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Paraguay Green and Resilient DPL (P178285)

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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM DOCUMENT FOR A

PROPOSED LOAN

IN THE AMOUNT OF US\$ 240 MILLION TO THE

REPUBLIC OF PARAGUAY

FOR THE

PARAGUAY GREEN AND RESILIENT DEVELOPMENT POLICY LOAN

June 3, 2022

Environment, Natural Resources and the Blue Economy Global Practice
Latin America and Caribbean Region

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Republic of Paraguay
GOVERNMENT FISCAL YEAR

July, 1 – June, 30

CURRENCY EQUIVALENTS
(Exchange Rate Effective as of May 24, 2022)
Currency Unit = Guaranies (PYG)
PYG 6,856.36 = US\$1.00

ABBREVIATIONS AND ACRONYMS

AFD	Development Finance Agency (<i>Agencia Financiera de Desarrollo</i>)
AGPE	National Audit Office (<i>Auditoría General del Poder Ejecutivo</i>)
AI	Institutional Internal Audit (<i>Auditoría Interna Institucional</i>)
BCP	Central Bank of Paraguay (<i>Banco Central del Paraguay</i>)
CGR	Comptroller General (<i>Contraloría General de la República</i>)
COVID	Corona Virus Disease
CPF	Country Partnership Framework
DPL	Development Policy Loan
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross Domestic Product
GHG	Greenhouse Gas
GRID	Green, Resilient, and Inclusive Development
GRS	Grievance Redress Service
IBRD	International Bank for Reconstruction and Development
ICR	Implementation Completion and Results
IDB	Inter-American Development Bank
IMF	International Monetary Fund
INFONA	National Forestry Institute (<i>Instituto Nacional Forestal</i>)
MADES	Ministry of Environment and Sustainable Development (<i>Ministerio del Ambiente y Desarrollo Sostenible</i>)
MAG	Ministry of Agriculture and Livestock (<i>Ministerio de Agricultura y Ganadería</i>)
MIC	Ministry of Industry and Commerce (<i>Ministerio de Industria y Comercio</i>)
MoF	Ministry of Finance (<i>Ministerio de Hacienda</i>)
MOPC	Ministry of Public Works and Communications (<i>Ministerio de Obras Públicas y Comunicaciones</i>)
MtCO ₂ e	Metric tons of Carbon Dioxide equivalent

NDC	Nationally Determined Contribution
PA	Prior Action
PdG	Plan de Gobierno (<i>Government Plan</i>)
PEFA	Public Expenditure and Financial Accountability
PFM	Public Financial Management
SIAF	Integrated Financial Management System (<i>Sistema Integrado de Administración Financiera</i>)
SMEs	Small and Medium Enterprises
WBG	World Bank Group

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REPUBLIC OF PARAGUAY

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SUMMARY OF PROPOSED FINANCING AND PROGRAM

BASIC INFORMATION

Project ID	Programmatic
P178285	No

Proposed Development Objective(s)

The Program Development Objective is to (i) mobilize private capital for climate resilience and mitigation, (ii) promote climate resilience and mitigation in select sectors of the economy, and (iii) enhance fiscal transparency for climate action.

Organizations

Borrower: REPUBLIC OF PARAGUAY

Implementing Agency: Ministry of Finance

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Financing	240.00
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DETAILS

International Bank for Reconstruction and Development (IBRD)	240.00
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INSTITUTIONAL DATA

Climate Change and Disaster Screening

This operation has been screened for short and long-term climate change and disaster risks

Overall Risk Rating

Substantial



Results

Indicator Name	Baseline	Target
Results Indicator #1: Projected direct GHG emission reductions enabled by the loans disbursed through the energy efficiency line of credit.	0 (2022)	3,075 tCO ₂ e (2023)
Results Indicator #2: Credits issued by financial institutions to forest plantation operators using as loan collateral the real right to standing timber.	No (2022)	Yes (2023)
Results Indicator #3: Average number of water and sanitation customers per new service provider established.	<200 (2022)	500 (2023)
Results Indicator #4:		
a) Number of electronic signatures registered in the electronic signature database of the Ministry of Industry and Commerce.	40,586 (Dec 2021)	1,000,000 (2023)
b) Number of electronic signatures held by women registered in the electronic signature database of the Ministry of Industry and Commerce.	18,168 (Dec 2021)	500,000 (2023)
Results Indicator #5:		
a) Establishment by INFONA of an early warning system that allows the general public to report forest fires.	No (2022)	Yes (2023)
b) Establishment by INFONA of a computerized administrative system to issue permits for prescribed burns.	No (2022)	Yes (2023)
Results Indicator #6: Number of fiscal risk assessments that include discussion of climate risks published on the Ministry of Finance's website.	0 (2022)	2 (2023)
Results Indicator #7: Share of the budgets of the MAG, MIC, MADES, INFONA, MOPC, and the National Emergency Secretariat screened for initiatives focused on climate change.	0% (December 2021)	100% (2023)



IBRD PROGRAM DOCUMENT FOR A PROPOSED LOAN TO THE REPUBLIC OF PARAGUAY

1. INTRODUCTION AND COUNTRY CONTEXT

1. The proposed Paraguay Green and Resilient Development Policy Loan (DPL) in the amount of US\$240 million is a standalone operation aiming to: (i) mobilize private capital for climate resilience and mitigation; (ii) promote climate resilience and mitigation in select sectors of the economy; and (iii) enhance fiscal transparency for climate action. The operation supports the government's emerging policy shift that recognizes the importance climate change has for the heavily natural resource-based Paraguayan economy, brought to the fore during the recurring droughts since 2019.

2. Favorable external conditions and good macroeconomic policies have helped Paraguay achieve respectable growth and poverty reduction for the past two decades. From 2003 to 2019, Paraguay grew at a rate of 4.1 percent per annum on average, higher than the regional average (3.3 percent) and on par with other upper middle-income countries. Three factors played a key role in this growth performance: First, the commodity boom benefited agricultural exports, which led to a rise in purchasing power and stimulated growth in the services sector. Second, sound macroeconomic and fiscal policies resulted in small fiscal imbalances and low inflation for most of the period. Third, Paraguay has been benefiting from a demographic dividend, leading to a significant expansion of the working age population that contributed to output growth. As a result of strong growth, poverty rates (measured at US\$5.50 a day in 2011 purchasing power parity) fell from 39.3 percent in 2003 to 15.4 percent in 2019. The income of the bottom 40 percent grew at an annualized rate of 3.6 percent, while the Gini coefficient fell from 54.9 percent to 45.7 percent over the same period.

3. Much of Paraguay's growth has, however, relied on the exploitation of natural resources, exacerbating its vulnerability to climate change. Paraguay has exploited its rich endowment of natural resources to become an important producer of soybeans, beef, and hydroelectric energy. Together, the agriculture, livestock, forestry, fishing, electricity, and water sectors account for a fifth of Gross Domestic Product (GDP) and total employment. However, the growth of the agribusiness sector has in large part been fueled by the conversion of natural ecosystems, especially forests: about 94 percent of the Atlantic Forest has already disappeared, and the Chaco (Western Paraguay) has been under severe pressure from cattle ranching. Forest loss is estimated at an average of 323,000 hectares per year between 2001 and 2018.¹ While this conversion has driven short-run growth, it is unlikely to be sustainable in the longer run in the face of climate change. Partly as a result of this intense depletion of natural resources, Paraguay is increasingly vulnerable to the effects of climate change. Paraguay ranks 94th out of 182 countries on the Notre Dame Global Adaptation Initiative (ND-GAIN) index, which assesses countries' vulnerability to climate change and other global challenges, as well as their readiness to improve resilience.² With mean monthly temperatures projected to rise by 2°C by the 2050s and by 4°C by the end of the century under a high-emissions scenario, droughts, extreme heat, and flooding events are projected to increase, primarily along the Paraguay River and the key watersheds in the Chaco.³ Such events would have significant implications on the economy and wellbeing of all Paraguayans, especially poor and vulnerable communities.

4. Climate shocks have become more recurrent in recent years, suppressing the pace of growth and poverty

¹ World Bank (2020). A Forest's Worth: Policy options for a sustainable and inclusive forest sector in Paraguay. Washington, DC.

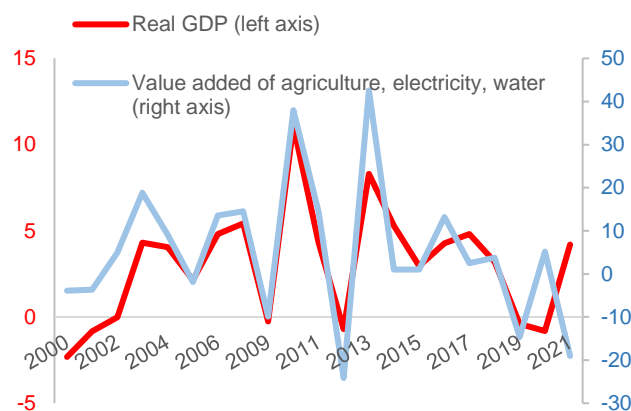
² University of Notre Dame (2022): Notre Dame Global Adaptation Initiative.

³ World Bank Group (2021): Climate Risk Profile: Paraguay.



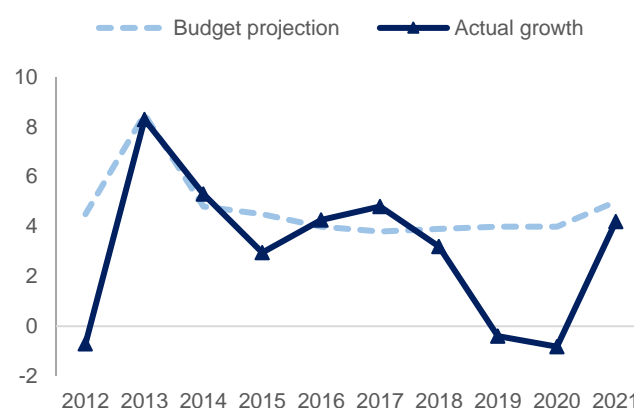
reduction. Paraguay's economic growth has been historically volatile, driven by weather-induced swings in agricultural and hydroelectric production (Figure 1). In 2009 and 2012, poor harvests induced by droughts and floods led to negative real GDP growth, contrary to the government's expectations (Figure 2). These shocks have become more recurrent in recent years, with poor harvests in 2019, 2021, and 2022. Slightly more favorable climate conditions in the 2020 harvest buffered the negative effects of the COVID pandemic. Partly as a result of these shocks, which disproportionately affected the poor, progress in poverty reduction has stalled: the rate of poverty reduction has slowed since 2013. In 2020, the crisis induced by the COVID pandemic led to higher unemployment (from 5.7 percent to 8.2 percent) and poverty (from 15.4 percent to 17.9 percent), although government transfers helped to prevent an increase in extreme poverty. By the end of 2021, unemployment remained higher than pre-pandemic levels, at 6.8 percent, in part due to the effects of the drought in rural areas, where job creation is more dependent on agricultural activities.

Figure 1. Year-on-year growth rate of real GDP and Agriculture, Electricity and Water value added, percent



Source: Central Bank of Paraguay (BCP)

Figure 2. Projected versus actual real GDP growth, percent



Source: MoF

5. The severe ongoing drought has led to widespread economic, social, and environmental costs. The series of drought events that began in 2019 has suppressed agricultural yields and hydroelectric generation. While higher commodity prices helped to mitigate the impact in 2021, a record low soybean harvest is expected in 2022, affecting not only exports but also the availability of feed for livestock. The low water levels in the river network have affected the movement of goods within and across borders, driving up logistics costs, affecting competitiveness. Low-income households, especially in rural areas, have thus suffered both from lower incomes and higher costs. Moreover, record-setting forest fires⁴ provoked by the dry spell have led to poor air quality and associated health challenges, and have made land use, land use change and forestry the country's largest source of greenhouse gas (GHG) emissions in fire-intense years (55 percent of total emissions in 2015, for example)⁵ Forest fires, often illegally set, contribute to Paraguay's high rate of land use change, which is estimated to cost the economy between 0.4 and 3 percent of GDP.⁶

6. Climate action in Paraguay has been historically limited. The Paraguayan economy has developed under a small

⁴ According to Global Forest Watch, there were 48,338 VIIRS fire alerts reported between January 14, 2019 and March 14, 2022 (considering only high confidence alerts), a high number compared to previous years.

⁵ World Bank staff estimates based on data from Joint Research Center of the European Commission: Global Wildfire Information System; Food and Agriculture Organization of the United Nations: Earthmap; and Government of Paraguay (2021): Third Biannual Update Report on Climate Change. Asuncion.

⁶ World Bank (2020). A Forest's Worth: Policy options for a sustainable and inclusive forest sector in Paraguay. Washington, DC.



government, with low taxation and public expenditure, and a high degree of informality. Strong private sector interests, notably in the agriculture sector, have permeated economic and land use policy. A lack of resources and coordination across different institutions have led to poor enforcement of regulations on land use and other policies that have an impact on climate adaptation and mitigation. As a result, efforts to reduce the country's vulnerability to climate change have mostly been undertaken by individual line ministries or in an ad hoc fashion.

7. The private sector lacks the incentives and financial resources to engage in climate action. The country lacks effective mechanisms to channel financial resources to climate mitigation and adaptation activities. Paraguay's private credit markets are sound, but shallow, with a credit-to-GDP ratio lower than in comparator countries and concentrated in the banking sector. Paraguay's stock market, trading US\$3.4 billion in 2021, is also growing, while insurance penetration is limited. This leaves little room in the short-run for effective private sector action to build climate resilience and mobilize climate finance at scale.

8. Climate adaptation and mitigation in Paraguay requires coordination across a wide array of sectors, each with its own reform agenda moving at different speeds. Droughts, rising mean temperatures, and heat waves have created the conditions for record-breaking wildfires, with significant consequences for infrastructure, property, water quality, public health and the broader physical landscape and its ability to adapt to climate change, but also releasing greenhouse gas emissions that are estimated to be in the range of half of the country's reported emissions in major fire years.⁷ In addition, the predicted changes in rainfall patterns will increase the vulnerability of water supply systems, either by contamination of surface water sources due to flooding and inadequate sanitation systems, or lack of water due to droughts. Managing this will require greater investments in operations, which is especially challenging in rural areas, where only 58 percent of the rural population has access to piped water and 15 percent of the total population has access to sanitation.⁸ Paraguay's updated Nationally Determined Contribution (NDC) recognizes this risk by including four adaptation objectives to safeguard access to water. Similarly, more extreme weather events are expected to have severe impacts across the economy, business processes and transactions, including in the financial sector, requiring actions to increase their resilience.

9. Despite the increased importance of climate events on macro-fiscal outcomes, the risks and potential impacts have not been incorporated into the budgetary planning process. Projections of economic activity, public revenue and expenditure are currently not informed by a systematic quantification of climate risks and propagation mechanisms. This hinders the planning and design of contingency measures to manage climate events such as droughts, fires or floods. As a result, the response to disasters is not based on an integrated risk-based finance strategy, but relies on ad-hoc measures that are constrained by existing budget allocations and commitments, limiting its effectiveness to buffer aggregate volatility. Moreover, climate-related activities by the public sector are often haphazard initiatives, dispersed among different ministries without central coordination. The government therefore does not know and lacks information on the amount of resources it devotes to climate action, preventing a more effective, efficient and coordinated policy to manage climate risks.

10. The cumulative effects of recent droughts on the economy, have increased awareness and government interest to climate adaptation and mitigation. Paraguay's NDC commits the country to an unconditional 10 percent

⁷ World Bank staff estimates. The greenhouse gas accounting in Paraguay's NDC does not include emissions from forest fires, meaning that in high-fire years, its emissions are substantially higher than reported. However, the NDC signals that Paraguay may update its methodology for its first Biannual Transparency Report to the United Nations Framework Convention on Climate Change.

⁸ World Bank (2020): El Servicio de Agua y Saneamiento en Paraguay: Análisis sobre aspectos institucionales, de gobernanza y sobre el gasto público.



reduction of emissions by 2030 versus a business-as-usual scenario, as well as to 25 adaptation actions. Reforms are in many instances incipient, but represent necessary steps to address the underlying challenges. The Ministry of Finance (MoF), which has joined the Coalition of Finance Ministers for Climate Action, has also become cognizant of the need to take a more proactive role in the government's climate agenda. A shift in policymaking is therefore emerging as the MoF is generating analysis and information to start integrating climate considerations into cross-sectoral policy-making. In addition, the MoF is using its convening power to promote and coordinate actions with line ministries to meet Paraguay's climate commitments. These include measures to create the conditions for the development of financing instruments for climate action by the private sector. At the sectoral level, legislation to promote electromobility and renewable energy are being debated in Parliament. The Central Bank has also been playing a prominent role in policy discussions to make Paraguay's economy more sustainable, including the financial sector. There are other ongoing initiatives at different stages of development that directly or indirectly support Paraguay's NDC, covering a wide array of activities from the generation of climate-related statistics to the promotion of climate-friendly practices in the tourism sector.

11. This DPL supports an initial package of policy and institutional reforms aimed at supporting Paraguay to achieve a more sustainable and resilient development path. This set of reforms represents early-stage policies and measures that are critical to help the government increase its capacity to adapt to climate change and mitigate climate emissions. Cognizant of the varying pace of reforms in different sectors, the DPL supports the shift in policy priorities towards a more sustainable development mode in a challenging post-pandemic environment. Pillar 1 aims to create the conditions to mobilize private capital for climate resilience and mitigation. Pillar 2 aims to promote climate resilience and mitigation in select sectors, including enhancing the resilience of rural sanitation providers, increasing the adoption of electronic financial transactions, and improving management of wildfires. The objective is to support critical reforms that are part of Paraguay's NDC and in sectors that are closely linked to the Bank's portfolio in the country. Pillar 3 aims to enhance fiscal transparency to support climate action. The policy and institutional actions supported under this pillar promote improved risk management and budgeting. The World Bank is committed to helping the government cement these efforts towards comprehensive climate action through additional implementation support, technical assistance, and complementary lending projects.

2. MACROECONOMIC POLICY FRAMEWORK

2.1. RECENT ECONOMIC DEVELOPMENTS

12. Paraguay outpaced the Latin America and Caribbean region in terms of GDP growth between 2003 and 2019. During this period, and despite climate shocks, strong external demand and high commodity prices led the country to expand its agricultural output, livestock, and hydroelectric generation. Paraguay is a relatively open economy and stands out in the region for the positive contribution of net trade to its growth. The primary sector, which most of the poor and vulnerable depend on, has been a major driver of poverty reduction. The primary sector's performance also spilled over into the economy as a whole, expanding the services and manufacturing sectors, which account for the largest share of economic activity and are more labor-intensive. Structural transformation has mainly occurred through the movement of jobs and output from agriculture to low value-added services. However, the high level of informality (64 percent of the labor force, among the highest in the region) poses a constraint to growth and productivity in the medium-term.

13. Growth has slowed in recent years due to the recurrence of external shocks, especially those weather



related. After experiencing a drought-induced recession in 2019, the economy had begun to rebound in early 2020 when the COVID pandemic struck. The government's swift imposition of mobility restrictions to contain the spread of the virus led to a slump in economic activity, but more public investment helped limit the economic contraction to 0.8 percent, the smallest in Latin America. In 2021, despite the recurrence of dry conditions, the economy expanded by 4.2 percent, driven by the recovery of the services sector as COVID-related mobility restrictions were loosened. Private consumption recovered strongly from low levels, while the initiation of large private investment projects⁹ drove up imports. Combined with drought conditions that subdued agricultural output, the contribution of net exports to growth was negative. The drought has persisted into early 2022, affecting the agricultural harvest and hydroelectric exports, driving up logistics costs, and intensifying forest fires.

14. The current account is mainly driven by the behavior of the trade balance, with exports particularly sensitive to climate shocks due to their heavy reliance on agriculture and hydroelectric power. The country has run a current account surplus of 1.0 percent of GDP, on average, since 2003. Current account deficits are usually low, never exceeding 0.9 percent of GDP in the last two decades, and have been mostly linked to the evolution of the trade balance, which in turn is influenced by drought events. Agricultural products, mainly soybeans and to a lesser extent maize, account for a large portion of exports, 32 percent, on average, between 2017 and 2021, while beef and leather account for an additional 10 percent. Electricity exports from the binational Itaipú and Yacyretá hydroelectric dams, contribute a further 15 percent. Together, the agriculture and hydroelectric sectors account for 57 percent of Paraguayan exports. An additional 20 percent come from re-exports of consumer goods to neighboring Brazil and Argentina, which are also reliant on natural capital and subject to large macroeconomic swings. Net foreign direct investment is low, averaging 1.1 percent of GDP from 2003-2021. Foreign direct investments have mostly been towards extraction and transformation of existing raw materials in forestry and paper-related industries. Remittances average 1.4 percent of GDP and are a relatively stable component of the balance of payments.

15. A flexible exchange rate regime has helped Paraguay cope with climate and other external shocks, keeping external imbalances at bay. The flexible exchange rate regime has helped the economy adjust in recent years to variable climate conditions, commodity price fluctuations, macroeconomic swings among trading partners, and the COVID pandemic. Despite multiple shocks, the real effective exchange rate has remained relatively stable in recent years, depreciating only 5 percent over 2018-2021. As of end-March 2022, the nominal exchange rate had strengthened vis-à-vis the US dollar by 3 percent since end-2021. Foreign reserves remain at prudent levels at US\$9.5 billion as of mid-March 2022, covering eight months of 2021 total imports. This has helped smooth macroeconomic cycles and prevented large external imbalances.

16. A sound inflation targeting framework from an independent central bank has been a solid pillar of Paraguay's macroeconomic success. The Central Bank of Paraguay (*Banco Central del Paraguay*, BCP) has two main objectives: price stability and financial sector stability and efficacy. Paraguay has seen low and stable inflation rates since the adoption of a modern inflation targeting regime in 2011, using the interest rate as its main monetary tool. Since then inflation has averaged 3.9 percent, lower than in most of its history (Figure 3) and than the regional average. In the process, the inflation target has decreased from 5 percent to 4 percent, and the width of the target range narrowed from 5 percentage points to 4 percentage points. Inflation expectations for the monetary policy horizon (24 months)

⁹ The Zapag Group, which owns Copetrol, the leading fuel distributor in the country, began construction on two major investments in late 2021.

1) Paracel, a US\$2.8 billion joint venture with a Swedish firm, Girindus Investments, to develop a kraft pulp mill and eucalyptus plantations in the northern region of Paraguay. The mill is expected to be operational by end 2023. 2) Omega Green, an US\$800 million joint venture with Brazil's ECB Group to build an advanced biofuels processing plant in the industrial center of Villeta, anticipated to be operational by 2025.



have been almost exactly at the center of the target range since 2014, when systematic surveys started.¹⁰

17. The BCP provided strong monetary stimulus during the pandemic, but inflation is currently running high, in line with the region. During the COVID pandemic, the BCP provided monetary stimulus by reducing its monetary policy rate by a cumulative 325 basis points to 0.75 percent between February and June 2020. In addition, the BCP implemented measures to promote liquidity such as the reduction of reserve requirements and measures to ease the renewal, refinancing, or restructuring of the credit portfolio. The easing of monetary conditions did not affect inflation expectations, which remained anchored at 4 percent. Inflation has, however, been on an increasing trend since May 2021, driven by the sharp increase in fuel and foodstuff prices. The BCP reacted quickly, raising the interest rate by a cumulative 650 basis points in 10 months, but at 11.4 percent in May 2022, inflation remains above the upper bound of the target range (2-6 percent).

18. The BCP oversees a sound but shallow financial sector, with well-capitalized banks and low non-performing loans. At 15 percent, the tier 1 capital-to-asset ratio is well above the regulatory minimum, and the non-performing loan ratio is 3 percent.¹¹ With private credit reaching 49.3 percent of GDP, it is below the median for regional peers and upper-middle-income countries.¹² The banking systems is highly dollarized, with a credit portfolio consisting mainly of agricultural loans, wholesale trade, and automobile loans.¹³ The largest share of the portfolio targets large firms (55 percent) followed by consumer loans (23 percent).¹⁴ Loans to small and medium-sized enterprises (SMEs), which provide jobs to over 2 million people, represent only 17 percent of the total portfolio of banks and finance companies. The number of male borrowers (households) from commercial banks was 287 versus 218 females. Capital markets are also smallgrowing. The Asuncion sock market transactions grew 112 percent in 2020 and 76 percent again in 2021, they amounted to only US\$3.4 billion.¹⁵ Insurance market development and premiums are limited more broadly, with US\$224.5 million in total premiums in 2021.¹⁶ Vehicle, life, and fire segments represent 42.6, 16, and 8.4 percent of premiums, respectively¹⁷.

19. Prudent fiscal management has been another strong pillar of Paraguay's macroeconomic performance. The size of the public sector in Paraguay is small, with a public expenditure-to-GDP ratio averaging 20 percent of GDP in the last decade. Paraguay averaged a central government fiscal deficit of 0.3 percent of GDP between 2003 and 2019 (Figure 4), lower than the average of countries in Latin America (3.2 percent). Fiscal prudence has been underpinned by a fiscal responsibility law, approved in 2013, which limits the central government deficit to 1.5 percent of GDP and the real growth of primary current expenditure to 4 percent of GDP. Current expenditures and interest payments accounted for around 83 percent of total expenditures in the years before the pandemic, half of which corresponded to public wages. Capital expenditures represented 17 percent of total expenditures. On the revenue side, Paraguay's tax system is characterized by a low tax rate, set at 10 percent for the value added tax, personal income tax, and corporate tax. Revenues from the Itaipú and Yacyretá dams constitute around 10 percent of total revenues. The central government is the main driver of general government fiscal dynamics. The key off-budget risks come from state-owned enterprises and the pension system, which registered a deficit of 0.5 percent of GDP in 2021. The MoF has been working on a package of parametric reforms, but the legislative proposal has not yet been brought to Congress.

¹⁰ As measured by BCP's *Encuesta de Expectativas de Variables Económicas*.

¹¹ International Monetary Fund (2021): Paraguay. 2020 article IV consultation staff report. IMF Country Report N°21/45

¹² IMF (2020): Financial access survey.

¹³ BCP (2021). Indicadores Financieros. Octubre 2021. Estudios Económicos. Departamento de Estadísticas Macroeconómicas. Diciembre 3, 2021.

¹⁴ Data shared by the Superintendent of Banks.

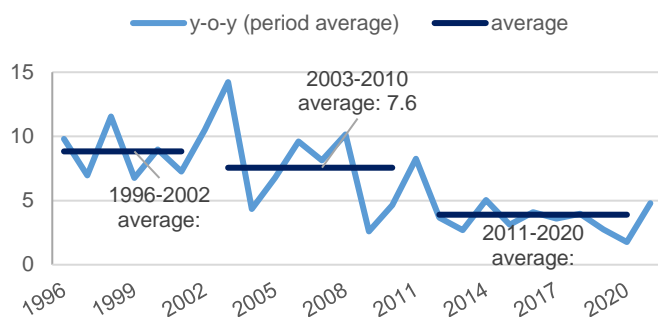
¹⁵ Bolsa de Valores de Asuncion. Annual Report, 2021.

¹⁶ US\$10.6 billion for Argentina in 2021. Superintendency of Insurance of the Nation, Annual Report, 2021.

¹⁷ Central Bank of Paraguay, Financial and Statistical Market (Insurance) Information

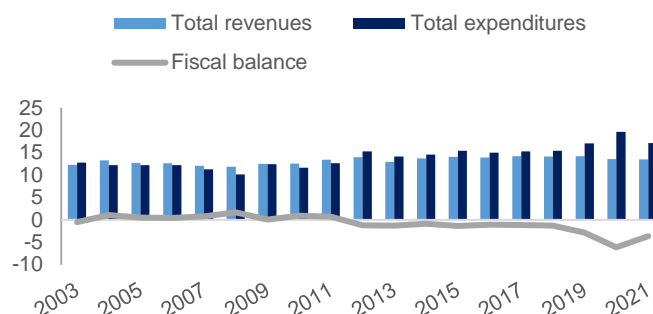


Figure 3. Inflation rate, Consumer Price Index, year-on-year change, percent



Source: Staff calculations using BCP data.

Figure 4. Total central government revenues, expenditures, and fiscal balance, percent of GDP



Source: Staff calculations using MoF data.

20. The country's fiscal track record and low debt levels enabled a strong countercyclical response to the pandemic. Small fiscal imbalances, sound debt management practices, and moderate growth led Paraguay to have a low debt-to-GDP ratio of 22.9 percent in 2019. At 282 basis points, Paraguay's country spread in international financial markets was lower than the regional average (465), and than some countries with investment grade rating in the region, such as Mexico. This context allowed for a significant fiscal response to mitigate the impact of the COVID pandemic on households and firms through additional spending on health and social protection programs and capital expenditure. The public wage bill also increased in 2020 due to the hiring of additional health personnel and bonuses to medical personnel as a form of compensation during the COVID pandemic. As a result of this additional spending and lower revenues, the central government fiscal deficit widened to an unprecedented 6.1 percent of GDP in 2020, financed mostly by the issuance of two bonds totalling US\$1.5 billion.¹⁸ In 2021, the recovery of revenues, a partial phase-out of COVID related expenditures, a real reduction in the public wage bill, and lower capital expenditures reduced the fiscal deficit to 3.8 percent. The government has committed to a gradual fiscal consolidation process to reach a 1.5 percent deficit by 2024.

21. The fiscal response to the COVID pandemic effectively supported the incomes of the poor and vulnerable. Poverty (as measured at the US\$5.50 per day line, in 2011 purchasing power parity) increased from 15.4 percent in 2019 to 17.9 percent in 2020, one of the smallest increases in the region. The pandemic shock was partially cushioned by government transfers such as Ñangareko and Pytyvõ in the informal sector and support to formal workers whose jobs were suspended. As a result, the increase in extreme poverty was negligible at 0.1 percent. The Gini coefficient fell by 2.1 percentage points to 43.5 in 2020. In 2021, the economic recovery led to a partial improvement in labor market outcomes. The unemployment rate fell from 8.2 percent in 2020 to 6.8 percent in 2021, but remains above the pre-pandemic levels. Urban areas still present high levels of unemployment (8.2 percent) compared to the pre-pandemic levels (6.3 in 2019). While labor force participation rates returned to pre-pandemic levels, the gender gaps remain (84.7 percent for men and 60.6 percent for women). Moreover, the quality of employment remains an issue mainly among women with higher underemployment rates (9.8 percent compared to 4.7 percent of men). Higher inflation hindered poverty reduction due to the higher cost of the consumption basket, especially for those at the lower end of the income distribution, since the highest increase was in food inflation. As a result, the poverty rate is estimated to have only slightly declined to 17 percent in 2021. The Gini coefficient increased slightly due to a decline in the

¹⁸ In January 2020, Paraguay reopened its 5.4 percent US\$ global notes due 2050, raising an additional US\$450 million. Subsequently, in April 2020, it placed a US\$1 billion bond at 4.95 percent with a ten-year maturity.



disposable incomes of the poor. These effects were more accentuated in rural areas where the drought limited poverty reduction.

Table 1: Key Macroeconomic Indicators, 2018-2025

	2018	2019	2020	2021e	2022f	2023f	2024f	2025f
Real economy	<i>Annual percentage change, unless otherwise indicated</i>							
Real GDP	3.2	-0.4	-0.8	4.2	0.7	4.7	3.8	3.8
Private consumption	4.4	1.8	-3.6	5.9	1.6	4.6	4.1	4.1
Government consumption	3.0	4.7	5.1	5.4	0.8	-2.9	0.3	1.1
Gross fixed capital formation	6.9	-6.1	5.3	18.5	7.2	6.4	4.5	4.1
Exports of goods and services	-0.4	-3.4	-9.0	2.2	-2.5	7.0	5.0	5.0
Imports of goods and services	8.3	-2.0	-15.2	21.4	3.5	4.5	4.5	4.5
Contribution of primary sector, percentage points	0.2	-0.4	0.8	-1.2	-2.6	2.7	0.6	0.5
Contribution of industry, percentage points	0.6	-1.0	0.2	1.5	1.8	1.4	1.4	1.4
Contribution of services sector, percentage points	2.1	1.1	-1.5	3.3	1.4	0.3	1.5	1.7
Fiscal Accounts	<i>Percent of GDP</i>							
Total expenditures	15.4	17.1	19.6	17.7	16.6	16.0	15.7	15.5
Total revenues	14.1	14.2	13.5	14.0	13.1	13.4	14.2	14.2
Overall fiscal balance	-1.3	-2.9	-6.1	-3.8	-3.6	-2.6	-1.5	-1.4
Primary balance	-0.6	-2.0	-5.1	-2.6	-2.4	-1.3	-0.2	-0.2
Public debt	20.0	23.4	34.4	35.0	36.0	36.3	36.1	35.8
External debt	15.7	18.7	29.0	30.1	32.5	32.8	34.0	34.0
Money and prices	<i>Annual percentage change</i>							
Inflation (average)	4.0	2.8	1.8	4.8	6.5	4.0	4.0	4.0
Credit to private sector	15.2	11.0	7.7	9.6	..	..	..	..
Monetary policy rate (end-of-period)	5.3	4.0	0.8	5.8	..	..	..	..
Balance of Payments	<i>Percent of GDP, unless otherwise indicated</i>							
Current Account Balance	-0.2	-0.5	2.7	0.7	-1.5	-0.4	-0.2	0.3
Net foreign direct investment	0.4	0.6	0.3	0.4	0.8	0.8	0.8	0.6
Gross reserves (US\$ mil)	7680	7675	9490	9947	..	..	..	..
<i>Memorandum items:</i>								
Per capita GDP (In US\$, Atlas Method)	5,600	5,510	5,180	..	..	..	..	..
Nominal GDP (US\$)	40,225	37,925	35,464	39,061	41,439	44,133	46,114	48,239

Source: World Bank staff estimates and projections using BCP and MoF data. Cut-off date for projections: 25 April 2022.

Note: Agriculture sector includes livestock. Fiscal data refer to Central Government. Expenditures include net acquisition of nonfinancial assets.

Table 1: Balance of Payments Financing Requirements and Sources, 2018-2025 (US\$ millions)

	2018	2019	2020	2021e	2022f	2023f	2024f	2025f
Financing requirements	115	-123	-845	-127	-85	-43	-45	48
Current account balance	-68	-178	959	269	-639	-176	-88	133
Change in reserves	183	55	-1,804	-396	553	133	42	-86
Financing sources	-115	123	845	127	85	43	45	-48
Capital transfers	153	151	172	247	189	171	181	191
Direct investment	156	225	120	138	322	342	362	286



Portfolio investment	530	500	2,161	564	379	385	407	429
Other investment	-177	-336	-1,350	34	-804	-856	-904	-954
Errors and omissions	-777	-416	-257	-856	0	0	0	0
Nominal GDP (US\$)	40,225	37,925	35,464	39,061	41,439	44,133	46,114	48,239
Gross external financing needs	0.3	-0.3	-2.4	-0.3	-0.2	-0.1	-0.1	0.1

Source: World Bank staff estimates and projections using BCP data. Cut-off date for projections: 25 April 2022.

Table 2: Key fiscal indicators for the central government, 2018-2025

	2018	2019	2020	2021e	2022f	2023f	2024f	2025f
	<i>Percent of GDP</i>							
Revenues	14.1	14.2	13.5	14.0	13.1	13.4	14.2	14.2
Tax revenues	10.0	10.0	9.5	9.7	9.7	9.7	10.1	10.1
Income taxes	2.3	2.5	2.5	2.4	2.4	2.4	2.5	2.5
Excises	1.4	1.3	1.2	1.3	1.3	1.3	1.3	1.3
VAT	5.1	4.9	4.9	5.1	4.8	5.0	5.1	5.1
Other taxes	1.2	1.2	0.9	0.9	1.2	1.0	1.2	1.2
Nontax revenue and grants	4.1	4.2	4.0	4.3	3.4	3.7	4.1	4.1
Total expenditures	15.4	17.1	19.6	17.7	16.6	16.0	15.7	15.5
Operational expenditures	13.4	14.1	16.0	14.7	13.8	13.3	13.2	13.1
Compensation of employees	6.6	6.9	7.3	6.8	6.5	6.1	6.0	6.0
Purchases of goods and services	1.3	1.3	1.4	2.0	1.4	1.2	1.2	1.2
Interest payments	0.7	0.8	1.1	1.1	1.2	1.3	1.3	1.1
Transfers	2.3	2.4	3.8	2.5	2.4	2.4	2.4	2.4
Other expenses	2.6	2.6	2.4	2.4	2.3	2.3	2.3	2.3
Net acquisition of nonfinancial assets	2.0	3.0	3.6	3.0	2.8	2.7	2.5	2.5
Overall fiscal balance	-1.3	-2.9	-6.1	-3.8	-3.6	-2.6	-1.5	-1.4
Primary balance	-0.6	-2.0	-5.1	-2.6	-2.4	-1.3	-0.2	-0.2
Public sector debt	20.0	23.4	34.4	35.0	36.5	36.4	35.4	35.1
Domestic	4.0	4.2	4.8	4.5	4.5	4.6	4.7	4.8
Foreign	16.0	19.2	29.7	30.5	31.5	31.7	31.4	31.0

Source: World Bank staff estimates and projections using SITUFIN and BCP data. Cut-off date for projections: 25 April 2022.

Note: Data refer to central government, except for public sector debt (general government).

2.2. MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY

22. Growth is expected to slow to 0.7 percent in 2022 as net exports exert a drag (see Table 1). Net exports are forecast to contribute negatively to growth as agriculture and hydroelectric energy exports slump due to the drought. Private consumption will remain the main driver of growth, but is forecast to decelerate in 2022 due to the combination of high inflation and lower agricultural incomes, and pick up as these conditions moderate in 2023. Overall, domestic demand is expected to be sustained by the progress of two large private investment projects in a pulp mill and a biofuel plant, totaling US\$3.6 billion or 9 percent of 2021 GDP.¹⁹ These large private investments, which began construction in

¹⁹ These refer to Paracel and Omega Green. See footnote 2.



2021, are expected to continue to sustain economic activity in the coming years, and accelerate export growth once they are operational. Contingent on an improvement in weather conditions and a recovery in commodity exports, growth is expected to rebound sharply in 2023 and remain robust in 2024-2025.

23. Inflation is expected to remain high. Inflation is expected to remain above the upper-bound of the target range (6 percent) for at least the first semester of 2022 as second-round effects of the hike in commodity prices evolve. Inflation is expected to converge only gradually to the upper end of the target range in the baseline scenario. This estimate is subject to high uncertainty, as reflected in BCP's March 2022 Survey of Economic Variables, where there is a greater dispersion of economic agents' inflation expectations with respect to previous months. The BCP is expected to continue increasing its monetary policy rate going forward until inflation expectations stabilize and recede. On the financial side, measures to dampen the impact of the COVID pandemic such as the refinancing or restructuring of existing loans are unwinding, but it is difficult to assess the current loan portfolio quality as several loans can eventually become non-performing. In addition, around 10 percent of assets of the financial sector are unsupervised in non-banking institutions, which could represent a source of concern. However, a well capitalized system and low non-performing loans are important mitigating factors.

24. The fiscal deficit is expected to decline at a slower pace in 2022 given the effects of the drought on economic activity, but remains firmly on a medium-term consolidation path. With lower revenues from the agriculture and hydropower sectors and lower tax collections from more subdued retail activity, the fiscal deficit is expected to come in at 3.6 percent of GDP in 2022, above official projections of 3 percent. Total expenditures are expected to decline as a share of GDP in 2022 as the MoF has pledged to contain wage bill pressures and has not introduced subsidies on fuels as initially proposed.²⁰ Under the baseline scenario, the fiscal deficit is expected to gradually narrow to reach the government's target of 1.5 percent by 2024. Over the medium-term, revenues are expected to revert to their 2018-2019 shares of GDP as the effect of the drought dissipates and the economy rebounds in 2023. However, with no significant tax reform in sight, the consolidation is expected to be achieved through permanent lower expenditures (by 2.2 percentage points of GDP) over 2022-2026. The government envisions that this will occur mainly through the reduction of current spending (personnel and material) and as a gradual reduction in capital spending.²¹ The government intends to limit salary increases for both permanent and contract staff, and has submitted a legislative proposal to prohibit increases in the public wage bill in electoral years. The reduction in material spending is anticipated to take place by limiting the growth of non-essential items to zero, as well as through proposed procurement reforms.²² Legislative proposals related to civil service reform and parametric pension reforms have also been prepared and are at different stages of progress.

25. The drought is also expected to deteriorate the current account balance in 2022, but imbalances going forward are expected to remain small if the drought subsides. The current account is forecast to register a deficit in 2022 as the net trade balance turns negative on stagnant exports and a higher import bill for fuel and fertilizers. As import growth is expected to keep momentum as public and private investment projects progress, the current account is expected to remain in a small deficit until 2024. As these projects are expected to lead to higher exports, the current account is expected to revert to a surplus thereafter. The financial account is expected to remain stable as a share of GDP despite interest rate increases in the United States, as residents mainly own domestic currency-dominated assets.

²⁰ The government had initially proposed a subsidy on retail sales of certain types of fuel to mitigate inflation, but the law was repealed and replaced with a proposal enabling more transparent and competitive procurement of fuels by the state-owned company, Petropar.

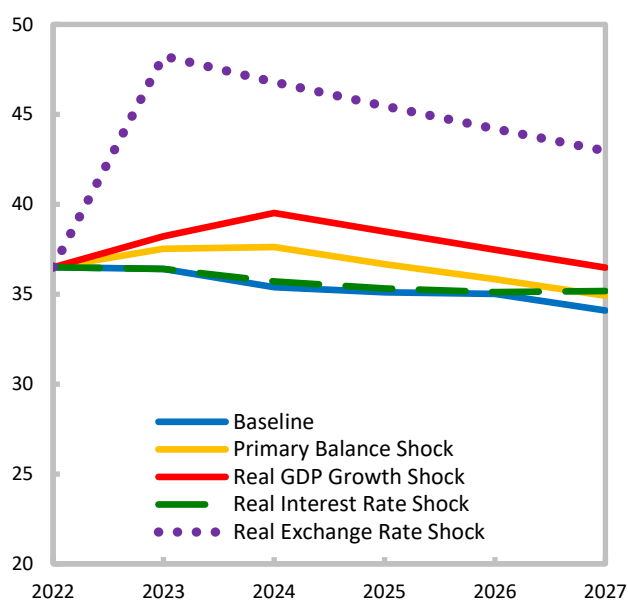
²¹ Government of Paraguay (2022): Informe de Las Finanzas Públicas de La República del Paraguay.

²² A procurement law was approved by the Senate in December and is being debated in Congress (see section 5.3).



26. Public and external debt are low by international standards and are expected to remain so in the medium term. As of end-February 2022, public sector debt of the general government stood at US\$13.9 billion, or 33.5 percent of estimated 2022 GDP. 87 percent of this amount comprises external debt and is mostly owed to international bondholders (50 percent of total external debt), followed by multilateral institutions, mainly the Inter-American Development Bank (IDB). While public debt has increased due to additional borrowing during the COVID pandemic, it is projected to remain low and sustainable under various scenarios. Approximately 85 percent of public debt is in foreign currency or linked to foreign currency, exposing Paraguay to potential currency depreciation risk. While public debt has increased due to additional borrowing during the COVID pandemic, it is projected to remain low and sustainable under various scenarios (**Error! Reference source not found.**). Public debt is expected to decline as a share of GDP, a scenario robust to interest rate, current account, and growth shocks, where debt never exceeds 40 percent of GDP. Debt is more sensitive to real exchange rate shocks, with a 30 percent real depreciation increasing the public debt-to-GDP ratio around 12 percentage points on impact, but it would still decrease in the forecast horizon. As previously noted, however, the exchange rate has remained relatively stable in 2019-2021 despite multiple shocks.

Figure 5: Public Debt-to-GDP ratio under Stress Scenarios, percent of GDP



Source: World Bank staff debt sustainability analysis, 2022

27. These forecasts incorporate the anticipated impact of the ongoing Russia-Ukraine war on the Paraguayan economy, but the estimates are clouded by high uncertainty. The war is expected to impact Paraguay primarily through the inflation and trade channels. As a fuel importer, the increase in global fuel prices due to the war has increased inflation and led to a higher fuel import values (45 percent higher in nominal terms in the first quarter of 2022 compared to the same period in 2021), leading to a deterioration in the trade balance. Moreover, reduced exports of beef to Russia and more costly imports of fertilizer are also expected to weigh negatively on the trade balance. Russia is Paraguay's fourth largest export destination, purchasing a fifth of its beef exports in 2021. Nominal exports to Russia dropped by 87 percent in March 2022; however, the impact in the coming months could be mitigated by Paraguay's efforts to redirect beef exports to other markets (Colombia, Chile, Brazil and possibly the United States). In addition, fertilizer



shortages – which Paraguay imports almost exclusively from Russia – could potentially reduce yields in 2023. According to a recent United States Department of Agriculture report,²³ Paraguay has only secured 65 percent of its fertilizer needs for the 2022/23 season. Finally, while Paraguay could benefit from higher global prices for beef, soy, wheat and corn, which make up nearly half of total exports, in the short run this only partially mitigates the negative impact of reduced export volumes from the ongoing drought.

28. Paraguay's macroeconomic policy framework is considered adequate for this operation. The government is committed to gradually return to the target deficit of 1.5 percent of GDP, as stipulated by the Fiscal Responsibility Law, by 2024. This will be achieved primarily by continuing to consolidate public expenditures. The government has signaled its commitment to keeping the debt ratio stable. Fiscal and monetary policies are coordinated, as the latter has been on a tighter path since August 2021 to rein in rising inflation. Monetary policy credibility is robust. BCP is independent and has the best track record in the region with respect to keeping inflation within the target range²⁴. Despite the external price shock, median inflation expectations for the monetary policy horizon remained well within the target range at 4.8 percent. Foreign reserves are ample at 8 months of imports, above the metrics from the International Monetary Fund (IMF) for a small open economy.

29. Downside risks are substantial. The outlook described above is predicated on three assumptions: First, La Niña is expected to subside towards the end of 2022, enabling more favorable weather conditions for the 2022/23 planting season especially for soybeans, which typically begins in September. Second, it assumes that the shock to global fuel prices gradually subsides by the end of 2022²⁵, as the impact of the Russia-Ukraine war is gradually attenuated. This would lead to a moderation of inflation and facilitate plans to reduce primary expenditures in the coming years. Third, it assumes the absence of major external shocks, both to Paraguay and its main trading partners, Argentina and Brazil. Specifically, future potential waves of the COVID pandemic are expected to remain manageable, avoiding the need for new cross-border and domestic mobility restrictions. As of early June 2022, only half of Paraguay's population has received two doses of a COVID vaccine, among the lowest shares in Latin America, despite sufficient vaccine supplies. Nonetheless, the government has progressively relaxed mobility restrictions and recently lifted all COVID-related health and sanitary precautions.

30. The macroeconomic outlook could materially worsen should any of the above assumptions fail to hold, but several factors are likely to help the country cope with negative shocks. These include Paraguay's financial market openness, the flexible exchange rate, and the inflation targeting regime. Furthermore, the relatively low debt burden and the government's commitment to a rule-based fiscal framework are important signals of policy credibility and capacity to execute on plans for medium-term fiscal consolidation. The government is also taking steps to diversify its trading partners, particularly for livestock, due to the impact of the Russia-Ukraine war. Finally, the government has not introduced any new mobility restrictions in response to periodic COVID outbreaks since mid-2020, and is thus expected to maintain a normal level of economic openness even in the face of future outbreaks of the virus. In addition, there is one potential upside risk to the outlook: Should the ongoing bilateral renegotiations of the Itaipú dam treaty with Brazil result in higher royalty payments, Paraguay could raise up to an additional US\$1 billion in annual revenues starting in 2024²⁶.

2.3. IMF RELATIONS

²³ United States Department of Agriculture (2022): "Oilseeds and products annual". April 11, 2022.

²⁴ Diego Labat & Gerardo Licandro (2021): Towards a quality currency. Documentos de trabajo 2021005, Banco Central del Uruguay.

²⁵ The current forecast assumes that global oil prices average US\$95.1 per barrel in 2022 and moderate to US\$85.4 in 2023 and US\$80.4 in 2024.

²⁶ Natasha Che (2021): Macroeconomic Impact of the Itaipú Treaty Review for Paraguay. IMF Working Paper No. 2021/129.



31. The Fund carries out regular Article IV consultations with Paraguay. The staff report for the most recent (April 2022) consultations is expected later in 2022. There is no program in place between the IMF and Paraguay. The IMF approved a request for purchase under the Rapid Financing Instrument on April 21, 2020 in the amount of Special Drawing Rights 201.4 million (100 percent of Paraguay's quota), equivalent to US\$274 million. According to the last Article IV report published in March 2021, the government has undertaken swift and forceful action to contain the health, social and economic impact of the crisis, including by temporarily widening the fiscal deficit to finance expanded social transfers. The Fund encouraged a gradual withdrawal of fiscal stimulus to return to the fiscal responsibility law ceiling by 2024, contingent on the absence of further negative shocks.

3. GOVERNMENT PROGRAM

32. The proposed DPL is fully aligned with core priorities of the government's program. These priorities are laid out in its two key development strategy documents: the long-term Paraguay 2030 national development plan and the medium-term Plan de Gobierno 2018-2023: Paraguay de la Gente (PdG 2023), which lays out the medium-term priorities of the current administration. The development plan's overarching goals include a focus on eliminating extreme poverty and achieving higher-than-average growth in the incomes of the bottom 40 percent. Within the framework of the plan, the PdG 2023 lays out priority areas in which the current administration intends to make progress within its five-year term. These include, among others, stable economic growth, improved public spending, and environmental management. The PdG 2023 is anchored in a medium-term economic framework which supports, among others, sustainable fiscal policies, and widened financial inclusion.

33. Four years into its tenure, the administration continues to prioritize macroeconomic stability, private sector-led growth, and improved efficiency. The government has remained committed to a sound macroeconomic policy framework through the COVID pandemic, providing much-needed stimulus while also stressing its temporary nature and presenting a gradual phasing-out plan. International credit markets find those commitments credible, as reflected in the relatively stable sovereign spreads with respect to the pre-pandemic. The government has also been working toward improving conditions for the private sector to make Paraguay more attractive for foreign and domestic investors by removing bottlenecks, promoting economic diversification, and facilitating access to credit and reducing transaction costs in financial services. The continued implementation of the simplified joint-stock company type, supported under the Paraguay First Economic Management Development Policy Loan (P169505) approved in March 2020, and the promotion and approval of the law on fiduciary services are clear examples of this agenda. The administration is also seeking to make government itself more efficient in an effort to improve reliable delivery of basic services, especially for disadvantaged households. This is illustrated by the effective implementation of a comprehensive support program for the poor and vulnerable in response to the COVID shock, above and beyond the existing social safety net, and the subsequent gradual phase-out program and fiscal convergence plan.

34. These reforms are complemented by the government starting to promote more climate-informed development. Building on its 2017 Climate Change Law, its 2017 National Mitigation Plan and its 2017 National Adaptation Plan, the government submitted its updated NDC to the United Nations Framework Convention on Climate Change on July 16, 2021, outlining its ambitions to adapt to and mitigate the effects of climate change, including adaptation through 25 priority objectives across seven sectors and unconditionally reducing its emissions by 10 percent from a business-as-usual scenario by 2030 (and by an additional 10 percent subject to international financing). Among other actions, through Law 6676, in 2020 the government extended for ten years the Zero Deforestation Law covering the eastern part of the country, and legislative proposals to advance incentives for investment into the electromobility



and renewable energy sectors are being debated in Parliament. The MoF has joined the Coalition of Finance Ministers for Climate Action and has requested World Bank support for charting a climate policy roadmap. The BCP has also joined the Network for Greening the Financial System, has been promoting a greener economy in the last few years, and has advanced discussions with the World Bank on a technical assistance program to support greening the financial sector.

PROPOSED OPERATION

4.1. LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION

35. The proposed DPL supports policy and institutional reforms that aim to set Paraguay's development trajectory on a more sustainable pathway by: (i) mobilizing private capital for climate resilience and mitigation; (ii) promoting climate resilience and mitigation in select sectors of the economy; and (iii) enhancing fiscal transparency for climate action. The Program complements the government's reform agenda as laid out in the PdG 2023, as well as Paraguay's updated NDC. It supports a shift in approach to climate change policymaking propelled by the recent climate-induced events, in particular the series of droughts. Pillars 1 and 2 contribute to the government's commitment to environmental management and to implementing the NDC's mitigation priorities in energy and land use, land use change, and forestry sectors, as well as to implementing NDC adaptation actions, including ensuring quality water availability. Pillar's 2 support for the development of electronic transactions through a trust services providers bill also lays the foundation for improved business continuity in the face of climate events by supporting the dematerialization of transactions. Pillar 3 is aligned with the government's commitment to stable growth and improved public spending, and contributes to the NDC's means of implementation, in particular through measures aiming to improve risk management and budgeting.

36. The operation incorporates lessons learnt through previous engagements. The Implementation Completion and Results (ICR) report of the Paraguay Enhancing Fiscal Management, Social Protection and Financial Inclusion Development Loan with a Deferred Drawdown Option (P151007), implemented between 2014 and 2017, highlights important lessons that were taken into consideration through the design of the DPL. For example, the team coordinated with other Multilateral Development Partners throughout preparation to build on complementarities, avoid duplication, and maximize impact. Following another lesson highlighted in the ICR, the Bank provided technical assistance for the development of several Prior Actions (PAs) and to manage shortcomings in institutional capacity, as advised in the ICR. The Bank has closely monitored the progress of the reforms during the preparation of this DPL to avoid last-minute policy changes that would affect the consistency of the policy reforms.

4.2. PRIOR ACTIONS, RESULTS AND ANALYTICAL UNDERPINNINGS

PILLAR 1: MOBILIZE PRIVATE CAPITAL FOR CLIMATE RESILIENCE AND MITIGATION

37. Prior Action 1: *To incentivize SMEs to reduce their greenhouse gas emissions, the AFD has established a credit line to finance energy efficiency improvements, including in the biomass energy sector, as evidenced by AFD's Resolution No. 3 included in AFD's Act No. 13/2022 dated February 23, 2022, and AFD's Letter No. GCM No. 4/2022 dated April 26, 2022.*

38. Rationale: Access to finance for firms remains limited in Paraguay, particularly for SMEs and non-traditional



areas, such as improving energy efficiency. The estimated finance gap for SMEs is US\$ 4 billion.²⁷ Paraguay's 22,000 SMEs make up 2.6 percent of the country's firms.²⁸ 73 percent of SMEs and 54 percent of medium-sized enterprises are not able to access external sources of financing. Consumer loans are the largest portfolio with approximately 20 percent of the local currency loans and 12 percent of the total loan portfolio.²⁹ Agricultural loans are about 28 percent of the portfolio in foreign currency, and also represent 12 percent of the total loan portfolio, while mortgages (in local currency) have grown 20 percent in 2021.³⁰ Loans for investments in energy efficiency and renewable biomass energy technology are virtually non-existent in Paraguay. In part, this absence of financial services is due to a lack of familiarity with this type of investment among financial institutions. Several sectors, including brickmaking, grain drying, and sugar production, rely heavily on biomass energy, contributing to deforestation and forest degradation and resulting GHG emissions, especially in the eastern part of the country. The emission reductions potential in these industries has been estimated at 883,000 tCO₂e per year,³¹ or 1.8 percent of Paraguay's total net emissions.³²

39. Substance: The resolution establishes a first-of-its-kind US\$ 40 million line of credit at the AFD, a second-tier state-owned bank, to channel affordable credit to financial institutions for SME investments at market rates for energy efficiency and biomass-based renewable energy technology adoption.³³ The resolution provides financial institutions affordable credit to on-lend at market rates in US\$ or in the local currency (guaraníes) to clients to incentivize adoption of technologies whose full range of benefits is not currently priced by the market. The credit line will allow SMEs with annual revenues of less than 15 billion guaraníes and a minimum of three years of existence, which face significant shortfalls in access to finance, to invest in projects (maximum loan size is US\$1.5 million) to modify their current energy matrix by, for example, moving from biomass energy to hydroelectricity, and to increase the efficiency of existing energy use, using a predefined list of eligible investments. The line of credit provides for the development of medium and long-term maturities (1 to 15 years with up to a 2 year grace period), which will help SMEs repay loans for which the investments might not yield high profits in the initial years. Technical support to SMEs to assess energy efficiency options and to design viable subprojects will also be provided.

40. Expected impact: The expected impacts of this line of credit are investments in energy efficient technologies, reducing SMEs' energy consumption and enabling fuel switching toward renewable biomass-based energy technology, leading to GHG emission reductions. More broadly and in the longer term, the line of credit is expected to create a learning effect among financial institutions in a market with little exposure to energy efficiency, demonstrate that investments in improving energy efficiency are bankable, and stimulate credit offerings without AFD's involvement. This PA will be complemented by technical assistance to BCP to further develop green finance in Paraguay. Progress against this PA will be measured by the projected direct GHG emission reductions enabled by the loans disbursed through the energy efficiency line of credit, which are expected to rise from a baseline of zero in 2022 to 3,075 tCO₂eq by 2023.

Prior Action 2: *To facilitate financial institutions lending to forestry businesses in the plantation sector, the*

²⁷ International Finance Corporation (2017) : MSME Finance Gap : Assessment of the Shortfalls and Opportunities in Financing Micro, Small, and Medium Enterprises in Emerging Markets. Washington, DC.

²⁸ Dirección General de Estadísticas, Encuestas y Censos (DGEEC/ Viceministerio de Mipymes), cited in Insfran J., 2021.

²⁹ Banco Central de Paraguay (2021). Indicadores Financieros. Octubre 2021. Estudios Económicos. Departamento de Estadísticas Macroeconómicas. Diciembre 3.

³⁰ Ibid.

³¹ Hernán Carlinio (2017): Guía para la estructuración de instrumentos financieros para la promoción de la eficiencia energética: estudio de caso de la Agencia Financiera de Desarrollo de Paraguay. Interamerican Development Bank. Washington, DC.

³² Authors' calculation based on MADES-DNCC/PNUD-FMAM. 2021. Tercer Informe Bienal de Actualización sobre Cambio climático ante la CMNUCC. Proyecto IBA3. Asunción.

³³ US\$ 20 million of which will be provided by the Green Climate Fund upon Congress approval. The launch of the credit line, however, not contingent on these funds.



Superintendency of Banks has regulated the valuation of standing timber as loan collateral by establishing: (a) rules for the accreditation of professional valuers of the real right to standing timber (derecho real de superficie forestal); and (b) related technical valuation requirements, as evidenced, respectively, by: (i) Resolution SB. SG. No. 34/2022 dated April 6, 2022, and published on BCP's website; and (ii) Resolution SB. SG. No. 22/2022 dated February 25, 2022, and published on BCP's website.

41. Rationale: Forests play an important role in the Paraguayan economy by supplying raw materials for solid wood products, construction, fuelwood for energy, export revenues, and environmental services, including sequestering carbon and providing essential environmental services, supporting adaptation to climate change. Paraguay's NDC includes afforestation through forest plantations as part of its approach to climate mitigation. Paraguay has very favorable environmental and economic conditions for forestry, including a subtropical climate fostering rapid tree growth and ample land suitable for planting. Despite this potential, plantation forestry has historically struggled to develop due to competition from cheap, mostly illegal, timber and fuelwood from unsustainable exploitation of its natural forests, especially in the biomass energy sector; a complex regulatory environment; weak institutional capacity; deficiencies in governance; limited sector knowledge; and weak access to finance for producers. These challenges are reflected in the fact that Paraguay's forest plantations (177,000 ha in 2019) are insufficient to meet a demand for resources that would require 330,000 to 430,000 ha of planted area,³⁴ contributing to its high deforestation rate and related GHG emissions, as well as to an annual trade deficit in wood products averaging US\$ 216 million between 2014 and 2018.³⁵ A major upcoming investment in a pulp and paper mill is expected to further drive demand.

42. Substance: The government has embarked on a series of reforms meant to boost the forest plantation sector, including, for example, on plantation monitoring and technical assistance, export regulations, and creating *PROFORESTAL*, a dedicated credit line of the AFD. To address further the difficulty in accessing finance for forestry companies, the government, led by the National Forestry Institute (*Instituto Forestal Nacional*, INFONA), through Law 4890/2015 created the "Right to Standing Timber" (*Derecho Real de Superficie Forestal*, or *vuelo forestal*). This law created the basis for forestry companies to put up existing or future standing timber as loan collateral when seeking loans from the financial sector, where previously the law only considered the land itself or other physical assets. This change especially enables forestry companies operating on leased land to leverage the assets they create to apply for financing, and increases the ability of landowners engaged in forestry to do so. The *vuelo forestal* not only helps increase overall access to finance, but supports the structural reform of the forest plantation sector, enabling a wider array of operators to invest in forestry by decoupling land ownership (highly concentrated in Paraguay) from forestry operations. To operationalize this law, INFONA has been working with BCP, resulting in Resolution 1/61 of 2020, which provided financial institutions with the necessary guidance to recognize the *vuelo forestal*. Providing continuity, the BCP has now issued two complementary resolutions required to ensure the sound functioning of the *vuelo forestal*: The first, BCP Resolution SB. SG. No. 34/2022, sets forth the eligibility criteria for expert assessors of forest resources to be registered with the Superintendent of Banks for the purposes of valuing forest resources under the *vuelo forestal*. The second, BCP Resolution SB. SG. No. 22/2022, sets forth the technical valuation criteria and reporting format for the assessment of the resource.

43. Expected Impact: Taken together, these resolutions will render Law 4890/2015 operational by creating a framework for how the value of standing timber can be evaluated for use as collateral in private sector lending. This is

³⁴ Borsy, P., R. Ortiz, J. Balsevich, M. Rios, and M. Kaltschmitt. 2013. *Producción y consumo de biomasa sólida en el Paraguay*. Ministerio de Obras Públicas y Comunicaciones, Viceministerio de Minas y Energía, and Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH.

³⁵ ITC, UNCTAD, UNSD, WTO, World Bank (2020). World Integrated Trade Solution. <https://wits.worldbank.org/>.



expected to facilitate access to commercial loans for forestry operators, resulting in a more dynamic forest plantation sector, with a greater downstream potential to fulfill its role in socioeconomic development, climate mitigation (through increased carbon sequestration) and adaptation (for example by reducing run-off). Over the last three years, the Bank has been working on strengthening INFONA's overall capacity, including the preparation of an investment operation that would also increase its ability to provide services to private operators, including for implementation of the *vuelo forestal*. The indicator to monitor progress under this PA will be whether financial institutions have issued credits to forest plantation operators using as loan collateral the real right to standing timber by 2023. Given that the designation of the Right to Standing Timber for use as loan collateral is new to Paraguay, and the resulting difficulty in predicting demand for credit based on this new tool, a quantitative target is not deemed feasible.

PILLAR 2: PROMOTE CLIMATE RESILIENCE AND MITIGATION IN SELECT SECTORS OF THE ECONOMY

Prior Action 3: *To increase climate resilience, improve the sustainability of natural resource use, and generate economies of scale among rural and peri-urban water and sanitation service providers, the Borrower, through its Executive Branch, has reformed the subsidy regime for water and sanitation service providers by eliminating unsustainable subsidies and encouraging a higher number of connections per water and sanitation system, as evidenced by Decree No. 7161 dated June 1, 2022, and published in the Official Gazette on June 2, 2022.*

44. Rationale: The water and sanitation sector in Paraguay is inefficient, with limited service coverage and low service quality. A key contributor to this situation is the considerable number of service providers and their small size, making these services neither financially, technically, nor environmentally sustainable, nor resilient to climate variations affecting water availability and quality. This is particularly important in a context where droughts are becoming more extreme and where increased variability in the availability of water sources, due to anomalous rainfall patterns, is projected as a consequence of climate change. 70 percent of water service users in the country are served by small-scale, unsustainable providers. Many of these service providers cannot invest in the proper operation and maintenance of their systems and are therefore more exposed to potential damage from flooding or other extreme climate-induced weather events. As a result, water quality, service quality, leakages, and other operating indicators are well below regional levels. The existing subsidy regime intended to promote financial sustainability for small service providers by granting larger subsidies to communities of smaller sizes. However, since it only took into consideration the number of households served, it has created fragmentation in service provision, generating an even greater number of small service providers. The old subsidy regime, under Decree 3617/04, provided larger subsidies for water supply investments (leaving out sanitation). It limited subsidies to *Juntas de Saneamiento* with fewer than 150 connections, excluding other types of providers. As a result, 90 percent of the *Juntas de Saneamiento* in Paraguay have fewer than 200 connections and only 1 percent of *Juntas* are considered efficient, serving more than 2,000 connections.³⁶ By excluding sanitation investments, this legal framework also put Paraguay behind other countries in the region regarding sanitation coverage.

45. Substance: Decree 7161/22, replaces Decree 3617/04 and paves the way for new funding rules that promote higher economies of scale for water and sanitation services provision to areas with less than 10,000 inhabitants, which will improve the sustainability of operations. The new Decree does not cap subsidies by the size of water and sanitation systems, but allows for better targeting of subsidies, by tying them to communities' socio-economic characteristics, geographical location, availability of water resources, vulnerability to climate change, and other factors. By replacing the existing regulation, which only used the number of connections to target subsidies, the new regulation will encourage a higher number of connections per service provider. This is expected to result in more financially and

³⁶ Roberto Dario Lezcano, y Adrian Ferrari Caceres (2013): Eficiencia y Sustentabilidad en el servicio de provision de agua potable en Paraguay. Un análisis de las economías de escala. CEPAL, Santiago de Chile.



environmentally sustainable service provision, better maintenance and infrastructure resilience to weather events, decreased associated water losses, better resilience and adaptation to scenarios of potential water scarcity.

46. Expected impact: The reform is expected to increase the sustainability and climate resilience of rural and peri-urban water and sanitation service provision, promoting an optimal size of users for each service provider/service area. In the short-term, this will provide an incentive to reduce the fragmentation of water systems, halting the growing number of unsustainable service providers. In the medium- to long-term the decree will allow for aligning the incentives for sustainable and climate resilient service provision through parameters that incentivize the maximization of customers per system, while taking into consideration socio-economic characteristics to ensure sustainable and resilient service provision. Implementation will be assessed using the average number of water and sanitation customers per new service provider established, which is expected to increase from fewer than 200 in 2022 to 500 by end-2023.

Prior Action 4: *To promote enhanced efficiency, effectiveness, and security of transactions, the Borrower has enacted a law for trust service providers to ensure that electronic transactions are as verifiable and legally binding as paper-based transactions, as evidenced by Law No. 6822/2021 dated December 30, 2021, and published in the Official Gazette on January 4, 2022.*

47. Rationale: Despite advances in technology, most business and public sector transactions in Paraguay still rely on paper-based verifications such as signatures, stamps, and in-person verification of identification documents. Such manual processes not only consume significant time and resources, but also require Paraguayans to travel to the site where transactions take place. Given that about 42 percent of the population requires more than an hour to access a main city,³⁷ the inability to complete such transactions through digital means perpetuates exclusion from a growing digital economy. This challenge also pertains to financial services, access to which is limited, with about half of the population lacking access to the formal financial sector. This trend is more pronounced for women.³⁸ The development of digital financial services has significantly benefited the poor and vulnerable in recent years; over 2 million Paraguayans currently use mobile money services,³⁹ and about 41 percent of users are women.⁴⁰ The COVID pandemic highlighted the important role that digital financial services can play in reducing disruptions to supply chains, maintaining economic activity, supporting social transfers, and ensuring safe transactions while maintaining social distancing. Climate shocks, which are expected to increase in frequency and intensity, can trigger further disruptions to physical travel, making business continuity challenging. Digitalization is a key pathway for mitigating economic losses during climate shocks, as firms with access to digital services are more resilient to shocks and allow economies to recover more quickly. At the same time, digitization allows entrepreneurs to set up and grow their business wherever they live, opening markets and investments across the country, and creating new jobs. Finally, reducing the need for in-person meetings and paper can help reduce GHG emissions and accelerate the digitalization of other services. Paraguay has thus far lacked the regulatory framework to enable the flourishing of Trust Service Providers, the companies that ensure the validity of electronic information through digital verification.

48. Substance: The law establishes a legal framework for Trust Service Providers, enabling them to provide electronic identification, signatures, stamps, time stamps, documents and files, certified delivery service, website authentication certificate services, and electronic transactions. This new law repeals the previous legislation on the matter, composed of Law 4017/10 "On Legal Validity of the Electronic Signature, Digital Signature, Data Messages and

³⁷ World Bank (2019): More, Better or Different? Investing in Paraguay's Roads. Washington, DC.

³⁸ Women are less likely than men to own a bank account (46 percent vs. 51 percent). World Bank (2017): The Global Findex Dataset 2017.

³⁹ <https://www.ultimahora.com/ley-operaciones-electronicas-afectaria-2-millones-usuarios-estiman-n2962184.html>

⁴⁰ Inter-American Development Bank (2020): ¿Desigualdades en el mundo digital?: Brechas de género en el uso de las TIC. Washington, DC.



Electronic File" and Law 4610/12 that "modifies and expands Law 4017/10 in those provisions that contravene it. This new legal framework is in line with the United Nations Commission on International Trade Laws' model law, including on the principles of unequivocally identifying the signer, ensuring the integrity of the document and that they have not been tampered with, and ensuring non-repudiation of the signed document. The law also grants legal validity to electronically transmitted documents and probative force of expression of will.

49. Expected impact: The law is anticipated to accelerate the move away from paper-based documents and physical verification, which will not only improve the overall efficiency of private and public transactions, but also help reduce fraud in manual documentation and verification by enabling technologically advanced solutions. Reliable electronic transactions will enable the government to expand availability of digital services and payment streams, including for the disbursement of social transfers and receipt of tax payments. Moreover, the digitalization of transactions, including digital financial sector transactions, will help ensure service continuity in the event of climate-related events. The law is also expected to narrow gender gaps in digital inclusion, including digital financial services, by addressing some of the main barriers to financial services associated with unequal work opportunities and gender roles. Almost 40 percent of Paraguayan women have informal or vulnerable jobs, and more than half of women reported losing their jobs in May 2020 at the onset of COVID, compared to 35 percent for men.⁴¹ Also, Paraguayan women bear the brunt of domestic and unpaid work, which keeps almost half (48 percent) of them out of the labor market. Less than 1 in 10 men is in this situation.⁴² Therefore, enhancing the efficiency and effectiveness of transactions through digitizing signatures, electronic time stamps, etc., which would have previously necessitated physical trips to locations (e.g., a bank or client) to transact, helps reduce the burden for all, but particularly for women. Facilitating access to financial services also increases their bargaining power within the household and provides for greater financial autonomy.⁴³ The Bank is complementing this Prior Action with technical assistance to Ministry of Industry and Commerce (*Ministerio de Industria y Comercio*, MIC) for implementing regulations for the Trust Service Providers law. The indicators to assess progress under this PA are: (i) the number of electronic signatures registered in the electronic signature database of the MIC, expected to increase from 40,586 in December 2021 to a million in 2023; and (ii) the number of electronic signatures held by women registered in the electronic signature database of the MIC, expected to increase from 18,168 in December 2021 to a target of 500,000 in 2023. Monitoring the number of electronic signatures linked to women is critical as more women registered to do e-signatures should result in more electronic transactions by women, including in the area of financial services and formal business transactions.

Prior Action 5: *To strengthen resilience to climate change and conserve natural ecosystems, the Borrower has enacted a law that regulates fire use, management, and control, and the prevention of wildfires, as evidenced by Law No. 6818 dated October 12, 2021, and published in the Official Gazette on October 19, 2021.*

50. Rationale: Record temperatures and anomalously dry conditions led to more than 3.56 million hectares of land burned in 2020, or 8.7 percent of the total land area; 2019 and 2021, with their own intense dry spells, also saw intense fire seasons, with more than 2.5 million ha burned in each year. Wildfires are expected to increase as a consequence of climate change (given the higher risk of hot and dry weather). A large part of wildfires in Paraguay are anthropogenic, often getting out of control due to inadequate management, in particular in unusually dry weather conditions. The wildfires led to acute and chronic health issues, infrastructure and property destruction, and ecosystem degradation

⁴¹ Paraguay High-Frequency Survey.

⁴² A closer look of gender gaps in Paraguay during the pandemic.

⁴³ For example, Suri and Jack (The Long-run poverty and gender impacts of mobile money, December 9, 2016. Science, vol 354, issue 6317, pp. 1288-1292) found in Kenya that the introduction of e-wallets (digital bank accounts linked to phones) had a bigger impact on poverty for women. According to the global index 2017, only 46 percent of women and 51 percent of men had access to an account at a financial institution.



resulting in: (i) a reduction of ecosystem services, such as water supply, nutrition, biodiversity, thus, posing threats to the livelihoods of the populations and economic sectors that rely on natural resources, increasing their vulnerability to climate impacts; and (ii) a reduction of carbon sequestration and storage capacity and increased GHG emissions estimated at around 53 MtCO₂e for 2020 alone. The Forest Law (422/73, Art.53.e) sanctions arson of forests and the Agrarian Law (1.863/2002, Art. 25.d) prohibits the use of fire in agriculture. However, a solely punitive approach has been insufficient to reduce uncontrolled fires in Paraguay. A lack of clarity over institutional responsibilities has meant that the government's planning and response have faced coordination challenges.

51. Substance: Law No. 6818/2021 on integrated fire management seeks to remedy this situation by putting in place an institutional architecture that allows for the use of fire in agriculture to be regulated and controlled. The law tasks INFONA with operationalizing it through its Advisory Council (*consejo asesor*), an inter-agency body composed of the Ministry of Agriculture and Livestock (*Ministerio de Agricultura y Ganadería*, MAG), the Ministry of Environment and Sustainable Development (*Ministerio del Ambiente y Desarrollo Sostenible*, MADES), the MIC, the BCP, the private sector, the academia, and the associations of professional forest engineers. The law gives INFONA's Advisory Council policy-setting and normative competencies for fire management, including establishing zones and seasons when fire use is prohibited, establishing early warning systems, recommending best management practices, and setting the criteria for sanctioning non-compliance. It empowers municipalities to administer and manage the use of fire in rural areas in a more efficient way, following the principle of subsidiarity, giving municipalities administrative responsibilities including the issuing of burning permits, fee collection, and controlling that burning permits are carried out correctly. Municipalities must report non-compliance to INFONA, which then has the duty of sanctioning and imposing the fine set by the municipality. Proceeds from collected fines are to be shared equally between INFONA and the municipality and spent only on activities related to fire management and prevention. Criminal offences caused by the use of fire are to be notified for prosecution to the public prosecutor. A regulation to be issued by INFONA will render the law effective.

52. Impacts: The new law is expected to strengthen Paraguay's institutional architecture regarding wildfire policy, law enforcement and administration of fire management, and the prevention of wildfires, with the ultimate goal of reducing the impacts of wildfire on Paraguay's landscapes and people, strengthening the resilience to climate change and reducing GHG emissions. INFONA is also preparing to conduct capacity building with municipalities, and is receiving support from a Green Climate Fund-funded project implemented by the Food and Agriculture Organization of the United Nations (FAO). In addition, the FAO and the Bank are providing technical assistance for the development of the law's regulation, while Worldwide Fund for Nature and Guira Paraguay are providing support for the development of the National Policy for Integrated Fire Management. Finally, the Bank has developed an investment project intended to strengthen INFONA's capacity. Given that the law is only the starting point for a series of reforms and capacity building processes whose execution will take some time before they can show results in terms of reduced forest fire incidence, the indicators to monitor progress in the law's implementation are: (i) the establishment by INFONA of an early warning system that allows the general public to report forest fires; and (ii) the establishment by INFONA of a computerized administrative system to issue permits for prescribed burns.

PILLAR 3: ENHANCE FISCAL TRANSPARENCY FOR CLIMATE ACTION

Prior Action 6: *To better identify, mitigate and anticipate fiscal risks, including those related to climate change, the Borrower, through the Ministry of Finance, has mandated the annual publication of a fiscal risk report, including climate-related risks related to fiscal operations, as evidenced by Resolution MH No. 173 dated March 10, 2022, and Resolution SSEE No. 17 dated March 21, 2022.*



53. Rationale: Fiscal risks tend to materialize during growth reversals and crises, and are an important determinant of fiscal outcomes.⁴⁴ In Paraguay, growth reversals are usually driven by climate shocks, as during the droughts in 2009, 2012, and 2019. Fiscal policy in Paraguay has traditionally tightened in the wake of climate-related shocks, and ad-hoc policy responses can be inefficient and costly. Despite the evident relevance of climate shocks for macro-fiscal outcomes, Paraguay does not systematically quantify their effects on aggregate dynamics, a long-standing information and knowledge gap for public policy, and does not regularly assess, monitor and disclose climate-related fiscal risks. As a result, climate consideration are currently not integrated in the budgetary process. As weather-related shocks become more frequent and more intense, quantifying, monitoring, and disclosing fiscal risks stemming from climate shocks becomes a crucial element of a sound fiscal framework.⁴⁵

54. Substance: Under the mandate provided by the MoF's resolutions, the Directorate of Macro-fiscal Policy is required to publish an annual fiscal risk⁴⁶ report, which would, for the first time, assess and quantify the impact of climate-related risks on fiscal operations. The draft inaugural report discusses and estimates the specific impacts of potential shocks related to climate change on various macroeconomic variables, in addition to fiscal risks from other sources such as contingent liabilities from state-owned enterprises, public-private partnerships and subnational governments. The report contains sensitivity analysis of baseline public debt and gross financing projections to weather-related shocks (modelled as a decrease in revenues and GDP growth) over 2022-2026. It also contains a short discussion on adaptation measures to better respond to climate-related fiscal risks such as the proposed Stabilization Fund under the revamped Fiscal Responsibility Law, ex-ante disaster financing from concessional sources, and the Paraguay Climate Contingency Plan. Annual fiscal risk reports will be publicly accessible on MoF's website.

55. Expected impact: The regular publication of a fiscal risks report that also includes specific climate risks fills a long-standing policy knowledge gap and is a critical step towards greater integration of climate considerations in Paraguay's budgetary process. While MoF has regularly published economic projections under alternative scenarios in its annual budget book since 2017, it does not link these scenarios to specific risks. Up until now, it has also never discussed or disclosed climate-related risks to fiscal operations in any budget-related documents. Identifying and quantifying the relevant risks from climate change in a comprehensive assessment is intended to improve budget planning and ultimately help MoF provision for these shocks, such as by negotiating the availability of contingent credit lines or establishing a countercyclical sovereign fund.⁴⁷ In addition, MoF could also use this report to elevate the importance of taking action on the climate agenda in national policymaking, and to inform discussions on policy measures to reduce the likelihood and magnitude of these risks occurring. The PA will be complemented by Bank technical assistance, including macroeconomic modeling of climate impacts on the economy that can refine the government's understanding of fiscal risks, through the Country Climate and Development Report and technical assistance to develop a climate policy roadmap for MoF. The latter is expected to identify numerous additional policy options that could substantially deepen the government's climate reform program. The indicator to monitor progress will be the number of fiscal risk assessments that include discussion of climate risks published on MoF's website, which is expected to evolve from a baseline of 0 to 2 by 2023.

Prior Action 7: *To better align the central government budget with climate change policy priorities, the Borrower has:*

⁴⁴ See Bova E., M. Ruiz-Arranz, F. G. Toscani, and H. Elif Ture (2016): The Fiscal Costs of Contingent Liabilities: A New Dataset. IMF Working Paper WPIEA2016014; February.

⁴⁵ International Monetary Fund (2021): Climate-Sensitive Management of Public Finances – "Green PFM". IMF Staff Climate Note 2021/002

⁴⁶ Fiscal risks are commonly defined as any substantial deviation in fiscal outturns from budget or other fiscal projections (Cebotari et al., 2006).

⁴⁷ Although its discussion and approval under the DPL application period is uncertain in the current environment, a draft law promoted by the Executive contemplates the establishment of such a fund.



(a) through its Executive Branch, mandated the Ministry of Finance to promote the identification and measurement of public initiatives focused on climate change; and (b) through the Ministry of Finance, mandated the identification of public expenditures of the Ministry of Agriculture and Livestock related to climate adaptation and mitigation, as evidenced, respectively, by: (i) Article 9 of Decree No. 6581/22 dated January 25, 2022 and published in the Official Gazette on January 26, 2022; and (ii) Resolution MH No. 206 dated April 8, 2022.

56. Rationale: In its updated NDC, Paraguay recognized the need to quantify climate mitigation and adaptation expenditures as a necessary step to meet its climate targets. Climate budget tagging helps identify and track government investments for mitigation and/or adaptation to climate change and can support better prioritization of public expenditures for climate policy. Climate tagging is being increasingly adopted around the world, building on experiences from other cross-sectoral priority areas, such as poverty or gender. The initial benefits of climate budget tagging are to raise awareness and improve transparency and accountability, but they can extend beyond that, such as to serve as basis for the issuance of sovereign green bonds, to help mobilize funding from external sources, and to assess progress on NDC implementation.⁴⁸ Methodologies for climate change budget tagging include at least three main dimensions: (i) defining climate change expenditures; (ii) developing a classification system for climate change expenditures; and (iii) establishing an accounting framework. At present, there is no methodology in Paraguay that covers any of the three dimensions, hindering an assessment of whether the resources allocated to adaptation and mitigation are commensurate with its NDC commitments.

57. Substance: Decree No. 6581/2022 establishes that MoF, through the General Budget Directorate, will promote the identification and measurement of public initiatives focused on climate change contained in the national general budget and carried out by government agencies. MoF's Resolution 206 instructs that the process of identifying expenditures for climate change will be piloted with MAG, and mandates the publication of the resulting report for public access. With support from a Bank technical assistance, MoF is developing a Climate Budget Tagging Methodology for the government that connects budgetary programs and activities and the budgetary classification system with a framework for reporting on and tracking climate-related expenditures. MoF is also taking steps to expand the Climate Budget Tagging Methodology to MIC, MADES, INFONA, the Ministry of Public Works and Communications (*Ministerio de Obras Públicas y Comunicaciones*, MOPC), and the National Emergency Secretariat, which, taken together, are estimated to supervise sectors that account for around 90 percent of GHG emissions.

58. Expected Impact: Climate budget tagging will allow the government to make progress on the quantification of public climate change expenditures as stipulated in the latest NDC Update, and assess the alignment of the national budget with adaptation and mitigation climate policies. In the process, the government will be able to involve line ministries in gathering accurate information for monitoring, planning and budgeting, enabling it to implement policies that will further enhance climate change mitigation and adaptation efforts. This will strengthen transparency and facilitate progress reporting of the NDC's implementation. The immediate result is that the MoF will have designed a methodology for climate budget tagging and this methodology will have been applied in a first stage to MAG's budget, and in a second stage, contemplated within the timeframe of this operation, to the budget of MIC, MADES, INFONA, MOPC, and the National Emergency Secretariat. This step is being complemented by World Bank technical assistance that will evaluate the cost of adaptation actions included in Paraguay's NDC. Together with a parallel mitigation costing conducted by the European Union and the Government of Germany, this will allow the government to obtain a better idea of its climate investment needs. The budget tagging will allow for comparison between those needs and budgetary commitments. The indicator to measure progress is the share of the budgets of the MAG, MIC, MADES, INFONA, MOPC,

⁴⁸ World Bank (2021). Climate-Change Budget Tagging: A Review of International Experience. International Bank for Reconstruction and Development/The World Bank. 1818 H Street NW, Washington DC 20433



and the National Emergency Secretariat screened for initiatives focused on climate change (from 0 percent in December 2021 to 100 percent in 2023).

TABLE 3: DPL PRIOR ACTIONS AND ANALYTICAL UNDERPINNINGS

PA	Analytical Underpinnings
Pillar 1: Mobilize private capital for climate resilience and mitigation	
1	<p><i>World Bank (forthcoming):</i> Comprehensive diagnostic on access to finance, Access to credit for SMEs is limited with 13 percent of adults having loans and World Economic Forum Executive Opinion Survey identifying it as the fifth biggest challenge for doing business in the country. The state plays an important role in the financial sector, including in facilitating lines of credit for underserved markets.</p> <p><i>Hernán Carlino (2017): Guide for the structuring of financial instruments for the promotion of energy efficiency: Case study of the Financial Development Agency of Paraguay, IDB.</i>⁴⁹ The primary challenge SMEs face in implementing energy efficiency investments is a lack of access to credit, in particular due to a lack of guarantees, high rates, burdensome information and documentation requirements, and short repayment periods.</p>
2	<p><i>World Bank (2020): A Forest's Worth: Policy options for a sustainable and inclusive forest economy in Paraguay.</i> The forest plantation sector is underdeveloped but has significant development potential. Access to finance is a primary constraint to sector development.</p>
Pillar 2: Promote climate resilience and mitigation in select sectors of the economy	
3	<p><i>World Bank (2020): Water and Sanitation Service in Paraguay: Analysis of institutional aspects, governance and public spending.</i>⁵⁰ This public expenditure review and institutional analysis' of the water and sanitation sector principal recommendations was to incentivize economies of scale and resilience among rural and peri-urban water and sanitation service providers.</p>
4	<p><i>World Bank (2021): Paraguay Payment Aspects of Financial Inclusion Diagnostic.</i> The uptake of digital financial services in Paraguay is limited, in part due to the underdeveloped legal and regulatory framework. The adoption of a law covering electronic signatures was a key recommendation to advance the digital economy.</p>
5	<p><i>World Bank (2020): A Forest's Worth: Policy options for a sustainable and inclusive forest economy in Paraguay.</i> Land use change leading to deforestation costs Paraguay between 0.4 percent and 3 percent of GDP, and wildfires are a contributor to this dynamic. The resulting losses fall disproportionately on vulnerable populations, while also significantly hampering climate mitigation and adaptation.</p> <p><i>United Nations Environment Programme (2022): Spreading like Wildfire – The Rising Threat of Extraordinary Landscape Fires.</i> The likelihood of catastrophic wildfires is increasing, and the economic cost of wildfires and the necessary response far outweighs the cost of prevention.</p>
Pillar 3: Enhance fiscal transparency for climate action	
6	<p>Pillar III of the <i>IMF Fiscal Transparency Code (2014)</i> stipulates that “governments should disclose, analyze, and manage risks to public finances”, including on “specific fiscal risks” such as natural resources and environmental risks. Polackova, Brixi and Schick (2002) and Cebotari (2008) show the importance of disclosing information on contingent liabilities, integrating such information in the budgetary process and putting in a comprehensive</p>

⁴⁹ Interamerican Development Bank (2017): Guía para la estructuración de instrumentos financieros para la promoción de la eficiencia energética: estudio de caso de la Agencia Financiera de Desarrollo de Paraguay.

⁵⁰ World Bank (2020): El Servicio de Agua y Saneamiento en Paraguay: Análisis sobre aspectos institucionales, de gobernanza y sobre el gasto público.



	<p>framework to safeguard against such risks. Bova et al. (2016) estimate that natural disasters are the third most frequent type of contingent liability with identified fiscal costs to materialize in a sample of 80 countries over 1990-2014 and quantify the impact of such events at 1.6 percent of GDP on average, although in some countries this has reached 6 percent of GDP. For Paraguay specifically, the World Bank Public Expenditure Review (2018) establishes that the impact of volatility on fiscal revenues is also significant and can foster procyclicality, exacerbating downswings. Fiscal revenue collection has been unstable and hard to predict, prompting frequent accelerations and contractions in spending, which have typically harmed investment and social spending.</p>
7	<p><i>World Bank (2022): Paraguay Climate Change Institutional Assessment (CCIA).</i> The Assessment identifies the strengths and weaknesses of Paraguay's institutional framework for climate change action. The assessment includes a review among others of the following areas: regulatory framework, intergovernmental coordination, stakeholder engagement and oversight and accountability for climate action. It identifies a lack of climate budget tagging as a key obstacle to improved budget planning and NDC alignment, as well as of reporting against the NDC and budget transparency.</p> <p><i>World Bank (2021). Climate Change Budget Tagging : A Review of International Experience.</i> The main benefits of the application of climate budget tagging are awareness raising and improvements in transparency and accountability. The cases of application of climate budget tagging reviewed show that expenditures are generally tagged during budget preparation and in this way provide information on allocations. Rarely do they cover actual expenditures. Even where tagging is integrated into financial management systems, expenditure reports are rarely presented or analyzed. As it is difficult to determine tagging's impact on budget allocations and decision making, linkages with the upstream and downstream aspects of expenditure management need to be strong if tagging is to effectively align resources with climate change policy priorities.</p>



4.3. LINK TO CPF, OTHER BANK OPERATIONS AND THE WBG STRATEGY

59. The proposed DPL supports the World Bank Group’s FY19-23 Country Partnership Framework (CPF) for Paraguay, discussed by the Board on January 22, 2019⁵¹, and the World Bank Group Climate Change Action Plan 2021-2025. The CPF presented a shift in World Bank Group (WBG) engagement relative to previous strategies, with support to governance and institutional reforms at the center and a move toward improved environmental governance. With this background, and in the context of an acute climate-related crisis with visible impacts and the resulting government dialogue, this DPL supports a shift in the approach to recognizing the importance of and addressing climate change in key development areas. The DPL is primarily linked to the second CPF Focus Area, “Reducing volatility, natural capital management and integration into sustainable value chains”, in particular Objective 6, “Strengthen environmental governance for NDC implementation and natural capital preservation”, thereby also contributing to Objective 5: “Improve resilience to macroeconomic volatility”. Select PAs also contribute to CPF Focus Area One, “Promoting Accountable Institutions and Improving the Business Climate”, in particular Objective 3: “Improve governance in the water and electricity sectors” and Objective 4: “Create an investor friendly business climate”. The Performance and Learning Review is adding a focus on climate mitigation and adaptation to the CPF, which this DPL directly supports. The proposed operation is closely aligned with priorities identified in the Systematic Country Diagnostic,⁵² including improving access to finance, increasing the sustainability of the energy matrix, and addressing infrastructure gaps in sanitation, among others, to make Paraguay’s development path more sustainable. Finally, the DPL supports the priority the World Bank Group places on climate action by directly supporting adaptation and mitigation strategies, including by supporting the mobilization of private finance for climate action, supporting systems transitions in the energy, water, and land use sectors, adopting a whole-of-economy approach through improved fiscal transparency, and supporting Green, Resilient and Inclusive Development (GRID).

60. The DPL is highly integrated with the World Bank’s technical assistance and investment program in an effort to mutually reinforce the country program. The World Bank is providing financial sector technical assistance to AFD in their asset and liability management and to MIC for implementing regulations for the Trust Service Providers law. The Bank is also exploring technical assistance to BCP on green finance to complement its ongoing technical assistance program in digital financial services and access to finance. In the water and sanitation sector, the Bank is providing continuous support for the preparation of a National Water and Sanitation Sector Plan to improve the country’s water security. The Bank is also providing technical assistance to INFONA to design the institutional arrangements and regulatory instruments to implement the forest fire law. A pipeline investment project for INFONA intends to strengthen overall institutional capacity, including on governance and sustainability of the forestry sector. For example, work has commenced on an Advisory Services and Analytics to support MoF in devising a climate policy and climate finance roadmap, which will include a costing of adaptation measures and identification of potential fiscal incentives for climate action. One component of this activity will be to develop a macroeconomic forecasting model for Paraguay that will model the impacts of climate change on the main macroeconomic and fiscal indicators, the impact of adaptation inaction, and of different policy proposals related to adaptation and mitigation. MoF can use this model in future fiscal risk assessments. A Climate Change Institutional Assessment is being finalized, and is identifying the strengths and weaknesses of Paraguay’s institutional framework for climate action, providing entry points that are currently being explored for additional technical assistance to complement the reforms promoted by the DPL. Technical assistance is further being provided to assist MoF in finalizing the climate budget tagging methodology and expanding the exercise to a wider set of ministries and agencies, while a costing of Paraguay’s adaptation commitments in the NDC will link the

⁵¹ Report No131046PY

⁵² World Bank Group (2018): Paraguay Systematic Country Diagnostic.



budget tagging with identified investment needs. These engagements provide entry points for future potential operations and/or will benefit from reforms fostered by the DPL.

4.4. CONSULTATIONS AND COLLABORATION WITH DEVELOPMENT PARTNERS

61. Consultations: The PAs in this DPL benefited from an extensive consultation process at different stages. For PA1, AFD held consultations with private sector representatives in the context of a market diagnostic exercise for an energy efficiency credit product. The *vuelo forestal* reforms supported by PA2 stem from consultations held with INFONA's Advisory Council, made up of private sector, non-governmental organizations, and academic stakeholders, as well as with the *Mesa de Finanzas Sostenible*, a network of financial institutions advancing sustainability financing. For PA3, extensive consultations were held as part of the World Bank-led public expenditure review that identified the need for this reform. For PA4, MIC hosted public consultations in May 2019 with public and private stakeholders. Additionally, the law was read in the Science and Technology Committee in the House of Deputies, along with private sector consultations in both chambers. There was also a public consultation with trust service experts and the United Nations Commission on International Trade Law in May 2021. MIC also worked with newspapers and television channels, and through webinars to support public dissemination. The World Bank participated in consultations and committed to support implementation. For PA5, the law was open for comment during debates in Congress, and INFONA's Advisory Council, composed of government, academic and private sector representatives, is the main conduit of consultations. The World Bank will support INFONA in the implementation of the law. The inclusion of climate change considerations in the fiscal risk assessment under PA6 was incentivized in consultations with government officials, and will continue to improve under Bank support. PA7 was designed jointly with authorities at the National Budget Office, a collaboration that will continue in the form of technical assistance to cover the main relevant ministries and agencies on climate change.

62. Collaboration with other development partners. The World Bank and IFC have been working effectively to increase the sustainability and productivity of agriculture, while MIGA has supported increased access to finance to medium enterprises in the agriculture sector. The Bank is supporting rural economic development, market access, and the resilience of small farmers, agricultural producer organizations, and indigenous communities. In addition, rural roadworks projects are improving access to markets and reducing transportation costs. IFC is providing credit to farmers to increase productivity and inclusion. This operation more specifically contributes to a broader package of financial and technical assistance provided by the World Bank through the framework of the CPF, under the overall guidance of MoF and in close coordination with international partners, including the IMF, the European Union and the United Nations Development Programme. For PA1, the first draft fiscal risk assessment was conducted with IDB's support. For PA2, the reform is related to a broader package of state reforms supported by IDB financing and coordinated with the European Union. For PA3, the IDB worked with the government to design the energy efficiency credit instrument. PA5 was identified as part of the World Bank-led public expenditure review and institutional analysis of the water and sanitation sector, with close participation in particular of the United Nations Children's Fund, the IDB, and the *Corporacion Andina de Fomento* (CAF). PA6 benefited from public consultation support from the United Nations Commission on International Trade Law. For PA7 and in the broader forestry space, the Bank is primarily coordinating with FAO.

OTHER DESIGN AND APPRAISAL ISSUES

5.1. POVERTY AND SOCIAL IMPACT



63. The poverty and social impacts of the policies supported by this DPL are expected to be mostly neutral in the short term and positive in the medium- and long term. The operation's poverty and social impact analysis focuses on the potential impact of the PAs on promoting climate policies and resiliency, access to credit, employment, and informality. The qualitative and quantitative analysis relies on available data and a literature review. Overall, the set of policies included in this DPL is expected to strengthen the country's capability to prepare, adapt, and mitigate the effects of climate change, therefore benefiting the overall population in the medium and long term, particularly the poor and vulnerable. Policies aimed at increasing financial resources to reduce GHG emissions and to transition to energy-efficient technologies supported by measures in Pillar 1 are expected to benefit the vulnerable middle class by improving SMEs' productivity and competitiveness and encouraging more formalization of SMEs (PA1), and facilitating and increasing financial access to forest producers (PA2). These measures may also promote job creation through business expansion and productivity gains, benefiting the poor and vulnerable. Prior Actions under Pillar 2 will have neutral or positive impacts on poverty and inequality in the short term. In the long term, these measures could affect poverty and inequality positively as they are expected to improve the country's capability to manage the effects of climate change by improving sanitation services for rural populations (PA3), enhancing the efficiency of transactions at the same time as increasing digital financial inclusion (PA4), and improving the management of wildfires (PA5). Finally, the set of policies in Pillar 3 are not expected to impact poverty and inequality directly; however, they are expected to help build the foundations towards an adequate risk management framework to tackle climate-related shocks. Annex 5 presents a detailed analysis of the estimated effects of all these policies on poverty and inequality.

64. Prior Actions under Pillar 1 are expected to be neutral in the short term and have an indirect positive effect in the medium- to long term. The measures in this pillar seek to increase access to credit while at the same time reducing GHG emissions. Credit availability for SMEs engaged in energy efficiency activities could benefit the vulnerable middle class in the medium term and the poor in the long term. As access to the financial system is still low for SMEs, particularly for those operating in the informal sector and in key energy consuming sectors, this measure could benefit the SMEs' productivity and competitiveness by adopting new, green technologies, increasing their survival time and growth prospects (PA1). In addition to this measure, the regulations of the valuation of standing timber on rented land as loan collateral supported under PA2 is expected to facilitate and increase financial access to forest producers and prevent higher deforestation rates. While this measure is not expected to directly impact poverty and inequality in the short term, it may have a positive impact if it benefits small-scale foresters in the medium- or long term.

65. Prior Actions under Pillar 2 are expected to have a positive or neutral impact on poverty and inequality in the short term and may positively impact both in the long term. The measures under this pillar are expected to strengthen the country's management of the effects of climate and wildfires and to promote climate adaptation. First, PA3 will generate resilience and economies of scale among rural water and sanitation providers in the short run with potential reduction effects on tariffs. This is expected to mainly benefit the poor and vulnerable who live in rural areas and whose main provider of sanitation are the community boards (*Juntas de Saneamiento*). The adoption of Law No. 6822/2021 under PA4 will provide the legal framework for digital transactions. This measure is expected to promote: (i) enhanced efficiency and security in financial transactions in the short- and medium-terms, and (ii) digital financial inclusion in the long term. Therefore, while the measure is not expected to affect the poor directly, it will help build the foundations for a more inclusive system in the long term, benefiting those who currently lack access. Finally, adopting the law regulating fire use, management, control, and prevention of wildfires (PA5) is expected to reduce and prevent significant negative effects on the poor and vulnerable in the medium- and long-term by reducing pollution and property damage.

66. Prior Actions under Pillar 3 are expected to positively impact poverty and inequality in the long term. Climate change is already affecting the country's economic standing. The identification and quantification of climate risks



supported under PA6 are expected to help the government's capacity to: (i) understand the potential impacts and the magnitude of the fiscal risks related to climate; and (ii) identify the mechanisms to manage and mitigate these risks. These actions are critical for the design and implementation of climate policies by increasing the understanding of their impacts on the government's budget. In addition, identifying government resources allocated to interventions that seek to tackle climate-related events (climate budget tagging) supported under PA7 will improve the government's capacity to prioritize expenditures for climate change interventions. This is particularly important for the poor and vulnerable, who are more likely to be disproportionately negatively affected by climate-related shocks.

5.2. ENVIRONMENTAL, FORESTS, AND OTHER NATURAL RESOURCE ASPECTS

67. The policies supported under this DPL are expected to have broadly positive impacts on Paraguay's environment and natural resources sectors by embedding an enhanced policy approach to climate change and promoting climate resilience and mitigation in key economic sectors. None of the Prior actions are expected to negatively affect Paraguay's environment, forests, or other natural resources. This assessment is based on the substance and expected result of supported Prior Actions across the three policy pillars and an assessment of the governance framework for environmental management in Paraguay. Pillar 1 aims to mobilize private capital for climate resilience and mitigation through the provision of an energy line of credit and regulation enabling the use of standing timber as loan collateral. These actions are expected to result in mitigation outcomes with local and global benefits, particularly reducing pressure on native forests through greater availability of plantation wood and increased resource efficiency for energy use by SMEs. The credit-line seeks to lay the basis for small-scale plantation forestry throughout the Paraguayan landscape to ensure biomass for firewood and reduce pressure on native forests as well as diversify production. Pillar 2 promotes climate resilience and mitigation in key economic sectors – specifically in rural water supply and sanitation, leading to greater resource use efficiency; electronic transactions, leading to reduced paper use and emissions from transportation; and improved ability to manage wildfires, with expected benefits for conservation, ecosystem services, and public health. Pillar 3 seeks to enhance financial transparency to support climate action and centers on mitigating fiscal risks arising from climate shocks as well as better aligning the national budget to promote climate priorities in the agriculture and livestock sector. These actions are expected to result in enhanced mitigation and adaptation outcomes to safeguard environmental assets at risk by projected climate change impacts.

68. Paraguay's *de jure* institutional architecture for environmental governance features elements of international best practice, but implementation is hindered by capacity and resource constraints. The national environmental authority is MADES, which is responsible for the formulation, coordination, enforcement, and oversight of national environmental policy and is the enforcement authority for the vast majority of Paraguay's environmental laws. MADES is responsible for verifying compliance and enforcing mitigation measures or management plans as well as for any false information it has received. It also has the power to revoke, cancel or suspend the environmental licenses issued and apply the corresponding fines, and has reporting obligations to the Public Prosecutor's Office any punishable acts that come to its attention. In practice, however, MADES' institutional capacity is hampered by several factors. MADES' budget allocation has not grown since its creation in 2018. Its budget for 2022 is only US\$8 million, or 0.1 percent of the national budget, imposing binding constraints to its ability to effectively achieve its stated objectives. MADES also has a key role in advancing the climate change agenda, including the formulation of the NDCs as well as Long Term Strategy preparation and other policies aligned with their objectives. It relies heavily on international support for its activities. The transversal nature of climate action also requires a level of coordination with other ministries and agencies and convening power that are still insufficient. MADES' effective implementation of its mandates is, thus, limited. INFONA also plays an important role in the environmental institutional architecture responsibility for forest management as the authority for implementation of the Forestry Law, which also regulates land-use change, oversight of plantation and



natural forest management as well as the forest industry and export controls related to wood and wood products. It has a smaller budget than MADES of only some US\$5.4 million in 2022 for its mandate, which is national in scope. Both institutions receive external support from development partners to strengthen their capacity.



5.3. PFM, DISBURSEMENT AND AUDITING ASPECTS

69. A well-developed legal framework⁵³ underpins Paraguay's Public Financial Management (PFM) system. However, Paraguay's PFM system is not fully aligned with international good practices as described by the 2016 Public Expenditure and Financial Accountability (PEFA) Framework. According to the latest PEFA Assessment completed in 2016,⁵⁴ Paraguay's PFM system shows improvement in the following performance areas compared to the previous assessment:⁵⁵ (i) government budget comprehensiveness and transparency, (ii) internal control, (iii) timeliness of preparation of government annual financial statements, (iv) public debt management, and (v) follow-up of external audit recommendations.

70. The major strengths of Paraguay's PFM system are the transparency of public finances and control in budget execution. The budget is widely available to the public,⁵⁶ primarily via the MoF's website.⁵⁷ The management of public assets and policy-based fiscal strategy and budgeting also shows some strengths. However, substantial modifications of the approved budget regularly occur during the annual budget implementation stage. These reallocations often deviate from the originally approved budget, hindering the credibility of the annual budget.

71. Internal controls and oversight. The standardized internal control mechanisms in Paraguay consist of a set of rules and procedures specified, for example, through the regulatory Decree of the Annual Budget Law and specific manuals for each government institution. Furthermore, the different manuals follow the Standardized Internal Control Model for Public Sector Entities in Paraguay.⁵⁸ Law 1.535/99 establishes that internal audit is part of the internal control structure that comprises ex-ante control by public managers and ex-post control (internal audit) by the internal audit unit of each institution within the government (Institutional Internal Auditor, or *Auditoria Interna Institucional*, AI) and the Comptroller General (*Auditoria General del Poder Ejecutivo*, AGPE).⁵⁹ The reviews by the Auditor and AGPE are carried out in accordance with the pertinent regulations and Generally Accepted Auditing Standards (*Normas de Auditoría Generalmente Aceptada*). The AIs report to the supreme authority of each institution and the AGPE reports to the President of Paraguay. The AGPE regulates, coordinates, and supervises the functioning of the AIs. Despite some progress, the 2016 PEFA Report states that the government's internal control system is still limited in providing reasonable assurances that operations meet the main control objectives. Coverage of internal audit has been expanded to all central government entities; however, there is no evidence that internal audit activities meet professional standards including focus on high-risk areas.

72. External oversight. The execution of the budget at all levels is externally overseen by the Comptroller General

⁵³ Including: (i) the 1992 Constitution of the Republic; (ii) Law 1.535/99 State Financial Management Law (*Ley de Administración Financiera del Estado*-LAFE) and its complementary regulations/decrees; (iii) the Annual and Pluri-Annual Budget Laws and their complementary regulations/decrees; (iv) Law 5.098/13 on Fiscal Responsibility; (v) Law 5.282/14 on Open Citizen Access to Public Information & Government Transparency; and (vi) Law 276/94 governing the National Audit Office (*Contraloría General de la República*-CGR).

⁵⁴ European Union (August 2016): Paraguay Public Expenditure and Financial Accountability Report (PEFA).

⁵⁵ European Union, The World Bank and IDB (December 2011): Paraguay Public Expenditure and Financial Accountability Report (PEFA).

⁵⁶ Paraguay's 2019 Open Budget Survey composite score (which measures budget transparency) was 46 out of 100 (1 point above the global average of 45) and ranked Paraguay 57 out of 117 countries.

⁵⁷ <https://www.hacienda.gov.py/web-hacienda/index.php?c=1196>

⁵⁸ Through Decree 962/08, the government is implementing the *Modelo Estandar de Control Interno para las Entidades Publicas del Paraguay* (Standardized Internal Control Model for Public Sector Entities in Paraguay). This is a comprehensive internal control framework based on the principles of the Committee of Sponsoring Organizations of the Treadway Commission.

⁵⁹ At the end of 2008, the mandatory use of the Unified Government Audit Manual was adopted for both internal and external audit agencies of the government, and the regulatory decree of the LAFE was amended, incorporating the rank of minister of the Auditor General, previously granted by Decree 10.883/07.



(*Contraloría General de la República*, CGR). As the supreme audit institution of the country, the CGR enjoys functional and administrative independence. The audits performed are almost exclusively of a financial type and only in exceptional cases – mostly prompted by blatant reports of wrongdoing or events of public importance – are performance audits performed.

73. Accounting and financial reporting. The State Financial Management Law and its complementary regulations establish, among other provisions, the use of the Integrated Financial Management System (*Sistema Integrado de Administración Financiera*, SIAF)⁶⁰ to record budget transactions. Government financial statements are prepared following national accounting and reporting standards⁶¹ that are not fully consistent with International Public Sector Accounting Standards (IPSAS).⁶² The government's consolidated⁶³ annual financial reporting (covering the previous fiscal year) is prepared by the Directorate of Public Accounting and must be submitted to the executive and congress by March 31 of the following year. The constitution requires the President to submit the annual financial report to the CGR before April 30 of each year. Within four months after receiving this report from the executive (i.e. by August 30), the CGR must present to congress a report and an assessment on the annual financial report. Congress must review and approve (or reject) the annual Financial report (including the opinion made by the CGR on the same), before December 15 of the year following the period in question. These annual reports are comparable with the approved budget and include information on revenues, expenditures, and cash balances. However, the accuracy of information on assets, liabilities, revenues, and expenditures included in the financial statements has been challenged by the external auditor, which expressed a qualified opinion on the 2020 statements.⁶⁴

74. Flow of foreign exchange funds and related control environment. A copy of the IMF's 2021 Safeguards Assessment of the BCP has been requested to determine whether arrangements are in place to ensure that the loan proceeds reach the country's official foreign exchange reserves, before being credited to an account of the government to finance budgeted expenditures. In addition, the BCP's financial statements for the last three years were reviewed as part of the assessment. Deloitte & Touche Paraguay carried out the audit of BCP for these years following international

⁶⁰ SIAF consists of a set of computerized subsystems with centralized and decentralized operations, interrelated and integrated with each other such as: the Integrated Budget Programming System (*Sistema Integrado de Presupuesto*), the Integrated Treasury System (*Sistema Integrado de Tesorería*), the Integrated Public Investment System (*Sistema Integrado de Inversión Pública*) and the Integrated Accounting System (*Sistema Integrado de Contabilidad*, SICO).

⁶¹ National Financial Administration Law, *Ley de Administración Financiera del Estado* (LAFE), and its regulatory Decree No. 8127 of 2000 establish public sector accounting standards. The Ministry of Finance sets accounting standards for the public sector through its Directorate of Public Accounting.

⁶² Via Resolution No. 262/2015 and Circular No. 02/2016, the government authorized the start of the process, for the study, approval and implementation of national accounting standards harmonized with IPSAS and International Financial Reporting Standards. Paraguay is following the "indirect" adoption method with some customization of the rules according to the specific circumstances of the country. A gap analysis and action plan towards IPSAS accrual adoption have been prepared. Since 2015, entities have had to register in their balance sheets all the obligations or debts contracted using the accrual basis. In addition, within the framework of the implementation of the IPSAS and its action plan, the government undertook to reform/reengineer the Integrated System for the Administration of State Resources (*Sistema Integrado de Administración de Recursos del Estado*-SIARE), including the prioritization of the Integrated Goods and Services System (*Sistema de Administración de Bienes del Estado* -SIABYS) (an asset/inventory recording system whose objective is to incorporate assets owned by all State agencies and entities and establishing the basis for the accounting records). SIARE contains three mega systems: the SIAF, the Integrated Human Resources System and SIABYS. (IDB (2019): *Contabilidad Gubernamental en América Latina y Convergencia a las Normas Internacionales de Contabilidad del Sector Público* (NICSP)).

⁶³ The consolidation of the financial and budgetary Statements and information of the entities that are connected to the SIAF is carried out through the data obtained from the SICO, which considers all the executors who report information as if they constitute a single separate unit. For consolidation purposes, all levels of government are integrated.

⁶⁴ Eight public institutions had qualified or adverse opinions; the Ministry of Finance was not one of these.

<https://www.contraloria.gov.py/index.php/actividades-de-control/informe-y-dictamen-sobre-el-informe-financiero-del-ministerio-de-hacienda/file/30550-informe-y-dictamen-informe-corto>



auditing standards. The auditors expressed an unqualified audit opinion on the financial statements for all three years.⁶⁵ Based on the review of the audited financial statements, there are also no indications of significant unmitigated risks pertaining to the management of either credit, interest, liquidity, currency or operational risks, which are managed by adequate segregation of duties (front office, middle office, and back office). Overall, the control environment of the BCP is acceptable to the World Bank.

75. Procurement aspects. The national regulatory system is robust, consistent with the World Bank's Procurement Principles, and in accordance with good international practices. The Public Procurement System is led by the National Directorate of Public Procurement (*Dirección Nacional de Contrataciones Públicas*). The government has been modernizing the public procurement system, promoting changes in regulations and developing strategies to streamline results and increase value for money. Under these efforts, a new reform to the public procurement law is under review by congress (the chamber of deputies gave preliminary approval at the end of 2021). The new law will introduce the concept of sustainability in public procurement, fostering, among other measures, the inclusion of evaluation criteria in the procurement processes linked to environmental, economic, and social sustainability. The Directorate is also progressing in the implementation of the 2020-2027 Sustainable Purchasing Plan, which will incorporate sustainable criteria in the public procurement of prioritized goods and services. Disbursements under this DPL, will not be linked to any specific purchases and no procurement requirements will be needed.

76. There are no risks to the achievement of the development objectives stemming from any identified weaknesses in the PFM system, and no additional fiduciary arrangements (for example, dedicated foreign or local currency bank accounts) will be put in place for the operation. Nevertheless, the Bank will reserve the right to have the bank account referred to below audited by independent auditors acceptable to the Bank, in accordance with consistently applied auditing standards acceptable to the Bank. The overall integrated fiduciary risk of this operation is rated as Moderate.

77. Disbursement arrangements. The Bank will disburse the loan proceeds to a new US\$-denominated account belonging to MoF. This account forms part of the country's official foreign reserves, held at the BCP. Upon receipt of the loan proceeds in the US\$-denominated account, the Borrower will promptly account for the receipt of the proceeds in the country's integrated financial management system (SIAF)⁶⁶ in an account used to finance budgeted expenditures using the country's regular or established procedures for such accounting. Recording and accounting for the funds' receipt will be done in guaraníes, and the exchange rate to be used is the rate that will be in effect on the date MoF receives the funds. If the loan proceeds or any part thereof are used for excluded expenditures as defined in the Loan Agreement, the World Bank will require the Borrower to refund an equivalent amount.

78. Written Confirmation. Within 30 days after receipt of the loan proceeds, the Borrower, through MoF, will confirm in writing to the Bank: (i) the exact amount of loan proceeds received into the BCP account; and (ii) that an

⁶⁵ The auditors did, however, highlight in their 2019 opinion (Emphasis of Matter) the continuing negative net worth position of the BCP. The ability of the BCP to continue as a "going concern" is backed up by the ability to create base money as needed and the Paraguay government's ownership, which provides a backstop. The 2019 and 2020 audit opinions also highlighted that the financial statements were not fully compliant with International Financial Reporting Standards (IFRS). This emphasis is not repeated in the 2021 audit opinion. Since late 2016, the BCP has embarked on a project for adoption of IFRS and modernizing information and technology systems infrastructure, including the implementation of Integrated Financial Management Information System (IFMIS) with technical support from the Bank's Project-P165552-RAS II Technical Assistance to support the BCP transitioning to IFRS and IFMIS.

⁶⁶ The Ministry of Finance may use the proceeds either to: (i) make budgeted foreign currency payments directly from this foreign currency bank account; or (ii) transfer amounts from the foreign currency bank account to a local currency bank account of the MH, which the government then uses to make payments for its budget expenditures; or (iii) a combination of these approaches.



equivalent amount has been recorded in Paraguay's accounting and budgeting management system/records.

5.4. MONITORING, EVALUATION AND ACCOUNTABILITY

79. The monitoring, evaluation, and results framework has been agreed with MOF, which is responsible for coordinating actions across ministries and agencies involved in the operation. The agencies responsible for the implementation of the PAs of the operation include MoF; AFD; the Ministry of Health and Social Wellbeing; MOPC; MIC; INFONA and BCP. Monitoring and coordination capacity in general is weak, and the participation of multiple agencies constitutes a risk. The World Bank will maintain close dialogue with counterparts, MoF, line ministries and agencies for the monitoring of indicators. Annex 1 presents the results framework discussed with the government, and the indicators selected are part of the government's regular monitoring activities and/or the relevant information can easily be collected.

80. Grievance Redress. Communities and individuals who believe that they are adversely affected by specific country policies supported as Prior Actions or tranche release conditions under a World Bank Development Policy Operation may submit complaints to the responsible country authorities, appropriate local/national grievance redress mechanisms, or the World Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Affected communities and individuals may submit their complaint to the World Bank's independent Inspection Panel which determines whether harm occurred, or could occur, as a result of World Bank non-compliance with its policies and procedures. Complaints may be submitted at any time after concerns have been brought directly to the World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the World Bank Inspection Panel, please visit www.inspectionpanel.org.

SUMMARY OF RISKS AND MITIGATION

81. The overall risk to achieving the DPL's development objective is Substantial. The primary risks identified include: (i) political and governance; (ii) institutional capacity for implementation and sustainability, (iii) sector strategies and policies, and (iv) technical design. Risks will be monitored throughout preparation and implementation of the DPL, and mitigation measures are in place to reduce their impact.

82. The political and governance risk is Substantial. General elections are scheduled to take place in April 2023. Potential changes in the national administration could have effects on the implementation of the PAs, including reducing political commitment to the Program and its implementation. Two mitigating factors stand out. On the one hand, the design of the program focused on reforms informed by consultation processes (see section 4.4) that fomented consensus on the reforms, and for which the World Bank has committed to implementation assistance. On the other hand, many of the supported Prior Actions were championed by ministries and entities with stable technical teams that are usually not subject to political changes, such as MoF, the BCP, or AFD.

83. The institutional capacity for implementation and sustainability risk is Substantial. Implementation of the enacted reforms is key to deliver on the Program's objective and limited institutional capacity has been a barrier to the implementation of WBG-financed operations in Paraguay. Intergovernmental coordination is weak, and the consensus building process is usually long, leading to delays in implementation. Implementation risks could arise from a lack of resources and capacity constraints, which could hinder the effective implementation of the reforms and undermine the



impact of the operation. Moreover, a lack of high-quality monitoring systems based on readily available data might complicate the implementation of sectoral reforms. Some Prior Actions directly address and mitigate risks arising from limited institutional capacity, including areas where interinstitutional coordination (such as on wildfires), or monitoring capacity (such as on economic data) are key for the achievement of the development outcomes. Several Prior Actions are being complemented with technical assistance to partially mitigate these and related risks (see below).

84. The achievement of the DPL's objectives could also be adversely affected by inadequacies in sector strategies, a risk considered to be Substantial. Discrepancies between the legal and policy framework, the supporting ecosystem, communications and the sector leadership may reduce reform effectiveness. These risks are being partially mitigated by technical assistance that complements the DPL. In the case of the integrated fire management law (PA7), the law will only become effective once INFONA publishes the accompanying regulation. To mitigate this risk, the World Bank, along with the FAO, is providing technical assistance for the development of the regulation, which is expected to be approved in June 2022.

85. Given the innovative nature for the Paraguayan context of many of the measures supported in this Program, the technical design risk is rated as Substantial. For example, there is a risk that the demand for the credit line for energy efficiency (PA1) takes time to materialize given the novelty of the product, in spite of planned promotion and capacity building work and technical assistance provided to applicants, or that demand is skewed toward projects that reduce electricity consumption rather than decrease or displace biomass use, resulting in a smaller impact on GHG emissions. A similar risk applies to the regulations related to the real right to standing timber (PA2), whose innovative nature poses challenges to predicting implementation bottlenecks. There are also risks that the new water and sanitation subsidy scheme (PA3) or that the scale of water and sanitation providers remains constrained by reasons not contemplated in the current design of the reform. To mitigate these risks the World Bank is helping the government finalize the development of the National Water and Sanitation plan, which will include aspects related to the subsidy scheme methodology. Finally, while the technical assistance INFONA is receiving to meet the indicator targets related to the integrated forest fire law (PA5) is expected to safeguard the initial steps of a lengthy implementation process for the law, downstream implementation of the law and its ability to influence a reduction in the incidence of wildfires will depend on a series of additional steps not covered by the law itself, including the formulation and implementation of an integrated wildfire management policy, the quality and implementation of the related regulation, and an increase in capacity in municipalities. This process is expected to exceed the implementation period of the DPL.



Table 4: Summary Risk Ratings

Risk Categories	Rating
1. Political and Governance	● Substantial
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Substantial
4. Technical Design of Project or Program	● Substantial
5. Institutional Capacity for Implementation and Sustainability	● Substantial
6. Fiduciary	● Moderate
7. Environment and Social	● Moderate
8. Stakeholders	● Low
9. Other	
Overall	● Substantial



ANNEX 1: POLICY AND RESULTS MATRIX

Prior Actions	Results		
	Indicator Name	Baseline	Target
Pillar 1: Mobilize private capital for climate resilience and mitigation			
Prior Action #1: To incentivize SMEs to reduce their greenhouse gas emissions, the AFD has established a credit line to finance energy efficiency improvements, including in the biomass energy sector, as evidenced by AFD's Resolution No. 3 included in AFD's Act No. 13/2022 dated February 23, 2022, and AFD's Letter No. GCM No. 4/2022 dated April 26, 2022.	Results Indicator #1: Projected direct GHG emission reductions enabled by the loans disbursed through the energy efficiency line of credit.	0 (2022)	3,075 tCO ₂ e (2023)
Prior Action #2: To facilitate financial institutions lending to forestry businesses in the plantation sector, the Superintendency of Banks has regulated the valuation of standing timber as loan collateral by establishing: (a) rules for the accreditation of professional valuers of the real right to standing timber (<i>derecho real de superficie forestal</i>); and (b) related technical valuation requirements, as evidenced, respectively, by: (i) Resolution SB. SG. No. 34/2022 dated April 6, 2022, and published on BCP's website; and (ii) Resolution SB. SG. No. 22/2022 dated February 25, 2022, and published on BCP's website.	Results Indicator #2: Credits issued by financial institutions to forest plantation operators using as loan collateral the real right to standing timber.	No (2022)	Yes (2023)
Pillar 2: Promote climate resilience and mitigation in select sectors of the economy			
Prior Action #3: To increase climate resilience, improve the sustainability of natural resource use, and generate economies of scale among rural and peri-urban water and sanitation service providers, the Borrower, through its Executive Branch, has reformed the subsidy regime for water and sanitation service providers by eliminating unsustainable subsidies and encouraging a higher number of connections per water and sanitation system, as evidenced by Decree No. 7161 dated June 1, 2022, and published in the Official Gazette on June 2, 2022.	Results Indicator #3: Average number of water and sanitation customers per new service provider established.	Less than 200 (2022)	500 (2023)
Prior Action #4 To promote enhanced efficiency, effectiveness, and security of transactions, the Borrower has enacted a law for trust service providers	Results Indicator #4: a) Number of electronic signatures	40,586 (Dec. 2021)	1,000,000 (2023)



Prior Actions	Results		
to ensure that electronic transactions are as verifiable and legally binding as paper-based transactions, as evidenced by Law No. 6822/2021 dated December 30, 2021, and published in the Official Gazette on January 4, 2022	registered in the electronic signature database of the Ministry of Industry and Commerce. b) Number of electronic signatures held by women registered in the electronic signature database of the Ministry of Industry and Commerce.	18,168 (Dec. 2021)	500,000 (2023)
Prior Action #5: To strengthen resilience to climate change and conserve natural ecosystems, the Borrower has enacted a law that regulates fire use, management, and control, and the prevention of wildfires, as evidenced by Law 6818 dated October 12, 2021, and published in the Official Gazette on October 19, 2021.	Results Indicator #5: a) Establishment by INFONA of an early warning system that allows the general public to report forest fires.	No (2022)	Yes (2023)
	b) Establishment by INFONA of a computerized administrative system to issue permits for prescribed burns.	No (2022)	Yes (2023)
Pillar 3: Enhance fiscal transparency for climate action			
Prior Action #6. To better identify, mitigate and anticipate fiscal risks, including those related to climate change, the Borrower, through the Ministry of Finance, has mandated the annual publication of a fiscal risk report, including climate-related risks related to fiscal operations, as evidenced by Resolution MH No. 173 dated March 10, 2022, and Resolution SSEE No. 17 dated March 21, 2022.	Results Indicator #6: Number of fiscal risk assessments that include discussion of climate risks published on the Ministry of Finance's website.	0 (2022)	2 (2023)
Prior Action #7. To better align the central government budget with climate change policy priorities, the Borrower has: (a) through its Executive Branch, mandated the Ministry of Finance to promote the identification and measurement of public initiatives focused on climate change; and (b) through the Ministry of Finance, mandated the identification of public expenditures of the Ministry of Agriculture and Livestock related to climate adaptation and mitigation, as evidenced, respectively, by: (i) Article 9 of Decree No. 6581/22 dated Jan 25, 2022 and published in the Official Gazette on Jan 26, 2022; and (ii) Resolution MH No. 206 dated April 8, 2022.	Results Indicator #7: Share of the budget of the MAG, MIC, MADES, INFONA, MOPC, and the National Emergency Secretariat screened for initiatives focused on climate change.	0% (December 2021)	100% (2023)





ANNEX 2: FUND RELATIONS ANNEX

Paraguay—Assessment Letter for the World Bank April 29, 2022

This note provides the IMF staff's assessment of Paraguay's macroeconomic conditions, prospects, and policies, based on available information as of April 25, 2022. The assessment has been requested in relation to a development policy loan by the World Bank.

Recent Developments, Outlook, and Risks

- 1. Since 2019, the Paraguayan economy has suffered a series of external shocks.** As the economy was just starting to recover from the 2019 drought and flooding conditions, the COVID-19 pandemic hit in 2020, leading to a sharp retrenchment in the services and cross-border trade sectors. The pandemic intensified in early 2021, but the economy rebounded due to favorable export prices and a recovery in the manufacturing and services sectors. Real GDP grew by 4.2 percent, the external current account recorded a surplus of 0.8 percent of GDP, and international reserves rose to US\$10.1 billion (9 months of prospective imports) at end-2021. But the intense drought during the critical summer months of 2021/22 hit agricultural production and exports hard, leading to an estimated loss of export revenue of about US\$3 billion in 2022.
- 2. Inflation has risen above the target, reaching 10.1 percent by March 2022.** Annual headline inflation strongly increased in the second half of 2021, primarily due to higher food (particularly meat) and fuel prices. In response, the Central Bank of Paraguay (BCP) has risen its policy rate by a cumulative 600 basis points since August 2021 to 6.75 percent. It has also increased foreign exchange interventions to limit short-term exchange rate volatility and reduce excess liquidity.
- 3. The fiscal position improved in 2021 due to declined spending on COVID-related measures and a rebound in government revenues.** The central government's deficit fell to 3.7 percent of GDP in 2021, down from 6.1 percent of GDP in 2020. In 2021, the government used the general IMF SDR allocation (equivalent to about US\$270 million or 0.7 percent of GDP) to finance expenditures related to the COVID-19 emergency plan and issued long-term external sovereign bonds for US\$800 million on favorable terms.
- 4. The banking system remains well-capitalized and profitable,** and non-performing loans have remained stable despite the gradual unwinding of forbearance measures implemented at the time of the pandemic.
- 5. The war in Ukraine is affecting the country through multiple channels.** The recent oil price surge has exacerbated inflation and current account pressures. In addition, the country is exposed to direct trade links with Russia. Exports to Russia represented about 7 percent of total exports in 2021 (mainly meat exports), while the war also affected the availability and prices of imported fertilizers, which are key for soy production.



6. **Paraguay is likely to experience lower economic growth and higher inflation in 2022 than previously expected.** In addition, the ongoing evolution of COVID-19 adds some uncertainty to the prospects of the services sector. Real GDP growth is projected to be barely positive at 0.3 percent. The loss of export revenue, while partly compensated by reduced non-fuel imports, would also lead to a larger deterioration of the external current account, from a surplus of 0.8 percent of GDP in 2021 to a deficit currently projected at 2.9 percent of GDP in 2022.

7. **Supply chain obstructions and problems with trade shipping logistics have caused scarcities and sharp price increases for vital import products.** Inflation should eventually subside and converge to the BCP's target of 4 percent but may still come out slightly above the BCP's target range ceiling of 6 percent at end-2022.

8. **The 2022 budget deficit target of 3 percent of GDP will be difficult to achieve.** Fiscal revenue will be dented both by the impact of lower growth and continued low electricity generation. The recent creation of a fuel subsidy will translate into an increase in expenditure by close to 0.3 percent of GDP. Moreover, the government faces salary increase pressures and various bills in congress that put fiscal stability at risk. IMF staff project a fiscal deficit for 2022 of around 3.2 percent of GDP. Public debt is projected to stabilize at around 37 percent of GDP over the medium term, from the estimated 39 percent of GDP at end-2022.

9. **Risks to growth and inflation are tilted to the downside.** Downside risks include an intensification of the war in Ukraine, a resurgence of the pandemic, and an abrupt tightening of global financial conditions. Due to the loss of the soy harvest, Paraguay may not take full advantage of current higher commodity prices to boost exports and growth, while continued high oil prices might exacerbate inflation and social pressures. Risks are mitigated by a large stock of international reserves.

Policy Framework and Settings

10. **Stronger domestic revenue mobilization is needed to maintain fiscal policy credibility and address structural gaps, while converging back to the 1.5 percent of GDP deficit ceiling over the medium term.** Gaps in infrastructure, health, and education are significant. In addition, fiscal space would be needed to implement adaptation and mitigation policies in response to climate change. The 2020 tax reform was a step in the right direction, but substantial exemptions from special tax regimes need to be assessed.

11. **Improved targeting of social spending would enhance the policy response against negative shocks.** While Paraguay successfully implemented social assistance programs during the pandemic to reduce its impact on poverty and inequality, there is room to improve their targeting strategies. This is particularly important given the recent increases in international fuel and food prices, which might last longer than originally expected.

12. **The BCP should tighten monetary policies further in case inflation expectations become unanchored or inflation turns out to be more persistent.** While the exchange rate



should continue to be flexible, the BCP's ample reserves leave it with some room to use non-sterilized foreign exchange interventions to limit short-term exchange rate volatility.

13. Tackling gaps in roads infrastructure, human capital and education, access to financing for SMEs, and the rule of law is critical to foster inclusive and private sector-led economic growth. In addition, Paraguay's climate change policies are still in their infancy and should move toward an integrated policy framework.

14. Paraguay needs to preserve the financial sector's health and resilience and continue strengthening its Anti-Money Laundering/Combating the Financing of Terrorism (AML/CFT) regime. Supervisory activities should continue to focus on assessing underlying asset quality to ensure that future capital and liquidity buffers will be appropriate. Supervision needs to be strengthened in the financial cooperatives' sector and extended to pension funds.

IMF Relations

15. The 2022 Article IV mission took place in Asuncion from March 23 to April 5 this year and the IMF Article IV Board date is scheduled for mid-June. It is expected that the next Article IV consultation with Paraguay will be held on the standard 12-month cycle. The Fund is providing continuous technical assistance on revenue administration, public financial management, banking supervision and AML/CFT issues.



Paraguay: Selected Economic and Social Indicators

I. Social and Demographic Indicators

Population 2021 (millions)	7.4	Gini index (2018)	46.2
Unemployment rate (2021)	7.7	Life expectancy at birth (2020)	74
Percentage of population below the poverty line (2019)	23.5	Adult literacy rate (2018)	94.0
Rank in UNDP development index (2019)	103 of 189	GDP per capita (US\$, 2021)	5,207

II. Economic Indicators

	2019	2020	Prel. 2021	2022	2023	Proj. 2024	2025	2026	2027
(Annual percent change, unless otherwise indicated)									
Income and prices									
Real GDP	-0.4	-0.8	4.2	0.3	4.5	3.5	3.5	3.5	3.5
Nominal GDP	2.6	1.4	10.1	11.0	8.7	7.3	8.1	7.7	7.9
Per capita GDP (U.S. dollars, thousands)	5.3	4.9	5.2	5.6	5.9	6.2	6.5	6.7	7.1
Consumption (contribution to real GDP growth)	1.7	-1.7	4.4	2.9	-4.4	0.4	2.9	2.6	2.5
Investment (contribution to real GDP growth)	-1.5	-1.0	5.3	2.3	5.9	2.8	1.2	1.4	1.4
Net Exports (contribution to real growth)	-0.6	1.9	-5.5	-4.9	3.0	0.3	-0.5	-0.4	-0.4
Consumer prices (end of period)	2.8	2.2	6.8	7.0	4.2	4.0	4.0	4.0	4.0
Nominal exchange rate (Guarani per U.S. dollar, eop)	6,453	6,917	6,879	...	...	...	...	...	...
Monetary sector									
Credit to private sector 1/	9.7	8.1	10.5	9.4	8.6	9.0	8.9	9.0	9.0
Monetary policy rate, year-end	4.0	0.75	5.25	...	...	...	...	...	...
External sector									
Exports (fob, values)	-8.1	-9.5	22.0	-11.5	18.1	3.5	4.1	3.0	3.7
Imports (cif, values)	-5.2	-18.1	30.4	-2.0	6.2	2.7	3.4	3.1	3.3
Terms of trade	-3.3	-0.6	-2.6	4.2	-2.1	-0.5	2.1	1.0	1.4
Real effective exchange rate 2/	-2.9	-1.2	0.3	...	...	...	...	...	...
(In percent of GDP, unless otherwise indicated)									
External current account	-0.5	2.7	0.8	-2.9	0.4	0.5	0.5	0.6	0.7
Trade balance	0.3	3.8	1.8	-1.5	1.8	2.0	2.1	2.0	2.0
Exports	33.5	32.4	36.6	29.6	32.9	32.2	31.5	30.7	30.1
Of which: Electricity	5.0	4.9	4.2	3.6	3.2	2.8	2.5	2.2	1.9
Imports	-32.3	-28.3	-34.2	-30.6	-30.5	-29.6	-28.9	-28.1	-27.4
Of which: Oil imports	-3.8	-3.0	-4.0	-6.9	-5.1	-4.3	-3.9	-3.6	-3.5
Capital account and financial account	1.5	5.0	3.0	3.1	0.7	0.7	0.6	0.4	0.2
Of which: Direct investment	0.6	0.3	0.3	1.2	4.0	4.4	1.4	1.0	1.0
Gross international reserves (in millions of U.S. dollars)	7,500	9,976	10,570	10,070	10,570	11,120	11,670	12,220	12,770
In months of next-year imports of goods and services	8.2	8.3	9.0	8.1	8.2	8.3	8.4	8.5	8.6
Ratio to short-term external debt	2.1	2.4	2.7	2.2	2.4	2.6	2.7	3.0	7.5
Gross domestic investment	21.7	20.0	22.4	24.0	27.9	29.5	29.3	29.4	29.6
Gross domestic saving	21.2	22.8	23.2	21.1	28.4	29.9	29.8	30.0	30.3
Central government revenues	14.2	13.5	14.0	13.5	13.5	13.7	13.7	13.6	13.6
Of which: Tax revenues	10.0	9.5	10.0	9.8	9.8	9.9	10.0	10.1	10.2
Central government expenditures	17.0	19.7	17.8	16.7	15.8	15.2	15.2	15.1	15.1
Of which: Compensation of Employees	7.0	7.3	6.8	6.8	6.6	6.4	6.3	6.1	6.0
Of which: Net Acquisition of Non Financial Assets	2.9	3.6	3.0	2.3	1.9	1.5	1.5	1.8	2.1
Central government net lending/borrowing	-2.9	-6.1	-3.7	-3.2	-2.3	-1.5	-1.5	-1.5	-1.4
Central government primary balance	-2.0	-5.1	-2.6	-2.6	-1.9	-0.9	0.0	0.2	0.0
Public sector debt (excl. central bank bills)	25.8	36.9	37.0	39.4	39.0	38.6	37.9	37.2	36.4
Of which: Foreign currency	21.4	31.9	32.3	34.4	34.0	33.6	32.8	32.1	31.3
Of which: Domestic currency	4.4	5.0	4.7	5.0	5.0	5.1	5.1	5.1	5.1
Memorandum items:									
GDP (billions of Guaranies)	236,567	239,915	264,103	293,108	318,746	341,861	369,557	398,057	429,327
GDP (US\$ billions)	37.9	35.4	38.3	...	...	...	...	...	...

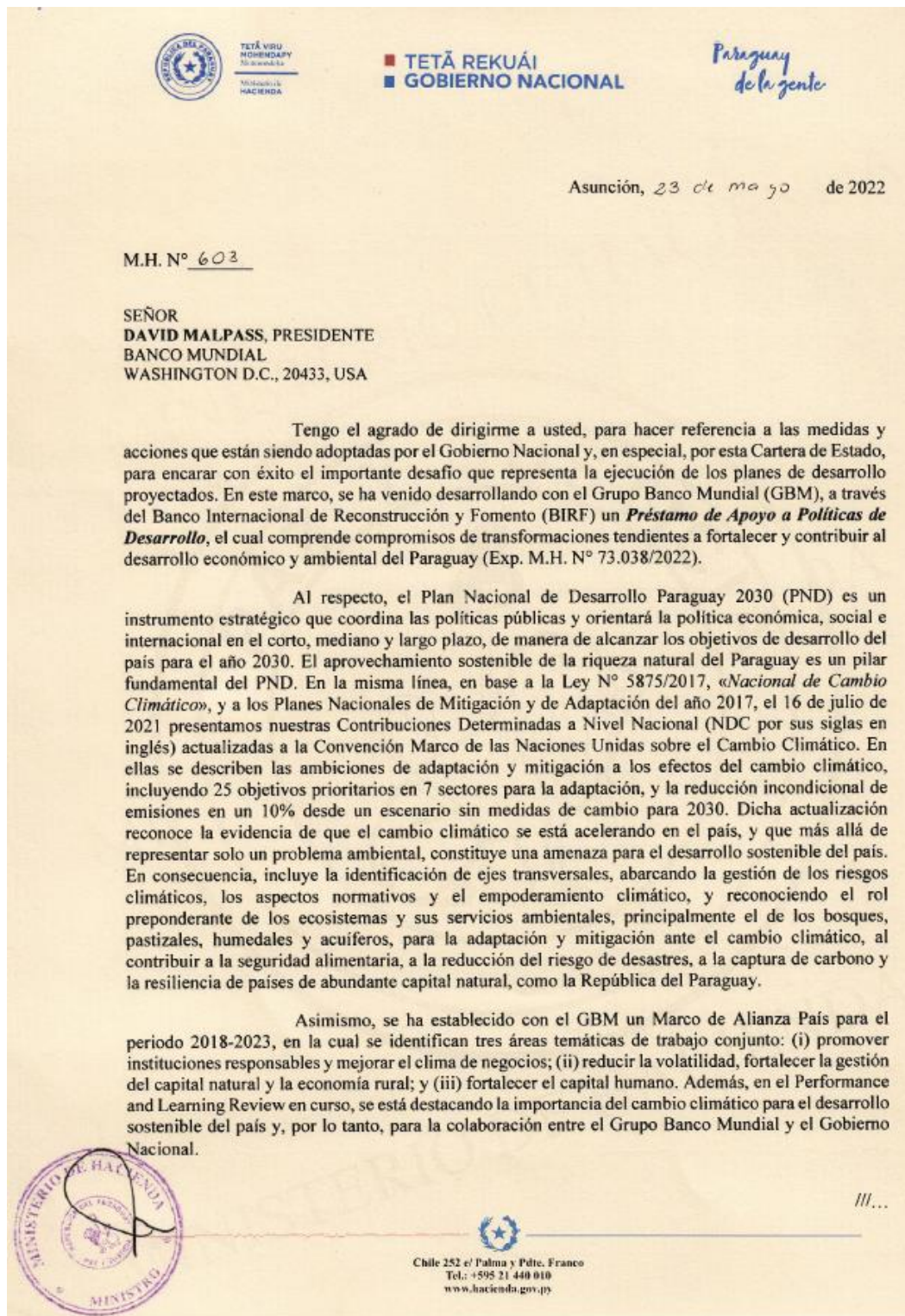
Sources: Central Bank of Paraguay; Ministry of Finance; and IMF staff estimates and projections.

1/ Includes local currency credit and foreign currency credit valued at a constant exchange rate.

2/ Average annual change; a positive change indicates an appreciation.



ANNEX 3: LETTER OF DEVELOPMENT POLICY





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M.H. N° 603.-

Para el logro de estas acciones, en el Marco de Alianza País se incluyeron iniciativas para promover mejoras en la gobernanza ambiental y reformas institucionales para reconocer la importancia y abordar el cambio climático en áreas clave de desarrollo, en particular: la gestión del capital natural e integración en cadenas de valor sostenibles; el fortalecimiento de la gobernanza ambiental para la implementación de las NDC y la preservación del capital natural; la mejora de la resiliencia ante la volatilidad macroeconómica; la promoción de instituciones responsables y mejora del clima de negocios; y la mejora en la gobernanza en los sectores de agua y electricidad.

El presente Préstamo de Apoyo a Políticas de Desarrollo, en línea con la estrategia de desarrollo del Gobierno del Paraguay y el Marco de Alianza país, brinda apoyo a reformas dirigidas a mejorar la sostenibilidad y resiliencia de la economía del país frente a la gestión del cambio climático. Los objetivos de las medidas apoyadas son: (i) movilizar capital privado para la resiliencia y mitigación del cambio climático, (ii) promover la resiliencia y mitigación del cambio climático en sectores seleccionados de la economía; y (iii) mejorar la transparencia fiscal para apoyar la acción climática.

A continuación, se presentan las áreas de implementación de la citada operación, orientada a consolidar los recientes avances alcanzados en tres pilares fundamentales:

I. Movilizar capital privado para la resiliencia y mitigación del cambio climático

En el marco de un mercado nacional de crédito pequeño, el acceso al financiamiento para las empresas sigue siendo limitado. Esto es particularmente cierto para las PYMES y en áreas no tradicionales, como la mejora de la eficiencia energética, clave en el alcance de los compromisos de NDC. De hecho, el mercado actualmente no ofrece instrumentos crediticios específicamente destinados a la mejora en la eficiencia energética. Para incentivar a las pequeñas y medianas empresas a reducir sus emisiones de gases de efecto invernadero, la Agencia Financiera de Desarrollo (AFD) ha establecido una línea de crédito para financiar mejoras en la eficiencia energética, incluyendo en el sector de energía de biomasa, como lo demuestra la Resolución AFD N° 3/2022.

La resolución proporciona a las instituciones financieras créditos asequibles a los clientes para incentivar la adopción de tecnologías cuya gama completa de beneficios no está valorada actualmente por el mercado. La línea de crédito permitirá a las PYMES invertir en proyectos para modificar su matriz energética actual, disminuyendo o eliminando el uso de biomasa en favor de la hidroelectricidad, o aumentar la eficiencia del uso de la energía existente. Se espera que, en el largo plazo, esta reforma, además de generar reducciones de emisiones de GEI, forje un efecto de aprendizaje mediante la exposición de las instituciones financieras a este mercado, demostrando que las inversiones para mejorar la eficiencia energética son financiables y estimulando ofertas de crédito totalmente privadas. Dada la variedad de desafíos relacionados con el cambio climático que enfrenta el país, incluso en el sector financiero y el nexo agrícola, la demanda de dicho crédito podría ser alta.



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Adicionalmente, para facilitar el crédito de las instituciones financieras a las empresas forestales del sector de plantaciones, la Superintendencia de Bancos ha reglamentado, a través de las resoluciones N°s. 22 y 34/2022, respectivamente, la valoración de la madera en pie como garantía de préstamo, estableciendo reglas para la acreditación de tasadores profesionales del derecho real sobre la madera en pie (derecho real de superficie forestal) y requisitos de valoración técnica relacionados. En conjunto, estas resoluciones harán operativa la innovadora Ley N° 4890/2013, «Derecho Real de Superficie Forestal», al crear un marco sobre cómo se puede evaluar el valor de la madera en pie para su uso como garantía en los préstamos del sector privado, que hasta la fecha depende de inversionistas privados extranjeros. Se espera que la compleción del marco normativo del derecho real de superficie forestal facilite el acceso a préstamos comerciales del sector financiero nacional para los operadores forestales. Dado el potencial del sector de plantaciones forestales del Paraguay, se espera que esta medida tenga el efecto de no solamente dinamizar el desarrollo socioeconómico en áreas rurales, sino también generar beneficios múltiples a este sector, sobre todo dado el apoyo técnico que el gobierno recibe en la materia de varios de sus socios internacionales.

II. Promover la resiliencia y mitigación del cambio climático en sectores seleccionados de la economía.

La acción climática implica intervenciones sectoriales específicas con impacto en la mitigación y adaptación al cambio climático. Este pilar agrupa intervenciones en diversas áreas en donde el Gobierno del Paraguay alcanzó avances significativos dentro del periodo de preparación cubierto por este Préstamo. Las medidas apoyadas cubren los sectores de agua y saneamiento rural, transacciones electrónicas, y la gestión de incendios forestales, y están pensadas como medios para alcanzar los objetivos plasmados en la NDC.

El sector de agua y saneamiento rural está caracterizado por proveedores de escala limitada, lo que afecta su eficiencia y eficacia. En particular, estos servicios no son ambientalmente sostenibles ni resilientes a las variaciones climáticas que afectan la disponibilidad de agua. Muchos de estos proveedores de servicios no pueden invertir en la operación y el mantenimiento adecuados de los sistemas y, por lo tanto, están más expuestos a sufrir daños por inundaciones u otros fenómenos meteorológicos extremos. Como resultado, la calidad del agua, la calidad del servicio, las fugas y otros indicadores operativos están muy por debajo de los niveles regionales.





Para aumentar la resiliencia climática y generar economías de escala entre los proveedores de servicios de agua y saneamiento rural y periurbano, se ha reformado, a través del Ministerio de Salud Pública y Bienestar Social (MSPBS) y el Ministerio de Obras Públicas y Comunicaciones (MOPC), el régimen de subsidios para las juntas de agua y saneamiento. El decreto allanará el camino para nuevas reglas de financiamiento que promuevan mayores economías de escala para la provisión de servicios de agua y saneamiento en áreas con menos de 10.000 habitantes. También cambiará la focalización de los subsidios, agregando una multiplicidad de características socioeconómicas y geográficas a los criterios de inclusión. El objetivo de la reforma es generar los incentivos adecuados para la prestación de servicios sostenibles y resilientes.



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Otra área donde hay importantes pérdidas de eficiencia, incluso con consecuencias para la mitigación y adaptación al cambio climático, es la de transacciones. La mayoría de las transacciones en Paraguay aún se basan en verificaciones en papel. Estos procesos requieren tiempo y recursos, desde el uso de papel hasta el consumo de combustibles para efectivizar los traslados hacia los lugares donde se realizan los trámites. Estos traslados, además, pueden verse interrumpidos ante shocks climáticos, afectando desproporcionadamente a poblaciones vulnerables y mujeres. Ante la falta de un marco legal apropiado, Paraguay no hace uso de los avances tecnológicos que permiten realizar estos trámites y verificaciones de manera remota de manera digital.

Para promover una mayor eficiencia y seguridad en las transacciones electrónicas, se ha promulgado una ley que establece el marco legal para las transacciones electrónicas, como lo demuestra la Ley N° 6822/2021, «De los servicios de confianza para las transacciones electrónicas, del documento electrónico y los documentos transmisibles electrónicos». Esperamos que esta normativa brinde el marco necesario para avanzar significativamente en los trámites digitales, mejorando la eficiencia de procesos de distinta índole pública y privada, y la seguridad de las transacciones.

Las temperaturas récord y las condiciones anómalamente secas, han provocado incendios forestales que quemaron millones de hectáreas de tierra durante los últimos años. Dado el mayor riesgo de este tipo de condiciones atmosféricas como consecuencia del cambio climático, se espera que los riesgos de incendios forestales aumenten aún más, lo que necesita un enfoque de prevención e intervención más coordinado. Una gran parte de los incendios forestales en Paraguay son generados por el hombre que, bajo las condiciones descritas anteriormente, sumado a una gestión inadecuada, a menudo quedan fuera de control. Los incendios forestales tienen una serie de efectos nefastos para el desarrollo del país, incluso problemas de salud agudos y crónicos debido a la contaminación del aire, destrucción de infraestructura, degradación de los ecosistemas, una reducción de la capacidad de secuestro y almacenamiento de carbono y un aumento de las emisiones de gases de efecto invernadero.

Para incrementar la resiliencia al cambio climático y conservar los ecosistemas naturales, se ha promulgado la Ley N° 6818/2021, «Manejo Integral del Fuego» que regula el uso, manejo y control del fuego y la prevención de incendios forestales. Dicha ley busca remediar la situación actual estableciendo una arquitectura institucional que permita regular y controlar el uso del fuego. La ley otorga al INFONA competencias de establecimiento de políticas y normativa para el manejo de incendios, incluyendo el establecimiento de zonas y temporadas en las que está prohibido el uso del fuego para el manejo de las tierras, el establecimiento de sistemas de alerta temprana, y la formulación de mejores prácticas de manejo y de criterios para sancionar el incumplimiento. Además, faculta a los municipios a administrar y gestionar el uso del fuego en las zonas rurales de manera más eficiente. Desde su promulgación, la Ley ya está impulsando un proceso de reformas coordinadas entre actores públicos y privados del sector de uso de las tierras, incluso avances importantes en la formulación del reglamento asociado, planeación para capacitaciones de los municipios, y el establecimiento de sistemas digitales de control y administración.

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M.H. N° 603.-

III. Mejorar la transparencia fiscal para apoyar la acción climática.

Los eventos climáticos extremos afectan significativamente la macroeconomía y la política fiscal paraguaya, como lo ilustran las sequías de 2009, 2011-2012 y 2019. La sequía de 2021-2022 podría tener efectos similares. Ante eventos climáticos cada vez más frecuentes e intensos, Paraguay necesita prepararse mejor y prever los recursos necesarios ante su posible materialización. Ello requiere como primer paso entender las contingencias fiscales derivadas de los eventos climáticos, e identificar los recursos fiscales actualmente destinados a la adaptación y mitigación del cambio climático.

Para identificar, mitigar y anticipar mejor los riesgos fiscales, incluidos los relacionados con el cambio climático, el Ministerio de Hacienda ha ordenado a través de las Resoluciones M.H. N°s. 173/2022 y SSEE N° 17/2022, la publicación anual de un informe de riesgo fiscal, incluyendo los relacionados con el cambio climático. Es intención de este Ministerio, que la publicación periódica del informe de riesgos fiscales que incluya riesgos climáticos específicos, sea un primer paso hacia una mayor integración de las consideraciones climáticas en el proceso de formulación de políticas macroeconómicas y fiscales del país, y que sea utilizado para informar el proceso presupuestario e identificar medidas concretas para mitigar los riesgos. Por ejemplo, la cuantificación de riesgos fiscales permitiría generar la información requerida en el caso en que se pudiera avanzar con el establecimiento y uso de un fondo de contingencia soberano.

Por otro lado, para poder avanzar políticas de acción climática de manera eficiente, es fundamental entender el punto de partida de las políticas públicas existentes en materia de mitigación y adaptación climática, y favorecer la transparencia en la gestión de los recursos públicos. Así lo entendió el Gobierno del Paraguay al actualizar su NDC, reconociendo al etiquetado presupuestario de gastos climáticos como un paso necesario para alcanzar los NDC. Hasta el momento no existía en Paraguay una metodología para el etiquetado del presupuesto de cambio climático, lo que dificultaba las opciones para evaluar si los recursos asignados a la adaptación y mitigación son acordes con sus compromisos de NDC.

Para alinear mejor el presupuesto del gobierno central con las prioridades de la política de cambio climático, según consta en el artículo 9° del Decreto N° 6581/2022, se ha encomendado al Ministerio de Hacienda a que promueva la identificación y medición de iniciativas públicas enfocadas en el cambio climático; y a través de esta Cartera de Estado, el mandato de identificar los gastos públicos del Ministerio de Agricultura y Ganadería (MAG) relacionados con la adaptación y mitigación climática. En ese marco, el Ministerio de Hacienda, con el apoyo técnico del Banco Mundial, está desarrollando una metodología de etiquetado de presupuesto climático que conecta actividades y programas presupuestarios con un marco para informar y rastrear los gastos relacionados con el cambio climático. Dicha metodología será expandida al Ministerio de Industria y Comercio (MIC), el Ministerio del Ambiente y Desarrollo Sostenible (MADES), el Instituto Forestal Nacional (INFONA), el Ministerio de Obras Públicas y Comunicaciones (MOPC) y la Secretaría de Emergencia Nacional (SEN) antes del final de 2023. Las entidades comprendidas supervisan la gran mayoría de actividades relacionadas con el cambio climático.

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M.H. N° 603.-

Para resumir, el Gobierno de Paraguay está comprometido a integrar de forma más sistemática el cambio climático en la formulación de sus políticas públicas y a enfrentar los retos que el mismo representa para el desarrollo sostenible de su economía. En vista de lo anterior, el Gobierno de Paraguay considera necesario y pertinente contar con el apoyo del Banco Mundial para llevar adelante las acciones antes señaladas e impulsar los logros de los ambiciosos objetivos estratégicos de desarrollo que el Gobierno se ha trazado.

Hago propicia esta oportunidad para saludarle con mi distinguida consideración.



[Signature]
OSCAR LLAMOSAS DÍAZ
MINISTRO DE HACIENDA
GOBERNADOR TITULAR POR PARAGUAY

C.c.: Señora *Motilde Bordón*, Representante Residente del BIRF.

SEE/SG/mdrv-agg.



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[Unofficial translation]
DEVELOPMENT POLICY LETTER

Asunción, May 23, 2022.

MH N°: 603

Mr.

DAVID MALPASS, PRESIDENT

WORLD BANK

WASHINGTON D.C., 20433, USA

I am pleased to address you, to refer to the measures and actions that are being adopted by the National Government, and especially by this Ministry, to successfully face the important challenge that the execution of the projected development plans represents. In this context, a Development Policy Loan has been developed with the World Bank Group (WBG), through the International Bank for Reconstruction and Development (IBRD), which includes transformation commitments aimed at strengthening and contributing to the economic and environmental development of Paraguay (Exp. M.H. No. 73.038/2022).

In this regard, the National Development Plan Paraguay 2030 (PND) is a strategic instrument that coordinates public policies and will guide economic, social, and international policy in the short, medium, and long term, in order to achieve the development objectives of the country by the year 2030. The sustainable use of Paraguay's natural wealth is a fundamental pillar of the PND. Along the same lines, based on Law No. 5875/17, "Climate Change National Law", and the National Mitigation and Adaptation Plans from 2017, on July 16, 2021 we presented our Nationally Determined Contributions (NDC) updated to the United Nations Framework Convention on Climate Change. Our NDC outline our ambitions to adapt and mitigate the effects of climate change, including 25 priority targets in seven sectors for adaptation, and the unconditional reduction of emissions of 10% from a business-as-usual scenario by 2030. This update recognizes the evidence that climate change is accelerating in the country, and that it not only an environmental problem, but it constitutes a threat to the country's sustainable development. Consequently, it identifies cross-cutting themes, encompassing climate risk management, regulatory aspects and climate empowerment, and recognizes the key role of ecosystems and their environmental services, mainly that of forests, grasslands, wetlands and aquifers, for adaptation and mitigation to climate change by contributing to food security, disaster risk reduction, carbon sequestration and the resilience of countries with abundant natural capital, such as the Republic of Paraguay.

In addition, a Country Partnership Framework has been established with the World Bank Group (WBG) for the period 2018-2023, which identifies three thematic areas of joint work: (i) promoting responsible institutions and improving the business climate; (ii) reducing volatility and strengthening the management of natural capital and the rural economy; and, (iii) strengthening human capital. In addition, the ongoing Performance and Learning Review highlights the importance of climate change for the country's sustainable development, and therefore of the collaboration between the WBG and the national government.

To achieve these actions, the Country Partnership Framework includes initiatives to promote improvements in environmental governance and institutional reforms to recognize the importance of climate change and address it along key development areas, in particular: the management of natural capital and



integration in sustainable value chains; the strengthening of environmental governance for the implementation of the NDCs and the preservation of natural capital; improving resilience to macroeconomic volatility; promoting responsible institutions and improving the business climate; and improving governance in the water and electricity sectors.

This Development Policy Loan, in line with the development strategy of the Government of Paraguay and the Country Partnership Framework, supports reforms aimed at improving the sustainability and resilience of the country's economy to climate change management. The objectives of these supported reforms are to: (i) mobilize private capital for climate resilience and mitigation, (ii) promote climate resilience and mitigation in selected sectors of the economy, and (iii) enhance fiscal transparency for climate action.

The following are the areas of implementation of this operation, aimed at consolidating the recent progress achieved in three fundamental pillars:

I. Mobilize private capital for climate resilience and mitigation

Given the small domestic credit market, access to financing for firms remains limited. This is particularly true for small and medium-sized enterprises (SMEs) and in non-traditional areas, such as improving energy efficiency, which is key to the attainment of NDC commitments. In fact, the market currently does not offer credit instruments specifically aimed at improving energy efficiency. To encourage SMEs to reduce their greenhouse gas emissions, the Development Finance Agency (AFD) has established a line of credit to finance improvements in energy efficiency, including in the biomass energy sector, as evidenced by AFD Resolution No. 3/2022.

The resolution provides financial institutions with affordable credit to encourage their clients to adopt technologies whose full range of benefits is not currently valued by the market. The line of credit will enable SMEs to invest in projects to modify their current energy matrix, reducing or eliminating the use of biomass in favor of hydroelectricity, or by increasing the efficiency of use of existing energy. In the long term, this reform is expected to create knowledge by exposing financial institutions to this market, demonstrating that investments to improve energy efficiency are bankable and can leverage fully private credit. Given the variety of climate change-related challenges facing the country, including in the financial and agricultural sectors, demand for such credit could be high.

Additionally, to facilitate credit from financial institutions to forestry companies in the plantation sector, the Superintendence of Banks has regulated, through resolutions No.22 and 34/2022, respectively, the valuation of standing timber as loan collateral by establishing rules to accredit professional appraisers of the real property rights to standing timber ("forest area property right") and related technical valuation requirements. Taken together, these resolutions will operationalize the groundbreaking Law No. 4890/2013, "Derecho Real de Superficie Forestal" by creating a framework to assess the value of standing timber for use as collateral for private sector loans, which so far depends on foreign private investors. Completing the regulatory framework for forest area property right is expected to facilitate access to commercial loans from the domestic financial sector for forestry operators. Given the potential of the forest plantation sector in Paraguay, it is expected that this measure will have the effect of not only boosting socioeconomic development in rural areas, but also generate multiple benefits for this sector, especially given the technical support that the government receives in this area from several international partners.



II. Promote climate resilience and mitigation in select sectors of the economy

Climate action involves specific sectoral interventions with an impact on mitigation and adaptation to climate change. This pillar, groups interventions in various areas where the Government of Paraguay made significant progress within the preparation period covered by this loan. The supported measures cover the sectors of rural water and sanitation, electronic transactions, and forest fire management, and are intended as means to achieve the objectives set out in the NDC.

The rural water and sanitation sector is characterized by providers of limited scale, which affect their efficiency and effectiveness. In particular, these services are not environmentally sustainable nor resilient to climatic variations that affect water availability. Many of these service providers are unable to invest in the proper operation and maintenance of the systems and are therefore more exposed to suffer damages from flooding or other extreme weather events. As a result, water quality, quality of service, leakages, and other operational indicators are well below regional levels.

To increase climate resilience and generate economies of scale among rural and peri-urban water and sanitation service providers, the subsidy regime for water and sanitation boards has been reformed through the Ministry of Public Health and Social Welfare (MSPBS) and the Ministry of Public Works and Communications (MOPC). The decree will pave the way for new financing rules that promote greater economies of scale for the provision of water and sanitation services in areas with fewer than 10,000 inhabitants. It will also change the targeting of subsidies, adding various socioeconomic and geographic characteristics to the inclusion criteria. The objective of the reform is to generate the right incentives for the provision of sustainable and resilient services.

Another area where there are significant efficiency losses, which also affect climate change mitigation and adaptation, is that of transactions. Most transactions in Paraguay still rely on paper-based verifications. These processes require time and resources, from the use of paper to the consumption of fuel to carry out the transfers to the places where the procedures are carried out. These movements can also be interrupted by climatic shocks, disproportionately affecting vulnerable populations and women. In the absence of an appropriate legal framework, Paraguay does not make use of the technological advances that allow these procedures and verifications to be carried out remotely digitally.

To promote greater efficiency and security in electronic transactions, a law has been enacted to establish a legal framework for electronic transactions, as evidenced by Law No. 6822/2021, "On Trust Services for Electronic Transactions, Electronic Documents and Electronically Transmittable Documents". We hope that this regulation provides the necessary framework to foster significant progress in digital procedures, improving the efficiency of all types of public and private processes, and the security of such transactions.

Record temperatures and abnormally dry conditions have sparked wildfires that have burned millions of hectares of land in recent years. Given the increased risk of these types of weather conditions as a result of climate change, wildfire risks are expected to increase further, necessitating a more coordinated prevention and intervention approach. A large part of the forest fires in Paraguay are manmade and, thanks to the abovementioned conditions and inadequate management, often spiral out of control. Forest fires have a series of dire effects for the country's development, including acute and chronic health problems due to air pollution, destruction of infrastructure, degradation of ecosystems, a reduction in carbon sequestration and storage capacity and an increase in greenhouse gas emissions.



To increase resilience to climate change and conserve natural ecosystems, Law No. 6818/2021, "Comprehensive Fire Management" has been enacted to regulate the use, management and control of fire, and the prevention of forest fires. This law seeks to remedy the current situation by establishing an institutional architecture that allows the regulation and control of the use of fire. The law grants INFONA powers to establish policies and regulations for fire management, including the establishment of zones and seasons in which the use of fire for land management is prohibited, the establishment of early warning systems, and the formulation of best management practices and criteria to sanction non-compliance. In addition, it empowers municipalities to administer and manage the use of fire in rural areas more efficiently. Since its promulgation, the Law has already been driving a process of coordinated reforms between public and private actors in the land use sector, including important advances in the formulation of associated regulations, planning for training of municipalities, and the establishment of digital control and administrative systems.

III. Enhance fiscal transparency for climate action

Extreme weather events significantly affect Paraguay's economy and fiscal policy, as illustrated by the 2009, 2011-2012, and 2019 droughts. The 2021-2022 drought could have similar effects. Increasingly faced with frequent and intense climatic events, Paraguay needs to be better prepared and anticipate the necessary resources for its possible materialization. This requires, as a first step, understanding the fiscal contingencies resulting from climatic events, and identifying the fiscal resources currently allocated to climate change adaptation and mitigation.

In order to better identify, mitigate and anticipate fiscal risks, including those related to climate change, the Ministry of Finance has ordered through resolutions MH N°s. 173/2022 and SSEE No. 17/2022, the annual publication of a fiscal risks report, including those related to climate change. It is the intention of this Ministry that the periodic publication of the report on fiscal risks which includes specific climate risks be a first step towards better integration of climate considerations in the formulation of the country's macroeconomic and fiscal policies, and that it be used to inform the budget process and to identify concrete measures to mitigate risks. For example, the quantification of fiscal risks would make it possible to generate the information, should there be progress on plans to establish and use a sovereign contingency fund.

On the other hand, to develop climate action policies efficiently, it is essential to understand the starting point of existing public policies in terms of climate mitigation and adaptation, and to promote transparency in the management of public resources. This was the understanding of the Government of Paraguay when it updated its NDC, recognizing the budget tagging of climate-related expenditures as a necessary step to achieve the NDCs. Until now, a methodology for climate change budget tagging did not exist in Paraguay, making it difficult to assess whether resources allocated to adaptation and mitigation are in line with NDC commitments.

To better align the central government budget with the priorities of the climate change policy, as stated in Article 9 of Decree No. 6581/22, the Ministry of Finance has been mandated to promote the identification and measurement of public initiatives focused on climate change; and through this State Portfolio, the mandate to identify the public expenditures of the Ministry of Agriculture and Livestock (MAG) related to climate adaptation and mitigation. In this context, the Ministry of Finance, with technical support from the World Bank, is developing a climate budget tagging methodology that connects budget activities and programs with a framework for



reporting and tracking climate change-related spending. This methodology will be expanded to the Ministry of Industry and Commerce (MIC), the Ministry of Environment and Sustainable Development (MADES), the National Forestry Institute (INFONA), the Ministry of Public Works and Communications (MOPC) and the National Emergency Secretariat (SEN) before the end of 2023. The entities involved oversee the majority of activities related to climate change.

To summarize, the Government of Paraguay is committed to integrating climate change more systematically into the formulation of its public policies and to address the challenges it represents for the sustainable development of the economy. In view of the above, the Government of Paraguay considers it necessary and pertinent to have the support of the World Bank to carry out the aforementioned actions and to help achieve the ambitious strategic development objectives that the Government has set.

I take this opportunity to express my distinguished consideration.

OSCAR LLAMOSAS DIAZ
MINISTER OF FINANCE
GOVERNOR FOR PARAGUAY



ANNEX 4: ENVIRONMENT AND POVERTY/SOCIAL ANALYSIS TABLE

PA	Significant positive or negative environment effects	Significant poverty, social or distributional effects positive or negative
Pillar 1: Mobilize private capital for climate resilience and mitigation		
1	Positive effects through enhanced resource efficiency and improved mitigation outcomes in the SME sector.	No direct impact on poverty and inequality in the short term. In the medium- and long term, however, the measure may have indirect positive impacts on poverty through increased resiliency of firms and employment to climate-related events and increased SMEs' formalization.
2	Likely positive effects by reducing incentives to deforestation or unsustainable forest management practices in the medium to longer term.	No direct impact on poverty and inequality in the short- and medium-term. In the long-term, this measure may lead to a positive impact if it benefits small-scale foresters to gain access to the financial system and if it helps prevent higher rates of deforestation.
Pillar 2: Promote climate resilience and mitigation in select sectors of the economy		
3	Likely positive effects in the longer term by generating economies of scale for small water and sanitation operators to improve investments in climate resilience and adaptation in the rural water and sanitation sector.	Positive impact on poverty in the short- and medium-term by improving resilience and increasing the efficiency of community boards, the main water and sanitation providers to vulnerable populations.
4	Neutral effects.	Neutral effects on the poor and vulnerable in the short term. However, this prior action may positively affect digital transactions' protection and increase financial inclusion in the medium- and long- terms.
5	Positive effects through enhanced regulation and control of fire use and prevention of wild-fires and natural resource loss over the longer term.	No direct impact on poverty and inequality in the short term. This measure may positively affect the poor and vulnerable, who are more likely to be disproportionately affected by wildfires in the medium- and long term.
Pillar 3: Enhance fiscal transparency for climate action		
6	Neutral effects in the short-term, with potential positive effects over the longer-term should reduced fiscal risks result in increased focus on mitigation and adaptation in natural resource sectors.	There are no direct impacts on poverty and inequality in the short- and medium- term. In the long term, this measure may have indirect positive effects if they help increase the country's resiliency to climate-related shocks.
7	Positive impacts through the promotion of climate mitigation and adaptation in the agriculture and livestock sector.	Neutral effects on poverty in the short- and medium-term. In the long term, positive impacts could be expected if the measure helps strengthen the country's capacity to tackle climate-related shocks.



ANNEX 5: POVERTY AND SOCIAL IMPACT ANALYSIS

Pillar 1: Mobilize private capital for climate resilience and mitigation

PA1: *To incentivize SMEs to reduce their greenhouse gas emissions, the AFD has established a credit line to finance energy efficiency improvements, including in the biomass energy sector, as evidenced by AFD's Resolution No. 3 included in AFD's Act No. 13/2022 dated February 23, 2022, and AFD's Letter No. GCM No. 4/2022 dated April 26, 2022.*

This Prior Action is not expected to directly impact poverty and inequality in the short term. However, in the medium and long term, the measure may positively impact poverty through increased resilience of firms and employment to climate-related events. Additionally, SMEs operating in the informal sector may be encouraged to register to apply for these credits, increasing the probability of formalization.

Providing financial support to SMEs could promote more resilient, low-carbon economic growth. Establishing a credit line to finance energy efficiency improvements will help build firm and employment resilience. With the implementation of this Program, the beneficiary firms will be encouraged to adopt measures to reduce GHG emissions and improve productivity. SMEs represent an important source of jobs and are considered a key driver of economic growth in emerging countries like Paraguay.⁶⁷ These firms face numerous challenges that limit their lifetime and development prospects. One such challenge is limited access to credit. In this context, the adoption of this Prior Action is expected to increase the availability of financial resources to SMEs, including to those operating in manufacturing industries such as brick kilns, yerba mate dryers, and chicken farming who urgently need to shift to more sustainable technologies to remain competitive in the market and who are more likely to operate in the informal sector.⁶⁸ The availability of the line of credit is expected to encourage formalization and to ultimately contribute to the promotion of economic growth, the creation of employment through the expansion, formalization, and productivity gains of SMEs, and to progress towards the achievement of the country's climate goals.

Demand for energy-efficient credits is expected to come from SMEs operating in the sugar, ceramic and brickmaking industries, which contain many informal firms.⁶⁹ The availability of credit for energy efficiency investments may encourage informal firms operating in the high-demand industries to formalize to be able to apply and be potential beneficiaries of these credits. Higher formalization is expected to positively affect economic growth and poverty in the long term. Therefore, the availability of this credit to SMEs may affect the poor and vulnerable through three channels: (i) longer survival time of firms and their employees, (ii) increased labor market opportunities through the creation of more jobs, and (iii) reduced pollution locally, which is likely to improve the livelihoods of all, but in particular of the poor and vulnerable.

PA2: *To facilitate financial institutions lending to forestry businesses in the plantation sector, the Superintendency*

⁶⁷ Bruhn, M., Hommes, M., Khanna, M., Singh, S., Sorokina, A., & Wimpey, J. S. (2017): MSME finance gap: assessment of the shortfalls and opportunities in financing micro, small, and medium enterprises in emerging markets (No. 121264, pp. 1-80). The World Bank.

⁶⁸ GCCF (2018). FP 063: Promoting private sector investments in energy efficiency in the industrial sector in Paraguay Approved Funding Proposal. URL: <https://www.greenclimate.fund/document/promoting-private-sector-investments-energy-efficiency-industrial-sector-paraguay>

⁶⁹ Carlino, H., Netto, M., & Cabrera, M. M. (2017): Guía para la estructuración de instrumentos financieros para la promoción de la eficiencia energética.



of Banks has regulated the valuation of standing timber as loan collateral by establishing: (a) rules for the accreditation of professional valuers of the real right to standing timber (derecho real de superficie forestal); and (b) related technical valuation requirements, as evidenced, respectively, by: (i) Resolution SB. SG. No. 34/2022 dated April 6, 2022, and published on BCP's website; and (ii) Resolution SB. SG. No. 22/2022 dated February 25, 2022, and published on BCP's website.

This Prior Action is not expected to directly impact poverty and inequality in the short and medium terms. However, it may generate positive effects in the long term if the measure benefits small-scale forestry producers.

The valuation of standing timber as loan collateral can benefit forestry producers by reducing credit constraints. Furthermore, the availability of credit can encourage timber plantations, reducing deforestation in particular where demand for biomass energy is high, provided plantations are managed sustainably. This measure can facilitate access to financial resources for investments with long return periods and value accumulated in a mature timber stand.⁷⁰ These resources can enable farmers and foresters to invest in their production, and can be particularly useful for smaller producers without their own significant financial resources (in contrast to large producers, who often invest their own capital). A growing literature explores the impact of financing smallholder timber plantations. For instance, Starfinger (2021) states that tree collateral can assist foresters in optimizing revenues and adopting risk mitigation measures, provided that clear values and land tenure are met.⁷¹ By providing fuel wood for biomass energy, increased plantation establishment can contribute to preventing more deforestation in a country with one of the highest rates of deforestation in the world,⁷² while at the same time increasing the financial inclusion of those working in the sector.

Pillar 2: Promote climate resilience and mitigation in select sectors of the economy

PA3: *To increase climate resilience, improve the sustainability of natural resource use, and generate economies of scale among rural and peri-urban water and sanitation service providers, the Borrower, through its Executive Branch, has reformed the subsidy regime for water and sanitation service providers by eliminating unsustainable subsidies and encouraging a higher number of connections per water and sanitation system, as evidenced by Decree No. 7161 dated June 1, 2022, and published in the Official Gazette on June 2, 2022.*

This Prior Action is expected to positively impact poverty in the short- and medium-terms by improving the resilience and increasing the efficiency of rural and peri urban service providers, which are the main providers of water and sanitation to vulnerable populations.

70 percent of Paraguayan water users depend upon more than 5,000 water providers that are unsustainable. This population lives in rural and peri-urban areas, and includes some of the most vulnerable population in the country. Given the importance of these service providers in supplying safe access to water and sanitation services to vulnerable populations in rural and peri-urban areas, policies that seek to increase the efficiency of these projects will likely have large benefits for them. *Empresa de Servicios Sanitarios del Paraguay*, the company that provides water services through a network connection in Paraguay, is responsible for urban areas larger than 10,000 inhabitants. While this provider is the largest in the country, in 2017, it only reached about a third of the

⁷⁰ Bardon, R. E., & Hamilton, R. A. (2003): Timber sales: A planning guide for landowners. NC Cooperative Extension Service.

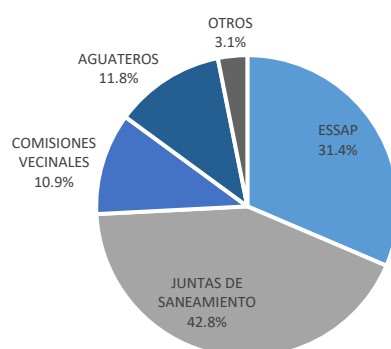
⁷¹ Starfinger, M. (2021): Financing smallholder tree planting: Tree collateral & Thai 'Tree Banks'-Collateral 2.0?. *Land Use Policy*, 111, 105765.

⁷² Earth Observatory (2016): Deforestation in Paraguay. URL: <https://earthobservatory.nasa.gov/images/92078/deforestation-in-paraguay>



households, while community boards reached 42.8 percent (Figure 1).⁷³ Community-led service providers, such as water boards, *Juntas de Saneamiento*, *comisiones vecinales*, and *aguateros*, provide services to around 70 percent of the population. Their absence would leave a significant proportion of the population without access to water, in particular populations that are more likely to be poor and vulnerable.⁷⁴ National statistics of poverty by area of residence show that a higher percentage of the poor population live in rural areas (34 percent vs. 22.7 percent in urban areas, as of 2020).⁷⁵ In this context, increasing the efficiency and resilience of community-led service providers is expected to benefit the most vulnerable populations. Finally, given that the objective of the policy is to achieve economies of scale, a direct impact on tariffs is not expected in the short run. However, in the long run tariffs may decrease since service providers have a more sustainable O&M cost structure, benefitting the poor.

Figure 1– Indicators of access to water by provider and area of residence
Percentage of households with access to water by provider, 2017



Source: El Servicio de Agua y Saneamiento en Paraguay, World Bank(2020)

PA4 To promote enhanced efficiency, effectiveness, and security of transactions, the Borrower has enacted a law for trust service providers to ensure that electronic transactions are as verifiable and legally binding as paper-based transactions, as evidenced by Law No. 6822/2021 dated December 30, 2021, and published in the Official Gazette on January 4, 2022.

This Prior Action is expected to have neutral effects on the poor and vulnerable in the short term. However, this Prior Action may positively affect digital transactions' protection and increase financial inclusion in the medium- and long term.

Law No. 6822/2021 provides a legal framework for digital transactions, facilitating safer transactions and promoting digital financial transactions. The law establishes the legal framework for electronic identification, electronic stamp, electronic time stamp, electronic document, and electronic certification, which seeks to increase the security of digital operations in the country.⁷⁶ These measures are expected to reduce fraud and increase the protection for users of digital transactions. At first, the new system may increase transaction costs, which are likely to decrease over time as the new framework strengthens. In addition, this law is expected to affect those

⁷³ National Statistics Office, Government of Paraguay, URL: <https://www.ine.gov.py/default.php?publicacion=10>

⁷⁴ UNICEF (2020): Paraguay: Revisión del gasto público en agua y saneamiento en el ámbito rural. Análisis y recomendaciones de política

⁷⁵ National Statistics Office, Government of Paraguay, URL: <https://www.ine.gov.py/default.php?publicacion=4>

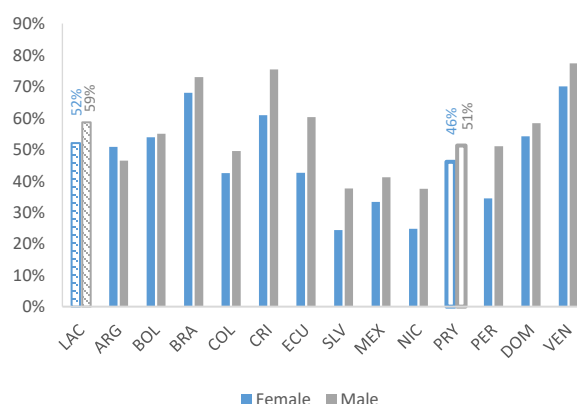
⁷⁶ <https://www.mic.gov.py/mic/w/contenido.php?pagina=1&id=2418>



operating in the formal system and, gradually, the population currently not part of the formal financial system. In this sense, an important proportion of the population that lacks access to the formal financial system has access to alternative options. Furthermore, the law supports the development of additional financial services available through mobile phones and wallets by enabling key processes like digital signature for loans (obviating the need to travel to a bank branch), and guaranteeing authentication of transmitted documents, etc.

As a country with low levels of financial inclusion, the development of digital financial services (which currently is largely mobile money services) in Paraguay has significantly benefited the poor and vulnerable. Relative to other regions, Paraguay's access to financial services is still low, with around half of the population lacking access to the formal financial sector. The percentage of the population who own a bank account or another type of financial account (by themselves or together with someone else) is lower than the regional average, with females experiencing lower ownership rates than males (Figure 2). Additionally, access and use of digital services for daily transactions are not widespread. For instance, the share of the population using digital payments to digital merchants is lower relative to the regional level, with females being less likely to make payments to digital merchants than men. These numbers portray the substantial room for expanding digital financial services. An example of innovative digital solutions developed to give alternative financial access to the low-income population has been the so-called "digital wallets." According to national statistics, over 2 million Paraguayans currently use these services provided by mobile phone companies, which have been expanding significantly since their introduction in 2008.⁷⁷ The rapid growth of these mobile services has provided alternative means to financial access to individuals and micro and small firms and has led Paraguay to become a leader in mobile money in the region.⁷⁸ The continued growth of these digital financial services will largely contribute to a more dynamic economy and will encourage financial inclusion in the years to come.

Figure 2 – Access to an account at a financial institution (%) by gender, 2017



Source: The Global Findex Dataset 2017

As a result of a safe and trustworthy digital transaction system, the expansion of digital financial services could have favorable redistributive effects through improved intermediation efficiency. The regulatory framework that the law's adoption will set is expected to increase trust in the financial system toward digital transactions and encourage more individuals and firms to engage in digital transactions, leading to more digital financial inclusion.

⁷⁷ <https://www.ultimahora.com/ley-operaciones-electronicas-afectaria-2-millones-usuarios-estiman-n2962184.html>

⁷⁸ Tellez, C., & McCarty, M. Y. (2011) : Mobile Money in Latin America: A Case Study of Tigo Paraguay. 2011. *GSMA Mobile Money for the Unbanked*, 22.



Research in this area has shown consistent evidence on the positive impacts of financial and digital inclusion on poverty reduction, food security, and inequality.^{79,80,81,82} While ownership of a bank account plays a major role, non-bank financial institutions and mobile money accounts have been found to contribute to poverty reduction significantly.⁸³ By ensuring digital transactions are secure, accessible, and a reliable way to transfer and receive payments, this measure could lead to long-term lower transaction costs, increasing financial inclusivity, ultimately benefiting the poor and vulnerable.

PA5: *To strengthen resilience to climate change and conserve natural ecosystems, the Borrower has enacted a law that regulates fire use, management, and control, and the prevention of wildfires, as evidenced by Law 6818 dated October 12, 2021, and published in the Official Gazette on October 19, 2021.*

This Prior Action is not expected to directly impact poverty and inequality in the short term. This measure may positively affect the poor and vulnerable in the medium and long term, who are more likely to be disproportionately affected by wildfires.

The literature on wildfires and poverty reflects a bidirectional relationship between the two: wildfires exacerbate poverty, and poverty increases the incidence of wildfires. Poor and vulnerable households typically live in inadequate housing structures and/or are located in communities that face a high risk of wildfire, e.g., communities living nearby wildlands. Furthermore, once a wildfire strikes, the poor and vulnerable are more likely to face disproportional negative impacts of wildfires because they lack the means to respond quickly and have fewer opportunities to recover from the economic losses.⁸⁴ In this context, wildfires not only exacerbate poverty but also perpetuate it.⁸⁵ This is particularly the case of smallholder farmers, who lack access to credits, are less likely to have savings, and are less prepared to face wildfires.⁸⁶

A legal framework for the use, management, and prevention of wildfires is crucial for adequately planning and implementing policies to prevent and control fires. Research on the linkage between wildfires and poverty has shown that policies that seek to mitigate the effects of wildfires are crucial to reducing the risk of wildfires and containing its effects on poverty.⁸⁷ The poverty impacts of wildfires are multidimensional since they pose a threat to lives and the socioeconomic and environmental systems. An adequate regulatory framework will strengthen the country's capability of tackling wildfires, with positive effects on poverty if implemented correctly.

Pillar 3: Enhance fiscal transparency for climate action

⁷⁹ Lyons, A., Kass-Hanna, J., & Greenlee, A. (2020): Impacts of financial and digital inclusion on poverty in South Asia and Sub-Saharan Africa. Available at SSRN 3684265.

⁸⁰ Inoue, T. (2019): Financial inclusion and poverty reduction in India. *Journal of Financial Economic Policy*.

⁸¹ Neaime, S., & Gaysset, I. (2018): Financial inclusion and stability in MENA: Evidence from poverty and inequality. *Finance Research Letters*, 24, 230-237.

⁸² Koomson I., Villano R., Hadley D. (2020): Effect of financial inclusion on poverty and vulnerability to poverty: evidence using a Multidimensional Measure of Financial Inclusion. *Social Indicators Research* 149, 613-639(2020).

⁸³ Lyons, A., Kass-Hanna, J., & Greenlee, A. (2020): Impacts of financial and digital inclusion on poverty in South Asia and Sub-Saharan Africa. Available at SSRN 3684265.

⁸⁴ Niemi, E. G., & Lee, K. (2001): Wildfire and poverty: an overview of the interactions among wildfires, fire-related programs, and poverty in the Western States.

⁸⁵ Cammelli, F., Garrett, R. D., Barlow, J., & Parry, L. (2020): Fire risk perpetuates poverty and fire use among Amazonian smallholders. *Global Environmental Change*, 63, 102096.

⁸⁶ Ibid.

⁸⁷ Ibid.



PA6: *To better identify, mitigate and anticipate fiscal risks, including those related to climate change, the Borrower, through the Ministry of Finance, has mandated the annual publication of a fiscal risk report including climate-related risks related to fiscal operations, as evidenced by Resolution No. 173 dated March 10, 2022 and Resolution No. 17 dated March 21, 2022.*

PA7: *To better align the central government budget with climate change policy priorities, the Borrower has: (a) through its Executive Branch, mandated the Ministry of Finance to promote the identification and measurement of public initiatives focused on climate change; and (b) through the Ministry of Finance, mandated the identification of public expenditures of the Ministry of Agriculture and Livestock related to climate adaptation and mitigation, as evidenced, respectively, by: (i) Article 9 of Decree No. 6581/22 dated January 25, 2022 and published in the Official Gazette on January 26, 2022; and (ii) Resolution MH No. 206 dated April 8, 2022.*

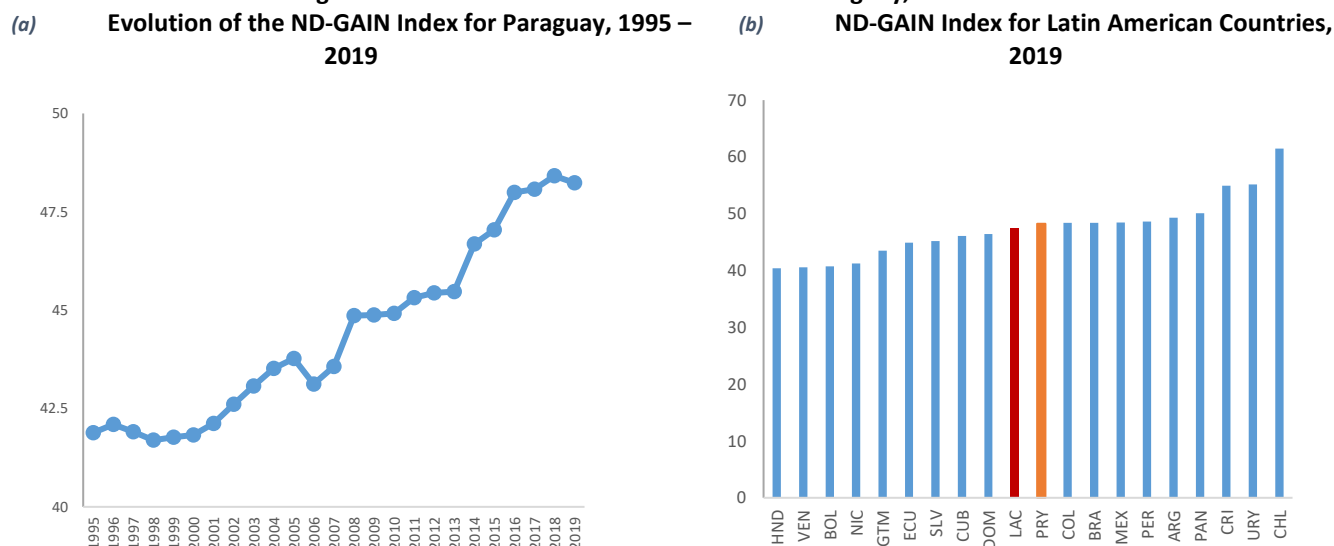
These Prior Actions are not expected to directly impact poverty and inequality in the short and medium terms but may positively affect poverty in the long term by increasing the country's resiliency to climate-related shocks.

Countries and regions facing higher vulnerabilities to climate change also face great structural challenges. Latin America and the Caribbean countries are considered highly vulnerable to climate change.⁸⁸ Paraguay is also vulnerable to climate-related events due to its geographical and structural characteristics, being landlocked, reliant on agriculture, and facing a lack of resilient infrastructure. The country is exposed to several natural hazards, as evidenced by the ND-GAIN Index, which combines political, economic, and environmental characteristics to assess the vulnerability of countries to climate-related events (Figure 3, panel a), ranking Paraguay in the 95th place out of 181 countries. Compared to other countries in the region, in 2019, Paraguay's score was above the regional average, with scores similar to Colombia, Brazil, and Mexico (Figure 3, panel b). Paraguay's vulnerability to climate increases its challenges to adequately prepare, adapt, and mitigate the effects of climate change, further threatening the achievement of development outcomes.

⁸⁸ IADB (2021): What are the fiscal risks from extreme weather events and how can we deal with them?, URL: <https://blogs.iadb.org/gestion-fiscal/en/what-are-the-fiscal-risks-from-extreme-weather-events-and-how-can-we-deal-with-them/>



Figure 3– Evolution of the ND-GAIN Index for Paraguay, 1995 – 2019



Source: Notre Dame Global Adaptation Initiative

Notes: The score reflects the country's vulnerability to climate change in both panels. The lower the score, the more vulnerable a country is; the higher the score, the more ready the country is to face climate-related events.

In panel (b), the regional average was calculated based on the countries in the sample.

The poor and vulnerable typically live in areas at higher risk of experiencing a hazard and in housing and communities that are particularly vulnerable to disasters. In addition to this, the poor and vulnerable have fewer means to cope with shocks from disasters once they strike. The combination of high exposure and lack of resources makes them highly vulnerable to negative impacts from natural hazards. In this context, countries should focus on precautionary planning to reduce the risks of those most at risk and to prevent disaster losses. However, to implement policies to strengthen the country's resilience to natural disasters and protect those most at risk, a more efficient allocation of resources that account for actions to tackle climate changes is needed.

Evaluating fiscal risks related to climate change and identifying the government's resources allocated to tackle climate-related events represents an important step towards strengthening the country's capacity to face climate change. Climate change has already been affecting Paraguay through unanticipated weather-related shocks. These effects have led to economic contractions due to negative impacts on agriculture and livestock, but also to other areas of life such as transport, health, water resources, and biodiversity.⁸⁹ In the long term, the impact of climate change in Paraguay is expected to be even more significant if current climate trends continue. In this context, the country's capacity to prepare, adapt, and mitigate climate change is crucial. Because of this, the identification and quantification of the risks from climate change could play an important role in having a better understanding of the potential impacts of climate change on the government's budget and the burden for taxpayers. Furthermore, identifying government resources allocated to climate action, or "climate budget tagging," can help the government identify the country's financial response to the negative impacts of climate change and prioritize the implementation of climate change interventions. In addition, this measure can help support assessing and reporting progress towards the country's NDC commitments. Finally, these actions are expected to help design and implement public policies to manage and mitigate climate risks.

⁸⁹ ECLAC (2014): Climate Change Will Have Significant Impacts on Paraguay's Economy.