



Project Information Document (PID)

Concept Stage | Date Prepared/Updated: 04-Dec-2019 | Report No: PIDC27799



BASIC INFORMATION

A. Basic Project Data

Country Paraguay	Project ID P171351	Parent Project ID (if any)	Project Name Paraguay Sustainable Production and Conservation Landscapes (P171351)
Region LATIN AMERICA AND CARIBBEAN	Estimated Appraisal Date Jun 15, 2020	Estimated Board Date Sep 30, 2020	Practice Area (Lead) Environment, Natural Resources & the Blue Economy
Financing Instrument Investment Project Financing	Borrower(s) Republic of Paraguay	Implementing Agency Instituto Nacional Forestal (INFONA)	

Proposed Development Objective(s)

To improve the governance and management of Paraguay’s forestry sector.

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Project Cost	30.00
Total Financing	30.00
of which IBRD/IDA	30.00
Financing Gap	0.00

DETAILS

World Bank Group Financing

International Bank for Reconstruction and Development (IBRD)	30.00
--	-------

Environmental and Social Risk Classification
Substantial

Concept Review Decision
Track II-The review did authorize the preparation to continue



Other Decision (as needed)

B. Introduction and Context

- Over the past fifteen years, Paraguay has been one of the fastest-growing economies in the region, achieving an average annual growth rate of 4.4 percent.** Solid job creation has improved incomes, the middle class doubled during the same period, while total and extreme poverty have fallen by 49 and 65 percent respectively.¹
- Natural capital underpins Paraguay's growth model, supporting the country's comparative advantage in several key economic sectors - agriculture, energy and manufacturing.** A favorable macroeconomic environment, a demographic dividend and abundant natural resources - fertile land, water, hydro-power and rich forests ecosystems, have propelled Paraguay's export-led economic model over the past fifteen years. This economic success is owed largely to a rise in exports of agricultural commodities such as soy, cereals and meat and, to a lesser extent, hydroelectricity. Today, Paraguay is the fourth largest soybean exporter in the world and the ninth largest beef exporter. The agricultural and livestock sectors account for roughly 20 percent of Paraguay's Gross Domestic Product (GDP) and generate over two thirds of national exports.² Hydropower is another significant contributor, generating another 10 percent to the GDP and nearly a quarter of total exports. In turn, manufacturing, which relies heavily on forest biomass for energy³, has been the third largest creator of formal jobs since 2008.
- This economic success has come at a high environmental cost, particularly for forest ecosystems.** The recent boom in exports of agricultural commodities has been accompanied by an expansion of the agricultural frontier – a rapid change in land use from forest to cropland and pastureland. Since 2000, Paraguay lost over 6 million hectares of forest cover⁴, representing lost natural capital, as well as ecosystem services.
- For Paraguay to sustain its pace of economic growth, a transition to a more efficient use of natural resources is necessary.** The rapid depletion of the forest cover not only undermines the ecosystem services that underpin the Paraguayan economic growth model, but also threatens the long-term competitiveness of its agricultural commodity exports⁵, which could be facing increasingly stringent agricultural commodity sourcing standards in international markets. In addition, forest cover loss undermines poverty reduction objectives. Today, 36 percent of Paraguayans living in rural areas are poor, and 9 percent are considered extremely poor.⁶ These lower-income households tend to be small landholders, running subsistence farms and depending heavily on forest ecosystem services, such as the provision of fuelwood, meat, drinking water and soil erosion control, leaving them vulnerable to the environmental degradation caused by deforestation and forest mismanagement.

¹ World Bank (2018), "Paraguay: Systematic Country Diagnostic"

² World Bank (2018), "Country Partnership Framework for the Republic of Paraguay for the period FY19 – FY23"

³ Viceministerio de Minas y Energía (2018) "Balance Energético Nacional en términos de Energía Final, 2017"

⁴ 2018 data from INFONA

⁵ World Bank (2018), Market Opportunities for Green Upgrading and Innovation: Sustainability Demand Analysis for the Beef, Soy, Dairy and Tourism

⁶ Dirección General de Estadística, Encuestas y Censos (2018), "Boletín de pobreza 2017"



Sectoral and Institutional Context

5. **Paraguay enjoys a rich forest resource endowment, spanning three major biomes - Alto Parana Atlantic Forest in the East, Chaco in the West and Cerrado, as well as sub-humid riparian forests found alongside the Paraguay River, but these ecosystems are experiencing high deforestation rates.** Over the past three decades, which were characterized by rapid economic growth, these forests have experienced unprecedented pressures. Between 2000 and 2018 alone, an average annual tree cover loss of 332,000 hectares led to the total loss of some 6.3 million hectares across the country⁷.

6. **The main direct drivers of forest cover loss are agricultural and pastureland expansion, and forest degradation due to extraction of forest biomass.** Between 1960s and early 2000s, deforestation was particularly high in Eastern Paraguay, which has experienced a boom in soy production. The Alto Parana Atlantic Forest suffered significant deforestation and now represents less than 10 percent of its original cover.⁸ Large-scale clear-cutting has now shifted to the Western Region (Chaco), which is experiencing annual deforestation rates of 250,000 ha on average⁹. In the East, deforestation has slowed down due to the moratorium on deforestation, introduced in 2004, however the remaining native forests continue to experience degradation, often fueled by demand for forest biomass. Fragmentation and loss of connectivity between forests is further exacerbating ecosystem impacts and loss of biodiversity.

7. **The underlying drivers of the forest loss include social, economic and regulatory factors.** Paraguay's environmental legal framework, notably Forest Law 422/73, recognizes the need to protect the native forest cover, requiring that all rural properties bigger than 20 ha conserve at least 25 percent of the natural forest area as a "Forest Legal Reserve (FLR)", however its enforcement is weak and it falls short of effectively recognizing the value of the forest ecosystem services. The two key environmental institutions in the forestry sector - INFONA and MADES, have limited presence in the field and insufficient technical and human resources to effectively monitor the forest cover and enforce the law. Sustainable forestry certification is also in the early stages of development in Paraguay and the sector faces a weak investment climate, limited access to credit and markets and is often perceived as risky. In the absence of targeted incentives that promote sustainable forestry, these structural challenges inhibit the development of the sector.

8. **Yet, forests can play an important role in Paraguay's economy and sustainable forestry approaches are starting to develop in certain districts and can be scaled up.** As much as 60 percent of forest-related economic activity is categorized as informal in Paraguay, representing a missed opportunity in terms of tax collection and formal job creation¹⁰. In the energy sector, there is an annual deficit of sustainably-sourced biomass of ~10-13 million tons.¹¹ Particularly in rural areas, a healthy forestry sector could diversify the economy and create opportunities for value-addition and new income streams for the rural poor. The Government of Paraguay is leading a number of pilot initiatives in Eastern and Western Paraguay that seek to reduce pressure on the native forests and give a boost to the local economy. In the Tobati district (Eastern Paraguay), known for its brick and clay production industry, INFONA is leading a pilot seeking to engage small landholders in plantation and reforestation, and the creation of a forest nursery, in order to respond to the energy needs of 2,000 artisanal producers in a sustainable way. In the Naranjal district (Eastern Paraguay), the government has initiated restoration of waterways and a biological corridor, seeking to bring small and medium-size producers from a key local

⁷ 2018 data from INFONA

⁸ WWF (2015) "Análisis Social, Económico y Ambiental de la Producción de Soja y Carne en Paraguay"

⁹ USAID (2017), "Land rights, beef commodity chains, and deforestation dynamics in the Paraguayan Chaco"

¹⁰ Source: Szulecka J., Zalazar E.M., "Forest plantations in Paraguay: historical developments and a critical diagnosis in a SWOT-AHP framework". *Land Use Policy*, 60, 2017, pp 384-394

¹¹ GIZ (2013) "Producción y Consumo de Biomasa Sólida en Paraguay"



cooperative in compliance with the forest law and create a replicable model for sustainable development in this productive landscape. In Central Chaco (Western Paraguay), INFONA is also collaborating with the Neuland Cooperative, to streamline sustainable forest management into livestock production, by piloting silvo-pastoral models and promoting plantations that offset forest deficits and maintain forest connectivity. Indigenous Peoples in this region also manage significant areas of native forests and can potentially be integrated into a landscape approach to forest conservation and sustainable management, while achieving poverty reduction impacts. The creation of sustainable districts and municipalities in Paraguay can be transformative not only for the forestry sector, but also for Paraguay's agricultural sector, opening access to higher-value international markets for sustainably-sourced agricultural commodities.

Relationship to CPF

9. **The project is fully aligned with the World Bank's Country Partnership Framework (CPF) for Paraguay for FY19 to FY23, encompassing two of its four priority areas: (i) rule of law, accountable institutions and business environment; and (ii) natural wealth management for greater sustainability of Paraguay's development model.** The project seeks to reverse the current forest trends that threaten to jeopardize Paraguay's long-term growth, by targeting: (i) the weak governance, enforcement and public sector effectiveness in the forestry sector; (ii) the limited integration of sustainability concerns into the Paraguayan value chains; and (iii) the weak business environment, notably poor access to credit and markets, and the absence of green certification in the forestry sector. Building on the past and present engagements of the World Bank in the environmental sector in Paraguay, the project ultimately seeks to create the conditions necessary for a dynamic forestry sector, which serves as an engine of long-term growth and inclusion.

C. Proposed Development Objective(s)

To improve the governance and management of Paraguay's forestry sector.

Key Results (From PCN)

The key results expected from the proposed project are:

- i. Increase in capacity to monitor and respond to illegal deforestation and logging (governance indicator)
- ii. Increase in area under Sustainable Forest Management pilots (percentage from baseline and absolute area following ESS6 requirements) (management indicator)

D. Concept Description

10. The project will strengthen the governance and management of Paraguay's forestry sector by building government capacity to provide an appropriate enabling environment for sustainable forest management and by supporting scalable proof-of-concept field pilots in selected areas to lay the basis for forest restoration and improve the investment climate in the forest sector. The project will achieve this by: (i) strengthening the capacity of INFONA to monitor and respond to illegal deforestation and forest fires, and to provide basic forestry extension services (Component 1); (ii) supporting the design and implementation of targeted regulatory reforms, sector planning and incentives, such as credit guarantees, to mobilize greater private sector investment in the forestry sector (Component 1); and (iii) piloting proof-of-concept municipality-level activities on reforestation/restoration, watershed protection and sustainable forest management (SFM) in key areas of the Eastern and Chaco regions (Component 2). Project management functions will in



turn be supported by Component 3.

Component 1: Strengthening Forest Sector Governance

11. Component 1 seeks to strengthen the capacity of INFONA to regulate and promote sustainable forest management and will give it the tools to monitor and respond to illegality in the forest ecosystems, and to provide extension services to small and medium forest (timber and non-timber) producers. This component will also support targeted regulatory reforms, sector planning, and provision of credit guarantees as well as other incentives to promote greater private sector investment in the forestry sector.

12. Specific sub-components include:

1.1: Institutional Strengthening for Sustainable Forest Management, which comprises: (i) institutional analysis of INFONA; and (ii) assessment of options for long-term financial sustainability of the Forest Fund (Fondo Forestal).

1.2: Data, Monitoring, Transparency, and Capacity for Response, which includes: (i) Improvement of processes and forest data management/access; support to the implementation of Global Forest Watch tools; (ii) upgrade of the infrastructure and field equipment in existing national and regional offices, to strengthen INFONA's operational capacity; (iii) reinforcement of the fire response capacity; and (iv) transformation of the regional offices of INFONA into extension nodes.

1.3: Landscape Planning Tools: development of basic remote sensing-based planning and decision-making capacity through preparation of thematic and regional maps that outline the conditions for commercial forestry and reforestation and identify critical forest areas that merit special protection within the different ecosystems of the country.

1.4. Smart Incentives for SFM and Timber Production, which will include: (i) reduction of barriers to investment in sustainable forest management (SFM), including plantation forestry, through financial and non-financial mechanisms that may include partial risk guarantees, enhanced credit conditions, targeted investment promotion and regulatory reform; (ii) development/promotion of certification standards for timber and non-timber forest products; and (iii) development of a regulatory framework for "mitigation banking" that would create a compensation mechanism for forest deficits under Law 422/73.

Component 2: Pilot Programs and Investments to Provide Proof-of-Concept SFM and Forest Ecosystem Restoration

13. Building on the development of planning tools and regulatory capacities of environmental institutions at the national level under Component 1, the project will also support pilot proof-of-concept municipality-level activities on reforestation/restoration, watershed protection, and sustainable forest management (SFM) in key areas of the Eastern and Western regions of Paraguay, integrating sustainability into productive landscapes. Investments will take an incremental approach and will scale up and support the sustainability of initiatives that are already ongoing in selected regions through public-private initiatives of INFONA.

14. Specific subcomponents include:

2.1: Support to Environmental Regularization and Sustainable Use of Chaco Forests: This sub-component will be geographically located in the Central Chaco and, building on the ongoing activities led by INFONA with the Neuland Cooperative, it will support: (i) the preparation of a plan for agricultural producers to comply with forest



regulations, including the definition of a landscape-wide plan in which owners with a forest deficit could compensate their deficit with sustainable forest management and forest services in forested areas; (ii) workshops to support dialogue between actors in the landscape and between local stakeholders and the central government; (iii) investments to support small to medium-scale productive forestry-based activities and income generation activities with the indigenous groups; (iv) the establishment of a competitive research grant fund to support SFM research and pilot projects throughout the Dry and Humid Chaco.

2.2: *Environmental Regularization in Alto Parana Atlantic Forest*: This sub-component will be geographically located in the Alto Parana and Itapua Departments, Eastern Paraguay. Building on the work of INFONA in the Naranjal district, this sub-component will: (i) identify reforestation and restoration areas with high hydrologic and ecological function potential; (ii) assist landowners in creating plans to offset their forest deficits; (iii) provide targeted support to leverage private sector led restoration of forests and natural habitats; (iv) establish a competitive research grant fund to support SFM research and pilot projects throughout the Alto Paraná Atlantic Forest.

2.3: *Switching Biomass Fuel Sources in Industry*: this sub-component will support reforestation efforts in the Tobati district in Eastern Paraguay through incentives for small and medium-size users of forest biomass as an energy source. The sub-component will promote the participation of the local value chains in the market for legally sourced wood.

Component 3: Project Implementation Coordination, Monitoring, and Evaluation

15. This Component will support the project management functions as well as monitoring and evaluation of the PDO and components as well as final project outcomes. The dedicated Project Implementation Unit (through a yet-to-be determined structure) will provide support for procurement, financial management, contract management, audits, among other administrative functions within the Bank requirements. It will also include key personnel trained to support implementation of the project according to the requirements of the World Bank Environmental and Social Framework (ESF) to ensure the agreed Environmental and Social Commitment Plan is implemented and that the investment and TA activities are compliant with national legislation.

Legal Operational Policies	Triggered?
Projects on International Waterways OP 7.50	No
Projects in Disputed Areas OP 7.60	No

Summary of Screening of Environmental and Social Risks and Impacts

16. The project is expected to have positive environmental and social impacts given the focus on improving the management, conservation and governance of Paraguay’s forests through its main institution, the INFONA. Environmental risks and impacts to be considered in the ESA and ESMF include health and safety of project workers and community, appropriate pest management in plantations and nurseries, protection of watersheds and water sources through adequate planning and use of appropriate species, attention to potential invasiveness of any exotic species supported. Social risks and impacts to consider include potential for exacerbating land-tenure conflicts, conflict from increased enforcement, elite-capture or inequitable distribution of project benefits, prejudice or



discrimination towards individuals or groups in providing access to development resources and project benefits, particularly in the case of those who may be disadvantaged or vulnerable, potential project impacts on local land use patterns and tenurial arrangements, land access and availability, food security and land values, and any corresponding risks related to conflict or contestation over land and natural resources, among other issues.

CONTACT POINT

World Bank

Julian Lee, Francis V. Fragano, Giovanni Ruta
Senior Environmental Specialist

Borrower/Client/Recipient

Republic of Paraguay

Implementing Agencies

Instituto Nacional Forestal (INFONA)
Antonella Mascheroni
Director of Planning
antonella.mascheroni@infona.gov.py

FOR MORE INFORMATION CONTACT

The World Bank
1818 H Street, NW
Washington, D.C. 20433
Telephone: (202) 473-1000
Web: <http://www.worldbank.org/projects>

APPROVAL

Task Team Leader(s):

Julian Lee, Francis V. Fragano, Giovanni Ruta



Approved By

Environmental and Social Standards Advisor:		
Practice Manager/Manager:		
Country Director:		
