recovery Project. The following table summaries the status of these projects.

The following list of projects financed by the Bank, the GEF and other development agencies are considered relevant to the project proposed.

| Sector Issue                   | Project  | Status         |
|--------------------------------|--|----------------|
| <i><b>Bank financed</b></i>    |  |                |
| <b>NRM</b>                     | <b>Natural Resource Management and Irrigation (PRENADER) 41.0 million</b>                                  | <b>Closed</b>  |
| <b>Agriculture</b>             | <b>Foot and Mouth Disease Emergency Project 18.5 million</b>   | <b>Ongoing</b> |
| <i><b>GEF</b></i>              |  |                |
| <b>Climate Change</b>          | <b>Landfill Methane Recovery Project 1.0 million</b>   | <b>Ongoing</b> |
| <b>International Waterways</b> | <b>Environmental Protection and Sustainable Integrated Management of the Guarani Acquirer .499 million</b> | <b>Ongoing</b> |

| <b>Other development agencies</b>         |  |                |
|---|--|----------------|
| <b>IFAD</b>                               | <b>Uruguay Rural (Rural Poverty Project) 24.5 million</b>  | <b>Ongoing</b> |
| <b>IDB</b>                                | <b>Competitiveness Livestock Project (Follow up Livestock Development under preparation) 11 million</b>      | <b>Ongoing</b> |
| <b>United Nations Development Program</b> | <b>Institutional Strengthening and Enabling Activities to Comply with UNFCCC .7 million</b>                  | <b>Ongoing</b> |
| <b>United Nations Development Program</b> | <b>Conservation of Biodiversity in the Western Wetlands 3.0 million</b>                                      | <b>Ongoing</b> |
| <b>United Nations Environment Program</b> | <b>Enabling Activities for the Stockholm Convention on Persistent Organic Pollutants (POPs) .499 million</b> | <b>Ongoing</b> |

During the project preparation, consultations have been done with stakeholders and key personnel involved in the projects above mentioned, in particular to the GEF UNDP-sponsored “Conservation of Biodiversity in the Eastern Wetlands” (Baños del Este) from which a valuable set of lessons learnt have been already incorporated into this project.

**Annex 3: Results Framework and Monitoring**  
**URUGUAY: Uruguay Rural Development**  
**Annex 1: Project Design Summary**

***Uruguay Integrated Ecosystem and Natural Resource Management Project***

| Hierarchy of Objectives  | Key Performance Indicators   | Data Collection Strategy   | Critical Assumptions  |
|--|--|--|---|
| <p><b>Sector-related CAS Goal:</b><br/>Sustainable economic growth in rural areas through sustainable land-use and water management.</p>   | <p><b>Sector Indicators:</b></p> <ul style="list-style-type: none"> <li>Improved livelihood conditions for people in critical eco-regions</li> <li>Increased economic importance of environmental services</li> <li>Further reduction in degradation of biodiversity resources</li> </ul>  | <p><b>Sector/Country Reports:</b></p> <ul style="list-style-type: none"> <li>Annual statistics</li> <li>Audit reports</li> <li>Mid-term review</li> </ul>  | <p><b>(from Goal to Bank Mission)</b></p> <ul style="list-style-type: none"> <li>Induced changes are sustainable</li> </ul>   |
| <p><b>Project Development Objective (PDO):</b><br/>To promote the adoption of integrated production systems in agricultural and livestock landscapes to increase productivity within a context of holistic ecosystem and natural resources management while conserving soils, water, rangelands and biodiversity</p> | <p><b>Outcome/Impact Indicators:</b></p> <ul style="list-style-type: none"> <li>4 sub-ecosystems (Savannah, Riparian Forest, Gallery Forest, and “Serranias”) with improved biodiversity conservation</li> <li>At least 150,000 hectares of biodiversity-friendly production activities</li> <li>At least 20% of farmers involved in the project include combined projects in which biodiversity is mainstreamed into their production sector.</li> <li>At least 150 subprojects are supported for a minimum of 1500 small- and medium-sized farmers in which biodiversity is linked to the production sector.</li> <li>These indicators will allow:               <ol style="list-style-type: none"> <li>Maintenance of mosaics of natural habitats within rural landscape through support for ecotourism and rural tourism</li> <li>Integrated savanna ecosystem management including regeneration of natural grasses and other vegetation, maintenance and</li> </ol> </li> </ul> | <p><b>Project Reports and Data Collection Strategy:</b></p> <ul style="list-style-type: none"> <li>Increased area of natural habitats managed for conservation and sustainable use for tourism activities</li> <li>Units of natural habitats under integrated management</li> <li>Increased management and land restoration by combining tools and methods of integrated habitat management</li> <li>Native biodiversity subject to sustainable use by either farming or ranching in rural landscape, isolated or combined with other means of rural production</li> <li>Hectares of natural habitats including forests under restoration or management for conservation and production</li> <li>Annual reports/site visits</li> </ul> | <p><b>(from Objective to Goal)</b></p> <ul style="list-style-type: none"> <li>Uruguayan small- and medium-sized farmers are willing to experiment with new tools for producing integrally on their lands</li> <li>The rural population’s economic situation makes it possible to co-invest in pilot projects including non-conventional rural products</li> <li>Non-conventional rural components such as biodiversity can create economic opportunities</li> <li><b>Project generates enough demand that farmers are willing to work with governmental sector in natural resources management</b></li> </ul> |

- regeneration of natural forests, reduced impact grazing, and carbon sequestration
3. Agro-forestry systems (including silvo-pastoral systems) that would exploit synergies between enhanced production due to reduced erosion, product diversification, and shade provision; and the increased ecological value that such systems provide due to maintenance of natural habitats and establishment of biological corridors
  4. Sustainable biodiversity use through sustainable wildlife ranching and hunting
  5. Forest regeneration

| Output for Each Component:  | Output Indicators:  | Project Reports:   | (from Outputs to Objective)  |
|---|---|--|--|
| <p>Component 1. Fund for Promotion of Sustainable Use of Biodiversity (FPSUB)</p> <ul style="list-style-type: none"> <li>• Improved livelihoods of small- and medium-sized farmers living in key areas for biodiversity conservation</li> <li>• Integrated Natural Resources Management (INRM) among small- and medium-sized farmers</li> </ul> <p>Component 2. Implementation of Pilot Areas</p> <ul style="list-style-type: none"> <li>• Demonstrative areas of sustainable use of natural resources in key microcatchments which are of importance for biodiversity</li> <li>• Combination of sound practices for natural resources management</li> <li>• Increased public awareness of significance and socioeconomic importance of biodiversity</li> <li>• Generation of a biological vision and eco-regional planning of the project's intervention areas</li> </ul> <p>Component 3. Institutional Strengthening</p> <ul style="list-style-type: none"> <li>• Strengthening of institutions responsible for biodiversity conservation</li> <li>• Increased capacity to support sub-regional needs in biodiversity conservation</li> <li>• Increased international awareness of project concepts and achievements</li> <li>• Creation of national capacity for carbon</li> </ul> | <p>The Uruguay Productive Landscape integrates biodiversity by means at least 150 subprojects funded to small and medium-sized farmers implementing INRM Projects by applying to the Fund (FPSUB) with pertinent technological transfer.</p> <p>Local and regional stakeholders capitalize mainstreaming of natural resource management by means of at least more than two demonstration/pilot projects in the most important sites for the conservation of the Uruguayan biodiversity.</p> <p>Local and national institutions are empowered with new tools for managing biodiversity as a productive resource and provide a nationwide service to improve biodiversity management.</p> | <p>Workshop implementation and results reported</p> <p>Financial aspects of Fund reported.</p> <p>Training workshops and exchange visits reported</p> <p>Annual reports; site visits; survey instruments</p> <p>Presentation of pilot areas</p> <p>Biological vision and eco-regional planning published and socialized</p> <p>Annual reports/training documentation</p> <p>Annual reports; personnel contracts</p> <p>Visits to webpage; number of "hits"; participation in regional/international fora</p> | <p>Appropriate policy, institutional and legal framework for biodiversity management in general and at farmers' level specifically</p> <p>Appropriate macroeconomic and fiscal policies are in place to stimulate economic opportunities being created in key areas for biodiversity conservation</p> <p><b>Sufficient and suitable capacities are available at national level for project management</b></p> <p><b>Governmental support to mainstream biodiversity in the rural productive system</b></p> |

|  |   |  |  |
|--|---|--|--|
| <p>balance projects</p> <ul style="list-style-type: none"> <li>• Facilitate the Geographic Information System</li> <li>• Facilitate management and marketing capacity in the private sector</li> </ul> <p>Component 4: Project Coordination</p> <ul style="list-style-type: none"> <li>• Project's administrative structure</li> <li>• <b>Monitoring and evaluation of project implementation</b></li> </ul> | <p>A project coordination unit implements the project and provides periodically with indicator to assess the evolution of the project implementation.</p> |  |  |
|--|---|--|--|



| <b>Activities:</b>  | <b>Input/Resources* :</b>   | <b>Project Reports:</b>               | <b>(from Components to Outputs)</b>  |
|---|---|---------------------------------------|--|
| <p><b>COMPONENT I:</b></p> <p><b>1.1.- Conservation and sustainable use of natural pastures</b></p> <ol style="list-style-type: none"> <li>1. Maintenance, recovery and improvement of natural pastures</li> <li>2. Maintenance and improvement of native species in systems of intensive use with crop rotations</li> <li>3. Multiple use of natural pasture lands (honey; medicinal, nutritional, ornamental and other uses)</li> <li>4. Implementation of soil protection techniques in riparian areas to conserve and improve hydrological system</li> <li>5. Training, technical assistance and sharing of experiences in the conservation and sustainable use of biodiversity in natural pastures</li> </ol> <p><b>1.2 Sustainable management of timber and non-timber products from native forests</b></p> <ol style="list-style-type: none"> <li>1. Implementation of forestry management techniques (thinning, pruning, enrichment, recovery, etc.)</li> <li>2. Improvement of native forests with reintroduction, reforestation and restoration of native forests</li> <li>3. Multiple use of forests (resins, honey, fruits, medicinal, ornamental, etc.)</li> <li>4. Training, technical assistance and sharing of experiences in conservation and sustainable use of biodiversity in natural pastures</li> </ol> <p><b>1.3 Management and conservation of native fauna</b></p> | <p>US\$4.5 million</p> <ul style="list-style-type: none"> <li>• Fund for application of resources to integrate biodiversity in rural productive landscape established</li> <li>• At least one experience published and socialized in each of the country's ecoregions</li> <li>• At least 15000 farmers presenting and involved in implementation of integrated natural resources management initiatives</li> <li>• At least 50 species of regional/global importance addressed by these integrated natural resources management initiatives</li> <li>• At least 150,000 hectares of land under improved management for conservation and protection</li> <li>• Sub-regional workshops on an annual basis</li> <li>• Campaign for information supply and demand-driven construction</li> </ul> | <p>Disbursement and audit reports</p> | <p>Government committed to establishing the necessary and appropriate institutional framework for biodiversity conservation and promotion of sustainable use of natural resources</p> <p>Small- and medium-sized farmers commit necessary counterpart financing to integrate natural resources management projects</p> <p>Co-financiers provide committed resources in a timely manner</p> <p>Local communities and regional authorities participated fully in establishment and management of initiatives</p> |

|   |  |                                       |
|---|--|---------------------------------------|
| <ol style="list-style-type: none"> <li>1. Implementation of farming practices for native species with different purposes (slaughtering by-products, pets, breeding-stock, etc.)</li> <li>2. Implementation of ranching practices for native species (slaughtering by-products, pets, breeding-stock, etc.)</li> <li>3. Development of strategies for restoration of degraded habitats for native fauna species</li> </ol> <p><b>1.4 Generation of silvo-pastoral initiatives</b></p> <ol style="list-style-type: none"> <li>1. Implementation of practices to recover the natural biodiversity of forest-pasture ecosystem</li> <li>2. Improvement of cattle-raising in forest areas, for purposes of certification</li> <li>3. Training, technical assistance and sharing of experiences in agro-silvo-pastoral systems with native species</li> </ol> <p><b>1.5 Development of rural tourism based on natural native species</b></p> <ol style="list-style-type: none"> <li>1. Implementation of agro-ecotourism experiments</li> <li>2. Implementation of ecotourism and nature tourism experiments</li> <li>3. Implementation ranch tourism experiments</li> <li>4. Training, technical assistance and sharing of experiences in rural tourism and agro-biodiversity</li> </ol> | <ul style="list-style-type: none"> <li>• At least 10 training modules designed with &gt; 400 participants trained.</li> <li>• At least 10 farmers visit projects of similar scope</li> <li>• At least 10 environmental awareness activities undertaken and disseminated through three information media instruments</li> <li>• Project webpage developed in first 6 months after project initiation and information updated regularly</li> </ul> |                                       |
| <p><b>COMPONENT 2: IMPLEMENTATION OF PILOT AREAS</b></p> <p><b>2.1 Generation of pilot demonstration areas in priority microcatchments</b></p> <p><b>12.2 Generation of ecological vision and eco-regional planning for the project intervention area</b></p>   | <p>US\$1.5 million</p> <ul style="list-style-type: none"> <li>• Eco-regional vision based on key biodiversity elements with priority setting</li> <li>• Business plans developed for specific uses of biodiversity as an integral part of rural productive system</li> </ul>   | <p>Disbursement and audit reports</p> |

|   |   |                                |  |
|---|---|--------------------------------|--|
|   | <ul style="list-style-type: none"> <li>At least one pilot project implemented by farmer(s) in key biodiversity areas and no less than 10 implemented in main ecoregions (savanna and forest ecosystems)</li> <li>Updated and functional GIS for rural productive landscape</li> <li>Development of a replicability strategy based on pilot projects</li> </ul>  |                                |  |
| <b>COMPONENT 3: INSTITUTIONAL STRENGTHENING</b>   |   | Disbursement and audit reports |  |
| <p><b>3.1 Creation of national capacity for carbon balance projects</b></p> <p><b>3.2 Creation of national governmental capacity for integrated management of natural resources</b></p> <p><b>3.3 Facilitate the Geographic Information System</b></p> <p><b>3.4 Facilitate management and marketing capacity in the private sector</b></p> <p><b>3.5 Establishment of organic product certification programs</b></p> | <p>US\$0.7 million</p> <ul style="list-style-type: none"> <li>Customized institutional arrangements for biodiversity management</li> <li>Capacity at national level to produce carbon-balance proposals under Kyoto Protocol Guidelines</li> <li>GIS provides services for land management and site/landscape planning.</li> <li>At least four organic product certification programs presented to the government.</li> </ul> |                                |  |
| <b>COMPONENT 4: PROJECT COORDINATION</b>  |   |                                |  |
| <b>4.1 Project's administrative structure</b>   | <p>US\$0.3 million</p> <ul style="list-style-type: none"> <li>Permanent project personnel contracted</li> </ul>   | Disbursement and audit reports |  |

|   |   |  |  |
|---|---|--|--|
| <p><b>4.2 Monitoring and evaluation of project implementation</b></p> | <ul style="list-style-type: none"><li>• Administrative unit established</li><li>• Periodic monitoring and evaluation of project implementation is used as project performance tool.</li></ul> |  |  |
|---|---|--|--|

### Arrangements for results monitoring

| Outcome Indicators                    | Baseline | Target Values |     |     |     |     | Data Collection and Reporting |                             |  | Responsibility for Data Collection |  |
|---------------------------------------|----------|---------------|-----|-----|-----|-----|-------------------------------|-----------------------------|--|------------------------------------|--|
|                                       |          | YR1           | YR2 | YR3 | YR4 | YR5 | Frequency and Reports         | Data Collection Instruments |  |                                    |  |
| Results Indicators for Each Component |          |               |     |     |     |     |                               |                             |  |                                    |  |
| Component One :                       |          |               |     |     |     |     |                               |                             |  |                                    |  |
| Component Two :                       |          |               |     |     |     |     |                               |                             |  |                                    |  |
| Component Three:                      |          |               |     |     |     |     |                               |                             |  |                                    |  |

## **Annex 4: Detailed Project Description**

### **URUGUAY: Uruguay Rural Development**

#### **General Project Features**

The proposed Bank/GEF blended project would assist Government in its efforts to promote among farmers and livestock producers the adoption of economically and environmentally viable integrated production systems, within a context of holistic ecosystem and natural resources management, which will improve natural resources management, and conservation of soils, water and rangelands, while increasing productivity and mainstreaming biodiversity conservation in producers' investment and production decisions. Thus ensuring the economic and environment sustainability of agricultural and livestock development. Within this integrated production system approach, the project aims to promote also increased understanding of role of biodiversity in agricultural landscapes and the potential impact of the various land use practices upon biodiversity and their economic and ecological sustainability.

The Project would provide financial incentives and technical assistance to medium- and small sized farmers, emphasizing plans by groups of farmers, to invest in sustainable agricultural practices and mainstream biodiversity in their investment proposals, in order to ensure the conservation and sustainable use of natural resources and biodiversity and consolidate productive investments made under PRENADER.

The project would strengthen the Ministry of Agriculture's overall natural resources management capabilities through training of staff and expanding the Geographical Information System and related natural resource management tools developed under PRENADER . Additionally, the project would support an institutional capacity building program at the central and regional level for the development and implementation of national strategies for the conservation and sustainable use agricultural biodiversity and to promote their mainstreaming and integration in sectoral development programs.

Even if Uruguay were able to place 10-15% of its territory under some sort of protection (which is very expensive and may be not applicable for Uruguay), this wouldn't be sufficient to maintain large-scale ecological processes and to ensure sustainable biodiversity conservation over the long term. The government of Uruguay expected to complement its fledging system of protected areas with aggressive conservation efforts outside it. Fortunately, the ecological characteristics of the country, the synergies that can be found between the types of ecosystems found and the generation of rural income opportunities, and the resilience and restoration potential of Uruguay's ecosystems are all very important supportive elements for such an approach. The key concept to achieve biodiversity conservation outside Uruguay's system of protected areas would be the promotion of biodiversity-compatible, multiple land-use practices, within a landscape approach. Under this approach, it is possible to promote the adoption of land-use practices that exploit the synergies that exist between biodiversity conservation and opportunities for rural income generation. Some of these practices of "integrated ecosystem management" may include a combination of the following land-uses, whose relative emphases will be determined by the local conditions, the feasibility of implementing an incentive framework, the ability for market-based mechanisms to support these land-uses, and their relative contribution to conservation: as a) maintenance of scenic beauty for rural tourism and recreation, b) wildlife ranching, c) integrated savanna ecosystem management, d) silvopastoral systems, e) wildlife hunting, among other arising opportunities.

The promotion of better practices in which natural resource management would be enhanced, including biodiversity in farmers' production matrix, would be evaluated in terms of the country's area under

sustainable use, the number of species and habitats conserved and the economic value of biodiversity for the rural sector.

The Project would promote the adoption of integrated production systems in agricultural and livestock landscapes to increase productivity within a context of holistic ecosystem and natural resources management while conserving soils, water, rangelands, and biodiversity. The project objective would be achieved by providing assistance to farmers and developing appropriate technologies for increasing the productivity of agricultural systems (crops, pastures, livestock), while ensuring biodiversity conservation, promoting the adoption of production systems to conserve soils, reducing the impact of grazing, reducing the risk of erosion and enhancing the efficient use of water resources, understanding the carbon sequestration potential of various land-use practices and delineating a strategy to promote carbon sequestration in Uruguay's productive landscapes.

The main project instrument would be a Fund to provide technical and financial assistance for the implementation of demand-driven subprojects that would be complemented by a series of supporting activities such as technical assistance, training aimed at raising awareness of biodiversity conservation in the productive sectors and building institutional and landowners' capacity for holistic management of natural resources, integrating biodiversity conservation in productive landscapes. While the adoption of integrated production systems in agricultural and livestock landscapes would be promoted at the national level, the GEF support for integrated systems would be concentrated in key biodiversity areas.

The main focus of this integrated project would be the promotion of biodiversity-friendly, multiple-use land use practices, within a landscape approach. Uruguay would need to complement its fledgling and still poorly-represented and -implemented protected areas system with aggressive conservation efforts outside this system. Under this approach, the adoption of land-use practices that exploit the synergies existing between biodiversity conservation and opportunities for rural income generation would be promoted. Some of these practices of "integrated ecosystem management" would include a combination of various land uses whose relative emphases would be determined by local conditions, the feasibility of implementing an incentive framework, the ability for market-based mechanisms to support these land uses, and their relative contribution to conservation. Within this framework, the project would be focused on the promotion of a geographic configuration that maintains the mosaic nature of Uruguay's original habitats and restoring biological corridors through a diversified rural landscape.

Based on a blending of GEF-financing with an IBRD loan and a demand-driven strategy with the commitment of rural landowners and with strong training and capacity building, this project would maintain mosaics of natural habitats within the rural landscape through sustainable wildlife use, support for ecotourism and rural tourism operation, promotion of integrated savanna ecosystem management including regeneration of natural habitats using agro-forestry systems (including silvo-pastoral systems and techniques for native vegetation propagation in nurseries). It would also promote innovative forms of private land conservation such as ecological easements, diversification of rural production, increase in ecological value, and the establishment of conservation corridors, all of them within a holistic approach that would mainstream biodiversity into the rural productive sector. GEF funds would be allocated to incremental costs throughout the various project components.

The proposed approach in the rural landscape of Uruguay would develop and promote a different way of "doing business as usual" without changing the productive context but including improved practices for natural resources and incorporating biodiversity into this sector, bringing country-driven information, advisory, technical and extension services and drawing special attention to viable farming and silvo-pastoral practices that help conserve and sustainable use biodiversity in the agricultural landscape, which require farmers' contribution to finance investments in improved natural resources management

operations. It would ensure public participation in a new means of getting products from rural sectors, promote the identification and development of new marketing and business opportunities for more diversified production systems including eco-friendly produce, and create a sense of belonging for native biodiversity. In turn, it would establish the human and institutional capacity to promote sustainable solutions to agro-silvo-pastoral initiatives beyond the project while at the same time conserving biodiversity, including training, demonstration, and technology transfer, among others. The sustainability would be also confirmed by the demand for investments.

## **Project Design**

The Project would provide financial incentives and technical assistance to medium- and small-sized farmers, emphasizing investment proposals by groups of farmers to invest in sustainable agricultural practices and mainstream biodiversity, in order to ensure the conservation and sustainable use of natural resources and biodiversity, and consolidate investments made under PRENADER. The project would also strengthen the Ministry of Agriculture, Livestock and Fisheries' overall natural resources management capabilities through staff training and the expansion of the Geographical Information System and related natural resource management tools developed under PRENADER, while at the same time creating ways for inclusion of innovative means of biodiversity conservation.

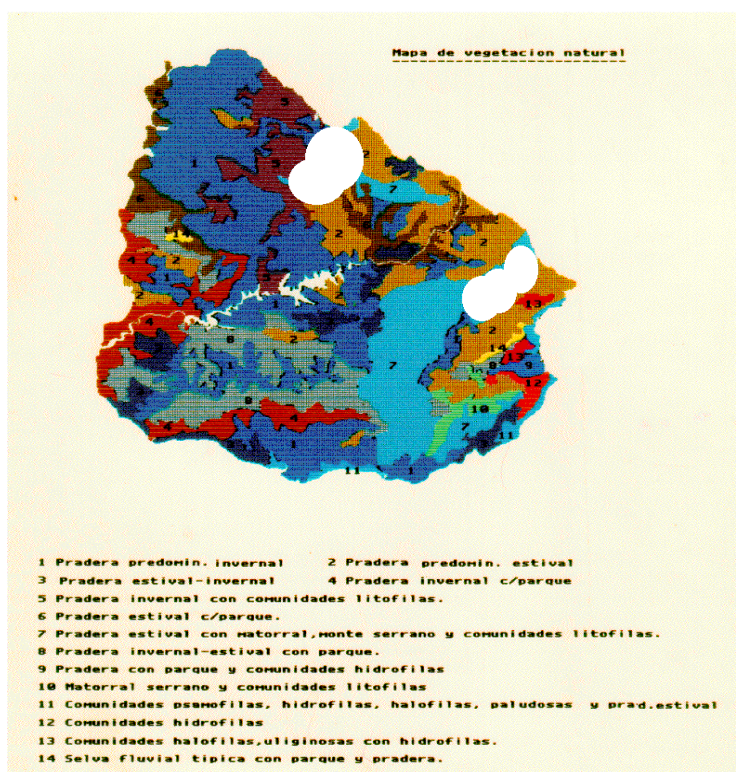
This fully blended IBRD/GEF project would promote the adoption of integrated production systems in agricultural and livestock landscapes to increase productivity within a context of holistic ecosystem and natural resources management while conserving soils, water, rangelands, and biodiversity. While IBRD would finance the productive and competitive components related to agricultural crop production and livestock development, the GEF component would finance the incremental costs required to restore or improve the capacity of the productive rural landscape to maintain and improve ecological processes and conserve biodiversity, by means of involving biodiversity as a key element for rural development.

The strategy to achieve the adoption of such integrated production systems would be based upon demand-driven project implementation in combination with investments committed by small- and medium-sized farmers in which the promotion of sound environmental practices were proposed. This demand would be created by a supply that would be widely communicated and those interested would apply to a Fund in which some resources would be a donation provided that the justification for incremental costs under the GEF definition is linked to a percentage reimbursement of total investment. Although the holistic approach would be developed at the national level, GEF funds would be allocated in key biodiversity areas, combining the credit approach with a donation to help mainstream biodiversity in the productive sector. The different menus of options in innovative ways to mainstream biodiversity and other natural resources in the rural landscape would be shown by demonstration pilot projects to be implemented in partnership with stakeholders in previously defined key areas of conservation. A strong training scheme would be implemented at stakeholder level.

While the entire project will have a national scope, the GEF-funding will be focused on the savanna and native forest ecosystems., These ecosystems hold heterogeneous herbaceous community and its associated areas of native Forests, including gallery forests (along rivers and other water courses), ravine forests (which appear in patches and benefit from specific micro-climate conditions), and mainly the "bosque Serrano". The project has already identified two key areas, one in the north and the other in east where the "quebradas" are the last remaining areas of native vegetation associated with water springs and water courses (preliminary areas selected for its biodiversity importance are shown in the following map). Main threats to grassland ecosystems are livestock/agriculture production systems in some cases incompatible with biodiversity conservation which produce the loss of carrying capacity of livestock



areas, loss of productivity and soil compaction, loss of native herbaceous vegetation with the recurrent water pollution, changes in the vegetation Features and the loss of shelter and food for wildlife. While in “serranías” though livestock and crops have not extensively arrived yet, some of these areas are vulnerable because of the need of more land for agriculture and livestock production. Traditional productive systems in these areas will reduce the productivity, would eliminate the last remnant of particular wildlife and plant species and may alter the capture and distribution of water into the “quebradas”.



By providing incentives for the conservation of key species and habitats using innovative tools for private initiatives (easements, certification, private reserves, land tax exemptions, and others) and by providing economic value to biodiversity by making proper use and perpetuating the issue of the resource, the country will have appropriate mechanisms to incorporate biodiversity into the productive alternatives of the rural sector

**The Project Components:**

**1.- Natural Resources and Biodiversity Management Component (US\$ 29.0 million)**

Through the establishment of a Fund (Fund for Promotion of Sustainable Use of Natural Resources) which would finance demand-driven activities to promote sustainable management of natural pastures; improved cultural practices in rainfed agriculture; and consolidation and expansion of PRENADER’s activities in irrigated agriculture and dairy farming. Farmers would compete for financial resources for their investment proposals according to clear selection and eligibility criteria to be defined. The GEF contribution to the Fund would be allocated for biodiversity initiatives that would result in better rural practices, improved populations of key elements of Uruguay’s biodiversity, increased areas of conservation for biodiversity, increased incomes for biodiversity used, as well as innovative means to promote private land conservation. This would be done by small- and medium-sized farmers living in key areas for biodiversity conservation. Extension services will rely on private groups such as

cooperative, producer associations, and professional extensionists group to whom the biodiversity component into the rural sector would be promoted.

Within this component, specific activities to be implemented with the support of GEF financial resources could include, among others, the following:

- a) Conservation and sustainable use of natural pastures. This subcomponent is expected to contribute to the maintenance, recovery and improvement of natural pastures, working with native species in systems of intensive use with crop rotations, providing alternatives for multiple use of natural pasture lands (honey, medicinal, nutritional, ornamental and other uses) and implementing soil protection techniques in riparian areas to conserve and improve hydrological system. This component will be accompanied by training, technical assistance and sharing of experiences in the conservation and sustainable use of biodiversity in natural pastures.
- b) Sustainable management of timber and non-timber products from native forests. This subcomponent is expected to contribute in implementing forest conservation initiatives by utilizing forestry management techniques (thinning, pruning, enrichment, recovery, etc.) and improving native forests with reintroduction, reforestation and restoration of native forests. The multiple use of forests (resins, honey, fruits, medicinal, ornamental, etc.) will be promoted and activities will be accompanied by training, technical assistance and sharing of experiences in conservation and sustainable use of biodiversity in native forests.
- c) Management and conservation of native fauna. This subcomponent will be based upon the fauna resources of the country, some of which are already under use and others are still to be implemented. The subcomponent will try to invest in implementation of farming practices for native species with different purposes (slaughtering by-products, pets, breeding-stock, etc.), ranching practices for native species (slaughtering by-products, pets, breeding-stock, etc.), development of strategies for restoration of degraded habitats for native fauna species and any other type of innovative way of conserving and making sound use of wildlife. Training and extension services will also be provided.
- d) Generation of silvo-pastoral initiatives. This subcomponent will seek the implementation of combined activities to promote livestock production in native landscapes by implementing practices to recover the natural biodiversity of forest-pasture ecosystem, by improving cattle-raising in forest areas, for purposes of certification. Training, technical assistance and sharing of experiences in agro-silvo-pastoral systems with native species will be provided.
- e) Development of rural tourism based on natural native species. Based on the experiences already existing in the country, this subcomponent will enhance the role of biodiversity-based tourism by supporting implementation of agro-ecotourism experiments, ecotourism and nature tourism experiments, ranch tourism experiments and at the same time providing training, technical assistance and sharing of experiences in rural tourism and agro-biodiversity.

## **2.- Establishment of Pilot Areas (US\$ 1.5 million)**

This component, which would be fully financed with GEF resources, would establish demonstration areas within the selected areas of GEF-interventions (grasslands and *serranías*), for sustainable use of natural resources in key micro-catchments which are of importance for biodiversity, combining sound practices

for natural resources management and creating increased public awareness of the significance and socioeconomic importance of biodiversity. The areas of importance for biodiversity will be established based upon a generation of a biological vision and eco-regional planning of the project's intervention areas. These pilot demonstration areas would be developed jointly with small- and medium-sized local farmers and therefore are expected to remain in place after project completion, given that farmers would be partners in these activities. The existence of areas of importance for biodiversity conservation as derived from the already 31 sites identified nation-wide and the vision generated by this project will set up the basis for a zoning of the country in which vulnerability, aptitudes and potentials would be amalgamated in a joint vision.

### **3.- Support Services (US\$ 7.5 million)**

Activities to be financed under this component would include training and technical assistance to farmers, institutional strengthening of local and central authorities, and specialized training for technical staff providing technical assistance to farmers. GEF Funds would reinforce the skills of institutions responsible for biodiversity conservation, would increase the capacity to support sub-regional needs in biodiversity conservation and create international awareness of the project's concepts and achievements. This component would also improve the national capacity to prepare a successful project on carbon balance, enhance the potential of the already existing GIS and the overall natural resources management capacity of the public and private sector. Specialized Technical assistance (innovative forms of biodiversity use, improved natural resource management techniques, nursery development, etc.) would also be provided under this component. Services will be provided to help Uruguay to commit to the protected areas system agreed in the recent CBD's COP 7 carried out in Malaysia. Specialized Technical assistance (innovative forms of biodiversity use, improved natural resource management techniques, nursery development, etc.) would also be provided. Incentives will be studied (certification, easements, land tax exemptions, and others) In addition, mainly due to the absence of a public extension service, the project will provide technical assistance through associations of farmers, production cooperatives and other private extension groups. A special effort will be focused on the promotion of private tools for conservation, some of them somehow implemented in the country such as private reserve, but other to be researched as easements, commodatums, lease and other types of incentives to private conservation.

### **4.- Project Coordinating Unit (US\$ 2.0 million)**

This Unit would be responsible for overall project execution and for the operation and maintenance of the Monitoring and Evaluation System.

**Annex 5: Project Costs**  
**URUGUAY: Uruguay Rural Development**

| Project Cost By Component and/or Activity         | Local<br>US \$million | Foreign<br>US \$million | Total<br>US \$million |
|---|-----------------------|-------------------------|-----------------------|
| 1.- Natural Resources and Biodiversity Management | 23.0                  | 6.0                     | 29.0                  |
| 2.- Establishment of Pilot Areas                  | 1.3                   | 0.2                     | 1.5                   |
| 3.- Support Services                              | 5.5                   | 2.0                     | 7.5                   |
| 4.- Project Coordinating Unit                     | 1.5                   | 0.5                     | 2.0                   |
| <b>Total Baseline Cost</b>                        | <b>31.3</b>           | <b>8.7</b>              | <b>40.0</b>           |
| Physical Contingencies                            |                       |                         |                       |
| Price Contingencies                               |                       |                         |                       |
| <b>Total Project Costs<sup>1</sup></b>            | <b>31.3</b>           | <b>8.7</b>              | <b>40.0</b>           |
| Interest during construction                      |                       |                         |                       |
| Front-end Fee                                     |                       |                         | 0.3                   |
| <b>Total Financing Required</b>                   | <b>29.2</b>           | <b>8.1</b>              | <b>37.3</b>           |

<sup>1</sup>Identifiable taxes and duties are US\$m \_\_\_\_, and the total project cost, net of taxes, is US\$m \_\_\_\_. Therefore, the share of project cost net of taxes is \_\_\_\_%.

| <b>Biodiversity component within the “Integrated Natural Resource and Biodiversity Management in Uruguay”</b> |                       |                          |                       |
|---|-----------------------|--------------------------|-----------------------|
|   | <b>Total Cost</b>     | <b>Counterpart Funds</b> | <b>GEF</b>            |
|   | <b>(US\$ million)</b> | <b>(US\$ million)</b>    | <b>(US\$ million)</b> |
| <b>Comp. 1: Fund for promotion of SUB</b>   | <b>9,50</b>           | <b>5,00</b>              | <b>4,50</b>           |
| <b>Comp. 2. Implementation of Pilot Areas</b>   | <b>5,00</b>           | <b>3,50</b>              | <b>1,50</b>           |
| <b>Comp. 3. Institutional Strengthening</b>   | <b>3,20</b>           | <b>2,50</b>              | <b>0,70</b>           |
| <b>Comp. 4: Project Coordination</b>  | <b>1,30</b>           | <b>1,00</b>              | <b>0,30</b>           |
| <b>Totals</b>   | <b>18,00</b>          | <b>12,00</b>             | <b>7,00</b>           |

## **Annex 6: Implementation Arrangements**

### **URUGUAY: Uruguay Rural Development**

Based on the current institutional framework in the sector and the lessons learned from the PRENADER I Project, a proposed institutional arrangements for the implementation of the proposed would be as follows:

- h) **CIDAP** (Inter-Ministerial and Inter-Departmental Committee for the Support of PRENADER II): The CIDAP will be coordinated by a member of the UPCT of MGAP, assisted by the coordinator of the Project Implementation Unit, and also composed by a member of each of the following institution: OPYPA (MGAP), RENARE (MGAP), and DINAMA (MVOTMA). This committee would approve the basic rules and general criteria of the project, as well as the annual plans and budgets.
- i) **Public Entities**: Public entities, such as RENARE (MGAP) and DINAMA (MVOTMA), will be responsible for specific components according to their specialty (i.e. GIS in the case of RENARE and carbon sequestration in the case of DINAMA). Respective roles and responsibilities as well as arrangements for project implementation would be agreed at appraisal en reflected in the Operation Manual.
- j) **PCU** ( Project Coordinating Unit): The PIU will be based in Montevideo and will have minimum of 7 members: 1 coordinator, 1 agronomist, 1 biodiversity specialist, 1 monitoring, evaluation and acquisitions specialist, 1 accountant, and 2 support staff. This team would be responsible for project management and implementation, final approval of proposals, and interaction with the World Bank.
- k) **CRDRISs**: The Rural and Sustainable Development Regional Councils (CRDRIS), will be created in each of the regions and will be composed of the following: (i) Municipalities, (ii) rural farmers associations, (iii) rural farmers and workers unions, (iv) farmers cooperatives; (v) NGOs involved in sustainable rural development; and (vi) central Government representatives. These councils main role will be the approval and prioritization of sub-projects.
- l) **Municipalities**: The 18 Municipalities of the country, with the exception of that of Montevideo, would be involved through the Directorate of Rural Development. Their role would be to be the “main entry point” for sub-project proposals.
- m) **Farmers**: Farmers or groups of farmers, eligible for project assistance, would prepare the sub-project proposals, with the assistance of private consultants, cooperatives or farmer organizations.
- n) **Private Sector**: The Private Sector will take part of the project through: (i) technical consultancies to assist sub-project proposal preparation, or (ii) by providing goods and services related to the activities to be carried out under the sub-projects approved.

**Annex 7: Financial Management and Disbursement Arrangements**  
**URUGUAY: Uruguay Rural Development**

**Annex 8: Procurement**  
**URUGUAY: Uruguay Rural Development**

Table A: Project Costs by Procurement Arrangements  
(US\$ million equivalent)

| Expenditure Category | Procurement Method <sup>1</sup> |                              |                              |                              | Total Cost                   |
|----------------------|---------------------------------|------------------------------|------------------------------|------------------------------|------------------------------|
|                      | ICB                             | NCB                          | Other <sup>2</sup>           | N.B.F.                       |                              |
| 1. Works             | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 2. Goods             | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 3. Services          | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 4. Miscellaneous     | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 5. [fill in]         | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 6. [fill in]         | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| 7. [fill in]         | 0.00<br>(0.00)                  | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               | 0.00<br>(0.00)               |
| <b>Total</b>         | <b>0.00</b><br><b>(0.00)</b>    | <b>0.00</b><br><b>(0.00)</b> | <b>0.00</b><br><b>(0.00)</b> | <b>0.00</b><br><b>(0.00)</b> | <b>0.00</b><br><b>(0.00)</b> |

<sup>1</sup>Figures in parentheses are the amounts to be financed by the {Loan/Credit/Trust Fund}. All costs include contingencies.

<sup>2</sup>Includes civil works and goods to be procured through national shopping, consulting services, services of contracted staff of the project management office, training, technical assistance services, and incremental operating costs related to (i) managing the project, and (ii) re-lending project funds to local government units.

Table A1: Consultant Selection Arrangements (optional)  
(US\$ million equivalent)

| Consultant Services<br>Expenditure Category | Selection Method |                |                |                |                |                |                | Total<br>Cost <sup>1</sup> |
|---|------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------------------|
|   | QCBS             | QBS            | SFB            | LCS            | CQ             | Other          | N.B.F.         |                            |
| A. Firms                                    | 0.00<br>(0.00)   | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00)             |
| B. Individuals                              | 0.00<br>(0.00)   | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00) | 0.00<br>(0.00)             |

|       |        |        |        |        |        |        |        |        |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| Total | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   | 0.00   |
|       | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) | (0.00) |

Table B: Thresholds for Procurement Methods and Prior Review<sup>1</sup>

| Expenditure Category | Contract Value Threshold<br>(US\$ thousands) | Procurement Method | Contracts Subject to Prior Review<br>(US\$ millions) |
|----------------------|--|--------------------|--|
| 1. Works             |  |                    |  |
| 2. Goods             |  |                    |  |
| 3. Services          |  |                    |  |
| 4. [fill in]         |  |                    |  |
| 5. [fill in]         |  |                    |  |
| 6. [fill in]         |  |                    |  |

<sup>1</sup>Thresholds generally differ by country and project. Consult OD 11.04 "Review of Procurement Documentation" and contact the Regional Procurement Adviser for guidance.

Total value of contracts subject to prior review: {value}

Overall Procurement Risk Assessment: {High/Average/Low}

Frequency of procurement supervision missions proposed: One every {number} months  
(includes special procurement supervision for post-review/audits)

Table C: Allocation of {Loan/Credit/Other} Proceeds

| Expenditure Category         | Amount in US\$ million | Financing Percentage |
|------------------------------|------------------------|----------------------|
| Total Project Costs          |                        |                      |
| Interest during construction |                        |                      |
| Front-end Fee                |                        |                      |
| Total                        |                        |                      |

Use of statements of expenditures (SOEs): {if applicable}

Special Account: {if applicable}



## **Annex 9: Economic and Financial Analysis**

### **URUGUAY: Uruguay Rural Development**

#### **Summary of Benefits and Costs:**

The project would provide technical and financial assistance to some 5,000 medium- and small-sized farmers and livestock producers, to improve natural resources management and the sustainability of crop and livestock production systems. increasingly open economy.

Through the establishment of a Fund, the project would provide technical and financial assistance to demand-driven activities aimed at promoting sustainable management of natural pastures and rainfed agriculture; and consolidating PRENADER I activities in irrigated agriculture and dairy farming. The GEF contribution to the Fund would support mainstreamed demand for biodiversity initiatives.

Additionally, the project would provide training to nearly 1,000 farmers. The project activities would be implemented nationwide but determined by beneficiaries demands, with the exception of GEF-supported activities which will be concentrated in areas of particular importance from the viewpoint of biodiversity. The technical and economic viability of investment proposals submitted for financing by beneficiaries and the definition of investment priorities would be done applying simple and easily verifiable criteria. In any case, no investment proposal with an ERR of less than 12% would be eligible for financing under the project.

Economic benefits of the project would be the result of increased agricultural and livestock production as well as a sustainable use of biodiversity of importance to agriculture. From an analysis of a sample of farm models it can be concluded that small commercial farmers would see a significant increase in their on-farm income as a result of investment financed under the project.

The project would promote also private sector participation in the provision of production support services, particularly technical assistance to producers, which is expected to increase the impact of project-financed on-farm investments.

Sustainability of project benefits is expected to be high, given that the increase in physical assets would be complemented with improvements in social and human capital through training, technical assistance, organization and better access to project financial, marketing and technological services. Over 70% of project resources are likely to be channeled to investment oriented to the adoption of integrated production systems and improved natural resources and biodiversity management activities demanded by beneficiaries, while an additional 18% would be allocated to technical assistance and training of the target population. The combination of farmers participation in the investment decision-making process and in project implementation is expected to increase the effectiveness and efficiency of public expenditure.

Total project cost, excluding farmers' contribution, has been estimated at about US\$40 million. The World Bank loan would be US\$30 million and the GEF contribution about US\$ 7.0 million.

#### **Main Assumptions:**

##### **Economic Analysis**

Given the demand-driven nature of activities to be executed under the project, it is not possible to determine *a priori* the exact composition of the universe of investment sub-projects that will be financed under the project. Consequently, as only activities identified and presented by potential beneficiaries

would be considered, an ex-ante determination of costs and benefits of productive investments would not be feasible. Therefore, economic return estimates were based only on a sample of investment sub-projects likely to be demanded by beneficiaries, following the experience of PRENADER I. The impact of these investments on natural resources and biodiversity management, agricultural productivity and farmers' income was analyzed with the help of farm models illustrative of typical farming situations in the main agro-ecological zones, and situations in which biodiversity was mainstreamed into the farmer's investment decisions. Assumptions regarding yield increases are conservative to reflect the risk-minimizing production strategies that normally characterize farmers. The estimated overall rate of return of the project, is estimated at about 23%. Although the estimated rate of return took into consideration only part, albeit a substantial part, of the possible investments to be financed under the project, is presented here to give an order of magnitude of the economic returns that can be expected from the proposed project.

Economic return calculations included the cost of incremental on-farm productive investment and recurrent expenditure for the adoption of sustainable agricultural production systems promoted under the project. The analysis of the sample of representative subprojects indicated that economic returns on most investments by crop farmers and livestock producers are likely to be above 18%; farm models with ERR of less than 12% were excluded from the analysis as this will be the minimum rate of return that any sub-project would have to have in order to be eligible for financing under the proposed.

**Pricing Assumptions:** Price contingencies were excluded and base costs plus physical contingencies less taxes were used for the IERR. Given the policy reforms and the opening of the economy that have been taking place since the early 1990s, the rate of exchange of the Uruguayan Peso is currently determined in the open market and trade restrictions have been gradually lowered and domestic prices tend to correspond much closer to border economic values. For the purposes of economic analysis, border prices were estimated for main tradable produced by the project, based on OPYPA projections. While the project would increase on-farm and off-farm employment in the priority areas, unemployment and under-employment would not be eliminated. Therefore, shadow prices for unskilled labor were estimated at 80% of the market wage rate, while for skilled labor, the market rate was assumed to reflect its opportunity cost.

### **Financial Analysis**

The financial analysis was carried out to assess the financial viability of a sample of productive investments most likely to be demanded by irrigation farmers, along the same lines followed for the economic analysis. The financial viability of these investments was analyzed within the framework of the most common production systems used by producers using the same set of farm models prepared for the economic analysis. As is to be expected, given the level of subsidy provided, the selected farm model showed relatively high financial rates of return (>23%). Input and output prices were assumed constant, as was the real exchange rate, throughout the 20 year time horizon used in the financial analysis. The discount rate was assumed to be 12%.

**Annex 10: Safeguard Policy Issues**  
**URUGUAY: Uruguay Rural Development**

**Annex 11: Project Preparation and Supervision  
URUGUAY: Uruguay Rural Development**

|                                 | Planned       | Actual |
|---------------------------------|---------------|--------|
| PCN review                      | March 1, 2004 |        |
| Initial PID to PIC              | March 3, 2004 |        |
| Initial ISDS to PIC             | March 9, 2004 |        |
| Appraisal                       |               |        |
| Negotiations                    |               |        |
| Board/RVP approval              |               |        |
| Planned date of effectiveness   |               |        |
| Planned date of mid-term review |               |        |
| Planned closing date            |               |        |

Key institutions responsible for preparation of the project:

Bank staff and consultants who worked on the project included:

| Name | Title | Unit |
|------|-------|------|
|      |       |      |
|      |       |      |
|      |       |      |
|      |       |      |

Bank funds expended to date on project preparation:

1. Bank resources:
2. Trust funds:
3. Total:

Estimated Approval and Supervision costs:

1. Remaining costs to approval:
2. Estimated annual supervision cost:

**Annex 12: Documents in the Project File**  
**URUGUAY: Uruguay Rural Development**

**Annex 13: Statement of Loans and Credits**  
**URUGUAY: Uruguay Rural Development**

| Project ID | FY   | Purpose                                  | Original Amount in US\$ Millions |      |      |      | Cancel. | Undisb. | Difference between expected and actual disbursements |            |
|------------|------|--|----------------------------------|------|------|------|---------|---------|--|------------|
|            |      |  | IBRD                             | IDA  | SF   | GEF  |         |         | Orig.  | Frm. Rev'd |
| P077172    | 2003 | UR Structural Adjustment Loan            | 151.52                           | 0.00 | 0.00 | 0.00 | 0.00    | 50.00   | -51.52   | 0.00       |
| P078726    | 2003 | UY Public Services & Social Sectors SAL  | 151.50                           | 0.00 | 0.00 | 0.00 | 0.00    | 100.00  | 50.00  | 0.00       |
| P080263    | 2003 | UY SSAL                                  | 151.52                           | 0.00 | 0.00 | 0.00 | 0.00    | 50.00   | -51.52   | 0.00       |
| P081495    | 2003 | UY Public Services & Social Sectors SSAL | 101.02                           | 0.00 | 0.00 | 0.00 | 0.00    | 75.00   | 25.00  | 0.00       |
| P074543    | 2002 | UY FOOT & MOUTH DISEASE - ERL            | 18.50                            | 0.00 | 0.00 | 0.00 | 0.00    | 5.26    | -13.24   | -13.24     |
| P070937    | 2002 | UY- Basic ED3                            | 42.00                            | 0.00 | 0.00 | 0.00 | 0.00    | 36.73   | 5.58   | 0.00       |
| P070058    | 2001 | UY PUBLIC SERVICES MODERNIZATION TA      | 6.00                             | 0.00 | 0.00 | 0.00 | 0.00    | 5.09    | 1.95   | 0.00       |
| P063383    | 2000 | UY APL OSE MOD&REHAB.                    | 27.00                            | 0.00 | 0.00 | 0.00 | 0.00    | 21.93   | 21.93  | 0.00       |
| P039203    | 1997 | UY FOREST PROD.TSP                       | 76.00                            | 0.00 | 0.00 | 0.00 | 5.00    | 31.60   | 36.60  | 0.00       |
| P008177    | 1996 | UY POWER TRNMSN & DISTR                  | 125.00                           | 0.00 | 0.00 | 0.00 | 0.00    | 53.12   | 53.12  | 0.00       |
| Total:     |      |  | 850.06                           | 0.00 | 0.00 | 0.00 | 5.00    | 428.73  | 77.90  | - 13.24    |

**URUGUAY**  
**STATEMENT OF IFC's**  
**Held and Disbursed Portfolio**  
**In Millions of US Dollars**

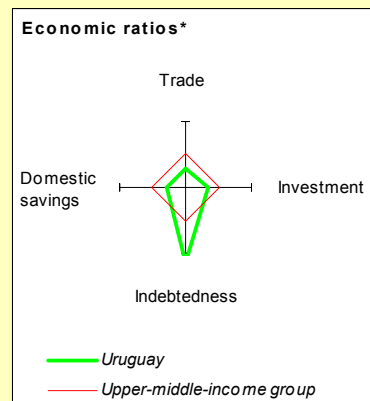
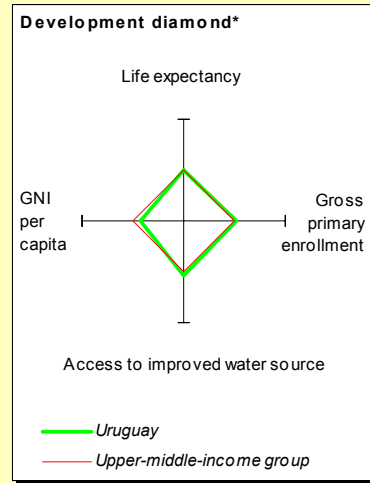
| FY Approval      | Company          | Committed |        |       |         | Disbursed |        |       |         |
|------------------|------------------|-----------|--------|-------|---------|-----------|--------|-------|---------|
|                  |                  | IFC       |        |       |         | IFC       |        |       |         |
|                  |                  | Loan      | Equity | Quasi | Partic. | Loan      | Equity | Quasi | Partic. |
| 1985/92          | Azucitrus        | 0.00      | 0.00   | 0.00  | 0.00    | 0.00      | 0.00   | 0.00  | 0.00    |
| 2001             | Banco Montevideo | 0.00      | 0.00   | 0.00  | 0.00    | 0.00      | 0.00   | 0.00  | 0.00    |
| 2002             | Conaprole        | 20.00     | 0.00   | 10.00 | 0.00    | 10.00     | 0.00   | 10.00 | 0.00    |
| 1995             | Consorcio Aerop. | 1.18      | 0.00   | 3.38  | 0.94    | 1.18      | 0.00   | 3.38  | 0.94    |
| 1991             | Granja Moro      | 1.78      | 0.75   | 0.00  | 0.00    | 1.78      | 0.75   | 0.00  | 0.00    |
| 1980/86/88/96/03 | Surinvest        | 0.00      | 0.00   | 0.00  | 0.00    | 0.00      | 0.00   | 0.00  | 0.00    |
| 2001             | UMontevideo      | 5.00      | 0.00   | 0.00  | 0.00    | 3.30      | 0.00   | 0.00  | 0.00    |
| Total portfolio: |                  | 27.96     | 0.75   | 13.38 | 0.94    | 16.26     | 0.75   | 13.38 | 0.94    |

|                           |           | Approvals Pending Commitment |        |       |         |
|---------------------------|-----------|------------------------------|--------|-------|---------|
| FY Approval               | Company   | Loan                         | Equity | Quasi | Partic. |
| 2002                      | Conaprole | 0.00                         | 0.00   | 0.00  | 0.02    |
| Total pending commitment: |           | 0.00                         | 0.00   | 0.00  | 0.02    |

## Annex 14: Country at a Glance

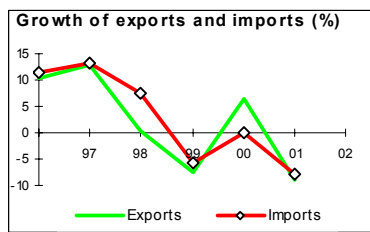
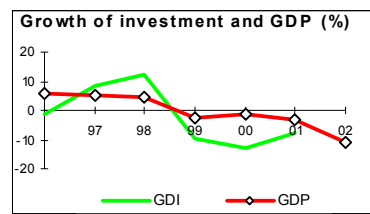
### URUGUAY: Uruguay Rural Development

| POVERTY and SOCIAL   | Latin America & Caribbean |                           |                     |       |         |
|--|---------------------------|---------------------------|---------------------|-------|---------|
|  | Uruguay                   | Latin America & Caribbean | Upper-middle-income |       |         |
| <b>2002</b>  |                           |                           |                     |       |         |
| Population, mid-year (millions)                              | 3.4                       | 527                       | 331                 |       |         |
| GNI per capita (Atlas method, US\$)                          | 4,370                     | 3,280                     | 5,040               |       |         |
| GNI (Atlas method, US\$ billions)                            | 14.8                      | 1,727                     | 1,668               |       |         |
| <b>Average annual growth, 1996-02</b>                        |                           |                           |                     |       |         |
| Population (%)   | 0.7                       | 15                        | 12                  |       |         |
| Labor force (%)  | 11                        | 2.2                       | 18                  |       |         |
| <b>Most recent estimate (latest year available, 1996-02)</b> |                           |                           |                     |       |         |
| Poverty (% of population below national poverty line)        | ..                        | ..                        | ..                  |       |         |
| Urban population (% of total population)                     | 92                        | 76                        | 75                  |       |         |
| Life expectancy at birth (years)                             | 75                        | 71                        | 73                  |       |         |
| Infant mortality (per 1,000 live births)                     | 13                        | 27                        | 19                  |       |         |
| Child malnutrition (% of children under 5)                   | ..                        | 9                         | ..                  |       |         |
| Access to an improved water source (% of population)         | 98                        | 86                        | 90                  |       |         |
| Illiteracy (% of population age 15+)                         | 2                         | 11                        | 7                   |       |         |
| Gross primary enrollment (% of school-age population)        | 109                       | 130                       | 105                 |       |         |
| Male   | 110                       | 131                       | 106                 |       |         |
| Female   | 109                       | 128                       | 105                 |       |         |
| <b>KEY ECONOMIC RATIOS and LONG-TERM TRENDS</b>              |                           |                           |                     |       |         |
|  | 1982                      | 1992                      | 2001                | 2002  |         |
| GDP (US\$ billions)  | 9.1                       | 12.9                      | 18.6                | 12.3  |         |
| Gross domestic investment/GDP                                | 19.8                      | 15.4                      | 13.5                | ..    |         |
| Exports of goods and services/GDP                            | 14.3                      | 20.4                      | 18.7                | ..    |         |
| Gross domestic savings/GDP                                   | 16.8                      | 16.2                      | 12.3                | ..    |         |
| Gross national savings/GDP                                   | ..                        | 14.6                      | 10.7                | ..    |         |
| Current account balance/GDP                                  | -2.6                      | -0.1                      | -2.8                | ..    |         |
| Interest payments/GDP  | 2.0                       | 16                        | 2.2                 | 3.2   |         |
| Total debt/GDP   | 29.0                      | 35.5                      | 52.3                | 85.5  |         |
| Total debt service/exports                                   | 30.5                      | 18.8                      | 36.0                | 32.9  |         |
| Present value of debt/GDP                                    | ..                        | ..                        | 53.2                | ..    |         |
| Present value of debt/exports                                | ..                        | ..                        | 240.9               | ..    |         |
|  | 1982-92                   | 1992-02                   | 2001                | 2002  | 2002-06 |
| <i>(average annual growth)</i>                               |                           |                           |                     |       |         |
| GDP  | 2.7                       | 12                        | -3.4                | -10.8 | 2.0     |
| GDP per capita   | 2.1                       | 0.5                       | -4.1                | -11.3 | 1.5     |



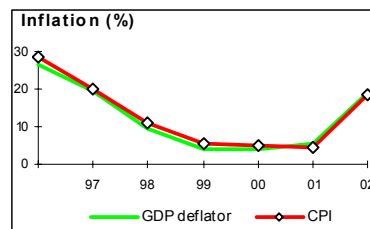
#### STRUCTURE of the ECONOMY

|                                | 1982 | 1992 | 2001 | 2002 |
|--------------------------------|------|------|------|------|
| <i>(% of GDP)</i>              |      |      |      |      |
| Agriculture                    | 11.0 | 8.8  | 6.4  | ..   |
| Industry                       | 29.4 | 32.8 | 26.6 | ..   |
| Manufacturing                  | 19.8 | 24.8 | 16.6 | ..   |
| Services                       | 59.6 | 58.4 | 67.0 | ..   |
| Private consumption            | 67.5 | 72.2 | 74.2 | ..   |
| General government consumption | 15.7 | 11.6 | 13.5 | ..   |
| Imports of goods and services  | 17.3 | 19.6 | 20.0 | ..   |
| <i>(average annual growth)</i> |      |      |      |      |
| Agriculture                    | 1.4  | 0.9  | -5.1 | ..   |
| Industry                       | 2.1  | 0.5  | -5.6 | ..   |
| Manufacturing                  | 2.3  | -0.4 | -6.2 | ..   |
| Services                       | 3.4  | 3.1  | -1.8 | ..   |
| Private consumption            | 3.4  | 3.2  | -2.7 | ..   |
| General government consumption | 2.1  | 2.1  | -1.3 | ..   |
| Gross domestic investment      | 1.6  | 1.9  | -7.7 | ..   |
| Imports of goods and services  | 5.9  | 5.6  | -7.7 | ..   |



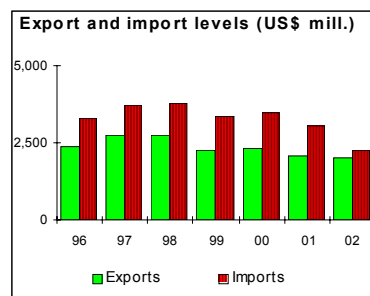
## PRICES and GOVERNMENT FINANCE

|  | 1982 | 1992 | 2001 | 2002 |
|--|------|------|------|------|
| <b>Domestic prices</b>                     |      |      |      |      |
| <i>(% change)</i>                          |      |      |      |      |
| Consumer prices                            | 0.0  | 68.4 | 4.3  | 13.3 |
| Implicit GDP deflator                      | 13.2 | 59.6 | 5.3  | 13.8 |
| <b>Government finance</b>                  |      |      |      |      |
| <i>(% of GDP, includes current grants)</i> |      |      |      |      |
| Current revenue                            | ..   | 17.4 | 19.8 | 20.8 |
| Current budget balance                     | ..   | 2.3  | -2.7 | -2.6 |
| Overall surplus/deficit                    | ..   | 0.7  | -4.4 | -3.4 |



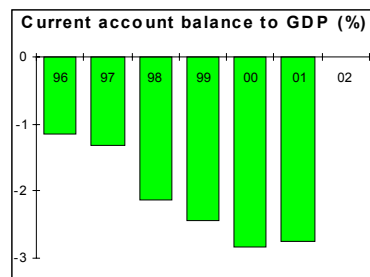
## TRADE

|                               | 1982  | 1992  | 2001  | 2002  |
|-------------------------------|-------|-------|-------|-------|
| <i>(US\$ millions)</i>        |       |       |       |       |
| Total exports (fob)           | 1,023 | 1,703 | 2,060 | 2,040 |
| Meat                          | 290   | 383   | 517   | 512   |
| Vegetables                    | 152   | 181   | 292   | 289   |
| Manufactures                  | 435   | 923   | 967   | 957   |
| Total imports (cif)           | 1,110 | 2,058 | 3,061 | 2,261 |
| Food                          | 69    | 188   | 279   | 206   |
| Fuel and energy               | 115   | 260   | 469   | 347   |
| Capital goods                 | 286   | 742   | 824   | 609   |
| Export price index (1995=100) | ..    | 88    | 82    | 90    |
| Import price index (1995=100) | ..    | 98    | 92    | 91    |
| Terms of trade (1995=100)     | ..    | 90    | 89    | 99    |



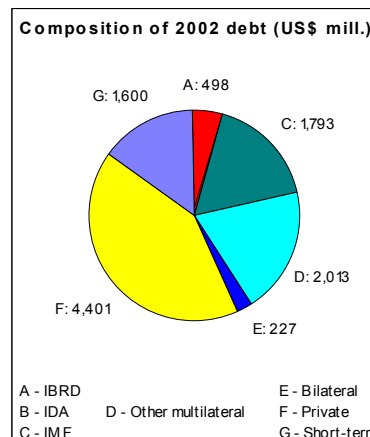
## BALANCE of PAYMENTS

|   | 1982    | 1992  | 2001  | 2002  |
|---|---------|-------|-------|-------|
| <i>(US\$ millions)</i>                  |         |       |       |       |
| Exports of goods and services           | 1,537   | 2,558 | 3,272 | 3,066 |
| Imports of goods and services           | 1,586   | 2,515 | 3,675 | 2,860 |
| Resource balance                        | -48     | 43    | -403  | 206   |
| Net income                              | -107    | -107  | -115  | -202  |
| Net current transfers                   | ..      | 29    | 43    | 39    |
| Current account balance                 | -235    | -9    | -513  | ..    |
| Financing items (net)                   | -102    | 108   | 1,030 | ..    |
| Changes in net reserves                 | 417     | -109  | -518  | 1,082 |
| <b>Memo:</b>                            |         |       |       |       |
| Reserves including gold (US\$ millions) | ..      | 1,050 | 3,341 | 2,259 |
| Conversion rate (DEC, local/US\$)       | 1.39E-2 | 3.0   | 13.3  | 21.3  |



## EXTERNAL DEBT and RESOURCE FLOWS

|                                      | 1982  | 1992  | 2001  | 2002   |
|--------------------------------------|-------|-------|-------|--------|
| <i>(US\$ millions)</i>               |       |       |       |        |
| Total debt outstanding and disbursed | 2,647 | 4,571 | 9,706 | 10,532 |
| IBRD                                 | 85    | 521   | 544   | 498    |
| IDA                                  | 0     | 0     | 0     | 0      |
| Total debt service                   | 513   | 524   | 1,476 | 1,275  |
| IBRD                                 | 13    | 75    | 111   | 99     |
| IDA                                  | 0     | 0     | 0     | 0      |
| Composition of net resource flows    |       |       |       |        |
| Official grants                      | 0     | 12    | 6     | ..     |
| Official creditors                   | 41    | 147   | 114   | 379    |
| Private creditors                    | 201   | 150   | 478   | -31    |
| Foreign direct investment            | 0     | 0     | 318   | ..     |
| Portfolio equity                     | 0     | 0     | 0     | ..     |
| World Bank program                   |       |       |       |        |
| Commitments                          | 0     | 76    | 52    | 0      |
| Disbursements                        | 22    | 174   | 65    | 29     |
| Principal repayments                 | 7     | 45    | 73    | 75     |





## Annex 15: Incremental Cost Analysis

### **Introduction**

This project will promote sustainable land management practices incorporating biodiversity as another component of the spectrum of products from the rural landscape in Uruguay. The entire project will promote the integration of sound management practices of natural resources and biodiversity and the GEF-funding will be used to promote the incorporation of biodiversity within the general framework of analysis prioritizing key biodiversity areas. Uruguay is one of the few places over the world with extensive savannas interspersed with other key habitat types which have been used for agriculture and livestock production since the Spanish colonization and is the basis for the economy of the country. Uruguay is well endowed with natural resources for livestock and agricultural production, most of the times overlapped with key biodiversity areas which were not known or acknowledged until recently. The combination of agriculture and agro-industry sectors represent up to 23 percent of the country's Gross Domestic Product (GDP). But, even this figure belies the combined importance of these two sectors to the economy as a whole; over half of their output is exported, and in the early 2000s represented over 70 percent of Uruguay's total export earnings. This importance in the economic sector has been achieved without much regard towards biodiversity conservation. Major threats to biodiversity conservation and natural resources are inappropriate management of livestock and natural grasslands, introduction of alien species, overgrazing, natural grassland forestation with exotic species, irrational burning, dam constructions, urbanizations, non ecofriendly practices of certain crops such as rice plantations, and some other minor threats. These practices have been carried out by small, medium-sized farming operations mainly, being large-sized operations in most of cases left important tract of natural habitats.

The development of the rural landscape for production is now recognized to have advanced with some practices negative for the conservation of the rich natural resources, mainly biodiversity in a highly productive rural country. The constraints limiting the adoption of sound conservation practices that have impeded integrated and cross-sectoral approaches to lead sustainable landscape management are, amongst others, a) limited policies to promote sustainable patterns and support for the adoption of integrated approaches; b) limited technical assistance and the need for additional financial incentives for sustainable land use; c) limited resources if any to support targeted research important for biodiversity conservation and enhanced opportunities raising at the global level such as environmental services and carbon sequestration; d) lack of integration of conservation and traditional development, including areas of importance for a unique biodiverse habitats; e) lack of information and a general vision of the landscape ameliorating the natural resources and including biodiversity into the productive sector of the country.

In light of this situation the national government, based upon the experience derived from Prenader and Bañados del Este Projects, has decided to promote natural resources and biodiversity management techniques at the national level focused on the small and medium-sized landowners, who are in charge with the pertinent governmental support to change the unsustainable use of their lands and promoting the conservation of natural resources and biodiversity, mainly located in private hands. Little if any support has been given to such a different view of doing landscape management and this strategy has been mentioned as a priority in the Biodiversity Conservation Strategy.

### **The baseline scenario**

Preliminary surveys conducted by the preparation team have not identified governmental or civil society projects for the conservation of biodiversity. The only baseline information which can be included in this analysis is the operations of the GEF in Bañados del Este GEF UNDP-sponsored Project, already finished, which left ideas of how to improve the actions and lessons learnt are key part of this initiative.

The other example is Prenader, with clear steps left for the future of a second Prenader to which this GEF is fully blended. Under the baseline scenario, policy and capacity development for environmental and natural resources planning is left; e.g. provision of technical assistance for participatory landowners planning and the microcatchment-focussed initiatives.

Prenader II or “Integrated Natural Resource and Biodiversity Management in Uruguay” will provide the general framework of operation for the entire project, with provision of technical assistance and credit lines to small and medium-sized farmers who will propose strictly production-oriented projects to promote increased agricultural and livestock production, including some activities to promote improved natural resources management. Recent performance of the agriculture sector, however, indicated that, in general terms, the sector was reacting positively to market signals and did not require special assistance to increase growth. There was, nevertheless, an underlying threat that, if special incentives and technical assistance were not given to farmers there was a real danger that high rates of growth in agricultural and livestock production would be achieved at the expense of the country’s natural resources base. Consequently, in the light of the conclusions of the ESW, it was decided to opt for a project that would concentrate on promoting improved natural resources management and mainstream agricultural biodiversity in the integrated on-farm natural resources management plans.

The proposed Prenader II will promote natural resources and biodiversity management, by financing demand-driven activities to promote sustainable management of natural pastures; improved cultural practices in rainfed agriculture; and consolidation and expansion of Prenader I’s activities in irrigated agriculture and dairy farming. This component would be implemented through a Fund, in which farmers would compete for financial resources for their investment proposals according to clear selection and eligibility criteria to be defined. Furthermore, support services, will include training and technical assistance to farmers, institutional strengthening of local and central authorities, and specialised training for agronomist and technical staff providing technical assistance to farmers. These activities will be carried out under the leadership of a Project Coordination Unit, which would be responsible for overall project execution and the Monitoring and Evaluation System. Within this framework, the GEF will finance the incremental costs associated to incorporate biodiversity in this general productive landscape using improvement, incorporation, adoptive management skills at the farmers’ level and at the same time providing a participatory framework of the biodiversity landscape in the country and pilot demonstration areas.

In the absence of the GEF funding, the implementation of the aforementioned activities, some of them already on-going after Prenader I and which will be continued and reinforced in Prenader II, will contribute to the project goal of integrating natural resource management systems; nevertheless, biodiversity component will not be included especially because this component has yet to show its benefit to the landowner who will not commit into a long-term commitment and be investing for potential future reimbursement on an activity that not shown locally the benefits herein explained. The GEF will generate global benefits by increasing biodiversity of soils, pastures and the general landscapes, enhance the potential of the country to contribute positively to the carbon balance and create the conditions for survival and enhancement of wildlife populations in key biodiversity areas. It would thus finance technical assistance, rural infrastructure, management guidelines and services to small farmers, as well as to create the general vision of the biodiversity in the country under an ecological planning. However, the baseline would not address more far-reaching interventions funded by global transfers, as it would not support particular aspects mainly focused on for example restoration and rehabilitation of non-productive or fragile areas within the microcatchments, the connectivity of fragments of importance to biodiversity, the entire vision of the ecological landscape to perpetuate biological resources, as well as investment of high-risk as those related to conservation of biodiversity in which the country has little experience.

## **The GEF alternative**

The proposed GEF alternative and the existence of its insertion into Prenader II would achieve significantly greater conservation of threatened biodiversity of global importance, not only at the species/population level but also at the site and landscape levels in selected areas of importance for biodiversity within this unique habitat type found in Uruguay. Increased community participation and organization for biodiversity management, pilot demonstration projects developed jointly with landowners, donations to landowners with sound projects showing an integrated management of natural resources and the compliance with environmental legislation at the international and national level, proposed by this alternative strategy of blending the GEF to Prenader II, will in turn increase sustainability of interventions and will demonstrate the importance of mainstreaming biodiversity in the rural productive sector. Benefits of supporting this innovative way of biodiversity management outside Pas, working with private landowners to build on biodiversity friendly activities, increase the national capacity of managing natural resources and take advantages of the global opportunities arising, and enhancing the conservation of an ecosystem of such global importance, has to occur predominantly with the support of the global level and there warrant GEF funding.

The GEF in this way presented as part of Prenader II will orient the agricultural and livestock baseline operations through the introduction of a cross-sectorial approach in support of sustainable land use practices in benefit of biodiversity within an ecosystemic approach. GEF resources will cover the incremental costs associated with a) the development of appropriate strategies for the adoption of sound rural practices, b) the inclusion of biodiversity of global importance as part of the natural resources management in Uruguay, c) participatory and awareness support and efforts, d) capacity building amongst producers, leaders, managers and implementing agency, e) design and implementation of an incentive program for biodiversity conservation, f) needed research to validate appropriate technologies and practices, and finally g) M&E and communicational aspects to secure implementation excellence and replicability of sound practices.

The total cost of this Project with this GEF Alternative is estimated at US\$ 40 million, which would be financed by a Bank loan of US\$ 30 million, a GEF Grant of US\$ 7 million, and Government counterpart funds of about US\$ 3 million. In addition, beneficiaries' contribution would be about US\$ 50 million. Tentatively, about 90% of project resources would be allocated to investment in improved natural resources and biodiversity management activities; about 8% to support services, and the remaining 2% to the Project Unit and the M&E System. The US\$ 7 million GEF-contribution to match incremental costs will be allocated in the following way, 64,3% (US\$ 4,5 million) for demand-driven support from the Fund for Promotion of Biodiversity Sustainable Practices, 21,4% (US\$ 1,5 million) for the implementation of pilot areas, 10% (US\$ 0,7 million) for institutional strengthening and 4,3% (US\$ 0,3 million) for project coordination, thus the GEF follows the same criteria of funding allocation to the overall project.

With the GEF alternative, the Government of Uruguay and the other institutions working in partnership as municipalities, academia and NGOs will be able to experience a challenging program at the national level and mainly focused on key biodiversity areas encompassing both national and global benefits, enhancing the conservation of threatened and vulnerable species and habitats in Uruguay and assisting the productive force of the country with effective implementation of sustainable rural and environmental initiatives. The co-financing of this GEF-supported project will be done by a contribution of US\$ 11 million from the Bank loan and beneficiaries contribution, and an estimated contribution of US\$ 1 million from the government.

## **Incremental costs**

The difference between the costs of a baseline scenario where only the Bank loan will be implemented is about 7% given the contribution of the GEF's contribution. This 7% to be contributed by the GEF will make it possible to mainstream biodiversity as another key environmental source of creating rural development, by investing in sound practices, co-sharing farmers' investments and creating the capacity at the local and national level under the "umbrella" incremental costs of technical assistance, training, workshops and other services such as public awareness media campaigns, infrastructure, equipment, travel and subsistence allowances. The contribution from the GEF would be combined with the baseline committed by the Government to promote biodiversity conservation and use into the general natural resources management project. The GEF investment will promote the investment of US\$ 1 million from the government and a combined (loan and beneficiaries) co-financing of US\$ 11 million. The following tables show by components the total costs of the GEF contribution for biodiversity inclusion in the "Integrated Natural Resource and Biodiversity Management in Uruguay".

| <i>Biodiversity component within the "Integrated Natural Resource and Biodiversity Management in Uruguay"</i> |                          |   |                  |
|---|--------------------------|---|------------------|
|   | <b>Total Cost * 10 M</b> | <b>Matching * 10 M<br/>Gov &amp; loan</b> | <b>GEF * 10M</b> |
| <b>Comp. 1: Fund for promotion of SUB</b>   | <b>9,50</b>              | <b>5,00</b>                               | <b>4,50</b>      |
| <b>Comp. 2. Implementation of Pilot Areas</b>   | <b>5,00</b>              | <b>3,50</b>                               | <b>1,50</b>      |
| <b>Comp. 3. Institutional Strengthening</b>   | <b>3,20</b>              | <b>2,50</b>                               | <b>0,70</b>      |
| <b>Comp. 4: Project Coordination</b>  | <b>1,30</b>              | <b>1,00</b>                               | <b>0,30</b>      |
| <b>Totals</b>   | <b>18,00</b>             | <b>12,00</b>                              | <b>7,00</b>      |

**Component 1. Fund for Promotion of Sustainable Use of Biodiversity (FPSUB) (Total Cost \$ 9.5 million = GEF contribution \$ 4.5 million / Matching Funds \$ 5.0 million)**

Based upon a demand-driven strategy, activities to promote sustainable biodiversity management of natural pastures will be implemented through a Fund, in which farmers would compete for financial resources for their investment proposals according to clear selection and eligibility criteria to be defined. Improved livelihoods of small- and medium-sized farmers living in key areas for biodiversity conservation will be prioritized and integrated natural resources management projects will be implemented. Five main areas of project are expected to be generated by this demand-driven approach, as follows:

1.1.- Conservation and sustainable use of natural pastures. This subcomponent is expected to contribute to the maintenance, recovery and improvement of natural pastures, working with native species in systems of intensive use with crop rotations, providing alternatives for multiple use of natural pasture lands (honey, medicinal, nutritional, ornamental and other uses) and implementing soil protection techniques in riparian areas to conserve and improve hydrological system. This component will be accompanied by training, technical assistance and sharing of experiences in the conservation and sustainable use of biodiversity in natural pastures.

1.2 Sustainable management of timber and non-timber products from native forests. This subcomponent is expected to contribute in implementing forest conservation initiatives by utilizing forestry management techniques (thinning, pruning, enrichment, recovery, etc.) and improving native forests with reintroduction, reforestation and restoration of native forests. The multiple use of forests (resins, honey, fruits, medicinal, ornamental, etc.) will be promoted and activities will be accompanied by training, technical assistance and sharing of experiences in conservation and sustainable use of biodiversity in native forests.

1.3 Management and conservation of native fauna. This subcomponent will be based upon the fauna resources of the country, some of which are already under use and others are still to be implemented. The subcomponent will try to invest in implementation of farming practices for native species with different purposes (slaughtering by-products, pets, breeding-stock, etc.), ranching practices for native species (slaughtering by-products, pets, breeding-stock, etc.), development of strategies for restoration of degraded habitats for native fauna species and any other type of innovative way of conserving and making sound use of wildlife. Training and extension services will also be provided.

1.4 Generation of silvo-pastoral initiatives. This subcomponent will seek the implementation of combined activities to promote livestock production in native landscapes by implementing practices to recover the natural biodiversity of forest-pasture ecosystem, by improving cattle-raising in forest areas, for purposes of certification. Training, technical assistance and sharing of experiences in agro-silvo-pastoral systems with native species will be provided.

1.5 Development of rural tourism based on natural native species. Based on the experiences already existing in the country, this subcomponent will enhance the role of biodiversity-based tourism by supporting implementation of agro-ecotourism experiments, ecotourism and nature tourism experiments, ranch tourism experiments and at the same time providing training, technical assistance and sharing of experiences in rural tourism and agro-biodiversity.

**Component 2. Implemented of Pilot Areas. Total cost of \$ 500 million of which \$ 1,50 million would be invested by the GEF with a baseline contribution of \$3,50 million.**

This component will implement demonstrative areas of sustainable use of natural resources in key microcatchments which are of importance for biodiversity, combining sound practices for natural resources management and creating increased public awareness of significance and socioeconomic importance of biodiversity. The areas of importance for biodiversity will be established based upon a generation of a biological vision and eco-regional planning of the project's intervention areas

**Component 3. Institutional Strengthening. Total cost of \$3,20 million of which \$ 0,70 are requested from the GEF with a baseline of \$ 2,50 million.**

This Component will be focused on the strengthening of institutions responsible for biodiversity conservation, facilitating an increased capacity to support sub-regional needs in biodiversity conservation, creating international awareness of project concepts and achievements, creating the national capacity for carbon balance projects and facilitating both the operation of the Geographic Information System and the the management and marketing capacity in the private sector

**Component 4: Project Coordination. A total investment of \$1,30 millions, of which with a baseline of \$ 1,00 million to be contributed by the government, the GEF is requested to invest \$ 0,30.**

This component will have all the coordination of the Project, including the administrative structure and the implementation of the monitoring and evaluation.

## **Project Review**

**Project Title: Integrated Ecosystem and Natural Resources Management in Uruguay**

**Executing Agency: Ministry of Agriculture, Livestock and Fisheries, Uruguay**

**Reviewer: Enrique H. Bucher**

**Date February 28, 2004**

### **1. PROPOSAL'S GLOBAL PRIORITY AND RELEVANCE IN THE AREA OF THE BIODIVERSITY PROTECTION**

This proposal deals with a region of significant biodiversity and ecological value. Uruguay still holds large portions of little-modified, temperate ecosystems of great conservation value. They include grasslands, savannas, native forests and wetlands. Of particular importance are native grasslands, which represent a still vast but constantly decreasing portion of the grasslands than once covered Pampas of Uruguay, Argentina, and Southern Brazil. It is worth mentioning that the Pampas grasslands in Argentina disappeared almost completely early in the XX century.

Native ecosystems in Uruguay are under significant and rapidly increasing threats because of rapid changes in land-use patterns that are taken place, particularly since the 1990's. Unless adequate measures are taken, it is very likely that present trends will accelerate a rapid loss of natural capital in Uruguay. Accordingly, pre-emptive actions aiming at the integration of sustainable production systems, from the individual property to the basin and landscape scale, are fully justified and timely. This approach is particularly important regarding conservation outside protected areas, which deserve special consideration because of the very small number and limited extension of protected areas in Uruguay.

In summary, this proposal is accordance with GEF objectives, particularly regarding conservation of grasslands, one of the most endangered ecosystems in the world.

#### **SCIENTIFIC AND TECHNICAL SOUNDNESS**

The strategy selected, based on developing compatible, complementary activities that enhance conservation, sustainability and productivity of current production systems is appropriate for Uruguay. Integration of landscape management, basin management, and multiple production systems that incorporate biodiversity conservation as a primary goal is an attractive and desirable concept.

Obviously, it implies a demanding challenge, particularly in terms of designing and making compatible multiple-use systems, which in some case imply conflicting demands in terms of land-use and management practices.

The present version of the proposal has however some components that would require being expanded or improved in order to strengthen its technical soundness, particularly regarding: a) diagnostic, b) focus and scale, b) biodiversity conservation, and c) feasibility analysis.

### ***Diagnostic***

In the diagnostic analysis of the main environmental problems affecting Uruguay, no consideration is given to expansion of forest plantation and agriculture, two critical factors that are displacing other land uses in the native grasslands and savannas ecoregion. As mentioned in the proposal, *“The area under plantation has grown by close to 800% in the 1990s, and today the total area under plantation forestry covers 400,000 ha.”* Existing government policies and financial investments suggest further rapid growth of the planted area in the near future, as commented in the proposal:

In more recent years soybean expansion is also gaining momentum in western Uruguay, favored by current prices and new technological developments that allow cultivation in soils and region previously considered unsuitable for this crop.

Both factors (forestry with introduced species and agriculture) result in profound transformations of the original Uruguayan landscape, particularly because both provide higher economic returns than traditional land-uses. This situation requires, therefore, inclusion and careful analysis in this project.

RESPONSE: Both agriculture and forest plantations will be considered in the project design; while agriculture is considered in depth in the project description and the other related documents, forest plantations are included in the executive summary. The combination of agriculture and the agro-industry sector represent a large portion of the national economy (up to 23 percent of the country's Gross Domestic Product, GDP), with over half of their output exported, and representing over 70 percent of Uruguay's total export earnings. Subsidies applied to the forestry sector has promoted the expansion of exotic plantations, mainly of Eucalyptus with an area under of 400,000 ha.; such industry is not, *per se*, supportive of biodiversity conservation since based upon an exotic species has produced various negative environmental impacts. The expansion of soybeans is a new threat to biodiversity mainly in the western part of the country. Though both production systems could impact negatively on biodiversity, this project would address conservation strategies of these two potential threats as part of implementation within the target areas.

### ***Focus and scale.***

The project is tailored around a holistic approach at the landscape, basin, and individual property levels, according to the following statements:

*“The key focus of this project is the promotion of biodiversity-friendly, multiple-use land use practices, within a landscape approach. Under this approach, it is possible to promote the adoption of land-use practices that exploit the synergies that exist between biodiversity conservation and opportunities for rural income generation.”*

*“ From a biodiversity perspective, what is key is the promotion of a geographic configuration that maintains the mosaic nature of Uruguay’s original habitats, restoring biological corridors through a diversified rural landscape.”*

However, specific themes assigned to consultants suggest emphasis on actions aimed at promoting changes in production systems at the individual property scale, with little consideration to integration at the basin and/or landscape scales. This limitation is clearly seen in the following statement:

*“As explained earlier, the project will tailor activities to each of the production systems currently in use in Uruguay. Such systems will be used as a first “filter” to define the type of mainstreaming activities to be financed by the GEF. Nevertheless, the geographic areas of implementation have been broadly defined, and do not overlap with any of the other GEF-financed projects in Uruguay.”*

If site selection is guided by production system alone with no consideration to the basin/landscape scale, then it is unlikely that isolated actions at the individual property will succeed in influencing higher geographical levels of management. What a reader of this proposal would expect is to focus actions in specific landscapes/basins units, in which actions at all levels (basin, landscape, and individual property) could be integrated under the proposed holistic approach. Otherwise, it is difficult to conceive how expertise in basin and landscape management may be integrated with promotion of alternative, sustainable production systems. For example, what would be the criteria for suggesting conservation of a given forest or grassland patch to land owners interested in developing eco-tourism and biodiversity conservation? Survival of key species and biodiversity in general would require a landscape approach that goes beyond the individual farm or ranch.

Moreover, when landscape integration is mentioned, it would be desirable than this approach was made explicit in a more technical way, reflecting “state of the art” landscape ecology and management sciences. In summary, showing appropriate integration of the proposed actions at different landscape levels and production systems would strengthen the technical consistency of this proposal.

RESPONSE: As part of the preparation of the project, the country was divided in production areas and these areas were overlapped with natural communities and land aptitudes including the already known sites where natural vegetation is still found. This guided the site selection firstly by production system, giving us clear ideas that the GEF component would not be investing in highly modified habitats or areas where natural pastures have completely disappeared and the exotic species were introduced, or in forest plantations areas. Once these considerations were met, key areas were selected such as the “*basalto*” and the “*quebradas*” in the north and eastern parts of the country, within those large areas a criteria based in basin/landscape scale will be promoted and thus individual property or a group of farms would succeed in influencing higher geographical levels of management. Because of its demand-driven nature, the project would propose thematic areas of potential interventions but this has to be generated by the demand but the “state of the art” in landscape ecology and management sciences will be included as part of the development of the full proposal. The integration of the proposed actions at different landscape levels and production systems will strengthen the technical consistency of the project proposal.



### ***Biodiversity conservation***

The biodiversity component is based on the assumption that promotion of economic exploitation native fauna through consumptive use or ecotourism will ensure biodiversity conservation, as part of the integrated ecosystem management practices. However, the scientific and technical justification of this assumption is not made explicit. It would be advisable to add clarifications on the following specific points

- a) Economic utilization of most of the listed species is already in practice. In most cases, it is based on captive breeding more than in ranching of free or semi-captive populations (see previous PROBIDES experience, for example). Captive breeding has limited influence in land-use practices. More details are needed to understand how captive breeding will improve biodiversity conservation and how it will be integrated in practice with other land-uses.
- b) Other wildlife species widely used in “sport-hunting tourism” activities are not included in the proposal (particularly doves). They are becoming a very important economic activity in Uruguay.
- c) No actions are considered for the protection of threatened or endangered species. For example, a specific management plan for such a charismatic species as the Pampas deer would be expected as an important component of this project. This is valid also for other typical grassland species such as the Red Tinamou (*Rhynchotus rufescens*) and *Sporophila* grass-eater birds.
- d) The same applies for native grass and herb species. Many of them have considerable potential for pastures, although in many cases adequate research is lacking, despite important efforts made by several Uruguayan academic and research groups. As mentioned earlier, overgrazing and expansion of introduced pastures threatens survival of native grass species.
- e) Lack of any consideration on protected areas in this proposal weakens the scientific and technical soundness of the project, particularly because it is based on a holistic, landscape-based approach. Grasslands and savannas are extremely endangered ecosystems around the world. Unless some action is taken, it is very likely those native grasslands in Uruguay (and its associated fauna like the Pampas deer) may disappear, as already happened in the Argentinean pampas. This unique opportunity deserves careful consideration. Moreover, the need for protected areas is also supported by the priorities and criteria stated in Uruguay’s National Biodiversity Strategy for *in situ* conservation.

|   |
|---|
| RESPONSE: All these aspects are already in part considered in the full proposal but the recommendations are pertinent to produce a better document. Support to captive breeding is expected to be limited as the project aims to support either ranching operations requiring habitat management, or farming operations in liaison with other operations requiring habitat conservation. Game and other species with hunting potential are included and the full proposal |
|---|

addresses these opportunities for the country, including pigeons and doves, an important economic activity in the grassland ecosystem, generating chances to amalgamate management of population levels with income generation. Threatened or endangered species have a special consideration, in particular efforts are being placed on the charismatic Pampas deer for which plans to find compatibility between pasture production for livestock and Pampas survival as being both part of the landscape. The same applies for the Red Tinamou (*Rhynchotus rufescens*) and *Sporophila* grass-eater birds, native grass and herb species for which special plans will be developed in cooperation with stakeholders especially trying to bring together the Academia and NGOs. Regarding the lack of any consideration on PAs, the proposal addresses in its concept the existence of a very weak system of protected areas and a legal framework that is not conducive to any significant change to the current status. The government of Uruguay is convinced on the need to complement its fledging system of protected areas with aggressive conservation efforts outside the PAs. The key concept to achieve biodiversity conservation outside Uruguay's system of protected areas would be the promotion of biodiversity-compatible, multiple land-use practices, within a landscape approach. Under this approach, this project would work outside PAs and will promote the adoption of land-use practices that exploit the synergies that exist between biodiversity conservation and opportunities for rural income generation. Some of these practices of "integrated ecosystem management" may include a combination of the following land-uses: as a) maintenance of scenic beauty for rural tourism and recreation, b) wildlife ranching, c) integrated savanna ecosystem management, d) silvopastoral systems, e) wildlife hunting.

### ***Feasibility analysis***

The proposal does not make clear the specific strategy to be used to promote Integrated Ecosystem and Natural Resources Management in Uruguay, besides extension and outreach (courses, workshops, etc.) and support for initiatives at individual property level. However, it is clear that in most cases, unless some corrective policy is in place, commodity prices will dictate land-use preferences despite the conservation and sustainability values of other alternatives.

The same consideration applies for organizing the landscape at scales over the individual property (basin or any other management unit), one of the key aspects of the integrated ecosystem management approach driving this proposal. The general trend in Latin America is that, because of an almost complete lack of effective land-use planning policies, the landscape structure is driven almost exclusively by market forces. It would be useful if consideration and analysis were given to incentive mechanisms that Uruguay could apply to promote sustainable, conservation friendly land use at the landscape/basin scale. Moreover, these considerations should be matched against existing incentives for alternative land-uses, such as Eucalyptus plantations. Perhaps a consultant in this area could provide useful contributions.

Some statements in the proposal may answer my previous considerations, but unfortunately they do not provide enough details: "*Some of these practices of integrated ecosystem management will include a combination of various land-uses, whose relative emphases will be determined by the local conditions, the feasibility of implementing an **incentive framework**, the ability for market-based mechanisms to support these land-uses, and their relative contribution to conservation*"

RESPONSE: This proposal has been produced as a result of many years of working with the GOU and including a focus on incentives should have to be consulted with the national authorities regarding a particular consultancy on environmental services, it was concluded that the incentives based on tax considerations was not appropriate at present. Despite this the project would support the development and implementation of some innovative economic tools and approaches (such as promotion of market development and business opportunities, biodiversity-friendly production systems, consumer awareness-building, and others) as well as the creation of new incentives mainly based on development of necessary human and institutional capacities to promote sustainable solutions in agricultural biodiversity conservation, including training, demonstration, technology transfer etc.

### **Adequacy and cost-effectiveness of the project design**

According with the information presented, the project design is sound and has good possibilities of achieving its goals. The fact that both the development and conservation agencies in Uruguay work in coordination increases the chances of effective implementation of the proposed actions.

My only comment regarding this topic is the apparent lack of adaptive research needed for adapting the proposed actions that will emerge from the consultancies to the Uruguayan conditions. My impression is that development of new production alternatives and/or their integration in existing production items inevitably require adaptive research. This research appears necessary in between the recommendations made by the consultant and the practical, generalized implementation of the corresponding practices. This gap would require some kind of experimental and development period, probably in close connection with academic and research organizations such as universities, INIA, etc. Moreover, this research may also contribute to improve the monitoring component of the project. An additional benefit of this approach would be to help to develop local expertise in Integrated Ecosystem and Natural Resources Management in Uruguay.

RESPONSE: Though adaptive research was one of the tools and mechanisms to achieve the goals, given the pertinent reviewers' comments, this will be addressed during the coming weeks and given much more importance before the appraisal mission to be consistent with the strategy of the project.

### **Miscellaneous comments**

- 1) **Title**: the project title is very wide in scope and does not reflect exactly its goals. My suggestion is to consider a more focused alternative.
- 2) **Connection between this project and Prenador** should be made more explicit. As stated, it appears like if more irrigation projects will be developed with some consideration to the environment, but the articulation with integrated ecosystem management is not clear besides the following very general statement. *“This GEF project is fully-blended with an IBRD loan that will promote the adoption of integrated production systems in agricultural production systems and livestock landscapes to increase productivity within a holistic ecosystem and*

*natural resources management while conserving soils, water, grasslands and biodiversity.”* More specific details would be useful to clarify the articulation between these projects.

- 3) **Carbon balance and methane.** The proposal states that *“Since the emission of both gases are the result of inefficiencies in the production system, a reduction of the emissions would also lead to better results for the farmers (higher nitrogen use efficiency, and more efficient conversion of animal feed into milk, meat, and wool.)”*. Please consider also that the solution proposed is an increased N fertilization and replacement of native grasslands, which conflicts with the following statement also in the proposal: *“farmers seek increasing productivity levels and therefore, introduce exotic grasses and legumes and apply fertilizers in the natural rangelands. These practices result in higher livestock productivity levels and consequently increased farmer’s income. On the other hand, alterations of the natural rangelands represent a clear threat to preserving native species and reducing biodiversity.”*
- 4) **Carbon balance:** Any analysis of carbon balance in rural Uruguay should include forest plantations of introduced species and agricultural areas, and not only native grasslands and savannas. Another point of concern is to what extent a consultancy and the use of general models may replace the basic research needed to assess carbon balance in Uruguay with the required accuracy. Here again, a research component appears necessary.

RESPONSE: All these recommendations will be considered during the final phases of project preparation. Especially regarding the carbon balance, the project aims to create the capacity at the national level to prepare well sustained projects of carbon balance including the three main pillars of economic, environmental and social sustainability, based on research to have country information on carbon and carbon balance measurements. The link with the loan financed components and how the synergies are expressed will be better described in the project Summary and Brief.

### **Feasibility of implementation, operation and sustainability**

According with the strategy adopted in the proposal, implementation, operation and maintenance in the long term appear feasible. However, a critical question is whether innovative concepts in integrated ecosystem and natural resource management will be permanently adopted by Uruguay’s government structure and the local communities. That would probably require further steps and projects according with the results obtained by this project.

Another critical question is which kind of land-use policy will be adopted in Uruguay taking into consideration the experiences gained in this stage. It would be advisable to consider these questions during the development of this project.

RESPONSE: This issue raised is also one raised during the project preparation phase and a key element for the sustainability of the practices to be carried out. The Ministry of Agriculture, Livestock and Fisheries has ratified its commitment to having this new holist approach to NRM management. Furthermore, the training and TA activities to be implemented as part of the support services component of the project would ensure long-term adoption of this integrated approach by beneficiaries.

**Outputs.**

Outputs are in general consistent with the project's goals, general strategy, and methodological approach. Please see also previous specific considerations,

**Identification of the global environmental benefits and/or drawbacks**

If this project is successful and protection and sustainable use of one of the last extensive, temperate grassland ecoregions remaining in South America is achieved, benefits would be outstanding. In my opinion, the opportunity is unique but greatly constrained by a very narrow time-window opportunity. The proposal fits adequately with GEF goals

**Replicability of the project**

The project has clear value and feasibility for replicability in similar ecoregions of the world.

**SECONDARY ISSUES*****Linkages to other focal areas***

The project clearly links with biodiversity, desertification, and climate change issues.

***Other beneficial or damaging environmental effects***

The project has the potential for bringing additional, positive effects to the region, including promotion of research on biodiversity and sustainable development ideas and practices in temperate ecosystems. It may also promote local public awareness on environmental issues, and integration of government agencies towards integrated regional management criteria and actions.

***Degree of involvement of stakeholders in the project***

Involvement of stakeholders seems satisfactory at the level of analysis presented in the report.

***Capacity-building aspects***

The proposed capacity building activities are useful and very broad in scope.