1. Country and Sector Background

The Economy. Since 1995, the Paraguayan economy has been virtually stagnant. This is due to a variety of factors including the successive banking crises that have affected the country, recent weaknesses in the economies of neighboring countries and unfavorable terms of trade for the agricultural and livestock sector. While important inroads are being made in the country’s service sector, especially in trade and finance, Paraguay’s economy ultimately rests on agricultural and livestock production, which account for close to 30% of GDP, generate nearly 90% of exports and employ 43% of the country’s labor force. Indeed, soy and cotton alone make up 65% of total exports. However, in recent years there has been a marked shift away from cotton, which forms the basis of small producers’ livelihoods, and towards soy. From 1996 to 1999, the country experienced a 64% decrease in the area planted with cotton.

The Agricultural Sector. Paraguay’s agricultural sector can be divided into two sub-sectors: an emerging sub-sector of capitalized entrepreneurial agriculture which has been able to respond to market signals and is primarily responsible for growth within the broader sector in recent years; and a smallholder sub-sector characterized by low-productivity, family agriculture whose main products are subsistence crops, with a connection to the market economy primarily through cotton and with very limited access to land, capital and technology as well as to social and human capital resources. Given Paraguay’s economic dependence on agriculture and livestock and their importance to the livelihoods of many Paraguayans, the use and management of land has a notable impact on production, livelihoods and natural resources. The land situation in Paraguay today is characterized by extreme inequality in tenancy and extensive titling irregularities. This situation not only makes it extremely difficult for small producers to diversify their production, thereby improving food security and increasing incomes, it is also a major disincentive to investing resources in environmentally friendly productive practices on the land, thereby protecting the basis of the country’s economy.
Poverty is one of the most pressing social issues in Paraguay today, especially in the Eastern Region where 97% of Paraguayans live, and has been increasing in recent years. In 2004, 39.2% of the total population lived below the poverty line, and in rural areas that number reached 40.1%. At the same time, 17.1% of the total population lived in extreme poverty, and 22.8% of the rural population lived in extreme poverty. In concrete terms, this means that in rural areas over 1.2 million people lived in poverty, including virtually all of Paraguay’s 85,000 indigenous people, with one in every 4.3 rural inhabitants living in conditions of extreme poverty.

Environmental Degradation. Paraguay is home to part of the Atlantic Forest which, with only 7% of its original area still extant, is regarded as one of the most threatened ecosystems in the world and characterized by a high degree of fragmentation. Less than 30 fragments larger than 10,000 ha and 12 larger than 20,000 ha existed in 1997; only one of the latter is under effective protection (the Mbaracayú Forest Natural Reserve, which is being managed with assistance from a World Bank GEF grant) while another large fragment, San Rafael National Park, has received assistance from a prior Bank loan and a GEF grant to the Secretary of the Environment. Several other ecosystems of Paraguay are considered of global and regional importance for conservation including the Cerrado and Misiones Grasslands, the Pantanal and Humid Chaco wetlands, and the increasingly threatened Dry Chaco forests.

Despite its ecological importance, Paraguay suffers from severe environmental degradation. This includes accelerated erosion, loss of soil fertility, loss of biological diversity, decreased quantity and quality of water resources, and severe deforestation, all of which highlight the need to maintain the fragile productive resource base.

One of the principal causes of this environmental degradation has been Paraguay’s model of agricultural development which has predominantly promoted short-term profits over long-term environmental sustainability. Some of the major practices which contribute to this degradation include the expansion of the agriculture frontier through the colonization of new lands, slash-and-burn agriculture, extensive grazing and the practice of mono-cultivation of cotton and, more recently, soy.

The frontier has basically vanished in the eastern region as the push to expand soy production has resulted in nearly total deforestation of the native forests (less than five percent remain). As a result of deforestation, Paraguay has reached the point of becoming a net importer of wood, creating an unneeded drain on the balance of payments, not to mention the loss of employment in the previously strong forestry sector.

2. Objectives

The project development objective is to improve the quality of life of small-scale producers and indigenous communities in the project area in a sustainable manner, by supporting actions that will strengthen local organization and self-governance, improve natural resources management and enhance the socio-economic condition of the target population.
3. Rationale for Bank Involvement

The rationale for Bank involvement lies in the experience the Bank has gained in executing projects with a similar focus. In Paraguay, the enriching experience of the implementation of the Natural Resources Management Project (PARN), which promoted an integrated model of natural resources management and agricultural extension, has allowed the Bank to accumulate sufficient experience to channel into the design of the proposed project. The Bank is also executing sustainable rural development projects in the Brazilian states of Santa Catarina and São Paulo, and implementation was recently completed for projects in Paraná and Río Grande do Sul. These projects embrace a participatory microcatchment approach and, based on Bank evaluations, are proving to be very effective. These experiences will be very useful for the proposed project given the numerous socio-economic, cultural, and technical similarities in the two countries. The participatory diagnostic focus in the more recent of these projects, which will be an essential focus of the proposed project, is much more inclusive of the environmental, social, and productive aspects in rural areas than other project initiatives that are currently being implemented, thereby promoting a more efficient allocation of resources. All this makes the Bank especially suited to assume the responsibility of assisting the Paraguayan Government in this regard.

Moreover, all ongoing Bank–financed microcatchment projects in South-Southeast Brazil and the PARN in Paraguay are integrated in an informal, technical manner. The proposed project was integrated into this network during the preparation phase. In Paraguay, it will build a strong partnership with the Bank’s Regularization of Indigenous Lands project by building on its lessons and experiences as a basis to support land titling activities.

GEF/Bank Paraguay Biodiversity Project. It will also be partially blended with the proposed GEF/Bank Paraguay Biodiversity project. The two projects will work in the same departments and will overlap in nearly half of the proposed project’s target municipalities. The proposed project will provide some US$6 million in counterpart funding to the GEF project and will implement nearly US$4 million of the GEF project’s funds in biodiversity-related activities. These activities will likely be aimed at the incorporation of a biodiversity aspect in the proposed project’s training and extension activities and the integrated management of biodiversity in the productive sphere, the latter especially in medium and large holdings, where the largest and most important forest remnants are. A draft matrix of collaboration has been prepared by MAG and SEAM, who is responsible for implementation of the proposed GEF intervention.

4. Description

The project is designed to operationalize a microcatchment area-based project strategy to address rural poverty and natural resource degradation in the Departments of Caaguazú and San Pedro, Paraguay. It uses a highly participatory and decentralized demand-driven approach to poverty amelioration and natural resources management, and a production support process for rehabilitating and attaining sustainability of degraded and low productive farming systems. The project has four main components: (a) Community Organization Development and Capacity Building; (b) Rural Extension and Adaptive Research; (c) Sustainable Rural Development Fund; and (d) Project Management, and M&E.
This six-year project will be implemented through the following components and subcomponent:

**Component 1: Community Organization Development and Capacity Building (US$1.93 million, 4.1% of total project cost).** The objectives of this component are to: (a) organize beneficiaries to participate actively in local decision-making structures both within and outside of the project; and (b) prepare project staff for the implementation of the project technical strategy aimed at adopting sustainable agriculture and rural development activities in microcatchments. It has three sub-components: Training, and Community Organization Development, and Environmental Education.

The first sub-component, Training, includes activities to build awareness and capacity relating to project strategy and approach in project technical staff (including extension agents, extension agents for indigenous communities and social organization technicians), as well as for small-holder farmers, indigenous communities and others.

The second sub-component, Community Organization Development, includes applying the targeting criteria to micro-catchments and communities for their selection and participation in the project, establishing and strengthening Microcatchment Development Committees (MDC), Indigenous Associations (IA) and Municipal Steering Committees (MSC), as well as related training and institutional strengthening activities.

The third sub-component, Environmental Education, supports education efforts focused on environmental problems to increase stakeholder awareness in dealing with these issues to improve their livelihoods.

**Main outcomes:** Beneficiary (municipal, microcatchment and community) organizations institutionally strengthened for sustainable rural development management; Project staff trained to execute project actions.

**Component 2: Rural Extension and Adaptive Research (US$8.07 million, 17.3% of total project cost).** The objective of this component is to assist small-holder farmers, community groups and indigenous communities to overcome specific technical, socio-economic and environmental constraints to allow them to shift from existing non-sustainable agricultural practices to sustainable livelihood strategies which enhance natural resources management and reduce rural poverty. It has two sub-components: Rural Extension, and Adaptive Research and Studies.

The first sub-component, Rural Extension, supports: (a) beneficiaries to prepare Microcatchment Development Plans (MDP) and Farm Investment Proposals (FIP); (b) participatory identification of community demands for social, technical and financial support arising from those plans; (c) implementation at the community level; and (d) training indigenous community and microcatchment-level community promoters to facilitate the process of knowledge management for adopting the project strategy at their respective community levels.

A second set of activities focuses on providing project beneficiaries specific technical assistance relating to agricultural and environmental practices, including: (a) sustainable land management;
(b) product intensification and diversification; (c) processing and marketing; (d) environmental protection; and (e) management skills.

The second sub-component, Adaptive Research, will finance practical technology validation and information needs to better address production and marketing issues of the project’s primary target beneficiaries (small-holder farmers and indigenous communities), as well as policy studies of special interest to decentralized local (departmental and municipal) and national sectoral institutions. This would be attempted through public-private partnerships following a competitive grants approach.

*Main outcomes:* Small-holder producers, indigenous communities and the rest of the microcatchment population trained in planning and implementing development plans and investment proposals for sustainable microcatchment management, supported by rural extension and relevant research initiatives.

**Component 3: Sustainable Rural Development Fund (US$24.88 million, 53.4% of total project cost).** The objective of this component is to finance demand-driven investments identified in the context of the Microcatchment Development Plans (MDP) and the Indigenous Community Development Plans (ICDP) which are based on a participatory local-level diagnostic and planning process supported under the Rural Extension sub-component.

The sub-projects are grouped into four categories: (a) household or individual farm level; (b) small-holders or indigenous community level; (c) municipal level; and (d) titling support for small farmers or indigenous communities. Examples of eligible activities at the farm-level will include home improvements, sanitation and production diversification; at the community level, forest and water conservation and value-added schemes; and at the municipal level, fruit nurseries and erosion control along rural roads.

The proposals for sub-projects are to be prepared by eligible project beneficiaries with support from project extension agents, screened first by Microcatchment Development Committees (MDC) or in the case of indigenous people by Indigenous Associations (IA). Applications will then be evaluated by the PMU. Once awarded, grant funds will be transferred to beneficiaries for implementation through their legal associations. Beneficiary representatives and regional and national project staff will be responsible for sub-project monitoring.

In most cases, the grant will finance a maximum of 85% of investment cost, with the grantees contributing the 15% in-kind contribution. The average on-farm investments are expected to amount to a maximum of about US$1,500 for small-holder farmers (including both individual and group proposals) and about US$950 per family in indigenous communities; the cost of small-holder community and municipal investment activities are expected to vary.

*Main outcomes:* Farm Investment Proposals (FIPs), Community Investment Proposals (CIPs), Indigenous Community Development Plans (ICDPs) and Municipal Investment Proposals (MIPs) financed, and outputs created.
Component 4: Animal Health Improvement (US$5.83 million, 12.5% of total project cost). The objectives of this component are to assist Paraguay to initiate animal health improvement measures and to contribute to the regional strategy for animal health management. It has two main sub-components: (a) Strengthening the nodal implementing agency for this component - SENACSA; and (b) Strengthening the Vice Ministry of Animal Husbandry (VMG).

Under the first sub-component, the project would finance software and information systems, lab and office equipment, communication services, small works, consulting and training to increase the capacity of SENACSA to implement animal health improvement measures in the country, with emphasis in the areas along Paraguay’s borders with neighboring countries (Argentina, Brazil and Bolivia) and consistent with the actions comprising the Regional Strategy for Eradication of Transboundary Diseases in Mercosur.

The second sub-component would strengthen the VMG with office and clinic equipment, small works, consulting and training to monitor and manage the project animal health initiatives effectively.

Main outcomes: Improved Animal Tracking and Information systems, laboratory facilities and field operations established and managed effectively by SENACSA and the VMG to ensure high national standards of animal health.

Component 5: Project Management, Monitoring and Evaluation (US$5.88 million, 12.6% of total project cost). The objectives of this component are to strengthen the animal health strategy of the GOPy and put in place a functional and effective project management team. It has four sub-components: (a) Strengthening of the National Service for Animal Quality and Health (SENACSA), (b) Project Management; (c) Monitoring and Evaluation; and (d) Communication and Information Dissemination.

The first sub-component, Strengthening of SENACSA, finances software and information systems, lab and office equipment, communication services, small works, consulting and training to improve the performance of SENACSA to implement an effective animal health strategy for Paraguay.

The second sub-component, Project Management and Capacity Building for MAG, finances management services, office equipment, and all administrative and operational expenditures to improve MAG’s organizational skills-mix to effectively manage the project.

The third sub-component, Monitoring and Evaluation, finances the design and implementation of a M&E system to support project management. Specific objectives of the system include: (i) monitoring project implementation in relation to overall objectives, baseline situation, inputs and outputs; (ii) providing and receiving feedback from stakeholders; and (iii) generating inputs for dissemination of project results and lessons learned.

The fourth sub-component, Communication and Dissemination, supports the dissemination of project information to provide project stakeholders with systematized knowledge for the management of natural resources and rural poverty reduction throughout the country’s Eastern Region.
Main outcomes: Information systems, labs and field operations created and managed effectively by SENACSA to ensure high national standards of animal health, project management structure, including the Project Management Unit (PMU) at the central level and four Zone Coordination Units (ZCU), and relevant units of the MAG: Established, and functioning effectively, executing and monitoring project activities, and integrating them with the activities of other sustainable rural development programs.

5. Financing

Source: ($m.)
BORROWER 3.3
BENEFICIARIES 3.3
INDERT/FIDES 2.0
INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT 38.2
Total 46.9

6. Implementation

Overall project management and implementation will be the responsibility of the Ministry of Agriculture (MAG), in partnership with key rural development and environmental institutions, i.e. the National Land and Rural Development Institute (INDERT), the Indigenous People’s Institute of Paraguay (INDI), the Secretary of Environment (SEAM), and the Ministry of Labor (MT). A Project Management Unit (PMU) will be established through MAG prior to effectiveness. With the primary function of facilitating coordination of project execution, a National Coordination Committee (NCC) will also be established early in Project Year 1. Similarly, a Coordination Committee led by the Director of MAG-DGP seconded by the Director of MAG-DINCAP will interact with the Project Manager and the Project Technical Coordinator, and with representatives of other relevant MAG directorates to guide the project’s contribution to the implementation of sectoral policies and ensure coordination and complementarity of activities with other ongoing programs.

The Project Management Unit (PMU) will have a central technical unit responsible for overall project management and two\(^1\) regional sub-units (RSU) charged with the operative field work in the entire project area. The regional sub-units will carry out all extension and organization strengthening activities with the beneficiaries and will monitor adaptive research and investments (see Annex 6 with details).

In addition to this executive structure, and building on the experience of PARN, the bulk of the project participatory management activities will be at the microcatchment and municipal levels. The project will support creation and strengthening of: Microcatchment Development Committees (MDC) in each of the project-supported microcatchments, as the central units for beneficiary participation in project decision-making and implementation; Indigenous

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\(^1\) The two decentralized Regional Sub-units (RSU) could be increased to three after PY03 in line with the increased workload, if necessary.
Associations (IA) in the indigenous communities; and Municipal Steering Committees (MSC) in the municipalities selected for project implementation, to act as forum for local participation and social monitoring of municipal investments.

This combination of executive and beneficiary deliberative organs, in addition to help maximizing local participation, decision-making and project accountability to the lowest practical implementation levels, will be a major factor for achieving sustainability of benefits after the project terminates.

7. Sustainability

Sustainability of project benefits beyond Bank funding will be ensured by: (i) focusing on increasing capacity of beneficiary organizations and producer groups; (ii) utilizing existing institutional structures to organize and undertake project activities; (iii) involving national and local government institutions in order to facilitate follow up; and (iv) capitalizing on existing coordination mechanisms, particularly those which were established by PARN, including public-private-civil society ones.

The analysis of expected benefits at farm level indicates that improved practices will yield greater returns per hectare than traditional ones (see Annex 9). Improved financial returns, the ability for product diversification and access to new markets will act as important incentives for farmers to continue employing project practices. For indigenous communities and microcatchments, the participatory development of sustainable agriculture and rural development plans applied to local agro-ecosystems will integrate the objective of sustainable natural resources management with traditional objectives of production for domestic consumption and sale, thus fostering long term sustainability.

8. Lessons Learned from Past Operations in the Country/Sector

The project design incorporates lessons learned in PARN as well as other Bank funded poverty alleviation and natural resource management projects in Brazil and elsewhere in the world. In addition, experiences generated through the Paraguay Pilot Community Development Project (PRODECO), which has been testing a decentralized, participatory approach to improve the quality of life and social inclusion of poor rural and marginal urban communities along Paraguay’s southern border, have also been particularly valuable. The main lessons incorporated in the project design are summarized below:

(a) Microcatchment area-based projects aimed at improving sustainable natural resources management, rural poverty alleviation and income generation in poor communities should: (i) include an effective and transparent process of participatory and decentralized planning and decision-making; (ii) be demand-oriented; and (iii) combine actions facing relevant issues (i.e., natural resources, production and social needs) faced by poor communities in an integrated way.

(b) There should be a strong support from technical agencies to the beneficiary groups in the area of planning, implementation, monitoring, and management of completed investments for successful project implementation.
It is vital for microcatchment area-based projects to create and/or strengthen beneficiary organizations at the local and regional level and to involve local governments and organized civil society. This furthers decentralization of decision-making.

It is critical to work with and strengthen indigenous organizations, respecting the culturally-defined decision-making mechanisms of each ethnic group to ensure active participation of organizations and communities in project implementation. Project technicians must respect the processes of indigenous development and adapt the project to the needs and demands that arise from communities without imposing pre-established packages, timing or modalities of work that are foreign to the communities.

It is crucial to establish strict criteria for targeting beneficiaries and areas, as well as clear and transparent eligibility criteria and decision-making processes, to allocate resources to defined sub-project investment groups.

Funds for investment in sub-projects should be transferred to the beneficiaries directly with participatory administration of funds, and effective control mechanisms.

An effective strategy to foster good governance could focus on: (i) strengthening the implementation and management system capacity of the executing agency; (ii) mitigating fiduciary risks as best as possible; and (iii) incorporating measures to enhance public accountability and transparency.

9. Safeguard Policies (including public consultation)

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10. List of Factual Technical Documents

PENDING ANNEX 12

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