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This briefing was prepared by Environmental Paper Network, Bank Information Center (BIC), AXIAL Naturaleza y Cultura, Instituto Maira, and Heñoi. Note: This is a living document; we are conducting fieldwork and additional research to understand the project's environmental and social risks and impacts on the environment and local communities.

Pulp Fiction: What is Sustainable about the World Bank's "Scaling Up Financing for Sustainable Forestry" in Paraguay

Introduction

The [International Bank for Reconstruction and Development \(IBRD\)](#) is considering the approval of a [\\$100 million loan](#) (from a total project volume of \$400 million) for "Scaling up Finance for Sustainable Forestry" in the eastern regions of Paraguay. The project would be managed by Paraguay's Agencia Financiera de Desarrollo (AFD) and has been designed to promote wood production for the pulp mill industry, round wood, and fuel wood for energy generation. The project's goal is to promote the creation of jobs and economic growth through the expansion of forestry value chains.

The [project](#) (P504535) includes the following three components:

Component 1: Includes the design of a National Forest Fund for FSC-certified plantation deals of larger sizes (mainly 5,000 ha or greater).

Component 2: A credit line to support the financing of Forest Stewardship Council (FSC) certified plantation

sizes unattractive to the National Forest Fund (mainly 2,000 ha or smaller). It will include plantations by smaller outgrowers of pulp mills and smaller silvopastoral plantings sponsored by aggregators or cooperatives. AFD will also use proceeds to support banks making sub-loans for nurseries, harvesting machinery, wood shredders, trucking, or sawmill/veneer machinery.

Component 3: Institutional support and capacity-building: The project aims to position Paraguay as a supplier of high-integrity carbon removals within the framework of the World Bank Group's Global Challenge Programs (GCPs), specifically GCP #6 "Forests for Development, Climate, and Biodiversity." Industry sources expect planting needs of 1.5 million hectares by 2030 (from 200,000 ha in 2022) to satisfy demand for certified forestry products, especially fuelwood. Paraguayan authorities estimate "the overall potential of FSC-conforming acreage at 5-6 million hectares."

The proposed environmental risk classification for the project is Substantial under the ESF. Classification mainly responds to:

The scale of the project, expected to finance 50,000 ha of new plantations in the Oriental region of Paraguay, covering 0.3% of its current territory (15.9 million ha) under FSC certification;

The expected complex inter-institutional arrangements necessary to ensure appropriate management, monitoring, and oversight of the environmental health and safety (EHS) aspects of the FI subprojects; and

The local and cumulative environmental risks from the implementation of eucalyptus plantations, particularly on water availability and biodiversity (even though it is a species already well established in the region).

The project is linked to a [Development Policy Loan \(DPL\)](#) approved by the World Bank on June 30, 2022 (and closed on December 15, 2023), which supported the development of the Forestry Policy in Paraguay. The DPL proposed prior actions for the development of the biomass energy sector as a way of reducing greenhouse gas emissions.

Environmental concerns

1. **Increased deforestation and biodiversity loss.** The project targets the Oriental region of Paraguay, which has already suffered dramatic deforestation, where less than 10% of native forests remain (Project Information Document, PID - Page 7). The area shows the largest portion of degraded land in the region used for agriculture plantations (mostly soy and corn), farmed in large “fincas” (estates) that occupy 70% of the land (Page 4). The region has 46 public legally protected natural areas (and 43 private natural reserves). The project documents mention that “activities will not be implemented within these (protected areas), as well as in other types of critical natural habitats, and important/sensitive natural habitats such as wetlands” while “activities are expected to be located on land that is already converted or highly degraded and will not imply land use change from primary forests to plantations or silvopastoral systems” (Environmental and Social Review Summary). Nevertheless, the introduction of large-scale forestry threatens the remaining natural forest patches in the region, further degrading biodiversity and fragmenting and disrupting ecosystems.

Although the project claims it will implement robust control measures to identify the sources of wood products, there is still a lack of clarity

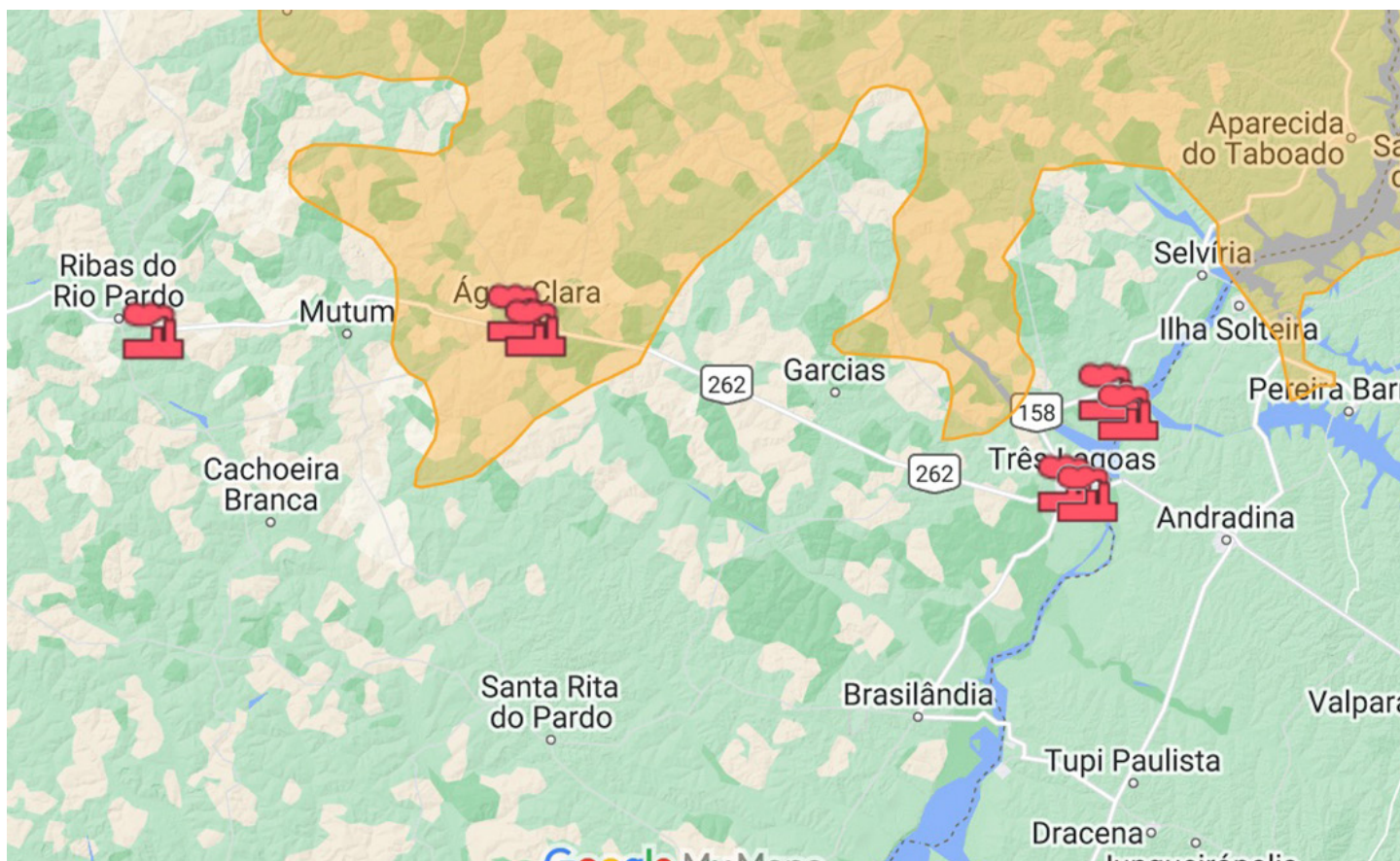
about what these measures would be, how the authorities will put the right surveillance mechanisms in place, and if they have the will and capacity to enforce such measures. The Bank’s documents raise this concern, noting that without “better regulation and enforcement” of restrictions on illegal fuelwood, “conservation of remaining native patches will remain elusive.” The project documents fail to indicate how the project plans to manage these risks.

2. **Expansion of the agricultural frontier.** While the PID states that timber products will be certified, the project may indirectly push farmers and cattle ranchers to expand beyond the current agricultural border into the Cerrado biome. Cattle ranchers displaced by expanding plantations might seek new lands by extending or relocating their pastures into areas of rich biodiversity (forests, wetlands, and savannas). This could lead to biodiversity loss or degradation in Paraguay and Brazil.

The project highlights the opportunities for silvopastoral systems that could promote mixed forestry-ranching use. However, this system is new in Paraguay, and the project has yet to determine how it could be implemented to conserve the local biodiversity without generating additional environmental impacts related to soil degradation, pesticides, and water use. It is also unclear if the silvopastoral system will eventually replace existing ranches or just create additional pressure on the ecosystems.
3. **Lack of consideration of cumulative impacts.** Within Paraguay’s oriental region and the neighboring area of Brazil, there are already eight pulp mill projects in different stages (four completed and four under development, see figure below¹), including Paraguay’s largest paper mill, Paracel (which is not included in the figure). A regional cumulative impact assessment should be required to understand the possible cumulative cross-border environmental impacts, but this is not mentioned in the Project’s documents. If there is already an assessment of the cumulative impacts, the World Bank should make it public, and it should be shared in consultation with stakeholders and project-affected communities.

¹ Fibria Horizonte 1 (completed), Fibria Horizonte 2 (completed), Eldorado Vangarda 1 (completed), Eldorado Vangarda 2, Suzano Ribas do Rio Pardo (completed), Arauco Agua Clara and Bracell Agua Clara. The map does not include Project Paracel

Figure 1: Map of the expansion of the paper industry in Brazil South-west



Source: <https://environmentalpaper.org/mapping-the-expansion-of-the-paper-industry/>

- 4. Water resources and soil degradation.** Project documents are not specific about the tree species that will be promoted. This lack of specificity could lead to the widespread use of eucalyptus plantations (the only species mentioned in the documents and a species that is preferred by local businesses), which is known for its high water consumption. Eucalyptus [can deplete local water resources](#), especially in areas with stressed water supplies. Additionally, the monoculture nature of these plantations often leads to [soil degradation](#). The documents also fail to mention the importance of adopting measures to diversify plantations, prevent habitat fragmentation, plant patches of natural biodiversity, or promote connectivity among the few protected areas left in the region.
- 5. The approach to forestry is misaligned with international biodiversity and climate conventions.** The Bank's assumption that plantation forestry is "green" and an improvement in biodiversity is factually wrong

and misaligned with the [Convention on Biological Diversity \(CBD\)](#)² and with the Bank's own [Forests and Landscapes](#) framework. Large-scale monoculture plantations of exotic species (in this case, eucalyptus) are incompatible with the conservation of natural ecosystems and should not be pursued, as they lead to the degradation and further fragmentation of natural habitats. In highly degraded areas, such as Paraguay's Oriental Region, the Bank should instead support the restoration of natural patches and small-scale, diversified agriculture to improve the livelihoods and access to quality jobs of local communities. True reforestation involves restoring native forests with diverse species, which supports local ecosystems and biodiversity. In contrast, monoculture plantations, such as eucalyptus, disrupt ecosystems, reduce biodiversity, and lead

² The CBD notes that "the evidence broadly supports the concept that diverse forests provide more goods and services than do forests with low species richness, especially planted forest monocultures", from Forest Resilience, Biodiversity, and Climate Change: A Synthesis of the Biodiversity/Resilience/Stability Relationship in Forest Ecosystems, Page 21.

to the loss of native species.³ Even if developed in already deforested land, they only deepen and complete the removal of natural vegetation and pose serious threats to the remaining native forested areas.

6. **Overstatements concerning climate change mitigation and adaptation.** The Bank ambiguously presents industrial forestry as a significant contributor to climate change mitigation and adaptation. While forestry is framed as a “green” solution, monoculture plantations often have a net negative impact on climate resilience. Their carbon sequestration potential is lower than that of natural forests, and the environmental costs—such as soil degradation, water depletion, and biodiversity loss—offset any perceived benefits. Promoting water-consuming and fire-prone species in areas already impacted by climate change-induced drought will have devastating consequences for the environment and the local communities.

Additionally, the project promotes biomass (fuelwood) as a “renewable” energy source but fails to account for the [high carbon emissions](#) from biomass combustion. The assumption that these new plantations will offset these emissions is weak, as evidence shows that young plantations cannot match the carbon sequestration of [mature forests](#) in roots and soil. Furthermore, the paper industry primarily produces short-lived, single-use products, resulting in minimal lasting sequestration. This approach undermines Paraguay’s [climate resilience and carbon reduction commitments](#) (in which the country committed to improving the resilience of ecosystems and strengthening the system of national protected areas).

7. **Water and Air Pollution.** Paper mills and fuelwood incineration have substantial environmental impacts across multiple areas. They contribute significantly to air pollution by emitting greenhouse gasses and other pollutants such as nitrous oxides, sulfur dioxides, carbon monoxide, and particulate matter. Mills are also major sources of water pollution due to their high water consumption and contaminated wastewater discharge. The forestry industry that supplies paper production also uses pesticides and other chemicals that can harm local

biodiversity, rivers, and family agriculture.

8. **Weak oversight capacity of the AFD.** It is unclear if the AFD has the institutional capacity to screen and supervise the timber plantation owners or other potential clients who will be borrowing funds from the AFD funds, and it is also unclear how the Bank is planning to support the AFD to increase oversight capacity. In its assessment, the PID observes risks in this mechanism, and notes that “The extent to which AFD’s Environmental and Social Management System (ESMS) is aligned with the requirements of an ESMS per ESS9, as well as its capacity to oversee the RFIs’ (Retail Financial Intermediaries) ESMSs, will be assessed during (project) preparation”. The project Concept Environmental and Social Review Summary (ESRS) adds that “Necessary institutional capacity strengthening activities for AFD will be defined during project preparation and reflected in the Environmental and Social Commitment Plan (ESCP) together with interinstitutional arrangements to ensure appropriate management and monitoring of the E&S aspects of the FI subprojects.” These assessments and institutional arrangements have not yet been made public.

9. **Concerns Regarding FSC Certification.** There are significant concerns regarding the FSC certification, which the Bank often cites as a guarantee of sustainable forestry practices. Forestry and its impacts have changed since the FSC certification system was developed over three decades ago. Recently, different forestry operations enjoying FSC certification all over the world have been proven [destructive or even illegal](#), such as in the cases of [Romania](#), [Peru](#), and [Russia](#). Particularly, the FSC standard for plantations is much weaker than standards that apply to natural forests, focusing very little on biodiversity and communities’ rights. All over South America, it has broadly failed to secure respect for traditional land rights and protect the environment from the extensive impacts caused by large-scale plantations.

Issues such as inadequate monitoring, insufficient community engagement, and certification of controversial projects have undermined the credibility of FSC standards. The Bank should critically evaluate the reliance on FSC certification and promote compliance with the highest environmental and social responsibility standards

³ The claim that forest plantations could be considered an alternative to natural forest has been widely discredited. Abundant research has been published on the forest areas of Argentina next to Paraguay, http://server.ege.fcen.uba.ar/pcourtalon/PDF4LIBRO_WETLAND2010.pdf and <https://www.avesargentinas.org.ar/noticia/posicion-institucional-forestaciones-en-el-nordeste-de-argentina>

Social Risks

- 1. Consultations and Stakeholder Engagement.** The project documents highlight the “potential risk for populations living near intervention areas, including impacts on livelihoods and access to natural resources.” Nevertheless, the project documents do not provide evidence of meaningful stakeholder consultation. The documents state that the borrower will develop a Stakeholder Engagement Plan that will focus on mapping relevant stakeholders and emphasize the inclusion of Indigenous communities and other rural populations in the preparation phase. It is important for the project to assess whether its sub-projects will impact Indigenous Peoples’ resources, land, or cultural heritage. If so, it must apply Free Prior and Informed Consent (FPIC). This is especially relevant considering other projects in Paraguay’s Orient region led by other MDBs [lacked strong and effective stakeholder engagement processes](#). The Bank and AFD should provide documentation that is accessible, culturally appropriate, and available in local languages, including Guaraní, with enough time for local communities to be able to assess and provide feedback on the project documents.
- 2. Precarious and low labor-intensive jobs.** The Orient region is home to numerous smallholder farmers and Indigenous communities who rely on traditional farming and forest resources for their livelihoods. The Bank also notes that the region has the highest number of people in extreme poverty in the country. While the project promises job creation, industrial forestry is typically low in labor intensity, with most jobs being seasonal or mechanized. This could lead to a net loss of livelihoods for smallholder farmers, who might be forced to abandon their land or work in precarious conditions for low or intermittent wages.
- 3. Risks of marginalization and displacement of local communities and Indigenous Peoples.** The expansion of industrial-scale forestry, connected with the expansion of the pulp and paper industry, threatens to displace these communities, erode their land rights, exacerbate local conflicts over land control, and disrupt their cultural practices. In Chile and Brazil, the areas marked by pulp and paper industry development are also marked by more

acute poverty.⁴ These examples show that forestry development (industrial plantations) has failed to create social benefits for local communities and has left populations in chronic poverty. In conversations with the World Bank and AFD about this project, the proponents mentioned a report completed by forestry companies interested in the project showing how the expected quality jobs could grow in the region due to the new plantations. This report has yet to be made public and should be verified by independent researchers due to possible conflicts of interest.

Recommendations

- 1. Develop and share a comprehensive review of environmental and social impacts prior to Board approval.** This could enable the Bank and the borrower to better avoid, reduce and mitigate expected impacts and risks to biodiversity and local communities. This review should involve independent experts and include informed, meaningful consultations with affected communities.
- 2. Shift the approach from industrial forestry to agroforestry and restoration efforts.** Promoting plantation or industrial forestry as a sustainable solution for poverty reduction and climate mitigation is a false solution that the Bank should not support. Numerous examples in the region show that such forestry affects biodiversity and ecosystem services and fails to create quality jobs, leading to increased poverty and social exclusion. An appropriate management strategy for natural forests would include an agroforestry approach that preserves the ecological integrity of natural forests and supports the local community’s agriculture needs.

⁴ In Chile, the region of La Araucanía holds the highest income-based poverty index, at 27.9%, followed by the region of Los Ríos with 23.1%, Bío Bío with 22.3%, and finally Los Lagos with 17.6%. These regions are also home to a disproportionate amount of people living in extreme poverty: In La Araucanía 10.6% of people are in extreme poverty, followed by Bío Bío and Los Ríos with 8% each, and Los Lagos with 5.7%. For comparison, the national average is 4.5%.

Source: <https://environmentalpaper.org/wp-content/uploads/2022/06/20220530-Arauco-en.pdf>

In Brazil, “The transition from cattle ranching to the paper industry has been swift and silent, while radically and carefully modelling the landscape according to a highly unnatural scheme. The new industry acquired the land in negotiations dealt with a few powerful people, in which the local population had little say. Most of the landowners in the area (81%) lived outside the municipality, in big cities, and had little relationship and little care for the life in the land they were selling out.”

Source: Nardoque, Melo e Kudlavicz. Questão agrária em Mato Grosso do Sul e seus desdobramentos pós-golpe de 2016. 2018, Revista Okara, v. 12, n. 2, p. 624-648, Source: <https://periodicos.ufpb.br/index.php/okara/article/view/41333>

3. **Strengthen the conservation of natural habitats and biodiversity.** The project must include stronger environmental measures to protect and expand the patches remaining of native forests in Paraguay's Orient, prevent an expansion of the agricultural frontier, provide sustainable water management, and prevent soil degradation. Also, a rigorous assessment of the long-term environmental benefits and costs should be adopted, particularly regarding carbon emissions and biodiversity loss. The International Panel on Climate Change has [highlighted](#) that biodiversity conservation and restoration holds the largest Climate Change mitigation potential after renewable energy. Restoration efforts should aim to rebuild native forests, support wildlife conservation, and enhance ecosystem services, all of which are critical for climate resilience and environmental health. The CBD highlights that indigenous peoples rely on biodiversity for food, medicine, shelter, and cultural practices, making its protection essential to their well-being. Biodiversity also provides the foundation for the development of sustainable agriculture.
4. **Promote alternative sustainable livelihoods.** Instead of promoting large-scale industrial forestry, the project should support smallholder farmers and Indigenous communities in developing sustainable agroforestry practices that preserve biodiversity, enhance food security, and build resilience to climate change. This would also mean better livelihoods and income sources for families.
5. **Promote robust and effective consultation and engagement processes with local communities and Indigenous Peoples throughout the project cycle.** Consultations with local communities, including Indigenous

Peoples, campesino organizations, women, and other marginalized groups, should be meaningful throughout the project cycle. It must also be documented, culturally appropriate, and include detailed information about potential impacts, benefits, and risks. We recommend that the Bank promote a comprehensive dialogue on sustainable forestry practices, prioritizing sustainability, such as diverse native species, ecosystem load capacity, biodiversity conservation, and landscape connectivity.

6. **Provide sustainable energy alternatives for Paraguay's productive sector.** The Bank should prioritize the development of genuinely sustainable energy alternatives for Paraguay's productive sector, both primary and industrial, rather than relying on fuel wood. The current focus on fuel wood as an energy source is depleting natural forests and exacerbating environmental degradation. Complementary to Paraguay's vast existing hydropower, the Bank should support sustainable energy sources with low-environmental impacts, such as solar and wind, whose international prices have made them a suitable alternative but still require further development in the LAC region.
7. **Institutional strengthening.** The Bank must assist Paraguay's institutions in guaranteeing that wood from existing plantations is sourced sustainably. This includes screening of private sector partners for their environmental and social track record and commitment to sustainable sourcing. The weak governance and lack of clarity on land tenure currently allows for widespread illegal logging and unsustainable practices, which undermine any potential benefits of future forestry projects.

FOR FURTHER INFORMATION ON THE ISSUES RAISED IN THIS REPORT, PLEASE CONTACT BANK INFORMATION CENTER AT:

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