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INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM DOCUMENT FOR A

PROPOSED LOAN

IN THE AMOUNT OF US$500 MILLION TO

REPUBLIC OF ECUADOR
FOR THE

Ecuador Third Green and Resilient Recovery DPF (EGARR-DPF3)
July 10, 2023

Macroeconomics, Trade and Investment Global Practice
Latin America and Caribbean Region

(Ecuador)

Republic of Ecuador

GOVERNMENT FISCAL YEAR

January, 1 – December, 31

CURRENCY EQUIVALENTS

(Exchange Rate Effective as of June 20, 2023)

Currency Unit

US$1.00

ABBREVIATIONS AND ACRONYMS

ARCERNNR	Agency for the Regulation and Control of Energy and Non-Renewable Natural Resources / *Agencia de Regulación y Control de Energía y Recursos Naturales no Renovables*
BAU	Business-as-usual
BCE	Central Bank of Ecuador / *Banco Central del Ecuador*
BDH	Human Development Bonus / *Bono de Desarrollo Humano*
CAF	Development Bank of Latin America
CGE	Supreme Audit Institution / *Contraloría General del Estado*
CNEE	National Energy Efficiency Committee / Comité Nacional de Eficiencia Energética
CO_2	Carbon Dioxide
COGPACC	Classifier of Environmental Policy-Related Expenditures / *Clasificador Orientador del Gasto en Politica de Ambiente*
COMEX	Foreign Trade Committee / *Comité de Comercio Exterior*
CONAIE	Confederation of Indigenous Nationalities of Ecuador / *Confederación de Nacionalidades Indígenas del Ecuador*
COPLAFIP	Financial Management Code / *Código Orgánico de Planificación y Finanzas Públicas*
CPF	Country Partnership Framework
DPF	Development Policy Financing
DRF	Disaster Risk Financing
EE	Energy Efficiency
EFF	Extended Fund Facility
EMBI	Emerging Market Bond Index
FAO	Food and Agricultural Organization
GCRF	Global Crises Response Framework
GDP	Gross Domestic Product
GGGI	*Global Green Growth Institute*
GHG	Greenhouse Gas
GoE	Government of Ecuador
IADB	Inter-American Development Bank
ICPP	Intergovernmental Panel on Climate Change
IFC	International Finance Corporation
IFI	International Finance Institution
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
ISD	tax on transfers abroad / *Impuesto a la Salida de Divisas*
kBOE	Kilo Barrels of Oil Equivalent
LOEE	Organic Energy Efficiency Law
LOSPEE	Public Service of Electricity / *Ley Orgánica del Servicio Público de Energía Eléctrica*
MAG	Ministry of Agriculture and Livestock / Ministerio Agricultura y Ganadería
MAATE	Ministry of Environment and Water and Ecological Transition / *Ministerio del Ambiente, Agua y Transición Ecológica*
MEF	Ministry of Economy and Finance / *Ministerio de Economía y Finanzas*
MEM	Ministry of Energy and Mines / *Ministerio de Energía y Minas*
MIES	Ministry of Economic and Social Inclusion / *Ministerio de Inclusión Económica y Social*
MRV	Measurement, Reporting and Verification
MSP	Ministry of Public Health / *Ministerio de Salud Pública*
MW	Megawatt
NCRE	Non-Conventional Renewable Energy
NDC	Nationally Determined Contribution
NDC-PI	Nationally Determined Contributions Implementation Plan

NDP	National Development Plan
NFPS	Non-Financial Public Sector
OIT	Original Indicative Trigger
PA	Prior Action
PLANEE	National Energy Efficiency Plan / *Plan Nacional de Eficiencia Energética*
PECC	Ecuador Zero Carbon Program / *Programa Ecuador Carbono Cero*
PDO	Program Development Objective
PFM	Public Financial Management
PLANEE	National Energy Efficiency Plan 2016-2035/ *Plan Nacional de Eficiencia Energetica 2016-2035*
PLR	Performance and Learning Review
PPP	Public-Private Partnership
PPS	Public Selection Process / *Procesos Públicos de Selección*
PV	Photovoltaic
RI	Result Indicators
RUAD	Single Registry of Victims / *Registro Único de Damnificados*
SGB	Sovereign Green Bonds
SOE	State Owned Enterprise
SNP	*Secretaria Nacional de Planeación*
STA	Single Treasury Account
STECSD	Ecuador Grows Without Child Malnutrition Technical Secretariat / *Secretaria Tecnica Ecuador Crece sin Desnutricion Infantil*
STEM	Science, technology, engineering, and mathematics
UN	United Nations
VIRTE	Humanitarian Visa / *Visa de Residencia Temporal de Excepción para Ciudadanos Venezolanos*
WB	World Bank
WBG	World Bank Group

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REPUBLIC OF ECUADOR

ECUADOR THIRD GREEN AND RESILIENT RECOVERY DPF (EGARR-DPF3)

TABLE OF CONTENTS

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SUMMARY OF PROPOSED FINANCING AND PROGRAM

BASIC INFORMATION

Project ID	Programmatic	If programmatic, position in series
P180319	Yes	3rd in a series of 3

Proposed Development Objective(s)

The Program's Development Objective (PDO) is to assist the government of Ecuador in its agenda to tackle selected structural challenges to foster inclusive, resilient, and low-carbon development.

Organizations

Borrower: REPUBLIC OF ECUADOR

Implementing Agency: Ministry of Economy and Finance

PROJECT FINANCING DATA (US$, Millions)

SUMMARY

Total Financing	**500.00**

DETAILS

International Bank for Reconstruction and Development (IBRD)	500.00

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

Results

Result Indicator (RI) Name	Baseline (2020)	Target (2024)
RI#1. Increase in Central Government Tax revenues, excluding tariffs and the tax on transfers abroad (ISD), US$ million.	2019= 12,048	At least 14,320
RI#2. Increase the share of imported electric and hybrid vehicles, percent of imported vehicles.	2021= 3.8	At least 6.0
RI#3. Increase PetroEcuador diesel sales to the large shrimp farms as a percentage of its total fuel sales, excluding sales to transport, tuna, and fishing.	2021= 6.9	2024= 10.0
RI#4. Increase the number of central government's budgets submitted to the National Assembly (pro forma) using the COGPACC.	0	2
RI#5. Increase the number of pre-identified projects that could be financed by sovereign green bonds.	0	2
RI#6. Increase the number of PPP projects assessed using the methodology to identify contingent liabilities related to climate and other climate-related disasters.	0	At least 5
RI#7. Increase in the percentage of imports benefiting from the measures (reducing tariffs and non-tariff measures).	0	At least 30
RI#8. Increase the percentage of poor female-headed households (without a partner) settled in parishes with the greatest vulnerability to disasters registered and potentially eligible at RUAD.	2019= 20	At least 80
RI#9. Increase the percentage of pregnant women and children younger than 2 years old who receive timely health check-ups, birth registration, and, according to their poverty status, receive child development services and cash transfers.	August 2020= 14.3	At least 30
RI#10. Increase the number of Venezuelan migrants: (i) registered at the Migrant Registry with relevant certificates; and (ii) granted VIRTE visa.	0	Registered with relevant certificates: At least 221,500 (of which 50% female); VIRTE: At least 176,497 (of which 50% female)
RI#11. Increase in the percentage of competitive processes for the procurement of services and works in the electricity sector that adhere to gender-inclusive qualification criteria.	2022= 0	2024= 100
RI#12. Increase renewable energy generation capacity awarded through PPS, MW.	310	At least 650
RI#13. Decrease volume of associated gas flared, percent.	0	At least 15
RI#14. Decrease energy consumption as per NDP 2021-2025, kBOE.	0	At least 3,000
RI#15. Decrease CO_2 emissions from transport, percent change from BAU (2018).	2018= 0	2025= At least 2.0
RI#16. Increase the number of public and private institutions quantifying intended mitigation measures under the PECC.	Oct 2021= 0	At least 50
RI#17. Decrease the annual forest loss in rural/forest frontiers, percent change from BAU (2019).	2019= 0	At least 4

IBRD PROGRAM DOCUMENT FOR A PROPOSED ECUADOR THIRD GREEN AND RESILIENT RECOVERY DEVELOPMENT POLICY LOAN TO THE REPUBLIC OF ECUADOR

1. INTRODUCTION AND COUNTRY CONTEXT

1. **The proposed Ecuador Third Green and Resilient Recovery Development Policy Financing (DPF), for US$500 million, is the final operation in a programmatic series of three.** The series seeks to assist the Government of Ecuador (GoE) in tackling selected structural challenges to foster inclusive, resilient, and low-carbon development. The first operation, for US$700 million, was approved by the World Bank's (WB) Board of Executive Directors in February 2022, and the second, for US$500 million, was approved in December 2022. This series is fully aligned with the National Development Plan 2021-2025 (*Plan de Creación de Oportunidades 2021-2025*, NDP) and the Country Partnership Framework (CPF) FY2019-2023, extended by the Performance and Learning Review (PLR) to FY2025.

2. **Amid a challenging domestic and external environment, Ecuador has significantly improved its macroeconomic fundamentals.** After rebounding 4.2 percent from the pandemic-led 2020 recession, Gross Domestic Product (GDP) grew by 2.9 percent in 2022. Growth was fueled by the ongoing recovery of consumption but adversely affected by prolonged protests, sporadic disruptions of oil production, and political uncertainty. Following a fiscal deficit of 1.7 percent of GDP in 2021, fiscal accounts nearly balanced in 2022 on the back of the recovery in economic activity, improving oil prices, the 2021 tax reform, public expenditure rationalization, and debt renegotiations with China. Public debt declined from a peak of 62.3 percent of GDP in 2021 to 58.1 percent in 2022, and international reserves rose from a low of 2.4 percent of GDP in 2017 to 7.3 percent in 2022.

3. **A lack of consensus, compounded by episodes of social unrest and political instability, poses challenges to advancing critical reforms.** In the past few years, the GoE has struggled to pass critical reforms in the National Assembly to improve the public-private partnership (PPP) legal framework and reduce rigidities in new hiring. Episodes of social unrest have increased uncertainty and forced the authorities to freeze and reduce fuel prices while looking for alternatives to better target fuel subsidies. More recently, political uncertainty has further increased after an attempt to impeach President Lasso, who in response dissolved the National Assembly and called for early elections in August 2023. In addition, the GoE decided to increase public spending on security and reconstruction in response to a deteriorating security situation that has become a political priority, and an earthquake and heavy seasonal rains that hit the country. The challenging domestic environment has also increased the perception of country risk, significantly raising the interest-rate spread in a context of tighter emerging market financing conditions.

4. **Despite this challenging context, the GoE has made progress in moving toward faster, inclusive, greener, and resilient growth.** Sustained fiscal consolidation is critical to building buffers to face the potential effects of compounded crises in a dollarized economy. At the same time, these indispensable consolidation measures together with pervasive and continued political uncertainty have subdued growth. Going forward, consolidation efforts would need to continue supporting better inclusion and social resilience of vulnerable people while helping Ecuador meet its climate commitments. This cannot be achieved without greater progress on growth-enhancing structural reforms that foster private investment and productivity, also critical for a green transition. After decades of negligible productivity gains, Ecuador needs to address structural weakness that hinder competitiveness, including the prevalence of protectionism, rigid labor markets, the

lack of an effective insolvency framework, distortive market regulations, and limited competition. Recognizing the importance of both fiscal consolidation and growth-enhancing structural reforms, the GoE, supported by this and the previous DPF series, implemented a series of reforms that lay some of the necessary foundations for stronger private investment and economic growth in the future and once political uncertainty and country risk decline. It increased the integrated climate change-related challenges into budget planning, tax burden on better-off people and firms with higher profits, reduced fuel subsidies, approved regulations to make public procurement more efficient, and enhanced competitiveness by reducing tariff and non-tariff trade barriers and negotiating trade agreements.

5. **The GoE is also making efforts to deal with climate-related disasters and other issues that disproportionally affect the most vulnerable population**. Exposed to earthquakes, floods, and droughts, Ecuador is among the 10 countries worldwide with the highest natural disaster risk. Vulnerability to the El Niño Southern Oscillation (ENSO) and related disasters such as floods and landslides is exacerbated by the fact that 64 percent of the population is urban and urban centers are concentrated in the coastal and mountainous regions. Ecuadorian firms lose US$1 billion annually due to infrastructure disruptions, mainly transport and power.[1] To foster social resilience, the GoE, supported by this DPF series, has improved the social safety net to reach the most vulnerable, including those exposed to climate risks and other natural disasters. It also made progress on reducing malnutrition (which affects one-quarter of children under age 5), easing the integration of migrants, and reducing gender gaps.

6. **Despite low per capita greenhouse gas (GHG) emissions, Ecuador is committed to reaching carbon neutrality by 2050.** In its Nationally Determined Contribution (NDC), Ecuador committed to an unconditional reduction of 9 percent of its overall GHG emissions and an unconditional target of 20.9 percent in the energy, industrial, waste, and agricultural sectors by promoting voluntary carbon offset programs and improving its institutional capacity to mainstream climate issues economywide. Reaching the NDC will require reducing land-use change, forestry, and agriculture emissions, accounting for 40 percent of emissions, and the energy and transport sector emissions, accounting for 45 percent.[2] Several of the proposed prior actions supported by this DPF series target these sectors, such as improving sustainable forest management, reducing gas flaring in the oil fields, and fostering energy efficiency.

7. **The measures that GoE has selected to advance towards increasing resilience and carbon neutrality are pro-growth, by stimulating private investment and competitiveness.** The GoE reforms supported by this DPF series promote the generation of green private investment that stimulates growth and resilience through the development of a framework to issue green bonds, the establishment of methodology to quantify fiscal risks, including contingent liabilities from climate-related hazards for PPPs, private sector financing for Non-Conventional Renewable Energy (NCRE), including distributed renewable generation, a voluntary carbon offset platform for the private sector to compensate for GHG emission reductions, and fostering green value chains in the promotion of sustainable timber and non-timber exports. For example, improvements in regulations, supported by the operations, will help attract private investment into NCRE generation. Reducing GHG emissions, opening new sustainable forestry-related investment opportunities and boosting green export competitiveness can improve labor productivity and create quality jobs.

8. **In this context, the third and final operation in this DPF series supports the implementation of**

[1] IADB. 2021. Políticas climáticas en América Latina y el Caribe: Casos exitosos y desafíos en la lucha contra el cambio climático.
[2] CAIT Climate Data Explorer.

critical reforms under the series while going beyond the program originally envisioned. The GoE has successfully implemented key triggers identified in the second operation in areas such as sovereign green bond issuance, climate-related fiscal contingencies, child malnutrition, migration, gender inclusion, voluntary offset mechanism, and sustainable and resilient forest management. The operation supports critical reforms geared towards increasing social inclusion and resilience among vulnerable populations by enhancing policies to fight malnutrition and promoting the participation of women in the labor force, including in the power sector. This operation also recognized some critical measures, which benefitted from World Bank technical assistance, related to fuel subsidy targeting, distributed renewable energy, and energy efficiency.

9. **The proposed operation is aligned with the goals of the Paris Agreement, the Green, Resilient, and Inclusive Development (GRID)[3] framework, and the World Bank Group (WBG) Roadmap for Climate Action in Latin America and the Caribbean[4] and provides significant climate co-benefits.** All prior actions are aligned with the Paris Agreement goals and consistent with the country's NDC. They are not likely to substantially increase GHG emissions or barriers to transition to low-GHG emissions, and their contributions to the Program Development Objective (PDO) are not expected to be affected by climate hazards but will increase climate resilience. In reducing GHG emissions, the operation acknowledges GoE's efforts to increase its ability to confront climate impacts by reducing fiscal risks and targeting fuel subsidies. This action complements previous efforts to reduce Ecuador's dependency on oil export revenues and advance NDC commitments. Adaptation is reflected in the GoE effort to enhance the institutional setup to handle climate disaster risks and encourage people to tap into public services to tackle malnutrition. On the mitigation side, it includes actions to enhance the energy sector's decarbonization by promoting distributed renewable energy generation, reducing tariffs on lithium battery imports, improving governance for incentive mechanisms to promote energy efficiency, fostering the development of a voluntary carbon compensation mechanism, and promoting the restoration and sustainable management of forests. Therefore, the operation addresses critical mitigation levers identified by the Intergovernmental Panel on Climate Change (IPCC) and the NDC plan to implement its goals under the Paris Agreement.

10. **The operation includes reforms that entail opportunities for green growth for Private Capital Mobilization.** Some prior actions laid the groundwork for mobilizing private capital to support Ecuador's green agenda, such as the green bond framework to allow sovereign green bond issuance, the quantification of contingent liabilities caused by climate-related disasters in PPP projects, the regulation on distributed renewable generation, and the reduction of tariffs on lithium batteries. These measures can help mobilize the private sector to develop clean energy and low-carbon development in Ecuador, generating many green job opportunities.[5] Moreover, the operation supports a mechanism to acknowledge the private sector's effort to

[3] World Bank. 2021. *From COVID-19 Crisis Response to Resilient Recovery - Saving Lives and Livelihoods while Supporting Green, Resilient and Inclusive Development (GRID)*.

[4] World Bank Group. 2021. *Climate Change Action Plan 2021-2025: Supporting Green, Resilient and Inclusive Development*.

[5] According to a recent ILO/IDB study, a decarbonization-focused recovery could generate 15 million jobs in Latin America. Studies have identified that infrastructure investment paths can be compatible with full decarbonization, and they do not need to cost more than more polluting alternatives (Rozenberg, F*ay. 2019. Beyond the Gap: How Countries Can Afford the Infrastructure They Need while Protecting* the Planet). With the right policies, investments of 4.5 percent of GDP would enable low- and middle-income countries to achieve the infrastructure-related sustainable development goals and stay on track to limit climate change to 2°C. In Chile, the Ministry of Finance led a study (Green Growth Opportunities for the decarbonization goal for Chile, 2020), concluding that implementing a mitigation policy package, jointly proposed by the Ministries of Energy, Environment, and Agriculture, can have a positive impact on the economy, that could mean an additional growth of 4.4 percent of its GDP by 2050. Hepburn, C., O'Callaghan, B., Stern, N., Stiglitz, J., and Zenghelis, D. 2020. Will COVID-19 fiscal recovery packages accelerate or retard progress on climate change?. Oxford Smith School Working Paper 20-02. In addition, *2019*, data from IRENA shows that all renewable energy technologies generated 89,236 direct and indirect jobs in Spain, 97,868 new jobs in Mexico, 17,493 in Chile, and 12,448 new positions in Ecuador.

reduce emissions and support a net zero development pathway in the country.

11. **In addition to the reforms supported by this DPF series, the WBG is providing technical assistance on complementary reforms to foster a more resilient and green recovery.** These include: evaluating and measuring fiscal risk; upgrading disaster risk management; improving fuel subsidy targeting; developing an institutional framework for issuing sovereign green bonds; and developing the carbon registry's procedures and guidelines for measurement, reporting, and verification (MRV) of GHG reductions. This assistance is part of a broader package that includes technical support to the GoE teams to evaluate and negotiate trade agreements and the ongoing preparation of a Country Economic Memorandum (CEM) and a Country Climate and Development Report (CCDR). Moreover, this DPF is part of a package of coordinated financial assistance from international partners, including the Inter-American Development Bank (IADB) and the Development Bank of Latin America (CAF).

2. MACROECONOMIC POLICY FRAMEWORK

2.1. RECENT ECONOMIC DEVELOPMENTS

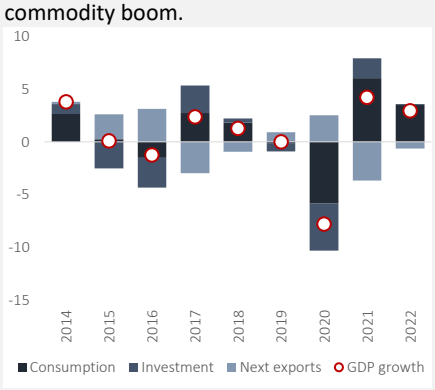
12. **Ecuador has made significant progress in addressing macroeconomic imbalances that built up during the oil price boom and worsened once oil prices plummeted in 2014.** With no national currency, the GoE had to engage in sustained fiscal consolidation, which has put public debt on a downward trend from 2022 (Figure 1). This consolidation has been achieved through reduced capital spending, which has been only partly offset by a private investment recovery resulting from GoE efforts to attract investments in untapped mining resources, drop import surcharges, reduce tariffs, advance new trade agreement negotiations, and allow international arbitration in sizeable foreign investment projects. However, private investment continues to struggle to recover from the COVID-19 pandemic due to entrenched barriers to private sector development, including a rigid and costly labor market, low access to finance, limited international integration, a challenging business environment, institutional weaknesses, and regulations.

13. **Ecuador advanced some critical structural issues during and after the COVID-19 crisis.** The pandemic reduced GDP by 7.8 percent in 2020 and increased the fiscal deficit to 7.1 percent in 2020 (Table 1). The shock was partly mitigated by debt renegotiations with international bondholders and Chinese creditors and new multilateral financing, including an extended fund facility (EFF) with the International Monetary Fund (IMF). The GoE tried to introduce a mechanism to gradually reduce the gaps between diesel and gasoline prices with their international benchmarks, reformed the financial management code, and expanded social protection assistance. It also strengthened the Central Bank's autonomy and the anti-corruption framework and improved the business environment by lowering tariffs, reducing fiscal repression, and streamlining business regulations. When a successful vaccination campaign and favorable international conditions enabled recovery, the country continued to rebalance its economy by introducing a tax reform, reducing tariff and non-tariff barriers, advancing trade agreement negotiations, enhancing the efficiency of social protection expenditures, and preparing the economy to deal with climate change. It has also taken measures to facilitate new investments in the mining sector and attract private investment to enhance NCRE generation and digital technologies. The international community, including the World Bank, has supported these reforms. In a difficult political context, however, this process experienced some setbacks: the GoE increased minimum wages above inflation levels and froze (2021) and reduced (2022) diesel and gasoline prices—it is now drawing on administrative measures to better target the fuel subsidy by increasing fuel prices to specific sectors such

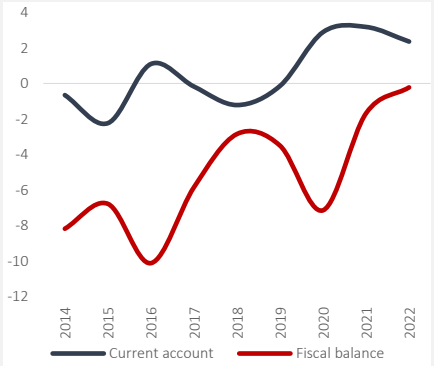
as large shrimp farmers. With limited influence in the National Assembly, the GoE also struggled to build consensus to pass critical reforms to improve the PPP legal framework, ease labor market rigidities, and improve state-owned enterprise (SOE) governance.

Figure 1. Ecuador has made significant progress in addressing the macroeconomic imbalances

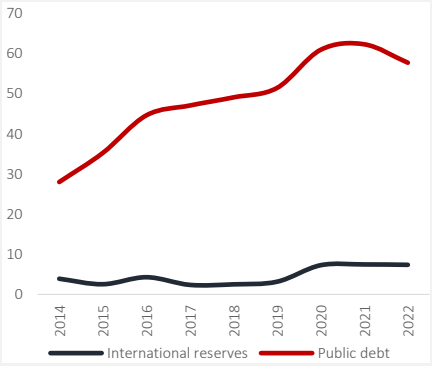
Growth remained sluggish after the commodity boom.



Despite a challenging external context, the GoE reduces imbalances, …



… stabilize public debt, and strengthen international reserves.



Source: Central Bank of Ecuador

Box 1. The earthquake impact and GOE's response

A 6.8-magnitude earthquake hit the country's coastal Guayas region, killing at least 14 people and compounding the effects of a heavy rain season. Its epicenter was 80 kilometers south of Guayaquil, a densely populated metropolitan area of over 3 million people. The earthquake affected to 3,774 people, 1,050 homes, 331 schools, and 61 public facilities. It was Ecuador's most intense seismic event since 2016, when a 7.8-magnitude earthquake hit further north on the Pacific Coast in a more sparsely populated area, resulting in about 670 fatalities. Besides structural damage to homes, schools, and medical centers, the latest quake has significantly impacted productive infrastructure. The shrimp sector, for example, has reportedly incurred losses of up to US$10 million. According to the GoE, the earthquake and a heavy rain season caused damages of US$200 million.

In response, the GoE is trying to mobilize additional external financing for reconstruction and social programs to support vulnerable people in the affected area. The GoE is attempting to reallocate funds from multilateral creditors' loans to support the reconstruction. These funds would include a US$60 million reallocation recently agreed with the IADB, a US$150 million World Bank emergency loan to restore connectivity, and a US$300 million loan from the CAF for road emergency projects and maintenance. The most recent GoE estimates indicate that the impact of both natural hazards has affected over 18,000 people. Consequently, the GoE has activated the Single Registry of Victims (*Registro Único de Afectados Directos*, RUAD), a prior action of the second operation of this series, to better target support for vulnerable people in the affected area, reaching out to 1.5 million households.

14. **Ecuador's recovery has been dampened by a series of idiosyncratic adverse shocks.** The country benefited from higher oil and other commodity prices after the pandemic and Russia's invasion of Ukraine, but its recovery was later dampened by tightening global financial conditions and uncertainty around the war in Ukraine. The economy was also affected by sporadic oil export disruptions resulting from damages in the main crude pipelines caused by regressive erosion of the Coca River basin and social demonstrations. The economy was also affected by social unrest led by the Confederation of Indigenous Nationalities of Ecuador (*Confederación de Nacionalidades Indígenas del Ecuador*, CONAIE), which paralyzed the country for about 18 days in June 2022. In 2023, the Guayas province was hit by an earthquake that compounded the adverse effects of a heavy rainy season (Box 1). In addition, political uncertainty increased in recent months due to a National Assembly initiative to impeach President Lasso, who dissolved the Assembly and called for early elections in August. Along with increasing gang and narco-trafficking-related crime and violence, these social

and political conflicts have inhibited private domestic demand, including private investment.

Table 1. Key macroeconomic indicators

	2020	2021	2022	2023e	2024f	2025f	2026f
Real sector, annual percentage change, unless otherwise indicated							
GDP growth	-7.8	4.2	2.9	2.6	2.7	2.8	2.8
Private consumption (Contribution)	-5.1	6.3	3.0	1.7	1.9	1.9	1.9
Government consumption (Contribution)	-0.8	-0.3	0.7	0.1	0.0	0.0	0.2
Gross fixed capital formation (Contribution)	-4.4	0.9	0.5	0.8	0.8	0.9	0.9
Changes in inventories (Contribution)	-0.1	1.0	-0.6	0.0	0.0	0.0	0.0
Net exports (Contribution)	2.5	-3.7	-0.6	0.0	0.0	-0.1	-0.3
External sector, percent of GDP, unless otherwise indicated							
Current account	2.9	3.2	2.4	1.4	1.1	0.6	0.2
Exports	20.7	25.7	29.1	27.2	26.7	26.2	25.7
o.w. oil exports	4.7	6.9	8.7	6.8	6.8	6.8	6.5
Imports	20.0	26.5	31.3	30.1	29.8	29.6	29.5
Foreign investment	-1.1	-0.6	-0.7	-0.5	-0.5	-0.5	-0.5
International reserves, US$ million	7.2	7.9	8.5	9.4	9.8	10.3	10.7
Months of imports	4.3	3.4	2.8	3.1	3.2	3.2	3.2
Percent of GDP	7.2	7.4	7.4	7.8	7.8	7.9	7.9
Real sector, annual percentage change							
Consumer price index (p.a.)	-0.3	0.1	3.5	2.1	1.5	1.5	1.5
GDP deflator	-0.4	2.6	5.3	1.9	1.3	1.3	1.4
Public sector, percent of GDP							
Public revenues	29.7	34.9	36.7	35.4	35.1	34.5	34.3
Public expenditure	36.9	36.5	37.0	35.9	35.2	34.5	34.3
o.w. capital expenditure	6.2	7.6	6.4	6.2	6.1	6.0	5.9
NFPS balance	-7.1	-1.7	-0.2	-0.5	0.0	0.0	0.0
NFPS debt 2/	60.9	62.3	57.7	55.3	52.8	50.2	47.6
Memo items							
Oil price, Brent (US$ per barrel)	42.3	70.4	99.8	80.0	82.0	84.4	83.2
Nominal GDP (US$ billion)	99.3	106.2	115.0	120.3	125.1	130.2	135.6
GDP per capita (US$)	5,645	5,965	6,391	6,606	6,792	6,993	7,204
GHG emissions growth ($mtCO_2e$)	95	97	98	98	99	100	101
Energy-related emissions (% of total)	34.1	34.8	35.2	35.4	35.7	36.0	36.6

Notes: As of June 20, 2023, negocitions date. (1) The NFPS (Non-Financial Public Sector) figures are based on the revised data recently released by the Ministry of Economy and Finance (*Ministerio de Economía y Finanzas*, MEF); however, they include SOE operational balances as non-tax revenue. (2) The NFPS debt includes the outstanding balance for advanced oil sales, treasury certificates, central bank loans, other liabilities, and domestic floating debt.
Source: BCE, MEF, IMF, and staff estimates.

15. **Despite some recent improvements, the labor market remains weak.** Although urban labor-force participation and unemployment returned to pre-pandemic levels, urban underemployment stood at 22.7 percent and national informality at 51.6 percent in 2022, still above pre-pandemic levels of 19.1 percent and 46.3 percent. With rigid labor regulation and above-inflation minimum wage increases, the dampened economic recovery has constrained the creation of quality jobs, forcing workers to turn to poor-quality and part-time jobs. The unskilled and minority groups have been affected the most because they worked in the hardest-hit sectors during the pandemic, such as construction, wholesale and retail trade, and hospitality.

16. **The fiscal balance improved in a context of recovering oil revenues, lower interest payments after the 2020 bond restructuring, the 2021 tax reform, and expenditure rationalization.** The Non-Financial Public Sector (NFPS) deficit decreased from 7.1 percent in 2020 to near balance in 2022, partly due to recovering oil prices (Table 2). The market-based price band introduced in June 2020 and interrupted in October 2021 allowed gasoline and diesel prices to rise, reducing the fuel subsidy bill. Tax revenues benefited from the

economic recovery, 2021 tax reform, and improved tax administration measures. Despite the expansion of social assistance, the recovery of public investment, and the increasing cost of fuel imports, expenditures increased modestly as the interest bill declined after the bond restructuring, and pandemic-related emergency spending was phased out. The authorities are also taking steps to improve public procurement efficiency and continue progress on enhancing debt transparency.

Table 2. Key fiscal indicators*

Percent of GDP	2020	2021	2022	2023e	2024f	2025f	2026f
Revenues	29.7	34.9	36.7	35.4	35.1	34.5	34.3
Oil revenues /1	4.9	8.5	11.5	9.8	9.8	9.8	9.6
Non-oil revenues	24.8	26.3	25.2	25.6	25.3	24.8	24.7
Tax revenues	17.6	17.8	18.1	18.2	18.1	17.9	17.8
Other	7.3	8.5	7.1	7.4	7.2	6.9	6.9
Expenditures	36.9	36.5	37.0	35.9	35.1	34.5	34.3
Expenses	30.7	29.0	30.6	29.7	29.0	28.5	28.4
Compensation of employees	11.5	10.5	9.9	9.8	9.6	9.3	9.2
Use of goods and services	2.5	2.4	2.4	2.4	2.3	2.2	2.2
Interest payments	2.9	1.4	1.6	1.9	2.0	2.1	2.1
Foreign	2.4	0.9	1.1	1.5	1.6	1.8	1.8
Domestic	0.5	0.5	0.5	0.4	0.4	0.3	0.3
Social security	6.9	6.8	6.6	6.7	6.7	6.7	6.7
Other	7.0	7.9	10.0	9.0	8.5	8.2	8.1
Capital expenditure	6.2	7.6	6.4	6.2	6.1	6.0	5.9
Overall balance (NFPS) /2	-7.1	-1.7	-0.2	-0.5	0.0	0.0	0.0
Primary balance	-4.3	-0.3	1.4	1.4	2.0	2.1	2.2
Non-oil balance /3	-12.0	-10.2	-11.7	-10.2	-9.8	-9.8	-9.6
NFPS financing	7.1	1.7	0.2	0.5	0.0	0.0	0.0
External, net	5.3	2.6	1.8	0.8	0.0	-0.3	-0.5
Domestic net	1.9	-0.9	-1.6	-0.3	-0.1	0.4	0.5
NFPS debt /4	60.9	62.3	57.7	55.3	52.8	50.2	47.6
External debt	44.7	44.7	42.6	40.7	39.3	37.4	35.4
Domestic debt	16.2	17.6	15.1	14.6	13.6	12.8	12.2

Notes: (*) As of June 20, 2023, negocitions date. (1) The oil revenues include the general budget of the state oil revenues, the Oil Derivatives Financing Account (*Cuenta de Financiamiento de Derivados Deficitarios*, CFDD), and the financial operations linked to oil service contracts carried out by the *Ministerio de Energía y Recursos Naturales no Renovables*, formerly known as *Secretaria de Hidrocarburos*; they do not include oil SOE's operative revenues, which is part of the SOE's operative balance included in other revenues. (2) The NFPS figures are based on the revised data recently released by the MEF; however, they include the SOEs' operational balance as non-tax revenue. (3) The non-oil balance excludes oil revenues from the overall fiscal balance. (4) The NFPS debt includes the outstanding balance for advanced oil sales, treasury certificates, central bank loans, other liabilities, and domestic floating debt.
Source: BCE, MEF, IMF, and staff estimates

17. **Due to a volatile social and political context, the perception of sovereign risk remains higher than macroeconomic fundamentals suggest.** Ecuador's Emerging Market Bond Index (EMBI) spreads have been subject to high volatility and higher than macro-economic fundamental suggests due to the challenging domestic political environment and its default history.[6] After having stabilized around 800 basis points after President Lasso's election, Ecuador's EMBI rose to a peak of about 1,900 basis points in the second half of 2022 as prolonged social unrest led by indigenous organizations paralyzed the country and forced the GoE to reduce diesel and gasoline prices and start a lengthy negotiation process on several policy issues.[7] After falling

[6] Ecuador's average EMBI was 1,141 basis points in 2022, more than double its counterparts in Mexico and the Dominican Republic (425), although those countries have similar debt-to-GDP ratios (56 and 59 percent) and higher fiscal deficits (4.4 and 3.3 percent).
[7] Indigenous organizations' demands included freezing diesel and gasoline prices at lower levels, stopping new oil and mining development, extending deadlines for small farmers to pay off debts with banks, imposing price controls on agricultural products, and abandoning plans to

to a low of about 1,000 basis points in mid-January, the EMBI has increased again to an average of around 1,800 basis points since March 2023 due to political instability ending in the National Assembly's dissolution and the call for early elections.

18. **A current account surplus and significant international finance institution (IFI) financing have boosted domestic credit and increased international reserves.** Despite the cyclical recovery of imports and high fuel imports, the country maintained a substantial current account surplus in the post-pandemic period due to high oil prices and growing shrimp and mining exports (Table 3). The current account surplus has contributed to expanding the money supply, and non-performing loans have remained low (2.7 percent in December 2022). Banks have used excess liquidity accumulated and growing deposits to fuel domestic credit, which rose 16.8 percent in 2022. Coupled with sizable external financing to the public sector, the current account surpluses also increased international reserves from US$3.4 billion (3.1 percent of GDP) in 2019 to US$8.5 billion (7.4 percent) in 2022, the highest level since the economy was dollarized in 2020.

Table 3. Balance of payments financing requirements and sources*

US$ billion, otherwise it is indicated	2020	2021	2022	2023e	2024f	2025f	2026f
Gross financing needs, percent of GDP	8.3	2.9	3.3	3.9	4.5	5.7	6.6
Gross financing needs	8.2	3.1	3.8	4.7	5.6	7.5	8.9
Current account deficit	-2.9	-3.4	-2.7	-1.7	-1.4	-0.8	-0.2
Public debt amortizations	4.8	1.8	2.3	2.0	2.4	3.5	4.2
Private debt amortizations	6.3	4.6	4.2	4.4	4.6	4.8	4.9
Financing sources	8.2	3.1	3.8	4.7	5.6	7.5	8.9
Capital grants	1.8	0.2	0.0	0.0	0.0	0.0	0.0
Foreign direct investment	-1.1	-0.6	-0.8	-0.6	-0.7	-0.7	-0.7
Public debt	10.0	4.5	4.4	2.9	2.5	3.1	3.6
Other financing sources	1.6	0.0	0.8	3.4	4.2	5.6	6.5
Financing gap	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Changes in reserves (-, increase)	-4.1	-0.9	-0.6	-0.9	-0.4	-0.5	-0.4

Note: (*) As of June 20, 2023, negocitions date.
Source: BCE, MEF, IMF, and staff estimates

19. **Prices remain stable despite inflationary pressures from growing domestic credit and global inflation.** Annual inflation increased from a pandemic low of -1.6 percent in October 2020 to a peak of 4.2 percent in June 2022 as gradual increases in gasoline and diesel prices reverberated in transport and food prices until the band-price mechanism was suspended in late 2021. That trend was compounded by inflationary pressure from a surge in international food prices resulting from the war in Ukraine and a new wave of social unrest in June 2022. Since then, however, inflation dropped to a low of 2.0 percent in May 2023, one of the lowest rates in the region, because of a still-sluggish economy, the nominal anchor provided by dollarization, frozen fuel prices, and declining international food prices.

2.2. MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY

20. **Despite the recent earthquake and political uncertainty, the economy is expected to grow modestly**

privatize SOEs. After 18 days, demonstrations ended as the GoE agreed on 15-cent reductions of gasoline and diesel prices, a waiver of overdue loans owing to the Development Bank of Ecuador of up to US$3,000 per loan, and a urea subsidy for small and medium farmers. The deal also limits the expansion of oil exploration areas; prohibits mining activity in protected areas, national parks, and water sources; and restricts privatization of public services and strategic sectors. The Central Bank has estimated the economic damages and losses attributable to these demonstrations at about 1 percent of GDP (*Evaluación de daños y perdidas*, October 2022).

as the effects of recent reforms partly offset the political uncertainty and long-lasting constraints to private investment and productivity. GDP is projected to grow by 2.6 percent in 2023 due to recovering private consumption and non-oil exports, including still-subdued services exports. The compression of public consumption and investment will lose momentum due to emergency expenditures triggered by the earthquake and heavy rains, additional social spending from the agreement with indigenous organizations, and higher security spending from GoE efforts to dampen insecurity. Real GDP growth is expected to stabilize at around 2.8 percent in 2025 as private investments and mining exports continue increasing in response to improved macro-fiscal conditions and the effects of recently implemented growth-enhancing structural reforms, allowing for continued robust growth in private consumption. This medium-term growth prospect remains insufficient because Ecuador still needs to reduce the political uncertainty that prevents private investment from fully recovering from the pandemic and tackle long-standing constraints to growth. Ecuador's productivity gains are constrained by allocative inefficiencies resulting from cross-cutting issues, including a rigid labor regulation, a dysfunctional insolvency framework, limited trade openness, and a lack of competition resulting from distortive SOE operations, privileges granted to domestic players, burdensome regulation, and price controls (World Bank, Ecuador – Country Economic Memorandum, forthcoming).

21. **The current account surplus is expected to decline, but international reserves are projected to continue growing at a modest pace.** The current account surplus is projected to decline from 2.4 percent of GDP in 2022 to 1.4 percent in 2023 as recovering imports, increasing interest payments abroad, and declining oil prices more than offset surging shrimp and mining exports. After that, it is projected to decrease to 0.2 percent by 2026 due to falling oil prices and increasing imports. International reserves are projected to increase from 7.4 percent of GDP in 2022 to about 7.9 percent in 2026 due to the expansion of banks' mandatory liquidity and the repayment of public sector liabilities to the Central Bank as stipulated by law; the bulk of public domestic debt amortizations in 2025 and 2026 will be paid to the Central Bank.

22. **The fiscal balance is expected to remain near balance on the back of expenditure rationalization, permanent tax hikes on better-off businesses and individuals, and the end of earthquake-related emergency expenditure**. The earthquake-related emergency spending, a steady decline in oil revenues, and rising interest payments will negatively impact the fiscal balance in 2023. Even so, it is projected to remain near balance from 2024 onward, in line with government projections. The improvements in the fiscal balances are supported by several GoE reforms, including permanent revenue-raising measures in the 2021 tax reform[8] that will be marginally affected by a reform aimed at reducing the personal income tax burden on larger families.[9] Moreover, the emergency expenditure trigged by the earthquake is expected to fade, and fuel subsidies are expected to decline due to lower international oil prices and a GoE measure to drop the fuel subsidy for large shrimp farms. The GoE has taken steps to control the public wage bill by limiting salary increases, replacing retired staff, allowing fixed-term contracts to expire, and reducing wages for new hires. It also started reforms to improve public procurement processes by relying more on standardized purchases, competitive processes, and catalog purchases. The GoE finalized a debt restructuring with China in 2022, reaching an agreement to reduce amortizations by US$1.4 billion between 2022 and 2025 and freeing up part

[8] Temporary measures, including temporal taxes on personal wealth and corporate net assets, are expected to increase revenues by 0.8 percent of GDP in 2022 and 0.4 percent in 2023 (*IMF*, 2022). Permanent reforms on personal and corporate income taxes, value-added taxes, and excise taxes are expected to increase revenues by 0.1 percent in 2022 and 0.7 percent from 2023 onward.

[9] President Lasso has recently sent to the Constitutional Court a bill that, among other things, would allow people with more dependents to deduct a larger share of their expenditures. Tax reform would reduce revenues by US$76 million, with lower revenues from the personal income tax reform (US$192 million) will be partly offset by additional revenues from reforming the simplified regime (US$ 103 million) and introducing taxes on public events and sports betting (US$20 million).

of oil shipments tied to the repayment of China Development Bank loans to be sold in the spot market.[10] Finally, a debt-for-nature swap tied to conserving the recently created Hermandad marine reserve in the Galapagos could reduce debt service despite carrying important risks.[11]

23. **Public sector financing needs are projected to increase slightly over the medium term as debt service with international bondholders and the IMF increase.** The NFPS' gross financing needs are expected to remain at around 4.7 percent of GDP until 2024 to be financed by domestic debt rollover and multilateral financing, some of which are not yet confirmed. Amortization of the restructured bonds and IMF loan repayment is expected to increase financing requirements to around 6.0 percent from 2026 that would need to be partially financed by fiscal savings and new sovereign bond issuances starting from 2025—it is assumed that the end of the current political transition accompanied by prudent fiscal management could calm down markets so the country could issue new bonds from 2025 onward.[12,13] A continued commitment to fiscal and growth-enhancing structural reforms will be critical to enable Ecuador to return to global capital markets and diversify its investor base, including through the development of a local market for public debt.

Table 4. Non-Financial Public Sector financing requirements and sources*

US$ billion, otherwise it is indicated	2020	2021	2022	2023e	2024f	2025f	2026f
Gross financing needs, percent of GDP	14.9	7.0	5.7	4.8	4.7	5.7	6.0
Gross financing needs	14.8	7.4	6.6	5.8	5.9	7.4	8.0
Fiscal deficit	7.1	1.8	0.3	0.6	0.0	0.0	0.0
External debt amortizations	4.8	1.8	2.3	2.0	2.4	3.5	4.2
Domestic bonds	0.8	1.4	0.9	1.1	1.1	1.5	1.5
Treasury certificates	2.1	2.4	3.1	2.2	2.3	2.3	2.3
Financing sources	14.8	7.4	6.6	5.8	5.9	7.4	8.0
External debt disbursements	10.0	4.5	4.4	2.9	2.5	3.1	3.6
IMF	4.7	0.8	1.6	0.0	0.0	0.0	0.0

[10] The deal has changed the debt service profile of eight outstanding loans provided by the China Development Bank and China Eximbank by: (i) extending the maturity from 2024 to 2027 of loans with China Development Bank and from 2029 to 2032 of loans with China Eximbank; (ii) reducing the interest rate of by up to 0.97 percentage point; and (iii) suspending the amortization of loans with China Eximbank for six months. As part of the negotiations, PetroEcuador and PetroChina signed two new contracts extending the delivery of crude oil to PetroChina tied to two loans with the China Development Bank in line with the change in the debt service profile, allowing Ecuador to reduce its oil shipments under these contracts in the upcoming years and sell the remainder in the spot market, where the PetroEcuador expects to get a higher price.

[11] On May 5, Credit Suisse, the operation's arranger, bought on behalf of GPS Blue, a special purpose vehicle set up by Credit Suisse, part of Ecuador's Eurobonds maturing in 2030, 2035, and 2040 through a tender offer in the market. Credit Suisse spent US$656 million to retire US$1.6 billion of face-value debt (the bonds were bought at highly discounted rates). To fund the transaction, GPS Blue issued a US$656 million blue bond at a 5.645 percent quarterly coupon to be repaid in equal installments between 2030 and 2041. Galapagos bonds pay an interest rate of 6.975 percent. The MEF announced the transaction would generate around US$1.1 billion of lifetime savings until 2041, measured by the difference in the Eurobonds' future nominal cash flows and those of the new loan plus the commitments for conservation payments. This estimate does not include the cost of initial fees, other undisclosed legal, advisory and management fees, and possible financial penalties associated with the failure to achieve key financial indicators related to the marine conservation efforts that were previously agreed upon.

[12] In September 2020, a 27-month arrangement under the US$6.5 billion EFF was approved to support the recovery from the pandemic, ensure fiscal sustainability, bolster the foundations of dollarization, expand the social assistance programs to protect the vulnerable, promote public sector transparency and efficiency, and lay the foundations for sustainable and inclusive growth. In December 2022, the IMF Executive Board concluded this program's sixth and final review. All quantitative criteria were met, and most structural benchmarks and corrective actions to address the latest misreporting were implemented. At the end of the program, the IMF urged Ecuador to build on the progress made under the program by cementing prudent macroeconomic management that ensures fiscal and debt sustainability, enhancing financial sector resilience, further strengthening transparency and governance, improving data quality, and accelerating reforms to boost potential growth. In this context, the IMF is currently deploying technical assistance on, for example, tax administration, public investment management, and domestic arrears management.

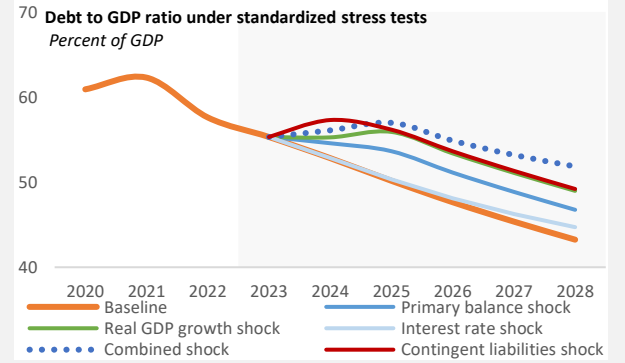
[13] Despite the 2020 bond restructuring and the end of the electoral process, Ecuador's Emerging Market Bond Index (EMBI) remained close to 830 basis points in the first five months of 2022. However, it has increased to about 1,500 basis points in recent months in the aftermath of June's social unrest and declining oil prices.

World Bank	1.2	0.3	1.3	1.1	0.3	0.3	0.3
IADB	0.7	1.3	0.8	0.7	0.7	0.7	0.7
CAF	0.9	0.5	0.4	0.6	0.6	0.6	0.6
Other**	0.8	0.3	0.0	0.0	0.4	0.0	0.0
Bilateral	0.1	0.3	0.2	0.5	0.5	0.0	0.0
Private sector and others	1.5	0.0	0.0	0.0	0.0	1.5	2.0
Oil-related financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SDR allocation	0.0	0.9	0.0	0.0	0.0	0.0	0.0
Domestic bonds	1.3	1.6	0.9	1.0	1.0	1.2	1.4
Treasury certificates	2.3	2.4	2.3	2.3	2.3	2.3	2.3
Changes in deposits	1.4	-3.1	0.4	-0.4	0.1	0.8	0.8
Net arrears accumulation	-0.5	-0.5	-0.9	0.0	0.0	0.0	0.0
Others and discrepancy	0.3	2.4	-0.6	0.0	0.0	0.0	0.0

Note: (*) As of June 20, 2023, negocitions date. (**) It includes past disbursements from other multilateral loans and future financing not yet confirmed.
Source: BCE, MEF, IMF, and staff estimates

24. **Public debt as a share of GDP is expected to decline but remains vulnerable to shocks.** In the baseline case, public debt is projected to fall from 58 percent of GDP in 2022 to 43 percent in 2028, approaching the 2032 target of 40 percent set by the 2020 Financial Management Code (*Código Orgánico de Planificación y Finanzas Públicas*, COPLAFIP) (Figure 2). In one of three stress tests, an increase of 500 basis points in average interest rates over the projection period increases public debt, relative to the baseline case, by 1.5 percentage points to nearly 45 percent in 2028. Slower-than-expected fiscal consolidation would leave public debt 3.5 percentage points above the baseline case at 47 percent in 2028. A drop of 2.2 percentage points in GDP growth in 2024 and 2025 (the standard deviation between 2012 and 2022, excluding the 2020 pandemic-led recession and the 2021 rebound) would put public debt at 56 percent of GDP in 2025, after which it would decline to 49 percent in 2028, 5.7 percentage points above the baseline scenario. If all stress tests are combined, public debt could rise to 57 percent of GDP by 2025 before falling to 52 percent by 2028, only 5.8 percentage points below 2022 and 8.6 percentage points above the baseline. The stress test captures the risks associated with compounded international crises and domestic political uncertainty. A recession in major economies could dampen the demand for non-oil exports and increase uncertainty about future oil prices. More restrictive monetary policies in most developed economies may further increase existing debt's interest payments. Growing pressures to increase spending could lead to a slower-than-expected fiscal consolidation, a critical condition for building resilience to deal with adverse shocks and reduce reliance on oil. The uncertain political situation could not only discourage private investment required to foster growth but also keep country risk high and prevent Ecuador from getting back to the international financial markets.

Figure 2. Public debt under alternative scenarios



Source: International Monetary Fund and staff estimates

25. **Public debt trajectory could also negatively affect the materialization of contingent liabilities triggered by, for example, natural disasters.** The materialization of contingent liabilities of about 5 percent of primary expenditures in 2024 would keep public debt around 57 percent in 2024 before falling to 49 percent in 2028. Although a sound financial sector reduces the probability of a financial crisis-related contingent

liabilities crisis, Ecuador's fiscal accounts are exposed to climate risks and other natural disasters. In 2016, while the country was being hit by the effects of the El Niño phenomenon, Ecuador was struck by a 7.8 magnitude earthquake, resulting in 676 deaths, 21,823 jobs lost, reconstruction costs of 3.3 percent of GDP, and 0.5 percent in productive sector losses.[14] Another risk lies in the worse-than-expected performances of the more than 300 SOEs at different GoE levels, many highly dependent on GoE transfers and emerging expenditure requirements resulting from a volatile social and political context.

26. **The macro framework is deemed adequate for this operation, but high downside risks remain and need to be carefully monitored.** Building on buffers provided by dollarization and a sound financial sector, the GoE has built a strong track record of fiscal consolidation and implemented measures to enhance non-oil revenues and contain spending over the medium term. In conjunction with a lower fiscal deficit, the debt renegotiations with bondholders (2020) and China (2020 and 2022) have helped reduce financing needs, setting overall public debt on a downward trajectory and strengthening international reserves. With the support of this and the previous DPF series, the GoE implemented growth-enhancing structural reforms, including efforts to remove trade restrictions, that will likely continue supporting growth over the medium term, and strengthened institutional arrangements to improve risk management related to natural disasters and better target social protection programs to support the most vulnerable population. Yet, domestic and external downside risks remain high. Ecuador could be negatively affected by increasing international interest rates, a slower than projected global economic recovery, or lower commodity prices. It could also be hit by natural disasters like floods and earthquakes, weaker-than-expected recovery of private investment, and lower-than-expected oil production.[15] Additionally, high uncertainty about the future policy stance after the early elections in 2023 and the new general election in 2025 could delay any sovereign bond issuance, increasing important refinancing risks. Yet, dollarization, which is widely supported across all socioeconomic strata, is expected to provide an important anchor. Macroeconomic prudence is also expected to be supported to some extent by limited access to external financing and some legal provisions introduced in recent years, including restriction to Central Bank financing to the public sector introduced by the 2021 Organic Law Reforming the Organic Monetary and Financial Code and the medium-term debt ceiling set by the 2020 Organic Code of Public Finances and Planning. Macroeconomic adequacy should be carefully monitored, given that uncertainty from the upcoming elections and lower-than-projected access to external financing could trigger a disorderly fiscal consolidation.

3. GOVERNMENT PROGRAM

27. **The NDP focuses on the country's medium and long-term development goals on reducing poverty and increasing shared prosperity.** The plan has five pillars:

[14] World Bank. 2022. *Strengthening Ecuador's Resilience and Responsiveness to Disasters and Macroeconomic Shocks*.

[15] The Constitutional Court has recently approved a referendum that could restrict oil production in the Ishpingo, Tambococha and Tiputini (ITT) fields in the Yasuni natural reserve. The referendum will be held on August 20, 2023, the same date as the early elections, and will ask: "Do you agree that the Ecuadorian Government should keep the ITT crude, known as Block 43, indefinitely in the subsoil?" If affirmative, the GoE would need to stop production in this block (50 thousand barrels per day), which accounts for 11 percent of national oil production and 15 percent of oil exports. In 2022, ITT's oil output generated a gross revenue of US$1.4 billion which, after considering operation and investment costs, translated into a fiscal oil revenue of about US$1.0 billion, 0.9 percent of GDP. However, even if the referendum were affirmative, effectively, oil production would not seize until 2026 at the very earliest. It would take the field developer, PetroEcuador, at least three or four years to prepare, obtain approval and implement a closure plan to prevent adverse social and environmental effects of stopping operations in this field that currently has more than 220 oil wells. If this fiscal risk materializes, the upcoming administration would need to implement complementary measures, such as further rationalizing public expenditure or mobilizing domestic revenues.

I. The economic pillar aims to: (i) foster employment and labor conditions in an inclusive way; (ii) promote a more resilient and competitive economy with clear rules to foster trade, tourism, investment, and financial system modernization; (iii) foster productivity and competitiveness in agriculture, aquaculture, fishing, and manufacturing under a circular and climate-smart economy approach; and (iv) ensure sustainable, green, and transparent management of public finances.

II. The social pillar aims to: (v) protect the most vulnerable families, guarantee their rights and access to services, eradicate poverty, and promote social inclusion; (vi) guarantee the right to free, integral, and quality health; (vii) enhance citizens' capacities and promote innovative, inclusive, and quality education; and (viii) create opportunities and improve well-being in rural areas and adaptation actions to climate risks.

III. The integral security pillar aims to: (ix) guarantee citizen security, public order, and risk management; and (x) guarantee national sovereignty, territorial integrity, and state security.

IV. The ecological transition pillar aims to: (xi) conserve, restore, protect, and make sustainable use of natural resources; (xii) promote long-term sustainable development models through climate change adaptation and mitigation measures; and (xiii) promote the integrated management of water resources.

V. The institutional pillar aims to: (xiv) strengthen state capacities with an emphasis on justice administration and efficiency in regulatory and control processes; (xv) promote public ethics, transparency, and the fight against corruption; and (xvi) promote regional integration, the country's strategic insertion in the world, and guarantee the rights of people in situations of human mobility.

28. **Ecuador is a signatory to the Paris Accord on Climate Change and submitted its first NDC in March 2019, defining the policies, actions, and efforts to reduce GHG emissions and vulnerability to climate change's adverse effects**. In its first implementation plan (NDC-PI), Ecuador set an unconditional target of a 9 percent reduction in GHG emissions by 2030, compared with a business-as-usual (BAU) scenario, and a conditional target of 20.9 percent from BAU by 2030. The plans provide a clear view of the milestones, outputs, domestic investments, and international support needed to meet climate and development targets. Mitigation measures identified in the country's NDC-PI target energy, waste, industrial processes, agriculture, and land use. Adaptation measures focus on agriculture, health, human settlements and vulnerable populations, food safety, water, and natural heritage.

29. **Through Executive Decree No. 59 of 2021,[16] Ecuador has committed to an ecological transition that promotes balancing growth with low-carbon development.** Ecuador is developing an economy-wide decarbonization plan[17] to delineate a clear transition toward carbon neutrality by 2050. The plan is expected to be completed by the end of 2023. For both the ecological transition and the decarbonization plan, a key priority is developing clean energy, such as renewables, that promote energy efficiency and a net-zero transport sector. The ecological transition and decarbonization plan also focuses on protecting and conserving land ecosystems and water resources for future generations and public policies and public and private initiatives that promote less energy-intensive manufacturing.

30. **Before the National Assembly was dissolved, the GoE had already adjusted the implementation of its program by relying mostly on executive rather than legislative power to approve the prior actions in this operation.** The ruling party's limited representation in the National Assembly had curtailed the GoE's capacity

[16] *https://www.fielweb.com/App_Themes/InformacionInteres/DE59AMFW.pdf.*
[17] *https://www.ambiente.gob.ec/ministros-firmaron-pacto-hacia-la-descarbonizacion/.*

to pass legislative reforms. Critical reforms could not be advanced, including those related to improving the PPP legal framework or reducing rigidities in new hirings. At the same time, increasing gang and narco-traffic-related crime and violence have created social discontent. Social unrest led by the CONAIE has led to higher social expenditures and fuel subsidies. In this challenging context, the GoE mostly relied on executive powers to continue moving forward with substantive reforms, including all but one of the prior actions of this operation. The exception is the gender-equality-focused Violet Economy Law, which was enacted by the National Assembly in January 2023. The DPF series has acknowledged progress in relevant areas, including forest management, gas flaring, and green financing, to replace some original reforms that required National Assembly approval, mainly labor reforms. Since dissolving the National Assembly in May 2023, the GoE has issued some reforms as decrees which require a favorable opinion of the Constitutional Court. These measures include a tax reform to reduce the personal income tax burden on larger families, recently cleared by the Constitutional Court, and an investment promotion law, recently rejected by the Constitutional Court. These new initiatives, however, are not part of this operation.

4. PROPOSED OPERATION

4.1. LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION

31. **The proposed DPF aims to assist the GoE in tackling selected structural challenges to green, resilient, and inclusive growth[18] and help realize its commitment to become carbon neutral by 2050.** It is the third in a programmatic series of three loans organized around two pillars:

- *Tackle selected structural challenges to foster green growth, inclusion, and climate resilience.* The first pillar supports critical elements of the NDP's economic, social, and integral security pillars that, among other things, aim to ensure public finances are managed in a sustainable and transparent manner, improve risk management, promote trade and investment, boost productivity and competitiveness, protect families, and promote social inclusion and climate resilience among vulnerable groups.
- *Strengthen low-carbon development.* The second pillar is embedded in the NDP's ecological transition pillar and the NDC, which, among other things, aims to promote green growth through a low-carbon economy and climate change mitigation and adaptation measures.

32. **The implementation of the WBG's country program for Ecuador in recent years offers lessons that have been considered in preparing this DPF**. The three main lessons from prior DPFs are:

- **In line with the previous series, strong analytical underpinnings provide the foundation for a well-designed operation.** Advisory Services Analytics (ASAs) helped shape the GoE's reform efforts and supported a fruitful policy dialogue.
- **Strong links to other WB technical assistance and investment operations are essential to the program's implementation.** The supported reforms have been complemented by WB-financed investment operations on child malnutrition and sustainable forestry and technical assistance on sustainable procurement, budget tagging, PPPs, energy, and transport.
- **Strong cross-sectoral support is critical**. The WB's ability to support a set of linked cross-cutting reforms

[18] The PDO was updated since the second operation to reflect the changes related to job creation, given the need to drop the labor reform, while maintaining its focus on growth, inclusion, and climate resilience.

is key to climate-related policy development that fosters green growth.

33. **This operation is aligned with the goals of the Paris Agreement.** First, the DPF reform program is consistent with the country's NDC and supports implementation of those commitments. Second, on mitigation goals, the prior actions will not likely cause a significant increase in GHG emissions or any persistent barriers to transition to low-GHG emissions and a long development growth path determined by Ecuador's long-term strategy. In fact, many prior actions (PA# 1, 2, 3, 6, 7, 8, 9, and 10) are expected to reduce GHG emissions (Annex 5). Therefore, all prior actions are aligned with Ecuador's NDC implementation goals and the Paris Agreement's mitigation goals. Third, on adaptation and resilience goals, identified climate risks from the climate risk screening process are not likely to have an adverse effect on the prior actions' contribution to the PDOs and sustainable development goals of Ecuador. While risks from climate hazards could adversely affect forest ecosystems, PA#10 focuses on a policy reform that promotes the conservation of standing forests and the restoration of degraded areas and contributes to reducing this risk and deforestation to an acceptable level. Specific prior actions (PA# 2, 3, 4, 9, and 10) are expected to increase resilience to climate variability and change. Therefore, all prior actions of the proposed DPF program are aligned with the reduction of GHG emissions and the Paris Agreement's adaptation and resilience goals and will, therefore, not hinder Ecuador's sustainable development pathway.

4.2. PRIOR ACTIONS, RESULTS, AND ANALYTICAL UNDERPINNINGS

This third and final operation under the series goes beyond the program originally envisioned, reflecting the GoE's strong commitment to the reform areas it covers. Original indicative triggers (OIT) 2, 3, 5, 8, and 9 were revised and strengthened to better capture the implemented actions. OIT 1 was fully met but was a relatively weak administrative measure. The planned measure to fight malnutrition in OIT 4, which is still under design, was replaced by the introduction of a cash transfer to underpin the same development objective. Although the GoE continues efforts for effective migrants' integration (Box 2), the migration measures in OIT 4 were dropped as phase three of the extraordinary migrant regularization process is still pending. OIT 6 and 10 were replaced by stronger measures focused on: (i) mandating all public and semi-public power companies prepare 5 year energy efficiency plans that will be monitored by MEM, helping to lead by example; and (ii) increasing the GoE's capacity to trace timber, thereby reducing illegal timber markets and associated deforestation. Three new prior actions (PAs) have been introduced in strategic areas where Ecuador is making progress or where the WB is providing support: fuel-subsidy targeting, clean energy use, and gender inclusion. These new prior actions reflect the GoE's commitment to moving toward a green and inclusive growth and climate-resilient recovery. Finally, to better reflect the impact of two PAs from the previous two operations, the formulation of two result indicators was modified despite not having related policy action in this operation.[19]

[19] Result Indicator (RI) 1 was modified to exclude the distortive effect of frequent changes in the tax on transfers abroad (*Impuesto a la Salida de Divisas*, ISD). RI#15 was modified to better reflect the indicator being monitored by the Ministry of Transport and Public Works (Ministerio de Transporte y Obras Públicas, MoTP) and the Ministry of Environment and Water and Ecological Transition (*Ministerio del Ambiente, Agua y Transición Ecológica*, MAATE) regarding their NDC, decreasing the percentage of CO_2 emissions from the transport sector by at least 2.0 percent by 2025 from a business as usual (BAU) scenario from 2018.

Table 5: Status of DPF3 triggers and proposed changes

Original Indicative Trigger (OIT) proposed in DPF 2	Prior Action (PA) for DPF 3	Comments/Rationale for Change
Pillar 1: Tackle selected structural challenges to foster green growth, inclusion, and climate resilience		
OIT#1. The Borrower has issued internal procedures to improve the risk-based enforcement (information and communications technologies and skills) of large taxpayers.	.	**Dropped.** It was dropped to streamline the program; however, the GoE has drafted these internal procedures and is expected to issue them beyond the timeframe of this operation.
	PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.	**New PA.** It was introduced to acknowledge the GoE's efforts to reduce fuel subsidies to areas that were not previously covered.
OIT#2. The Borrower has issued a regulation setting the new governance and institutional framework to enable the issuance of sovereign green bonds.	**PA#2.** To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.	**Trigger was upgraded to PA.**
OIT#3. The Borrower has approved regulations to quantify contingent liabilities caused by climate and climate-related disasters for PPP projects.	**PA#3**. To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.	**Trigger was upgraded to PA.**
OIT#4. The Borrower has issued: (i) guidelines for the formulation of the budget for MSP and MIES starting from 2024 with respect to the programs and services included in the prioritized package referenced in Decree No. 1211; (ii) norms for implementation of the migration registry, issuance of associated certificates, implementation of the extraordinary regularization process, and regularization of separated children and adolescents; and (iii) the decrees for phase 2 and phase 3 of the extraordinary migrant regularization process.	**PA#4**. The Borrower has created the Bono 1000 días program for providing conditional grants to expecting mothers and children under two.	**Replaced.** A new PA to fight malnutrition replaced the triggers on malnutrition and migration to streamline the program as phase three of the extraordinary migrant regularization process is still pending.
	PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector.	**New PA.** It was introduced to acknowledge the GoE's efforts to close gender gaps.
Pillar 2: Strengthen low-carbon development		
OIT#5. The Borrower has issued regulations to promote distributed generation at the residential level and establish a risk methodology to assess PPSs for NCRE project.	**PA#6**. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	**Trigger was upgraded to PA.**
	PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.	**New PA.** It was introduced to acknowledge the GoE's efforts to decarbonize the energy and industrial sectors.

Original Indicative Trigger (OIT) proposed in DPF 2	Prior Action (PA) for DPF 3	Comments/Rationale for Change
OIT#6. The Borrower has issued a regulation to establish decarbonization committees in oil and gas firms to set decarbonization plans and set efficiency tariffs in key industrial sectors to promote energy consumption reductions in the various sectors, including electromobility.	**PA#8.** The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans.	**Replaced**. The original trigger was replaced to acknowledge the GoE's efforts to promote energy efficiency in the power sector and streamline the program; however, the GoE has established the Decarbonization Committee of PetroEcuador and is working on its decarbonization plan.
OIT#7. The Borrower has established regulations to: (i) increase efficiency standards in technical vehicle inspections; (ii) set up a unique vehicle tagging (green labeling) for monitoring and vehicle efficiency; (iii) define the useful life of vehicles to ensure that vehicles circulating on the roads are safe with low emissions; (iv) improve efficiency standards for the import of new vehicles; and (v) establish a risk-mitigation methodology to assess transport PPPs.		**Dropped.** The GoE has taken steps to strengthen these reforms with a regulatory package to enhance transport efficiency and decarbonization that will be issued beyond the time frame of this operation.
OIT#8. The Borrower has established a compensation mechanism for public and private entities that reduce GHG emissions and benefit resilience activities in non-forest areas and published a National Emissions Registry to be used by the compensation mechanism under PECC.	**PA#9.** To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.	**Trigger was upgraded to PA.**
OT#9. To promote deforestation-free and value-added production in rural landscapes, the Borrower has issued the procedures for preparing, approving, registering, and updating integrated forest management plans. **OT#10**. The Borrower has enacted the Technical Norm for Sustainable Forest Management and the National Sustainable Forest Management Strategy.	**PA#10.** To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.	**Upgraded and complemented.** The first trigger was upgraded as part of the new PA and merged with a new measure to improve forest management. The latter replaced the second trigger that is in its socialization process.

Box 2. GoE's sustained effort on migrants' integration

In previous DPFs, the Bank has supported the GoE effort toward effective migrants' integration. Building on efforts started in 2020 and supported by the World Bank, in 2022, the government started a new process of extraordinary regularization and migratory amnesty. The process was started with Executive Decree No. 436 (June 2022) to regularize the situation of Venezuelans who had entered Ecuador regularly but found themselves in an irregular situation due to, for example, having overstayed a tourist visa, failing to apply for or obtain visas in previous regularizations, or having an expired visa. The Decree provisions were operationalized via the Ministry of Interior's Ministerial Agreement No. 007 (August 2022), which outlined the process for the migrant registry and the issuing of temporary residency certificates that guarantee migratory amnesty. The Ministry of Foreign Affairs and Human Mobility's Ministerial Agreement No. 076 (August 2022) established the

requirements and procedures for issuing the VIRTE visa (*Visa de Residencia Temporal de Excepción*).

In 2023, the GoE has continued deepening this reform agenda, expanding the types of migrants eligible for the process. Executive Decree 698 (March 2023) expanded the same provisions from Decree 436 to migrants from other nationalities that met the regular entry criteria. On May 31st, 2023, Executive Decree 753 was signed, expanding the migratory amnesty and extraordinary visa access to Venezuelan migrants who entered the country via irregular border crossings. Beneficiaries from the new process will benefit from both the migratory amnesty -after registering in the new migrants registry and have the option to apply and receive VIRTE visas. These visas are valid for two years and have the option to be renewed for another two years. VIRTE holders can get Ecuador national identification documents and gain access to formal regular employment, social assistance, banking, housing, and other benefits. They can also contribute to the country's development. Children and women will be less exposed to trafficking and sexual exploitation.

Pillar 1: Tackle selected structural challenges to foster green growth, inclusion, and climate resilience

34. **Pillar 1 of the third DPF operation supports green growth, inclusion, and climate resilience.** In addition to better targeting fuel subsidies, it strengthens the fiscal framework by enhancing the institutional setup to address climate-related challenges, including the governance for green bond issuance and quantifying fiscal risk in PPP projects. The pillar also supports reforms to foster social inclusion and resilience by encouraging people to use public services to tackle malnutrition and fostering gender parity in the overall economy, including the power sector.

Targeted fuel subsidy reduction

Prior Action DPF3	**PA#1.** To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms. Evidence: Executive Decree No. 614 issued on December 2, 2022.

35. **Rationale and Background. After an early attempt to eliminate gasoline and diesel subsidies was interrupted to end social protests, the GoE is reducing subsidies by improving their targeting through administrative measures**. Taking advantage of low international oil prices in 2020, the GoE introduced a price band system to reduce gasoline and diesel subsidies by making their prices converge toward international benchmarks. As the global economy recovered and oil prices skyrocketed, the price band system led to higher local fuel prices. (The inflationary impact of the new policy was compounded by food inflation triggered by Russia's invasion into Ukraine.) The GoE froze gasoline and diesel prices to prevent social unrest in 2021 and reduced them by US$0.15 to end prolonged social unrest led by Indigenous organizations in 2022. After the 2022 demonstrations, the GoE created a negotiation table to evaluate, among other things, alternatives to better target the fuel subsidy, including the elimination of the fuel subsidy to large shrimp farmers. In 2022, the fuel subsidy amounted to US$4.6 billion (about 3.9 percent of GDP), diverting public funds from other uses, including social expenditures, and strengthening the fiscal accounts. In addition, the fuel subsidy reinforces regressivity (because wealthier households use more fuel), increases GHG emissions, and discourages people and firms from transitioning to greener energy sources.

36. **Substance of the Prior Action (PA#1). As part of this strategy to gradually improve fuel subsidy targeting and promote energy transition, this prior action eliminates the fuel subsidy for large shrimp farms through *Executive Decree 614*, issued on December 1, 2022.** This decree ended the diesel subsidy for shrimp farms with more than 30 producing hectares, accounting for more than eighty percent of the national producing area. The diesel price for large shrimp farms is now equal to the weighted average of local and imported diesel costs—US$3.20 per gallon in 2022. Artisan, micro, and small farms with less than 30 producing hectares will continue buying small quantities at a subsidized price of US$1.60 per gallon. This measure does

not tackle the biggest item of the fuel subsidy bill—vehicles (US$2.9 billion in 2022) and household gas (US$900 million). However, the new policy reduces the largest subsidy to a productive sector (US$255 million),[20] encouraging this sector to accelerate its transition away from fossil fuels.[21] The GoE expects this measure to have a limited effect on this flourishing sector's employment (64,000 employees) because diesel accounts for only 2 percent of total costs. Shrimp exports rose from US$3.2 billion in 2018 to US$7.3 billion in 2022 due to innovative farming practices and Ecuador's favorable weather conditions.

37. **Expected Results and Indicators. This measure is expected to increase the share of PetroEcuador diesel sales to large shrimp farms from 6.9 percent of its total fuel sales, excluding sales to other subsidized sector (i.e., transport, tuna, and fishing), in 2021 to 10 percent in 2024**. This indicator controls the potential distortive effect of volatile oil prices and future revision to the subsidy to other sectors. Based on their oil price assumption, the authorities expect to reduce the shrimp sector subsidy, which had increased from US$59 million in 2017 to US$255 million in 2022. For example, the earnings from diesel sales to the shrimp sector rose by US$40 million between January to May 2023. In addition, in the medium term, this measure is expected to accelerate the shrimp sector's transition to greener energy, reinforcing other mitigation measures, including some of this operation's prior actions, such as the introduction of incentives to foster distributed renewable energy generation and the reduction in lithium battery import tariffs—the latter was approved as part of the negotiations with the shrimp farmers to reduce the fuel subsidy. Together, all these prior actions are expected to accelerate electrification of the largest export industry in Ecuador after oil.

Governance for the issuance of sovereign green bonds

Prior Action DPF3	PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds. Evidence: Inter-Ministerial Agreement No. MEF-SNP-MAATE-01 signed by MEF, MAATE and SNP on June 5, 2023.

38. **Rationale and Background. Ecuador's financial sector is critical to facilitating climate adaptation and mitigation and assuring a green recovery by improving capital allocation, accessing new funding sources, and mitigating/transferring climate-related financial risks**. Since Poland issued the first sovereign green bond in December 2016, 18 low- and middle-income countries have issued US$70 billion in green, social, and sustainability bonds.[22] Sovereign green bonds (SGBs) have been used to raise dedicated funding for green projects and provide a green benchmark to catalyze further growth, increase liquidity in the domestic green capital market, and diversify the investor base. Green bonds build on the GoE's experience in sovereign social bonds, launched and issued initially in 2020.[23]

39. **On June 5, 2023, MEF approved through *Inter-Ministerial Agreement No. MEF-SNP-MAATE-01* the Sovereign Green Bond Framework as the basis for the sovereign's issuance of bonds, the proceed of which will be used to fund compliant green projects**. The framework identifies the projects and expenditures that

[20] The diesel subsidy to the shrimp sector increased from an average of about US$50 million between 2016 to 2021 to US$255 million in 2022 as increasing demand compounded higher oil prices; the diesel bought by this sector almost tripled between 2016 and 2022. As a result, the subsidy to the shrimp sector was higher than the subsidy to the electricity (US$211 million), tuna (US$102 million), and artisanal fishing (US$59 million) sectors.
[21] This measure is complemented by the reduction on the tariffs on the lithium batteries that aim to support, among other, the supply of clean energy in the shrimp industry.
[22] World Bank Group, SOVEREIGN GREEN, SOCIAL AND SUSTAINABILITY BONDS: Unlocking the Potential for Emerging Markets and Developing Economies, October 2022.
[23] *https://www.finanzas.gob.ec/wp-content/uploads/downloads/2022/05/Reporte-del-BONO-SOCIAL-al-31-de-diciembre-de-2021.pdf*.

contribute to the sustainable development agenda and address climate change. These projects and expenditures reflect executive decrees No. 59 and No. 371 and support the GoE's implementation of its NDCs under the Paris Agreement, its National Development Plan 2021-2025, and the Long-Term Vision 2030 "The Equator of Opportunities: Desired Scenario 2030." The Sovereign Green Bond Framework is a pre-requisite to Ecuador's future issuance of SGBs and being able to market and underwrite a debt instrument as "green" to domestic and global emerging markets debt investors.[24] Bonds issued under the framework (and with the "green" label) would need to comply with the International Capital Market Association's Green Bond Principles 2021 and with Ecuador's United Nations (UN) Sustainable Development Goal commitments. The framework identifies the eligible sectors that can benefit from green bond proceeds; project evaluation and selection criteria; how proceeds will be managed; and how allocations and impact will be reported. Eligible green categories to be financed with the proceeds of these issuances will contribute to climate change mitigation and adaptation and will include renewable energy; energy efficiency; low-carbon transport; sustainable management of natural resources, land use and protected areas; sustainable water and wastewater management; sustainable agriculture; solid waste, pollution prevention, and control; and other climate change activities. These sectors are prioritized in the NDC, Long-term Low-Emission Development Strategies (LTS), and the National Adaptation Plan of Ecuador for the reduction of GHGs and the increase of resilience to climate change. Present macroeconomic circumstances may inhibit issuance of sovereign bonds, but the Sovereign Green Bond Framework will support project identification for refinancing of green projects under a future bond issuance.

40. **Substance of the Prior Action (PA#2).** The Sovereign Green Bond Framework[25] will support Ecuador's implementation of the NDC and other climate change policies and actions by supporting inter-ministerial coordination, prioritization of green project identification and expenditure tagging, and development of a sovereign green benchmark to catalyze further green capital market activity. Eligible expenditures are aimed at promoting Ecuador's transition to low-carbon, climate-resilient, and sustainable development. The MEF has started working with the Planning Secretariat (*Planifica*) to use both the Classifier of Environmental Policy-Related Expenditures (*Clasificador Orientador del Gasto en Politica de Ambiente*, COGPACC) and the Sovereign Green Bond Framework to tag public investments during budget preparation and use the same climate change criteria to pre-identify and prioritize green projects that can be financed with future bond proceeds.

41. **Expected Results and Indicators. This prior action aims to support identifying priority green climate-related projects that can be refinanced through future sovereign green bond issuances.** This intermediate outcome is expected to contribute to more accurate identification of resource allocations linked to the country's climate change objectives and targets**.** It will allow identification of sectors that concentrate more resources and the type of expenditures related to each of them, inform future allocation to other relevant sectors not adequately prioritized, and monitor the flow of financing for climate mitigation and adaptation programs and activities. Working with the COGPACC, the Sovereign Green Bond Framework will strengthen accountability and transparency of spending on climate change issues—a critical element for the success of the series' trigger on the future issuance of SGBs. Furthermore, the prior action on the governance and institutional framework for green bond issuances is expected to allow the GoE to pre-identify at least two projects that support actions under the Sovereign Green Bond Framework by the end of 2024 that could be

[24] Regaining access to international markets is a priority for the GoE, which expects to issue thematic bonds only after regaining access to international markets and establishing a track record.

[25] The Bank and other IFIS have provided TA on developing the green bond framework. Through the Whole of the Economy Trust Fund, the Bank will also provide technical assistance to develop a database of projects that could be financed by green bonds.

financed through SGB proceeds.

Fiscal contingency to natural and climate-related disasters

Prior Action DPF3	PA#3 To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects. Evidence: Ministerial Agreement No. 028 issued by MEF on June 3,2023, as published in Official Gazette No. 333 on June 16, 2023.

42. **Rationale and Background. Natural hazard risk management is constrained by the lack of resources and limited capacity to evaluate risks.** Ecuador is among the 10 countries in the world most exposed to natural hazards, including the climate-related disasters that are expected to increase due to climate change, affecting agriculture, fishery, forestry, and livestock and investments in public infrastructure and PPP projects.[26] In 2021, the MEF developed, with support from the first DPF, its first Disaster Risk Financing (DRF) Strategy to increase climate resilience. It allowed the GoE to identify the risks and define the financial instruments, processes, roles, and responsibilities for the retention and transfer of climate-related and other natural disaster risks, including those arising from PPP projects. As part of this initiative, the MEF developed guidelines in 2022 for identifying risks in PPP projects (*Lineamientos para la asignación de riesgos en los proyectos de gestión delegada al sector privado*) and preparing a fiscal risk and sustainability profile (*expediente de riesgos fiscales*), which was supported by the second DPF. Moreover, the WB and International Finance Corporation (IFC) have supported the GoE in strengthening public institutions for decision-making on risk management, strengthening the legal framework, clarifying the roles of different agencies, and supporting the standardization process throughout the PPP project cycle to better manage contingent liabilities, with a new special focus on natural disasters, including climate-related ones. However, the MEF still lacks a systematic, overarching methodology for appropriate accounting and risk monitoring in evaluating climate contingency risks and overall liabilities in PPP projects.

43. **Substance of the Prior Action (PA#3). The prior action enhances the GoE's ability to establish the methodology to quantify fiscal risk in PPP projects, including contingent liabilities arising from climate-related hazards.** This methodology describes quantification techniques that allow delegating entities to make estimates of the present values and programming of the contingent liabilities in the PPP projects, which are required for the preparation of the Fiscal Sustainability and Risk File (*Expediente de Riesgos y Sostenibilidad Fiscal*). The quantification of contingent liabilities will include the estimation of economic losses caused by climate-related disasters and support the selection of financial instruments for disaster risk management under a changing climate.

44. **Expected Results and Indicators. The MEF expects to increase the number of PPP projects assessed using the methodology from zero to at least five.** This assessment could include new or existing PPP projects with an approved Fiscal Risk and Sustainability Report (*Informe de Sostenibilidad y Riesgos Fiscal*). From a broader perspective, the reforms supported under this line of policies are expected to strengthen the GoE's

[26] PPP are defined by the World Bank PPP Reference Guide as *"a long-term contract between a private party and a government entity, for providing a public asset or service, in which the private party bears significant risk and management responsibility, and remuneration is linked to performance."* Depending on the jurisdiction, these types of arrangements fall under different legal modalities. In Ecuador, this can be done following the specific PPP framework or the pre-existing sectorial concession framework. Either case is considered delegated management (*gestión delegada*) and requires MEF intervention and the application methodology to quantify PPP projects' fiscal risk.

capacity to assess fiscal risk from PPP projects.[27] In addition, they will contribute to safeguarding fiscal sustainability while unlocking private endeavors in critical sectors, including NCRE investments expected to be triggered by other prior actions in this DPF series.

Cash transfers to fight child malnutrition

Prior Action DPF3	PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two. Evidence. (i) *Ley Organica para Impulsar la Economia Violeta*, as published in Official Gazette (*Suplemento*) No. 234 on January 20, 2023; and (ii) Ministerial Agreement No. MEM-VEER-2023-0001-AM, issued by MEM on March 8, 2023, as published in Official Gazette No. 278 on March 28, 2023.

45. **Rationale and Background. GoE efforts to fight high rates of malnutrition by better allocating public resources could be curtailed by inadequate conditionality of existing cash transfers.** Chronic child malnutrition has decreased in most countries in the Latin America and Caribbean region—except in Ecuador, Guatemala, and Haiti. Ecuador's chronic malnutrition affected about one-quarter of children under age 5 in 2019, disproportionally hitting the provinces of Morona Santiago, Chimborazo, Santa Elena, Bolívar, and Pastaza. All were affected by increasing droughts and erratic climate. The status of the issue has been uncertain in recent years not only because of the pandemic's impacts on the healthcare system and household earnings. In this context, the GoE passed Executive Decree No. 1211 in December 2020, a part of the first DPF. It approved a prioritized package of goods and services for pregnant women and children under 24 months to fight malnutrition. The GoE also passed an Inter-Ministerial Agreement between the MEF and Ecuador Grows Without Child Malnutrition Technical Secretariat (*Secretaria Tecnica Ecuador Crece sin Desnutricion Infantil*, STECSD) in October 2022, part of the second DPF. It set guidelines for results-based budgeting. However, as these measures did not address the lack of demand for services to fight malnutrition, newborns are enrolled too late. The average enrollment age of children for the conditional cash transfer program that has a health conditionality is 2 years.

46. **Substance of Prior Action (PA#4). Executive Decree 435 created Bono 1000 días for poor and rural pregnant women and children up to 2 years of age to ensure minimum food consumption and increase demand for health services that prevent malnutrition, the prioritized packages**.[28] The bonus consists of monthly unconditional (US$50) and conditional (US$10) transfers through the financial system, targeting poor people who do not receive any other cash transfer. The conditional cash transfer requires attending preventive health controls in Ministry of Public Health (*Ministerio de Salud Pública*, MSP) establishments, a condition that would be verified through an integrated information system coordinated by the STECSD. The non-conditional transfers aim to reduce food insecurity; the conditional transfers seek to promote demand for preventive health and early childhood development services, linked to the supply the GoE provides through the results-based budget formulation. This prior action will complement the support under the Additional Financing for the Social Safety Net Project, which, among other things, aims to increase resilience to climate shocks and early access to cash transfers and complementary services to most vulnerable populations, including poor pregnant women and children up to 2 years of age.

[27] In accordance with Ecuador's risk profile and as described in Ecuador's DRF strategy, the GoE may establish: (a) risk retention instruments for high-frequency and low-intensity disasters, including regular lines of credit or contingent credit, and take them to the debt market with multilateral organizations or private banks; and (b) risk transfer instruments for events of high economic impact, including traditional or parametric insurance placed in the reinsurance market and catastrophic bonds (as in the Pacific Alliance for earthquakes) that are transferred to capital markets specialized in disaster risks.

[28] There are several examples of the positive impact of cash transfers on health and nutrition indicators, including prenatal visits (Bolivia, Kenya, and Peru), institutional deliveries (Togo, Bolivia, and El Salvador), and child growth monitoring visits (Mali, Togo, and Kenya).

47. **Expected Results and Indicators**. The policies to fight child malnutrition backed by the DPF series aim to increase from 14.3 percent in August 2020 to at least 30 percent in 2024 the share of pregnant women and children younger than 2 years old who receive complete and timely health check-ups, birth registration, and, according to their poverty status, child development services (*Creciendo con Nuestros Hijos*, CNH), and cash transfers.

Foster gender parity in the overall economy, including the power sector

Prior Action DPF3	PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector. Evidence. (i) *Ley Organica para Impulsar la Economia Violeta*, as published in Official Gazette (*Suplemento*) No. 234 on January 20, 2023; and (ii) Ministerial Agreement No. MEM-VEER-2023-0001-AM, issued by MEM on March 8, 2023, as published in Official Gazette No. 278 on March 28, 2023.

48. **Rationale and Background. Ecuador has achieved significant progress toward gender equality in the past decade, particularly in education and health, but several disparities remain**.[29] The share of women who engage in entrepreneurial activities and access to financial products is comparatively high, but women are disadvantaged regarding labor force participation, quality of employment, and remuneration. Only 54.2 percent of working-age women participate in the labor market, compared to 77.5 percent for men. With strong gender segregation of employment, the share of women in vulnerable employment (i.e., contributing family or own account workers) is 58 percent, well above the regional average of 34 percent. Women dominate in low-skilled services, but have lower participation in added-value sectors such as energy, construction, mining, and transport.[27] Women still have lower earnings than men in Ecuador, and the engagement of young women in science, technology, engineering, and mathematics (STEM) is limited. Less than one in three Ecuadorian STEM graduates is a woman, even though women are more likely to complete post-secondary education.

49. **Adopting a more gender-responsive procurement approach by the public sector can be a critical tool for addressing persisting gender gaps and barriers to accessing the public marketplace**.[30] However, public procurement of goods, works, and services in Ecuador is not yet used to promote gender equality, less so in the power sector. Currently, Ecuador's public electricity distribution companies undertake between 400 to 500 procurement processes for services and works contracts each year that do not include selection criteria promoting gender inclusion. There is an opportunity for future energy sector public procurement processes to establish gender-inclusive criteria, such requiring firms to adhere to non-discriminatory clauses or encouraging contracts to be awarded to gender-inclusive firms (e.g., firms with female participation in ownership and/or targets in terms of women in their workforce occupying added-value jobs), which would help increase women's participation in the electricity sector. Considering this landscape, integrating a stronger gender focus for energy sector institutions and utility companies, including through gender-responsive procurement strategies, can not only help address gender gaps but is also a smart business.[31]

50. **Substance of the Prior Action (PA#5). The GoE has enacted the Violet Economy Law, mandating that**

[29] World Bank (2019). Ecuador Country Partnership Framework (CPF) for the period FY19-FY23, Annex 10.
[30] The World Bank et. al (2022) "Gender-Responsive Procurement in the Caribbean: A Tool Towards More Inclusive and Resilient Societies". Washington, DC.
[31] Orlando et. al. (2018). *Getting to Gender Equality in Energy Infrastructure: Lessons from Electricity Generation, Transmission, and Distribution Projects*. Energy Sector Management Assistance Program (ESMAP) Technical Report, No. 012/18.

public institutions establish gender policies to close the existing gender gap. The law seeks to promote gender equality and affirmative actions to generate opportunities for access to the labor market for vulnerable or discriminated-against sectors of the population. It recognizes institutional barriers that impede women from realizing their full potential and introduces policies and incentives to eliminate the gaps and grant equal treatment and employment opportunities, including access to decision-making positions, capacity building, and reduction of discriminatory practices in contracting.

51. **Building on this law, the Ministry of Energy and Mines (*Ministerio de Energía y Minas*, MEM) has issued Ministerial Agreement No. MEM-VERR-2023-0001-AM, establishing the official guidelines to operationalize the law's mandates in the power sector.**[32] The guidelines foster gender inclusion in the power sector, specifically focusing on increasing women's participation and professional development. The Ministerial Agreement applies to all public, private, and semi-private agencies and firms in this sector and introduces a series of affirmative actions to be implemented within a year, including: (i) quotas of at least 30 percent for women in recruitment processes for mid-level positions and at least 10 percent women in operating-level positions; (ii) adding gender inclusive selection criteria for the procurement of goods, works, and services; (iii) skill-building programs coupled with mentorship initiatives toward entrepreneurship and increased employability of women and capacity building programs targeting women to work in the field as technicians; and (iv) promotion of gender-responsive work environments that facilitate women's employment in the sector (e.g., separate toilets, appropriate clothing, safe accommodation for field positions, among others) and prevention and response measures to sexual harassment. Fostering gender-inclusive selection criteria for all public works and services procurements is one of the first actions being taken under Ministerial Agreement to address existing gender gaps in Ecuador. This action is expected to increase the number of women hired into technical jobs for services and work contracts. Currently, services and works contracts constitute around 95 percent of contracting done by electricity distribution companies. However, only around 3 percent of personnel hired through services[33] and works contracts are female. By adopting gender-responsive procurement criteria, female participation in mostly technical jobs is expected to rise to 5 percent of total employees hired for works contracts and 10 percent for services contracts. The Ministerial Agreement mandates power sector institutions to report progress around gender directly to the MEM, including related to contracting.

52. **Expected Results and Indicators. Implementing the Ministerial Agreement is expected to increase women's economic participation in the power sector, including the share of procurement processes in the power sector that are gender-responsive to 100 percent by the end of 2024 (from a baseline of zero).** Given the size of procurement processes undertaken by public electricity distribution companies in Ecuador, the adoption of gender-inclusive qualification criteria and adherence to non-discriminatory clauses, one of the first measures to be implemented under the Ministerial Agreement, will also serve as a model for other infrastructure-based sectors in the country, where women are under-represented.

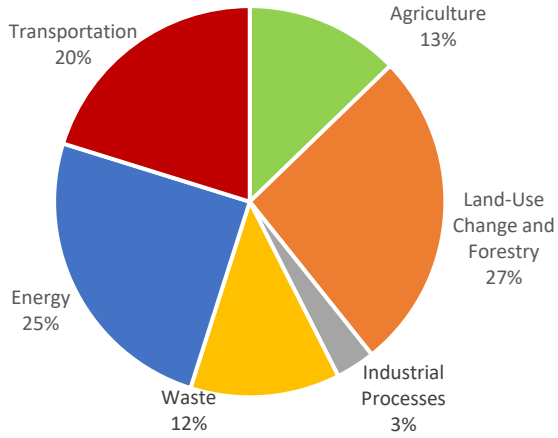
Pillar 2: Strengthen low-carbon development

Figure 2. GHG emissions by sector in 2019

[32] *Acuerdo No. MEM-VEER-2023-0001-AM. Directrices para el Desarrollo e Implementación de Estrategias Inclusivas de Genero en el Sector Electrico.*

[33] Services contracts are for mainly technical jobs, including linesmen, meter readers, technicians responsible for service connections and disconnections, and other distribution operational, commercialization, and retail functions that are outsourced.

53. **Actions under Pillar 2 support the GoE's efforts to strengthen low-carbon development by advancing the implementation of reforms supported by previous DPFs in this series.** The measures are aligned with the WBG Roadmap for Climate Action in Latin America and the Caribbean as they seek to prioritize actions on the largest mitigation opportunities. The key sectors contributing to GHG emissions in Ecuador are land-use change and forestry, accounting for 27 percent of emissions, energy with 25 percent, and transportation with 20 percent (Figure 2). Reforms under this pillar focus on mitigation measures for a green and resilient economic recovery by promoting private investment in NCRE energy, encouraging energy efficiency, supporting the development of voluntary carbon-offset mechanisms, and promoting sustainable forest management (the latter also improving the resiliency of rural communities). Previous reforms supported by the DPF series have resulted in private capital mobilization in low carbon development, including in NCRE with the launching of the 500 Megawatts (MW) NCRE bid, expected to be awarded by July 2023, and the signing of the first two PPPs for a solar farm project (El Aromo with 200 MW capacity) and a wind farm project (Villonaco 3 with 110 MW capacity). In addition, important low-carbon results include establishment of the National Energy Efficiency Committee (*Comité Nacional de Eficiencia Energética*, CNEE) to promote more rational energy consumption, the drafting of secondary legislation to the Organic Law Reforming the Organic Law of Land Transport, Traffic, and Road Safety, and the registry of more than 100 firms in the voluntary carbon-zero footprint program.



Source: CAIT Climate Data Explorer

Mobilize private capital for clean energy provision

Prior Action DPF3	PA#6. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers. Resolution No. ARCERNNR 017/2023, issued by ARCERNNR on May 24, 2023.

54. **Rationale and Background. Ecuador has facilitated the entry of NCRE, including renewable distributed generation, to increase energy security and resiliency to climate change.** In May 2021, the GoE approved the Organic Reform Law to the Organic Law for Public Service of Electricity (*Ley Orgánica del Servicio Público de Energía Eléctrica*, LOSPEE), a prior action of the first DPF. It defined electricity self-generation and self-consumption, which provided the legal framework for distributed generation. In June 2022, MEM issued its Electric Sector Public Policy in Ministerial Agreement MEM-MEM-2022-0024-AM), delineating general guidelines for specific policies and regulations to promote distributed renewable generation. This law and policy were an important first step to facilitate greater distributed energy generation.

55. **NCRE will be increasingly important to displace fossil-fuel electricity generation and adapt the hydroelectricity-based system, and increase its resilience to the impacts of climate change on hydrology.** Ecuador suffered severe electricity supply shortages in the latest dry season (October 2022 to March 2023) due to low water supplies and thermal generation restrictions from delayed maintenance and operational issues. To increase resilience to climate change, MEM prepared an emergency plan to address the electricity supply and demand imbalances, where distributed renewable energy generation was included as a key mitigation measure. Distributed renewable generation can help to mitigate shortage risks due to failures in some areas' transmission system, reduce energy losses, improve service reliability and quality, and open

opportunities to foster investment, technology transfer, and green employment. Fostering distributed generation among non-regulated customers in commercial and industrial sectors, which tend to be larger than residential consumers, can encourage energy service companies to provide and install distributed generation services.

56. **Substance of Prior Action (PA#6). To foster the integration of renewable energy into the power sector, displacing fossil-fuel generation, and lowering GHG emissions, the GoE issued a regulation that allowed non-regulated customers to invest in distributed renewable energy generation.** The Agency for the Regulation and Control of Energy and Non-Renewable Natural Resources (*Agencia de Regulación y Control de Energía y Recursos Naturales no Renovables*, ARCERNNR) issued a regulation (Regulation No. ARCERNRR 006/23) to enable non-regulated customers[34] to invest in distributed renewable[35] generation for self-supply. This regulation provides clarity on the following: (i) the types of distributed generation self-consumption systems (SGDA) that can be installed; (ii) interconnection procedures and assessment and authorization requirements; (iii) the conditions for installation, connection, dispatch, and operation; (iv) provisions on commercialization; and (v) grievance mechanisms. This regulation is expected to increase distributed renewable generation from the current 13 MW to 20 MW by the end of 2024.

57. **Expected Results and Indicators.** The regulation to foster distributed renewable energy generation is expected to support increasing installed NCRE capacity from 310 MW to at least 650MW by the end of 2024.

Fostering lithium batteries to increase integration of clean energy

Prior Action DPF3	PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources. Evidence: COMEX Resolution No. 001-2023 adopted on February 24, 2023, and effective March 1, 2023.

58. **Rationale and Background**. Ecuador is seeking to facilitate decarbonization of key industries, and storage can contribute to furthering these goals. In August 2022, Supreme Decree No. 540, a prior action of the second DPF, modified LOSPEE's secondary regulation to incentivize private investments and enable ancillary services, including storage systems to increase energy security and further integrate NCRE. The MEM's Electric Sector Public Policy (Ministerial Agreement MEM-MEM-2022-0024-AM) has also provided policy guidelines to promote storage. Providing incentives to increase the affordability of storage options like batteries is critical to increase the integration of NCRE and distributed renewable energy investments. Moreover, for Ecuador, it can help displace fossil fuel use in sectors such as the shrimp industry; where studies have estimated that replacing diesel with NCRE could result in cost reductions of up to US$300 million while helping generate a greener value chain for an industry that generates exports for US$7,500 a year.[36] The shrimp industry alone consumes an estimated 100 million gallons of diesel per year, with high diesel generation used for water airing and pumping.[37] Ecuador's tuna industry also uses fossil fuels for its industrial processes, with fuel representing an estimated 35 percent of their costs. Increased use of distributed renewable energy generation with battery storage for agro-industrial sectors can reduce diesel consumption and help lower costs, improving their competitiveness and lowering GHG emissions. Furthermore, given the recent elimination of fuel subsidies for large shrimp farms, facilitating greater investment in distributed

[34] Customers that have a contract with an electric distribution company to connect to their facilities and supply their power from a generator, self-generator or both through bilateral agreements. This customer can be a large consumer of a self-generator.
[35] Includes solar, wind, geothermal, biomass, ocean, and small-scale hydroelectric capacity.
[36] *https://www.lahora.com.ec/pais/gobierno-reduce-cero-aranceles-importacion-baterias-litio/*.
[37] EP PetroEcuador. Estadísticas del Gerencia de Comercialización Nacional. Enero-Agosto 2022.

renewable technologies with lithium batteries can help reduce diesel consumption to mitigate the effects of higher fuel costs. Providing incentives to increase the affordability of storage options like batteries is critical to facilitate distributed renewable energy investments.

59. **Substance of Prior Action (PA#7). To facilitate integrating renewable energy into the power sector, displacing fossil-fuel generation, and lowering GHG emissions, the GoE reduced lithium battery import tariffs.** On February 23, 2023, the Foreign Trade Committee (*Comité de Comercio Exterior*, COMEX) issued Resolution No. 001-2023 to reduce lithium battery import tariffs from 25 percent to 0 percent to facilitate investments in distributed renewable generation that can benefit the industrial sector in Ecuador, especially the shrimp industry, to replace diesel, reduce production costs and create green value chains. This measure is expected to underpin other actions supported by this and previous DPFs aiming at reducing fuel consumption, such as the recent removal of the fuel subsidy to large shrimp farms and fostering non-conventional renewable distributed generation systems.

60. **Expected Results and Indicators.** The COMEX Resolution is expected to contribute to increasing installed NCRE capacity from 310 MW to 650 MW by the end of 2024.

Foster energy efficiency

Prior Action DPF3	PA#8. The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans. Evidence: Ministerial Agreement No. MEM-MEM-2023-0010-AM, issued by MEM on May 12, 2023.

61. **Rationale and Background. To pursue its NDCs, Ecuador will continue enhancing energy efficiency (EE), which is critical to reducing energy consumption and GHG emissions and accelerating low-carbon development.** The GoE issued the Organic Energy Efficiency Law (*Ley Orgánica de Eficiencia Energética*, LOEE) in 2019, setting up the institutional architecture to promote EE. In 2021, the GoE approved the implementing regulation, a prior action of the first DPF. In June 2022, the GoE issued the Energy Efficiency Public Policy to support the formulation, promotion, and dissemination of economic incentives aimed at scaling up EE technologies and equipment deployment. However, with growing domestic energy demand, additional effort is needed to encourage the public and private sectors to invest in EE.[38] EE is important to increase energy security (especially considering the reduction in electricity supply during the recent dry season), reduce energy demand and GHG emissions, and facilitate green growth.

62. **Substance of the Prior Action (PA#8). The MEM has issued a Ministerial Agreement No. MEM-MEM-2023-0010-AM mandating public power sector entities implement EE as per the National Energy Efficiency Plan 2016-2035 (*Plan Nacional de Eficiencia Energética*, PLANEE).** It mandates that all power sector entities, including the MEM, the system operator, the regulator, and generation, transmission, and distribution companies submit their five-year energy plans to reduce electricity consumption and is a critical step supporting the implementation of the LOEE and its secondary regulation.[39] These plans would be reviewed, approved and monitored by MEM's DGPPEE (*Dirección de Gestión y Promoción de Proyectos de Eficiencia Energética*). Mandating EE action plans in the public power sector entities is an important step forward as it offers a unique opportunity to lead-by-example, incorporating energy efficiency measures into their facilities and operations to help realize savings and efficiency gains while minimizing emissions, helping

[38] Energy demand has increased by 4.3 percent over the past decade, primarily from industrial, residential, and commercial sectors.
[39] Including the Galapagos Electricity Company.

decarbonization agenda.

63. **Expected Results and Indicators.** The PA#8 will contribute to implementing the PLANEE by reducing energy consumption by at least 3,000 barrels of oil equivalent (kBOE) by 2024 from a BAU scenario, as established in the PLANEE, which is reported on and regularly monitored by MEM. The results will support the implementation of the LOEE and foster reducing energy consumption. In addition, EE investments can have substantial spillover effects on job creation, private energy service companies development, and emission reductions to transition to a low-carbon economy.

Enhance measurement and reporting of GHG mitigation initiatives

Prior Action DPF3	PA#9. To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives. Evidence: Ministerial Agreement No. MAATE 2023-053 issued by MAATE on June 11, 2023, as published in Official Gazette (*Tercer Suplemento*) No. 333 on June 16, 2023.

64. **Rationale and Background. The country has recently adopted the voluntary Ecuador Carbon Zero Program (*Programa Ecuador Carbono Cero*, PECC), which seeks to create a program that promotes actions to reduce GHG emissions.** PECC is a voluntary GHG mitigation program aiming at compensating initiatives implemented by public, private, community, or mixed entities that reduce or remove GHGs under a transformative, transparent, and verifiable scheme. The PECC, once fully operational, will allow the private sector and public services to align themselves with more demanding green global standards and certifications and potential future carbon border adjustments to exports in forest and non-forest areas. It will acknowledge progress in the four stages of the process (measurement, verification, reduction, and neutralization of carbon dioxide equivalent emissions, CO_2eq) and certify emission reductions that would be traded on a one-instance voluntary carbon market. Its implementation requires the creation of operational and transparent processes so that all productive sectors of the economy may participate as well as standardized and verifiable Emission Compensation Units (*Unidades de Compensación de Emisiones,* UCEs) to validate the information provided by registered entities. In turn, the UCEs will need to be validated by external parties and registered with the Ministry of Environment and Water and Ecological Transition (*Ministerio del Ambiente, Agua y Transición Ecológica,* MAATE) to ensure emission reductions are traceable and substantial. Establishing the PECC operational processes will help Ecuador develop an innovative, transparent, and robust emissions reduction data collection and management system, essential for informing the constituencies that feed into a national registry on emissions for the development of voluntary and compulsory carbon markets and international reporting.

65. **The GoE has already issued guidelines and technical criteria for PECC implementation, which establish a nationwide MRV system for GHG mitigation in the economy's productive and services sectors, however, the establishment of a compensation mechanism is still needed**. The relevant ministerial agreements support the implementation of PECC by establishing robust MRV methodologies for various sectors, avoiding double counting and including the appropriate procedures and methodologies for collecting and quantifying information for national GHG reports in a single system. The guidelines, a prior action of the second DPF, are relevant for establishing a structured national process and governance scheme for the accreditation, ample verification, and compensation of GHG emissions reductions by entities participating in the PECC compensation scheme. The guidelines support the recognition and promotion of good practices,

including strong alignment with Ecuador NDC and GHG reduction targets, including those that increase resilience and further adaptation to climate impacts, of participating public and private organizations and collect information for PECC incentive initiatives, including: the Green Initiative Distinction, Green Point Certification for Carbon Reduction, and Green Point Certification for Carbon Neutrality.

66. **Substance of Prior Action (PA#9). The GoE established the compensation mechanism for PECC through Ministerial Agreement No. MAATE 2023-053, which ensures full transparency of transactions, traceability, and compatibility with achieving NDC commitments and enhancing adaptation co-benefits.** The compensation mechanism will use a remuneration arrangement to benefit sectors and eligible activities prioritized in the National Strategy for Climate Change. Eligible activities include conservation actions, sustainable and resilient land-use management and land-use change, restoration of ecosystem services, clean energy generation, solid waste management, industrial processes, low-carbon transport, low-carbon and resilient agriculture productivity, and energy efficiency measures. The mechanism will enable entities to register in a national system[40] and report their activities and commitments while accessing environmental incentives through quantifying, reducing, and neutralizing[41] GHGs emitted**.** Remuneration will reward initiatives that reduce, capture, or remove GHG emissions from a defined baseline and are validated and verified by the MAATE. Remuneration will help ensure sustainability of the proposed activity and distribution to proposed beneficiaries via an approved benefit distribution plan. The development of the carbon emission reduction mechanism will enable Ecuador to build its national capacity to access climate finance and carbon markets by allowing tracking and transparency of emission reduction actions while positioning itself as a relevant referent in the region for developing these types of mechanisms.

67. **Expected Results and Indicators. The policy action will enable at least 50 public and private institutions quantifying intended mitigation measures under the PECC by 2024.[42]** The development of the related MRV system will enable registering public and private entities that access the GHG reduction remuneration scheme and the monitoring, reporting, and verification of low-carbon and sustainable activities. The PECC's combination of effective measurement, the MRV system, and emissions reductions to support low-carbon investments will support all institutions in designing mitigation strategies, enhancing credibility, and implementing mitigation measures. It will also increase transparency on emission reductions while contributing to the carbon neutrality NDC goals and intended low-carbon development growth.

Reduce deforestation and increase resilience of natural forests

Prior Action DPF3	PA#10. To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products. Evidence: (i) (A) Ministerial Agreement No. MAATE-2022-091, issued by MAATE on September 16, 2022, as published in Official Gazette (*Segundo Suplemento*) No. 175 on October 24, 2022; and (B) Ministerial Agreement No. MAATE-2023-052, issued by MAATE on June 7, 2023, as published in Official Gazette (*Cuarto Suplemento*) No. 328 on June 9, 2023; and (ii) Ministerial Agreement No. MAATE 2023-035, issued by MAATE on April 28, 2023 and published in Official Gazette (*Segundo Suplemento*) No. 325 on June 6, 2023.

68. **Rationale and Background. Sustainable forest management is critical to improving the lives of the**

[40] The norm establishing the compensation mechanism for PECC mandates the publication of the National Emission Registry in 2024
[41] Through assessments of GHG emissions and registry of initiatives that sequester and remove GHG from atmosphere, Ecuador would be able to account toward a 'net zero' emission goal, where GHGs concentrations remain stabilized in the long term.
[42] As of October 25, 2022, there were about 254 public and private institutions and six mitigation measures registered under PECC.

vulnerable rural population, reducing deforestation, and developing carbon sinks to achieve a carbon-neutral economy. Ecuador has lost more than 2 million hectares of tropical forest—0.8 percent of its surface area—in the past 26 years, and the deforestation rate has increased by 42 percent since 1990.[43] One key driver of Ecuador's deforestation is land-use change, often caused by rural populations that transform native forests to expand the agricultural frontier.[44] Around 58 percent of the poor and 70 percent of the extreme poor live in rural areas, facing higher climate vulnerability and limited income opportunities. Moreover, rural areas house 80 percent of indigenous peoples, with 53 percent living in poverty. A comprehensive Sustainable Forest Management approach that controls and regulates illegal logging, uses best management practices, and promotes traceability for better market access could reduce deforestation and increase the resilience of native forest ecosystems.

69. **The transition to Sustainable Forest Management requires addressing information asymmetries and economic incentives to reward the positive externalities of forest management plans across Ecuador's rural landscapes.** While some programs, such as *SocioBosque*, offer payments for conservation, these efforts are fragmented and lack the scale to create substantial impacts. Updated policies are needed to tackle financial gaps that contribute to deforestation and to promote conservation and reforestation through larger-scale programs and projects. These policies should provide income opportunities for local communities, facilitate private funding, and enable economic incentives and certifications to guide the transition toward value-added and sustainably managed forest products. The MAATE and Ministry of Agriculture and Livestock (*Ministerio Agricultura y Ganadería*, MAG) have already progressed in this direction by issuing the technical standards for certifying legal origin and good forestry practices (MAATE-MAG-2022-003) and promoting priority environmental investments (including environmental damage prevention, protection, conservation, sustainable business or "*bioemprendimientos*", restoration and environmental remediation) through tax exemptions (MAATE-2022-113), both supported by the second DPF. However, additional efforts will be needed to, for example, require forest management plans and track them and enhance the traceability of timber and non-timber exports.

70. **Substance of Prior Action (PA#10). Building on previous DPF prior action to promote deforestation-free forestry products in rural landscapes, the Borrower has issued the procedure for preparing, approving, registering, and updating integrated and climate-resilient forest management plans, a requirement to demonstrate the legal origin of products and access good practices certificates.** This procedure will allow interested parties to issue government-approved integrated forest management plans, and it will certify the plans' validity and adequate implementation, an important support to promote the needed behavioral change so rural communities can access certification and implement sustainable forest management good practices. The plans will be officially recorded in the Forestry Registry. These sustainable forest management plans are a first key step in demonstrating deforestation-free production, ensuring traceability of information and sustainable management of native forests, and registering the productive activities with authorities. This will enable use of the regulations on legal origin, good practices certificates, and tax incentives issued in October 2022. The procedure will also contribute to monitoring, reporting, and evaluating the progress of sustainable forest management plans and practices across the country, establishing a transparent and standardized process for all parties and a centralized repository of information required for traceability, management, and planning decisions. It will foster the production of sustainably sourced timber value and increase community

[43] UNDP. 2021. *La deforestación en el Ecuador, 1990-2018: Factores, Promotores y Tendencias Recientes*.
[44] In 2018, about 88 percent of agricultural and plantation area was created through the transformation of natural forests. UNDP. 2021. *La deforestación en el Ecuador, 1990-2018: factores, Promotores y Tendencias Recientes*.

benefits through ecosystem services and the availability of public information.

71. **It has also issued a regulation on the traceability of timber and non-timber exports and imports, which will limit illegal timber extraction and deforestation.** This regulation aligns with international standards and requirements, particularly from European markets, on enhancing the traceability of sustainably sourced timber for exports. By complying with these requirements, sustainably and legally sourced timber can access higher-value markets, increasing green value chains and boosting export competitiveness at the same time as improving the livelihoods of the communities associated with sustainable forest management and use. It will also enable MAATE and MAG to track illegal activities, allowing for increased deforestation control and enforcement of applicable restrictions. This regulation will help reduce deforestation and forest degradation, helping to increase critical carbon sinks that can help offset GHG emissions elsewhere and secure potential GHG emission reduction payments.

72. **Expected Results and Indicators. The technical and financial incentives policies included in PA#10 will reduce annual losses in rural forest frontiers by 4 percent by the end of 2024, compared with a baseline scenario (estimated from 2019 data).**

Table 6: DPF Prior Actions and Analytical Underpinnings

Prior Actions	Analytical Underpinnings
Pillar 1: *Tackle selected structural challenges to foster green growth, inclusion, and climate resilience*	
PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.	• GoE and Civil Society Agreement. "Roundtable #1: Subsidy Targeting, Closing Agreement, Annex 2". October 14, 2022. • Bulletin of External Commerce Figures for January to November 2022 period. Ministerio de Producción, Comercio Exterior, Inversiones y Pesca. • EP Petroecuador. Gerencia de Comercialización Nacional. Information on Diesel and Premium Diesel consumption by sector for January-August 2022 Period. • IADB. (2020). Apoyo al Cambio de la matriz energético del Ecuador II. • World Bank (2023) Technical Assistance.
PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.	• Joint Multilateral Development Bank. (2019). Report on Climate Finance. • Mejía, J., González, J., and Franco, G. (2021). Current state and development of green bonds market in the Latin America and the Caribbean. Sustainability, 13(19), 10872. • Restrepo, D., Restrepo, L., Lozada, J., Aguilera, C., Franco, J., Pinela, S., and Costa, L. (2020). The potential of the Green Bond markets in Latin America and the Caribbean. EU-LAC Foundation. • International Capital Market Association. (2021). Green Bond Principles, Voluntary Process for Issuing Green Bonds. • World Bank (2023) Technical Assistance
PA#3. To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.	• WB. (2020). Disaster Risk Financing Strategy for Ecuador. • WB. (2020). Colombia: Public Financial Management Strategy for Disaster Risk. • IMF. (2016). Analyzing and managing fiscal risks—Best practices.
PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants to expecting mothers and children under two.	• Adubra, L., Le Port, A., Kameli, Y., Fortin, S., Mahamadou, T., Ruel, M. T., … and Savy, M. (2019). Conditional cash transfer […] targeting the first 1000 days of life increased attendance at preventive care services but did not improve linear growth in young children in rural Mali: results of a cluster-randomized controlled trial. • Díaz, J., and Saldarriaga, V. (2019). Encouraging use of prenatal care through conditional cash transfers: Celhay, P. A., Johannsen, J., Martinez, S., and Vidal, C. (2021). Can small incentives have large payoffs? Health impacts of a cash transfer program in Bolivia. • Gutiérrez N., Ciuffardi, T., Rokx C., Brousset, H., Gachet, N. (2018). Apuntando Alto:

Prior Actions	Analytical Underpinnings
	Retos de la lucha contra la desnutrición crónica en Ecuador. Gutiérrez, N., Cordero, L. y Puebla, D. (2022). Apuntando alto. Los desafíos de una buena gobernanza para reducir la desnutrición crónica infantil en Ecuador. Documento de trabajo.
PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector	• Orlando et. al. (2018). "Getting to Gender Equality in Energy Infrastructure: Lessons from Electricity Generation, Transmission, and Distribution Projects." Energy Sector Management Assistance Program (ESMAP) Technical Report, No. 012/18. • World Bank. (2022). Gender Responsive Procurement in the Caribbean – A Tool Towards More Inclusive and Resilient Societies. • World Bank (2023). Attracting more young women into STEM fields.
Pillar 2: *Strengthen low-carbon development*	
PA#6. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	• World Bank/KKGTF. (2023) Evaluation of Use of Energy Storage Technologies to Enhance Power System Flexibility in Ecuador. • ESMAP. (2020). Global Photovoltaic Power Potential by Country. • World Bank. (2021). Compromiso con el futuro: Propuestas para superar la crisis y sentar las bases para un crecimiento inclusivo y sostenible en el Ecuador. • Cálculo del Déficit en el Mercado Eléctrico de Ecuador por Efecto de la Pandemia del COVID-19. World Bank (internal document only).
PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.	• World Bank. (2023). Evaluation of Use of Energy Storage Technologies to Enhance Power System Flexibility in Ecuador.
PA#8. The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans.	• Ministerio de Electricidad y energía Renovable. (2017) Plan Nacional de Eficiencia Energetica 2016-2035. • World Bank. (2022). Diagnóstico del potencial de intervenciones en materia de eficiencia energética en edificios públicos del Ecuador.
PA#9. To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.	• Partnership for Market Readiness. (2016). Experience in Developing Legislation to Support South Africa's Mandatory GHG Emissions Reporting Program and National Inventory Data Flow. • Partnership for Market Readiness. (2021). From the Ground Up: A Decade of Lessons on Carbon Pricing. • Using Carbon Revenues—PMR Technical note 16-2019.
PA#10. To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.	• UNDP. (2021). Deforestación en el Ecuador, 1990-2018: Factores, Promotores y Tendencias Recientes. • Ministerio del Ambiente de Ecuador. (2016). Bosques para el Buen Vivir - Plan de Acción REDD+ Ecuador (2016-2025). • Ministerio de Ambiente. (2018). Evaluación Nacional Forestal de Ecuador. • UNDP. (2021). La Deforestación en el Ecuador, 1990-2018: Factores, Promotores y Tendencias Recientes. • Ministerio de Ambiente. (2018). Evaluación Nacional Forestal de Ecuador. • WWF Ecuador. (2022). Análisis del Sistema de Explotación de la Balsa y sus Impactos Socio Económicos y Ambientales en Territorios Indígenas de Amazonía. • NepCon. (2017). Timber Legality Risk Assessment Ecuador. • FAO and WRI. (2022). Timber traceability – A management tool for governments. Case studies from Latin America. Rome.

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

73. **The DPF series play a central role in the WBG's engagement with Ecuador and is fully aligned with the WBG's FY19-FY23 CPF (Report No. 135374-EC, discussed by the Board in June 2019), and the third DPF is aligned with the FY23-FY25 PLR (Report No. 175329-EC, considered by the Board in May 2023).** The CPF focuses on achieving the WBG's twin goals—ending extreme poverty and boosting shared prosperity—through three interdependent areas: (i) Supporting Fundamentals for Inclusive Growth, (ii) Building Human Capital and Protecting the Poor, and (iii) Enhancing Institutional and Environmental Sustainability. Pillar 1 of the proposed DPF series supports CPF objectives under results area (i), (ii), and (iii), and Pillar 2 supports CPF objectives under results area (iii). Additionally, the DPF of this series is very aligned with the Performance and Learning Review (PLR), which gives greater emphasis to human development and social inclusion as well as institutional strengthening to address impacts of climate change.

74. **The third DPF complements ongoing operations and technical dialogue to fight malnutrition and strengthen forest management.** The DPF series has supported various reforms to fight malnutrition in synergy with the Additional Financing for the Social Safety Net Project (P175921) Investment Project Financing. It also supports regulatory reforms on sustainable forest management that could complement a possible lending operation to build the technical and financial capacities to support implementing sustainable forest management policies and sustainable forestry value chains.

4.4. CONSULTATIONS AND COLLABORATION WITH DEVELOPMENT PARTNERS

75. **Consultations on the reforms included in the third DPF operation have taken place through various forms of stakeholder engagements and multiple channels of information exchange and feedback**. In most cases, reforms were developed by the designated authorities in consultation with interested counterparts in other government agencies and entities, before the consultation processes were opened up to include a wider variety of stakeholders. For example, the enactment of a new Law to incentivize women's participation and gender equality in the workplace (PA#5), is linked to a MEM Ministerial Agreement that was itself informed by research on the extent to which the gender equality principles of the Law were known and being applied at the level of selected energy distribution companies. The finalized version of the Ministerial Agreement was then shared with all of Ecuador's energy distributors and socialized in a workshop attended by over 100 of their representatives at the end of January 2023. For its part, a Ministerial Agreement on the traceability of timber and non-timber imports and exports (PA#10), which was just issued by the Ministry of Environment, Water and Ecological Transition (MAATE), was developed through a series of consultation workshops involving foresters, representatives of academia, and other experts. These activities are in addition to the transparency measures built into the Ecuadorian legislative process: prior to their formal consideration, all legal reform proposals are made publicly available online and have two open consultation phases for a minimum of 30 days in the National Assembly. Annex 6 presents additional evidence of the various ways in which ordinary Ecuadorians have had opportunities to express their views on these and other prior actions included in the proposed operation.

76. **This DPF operation forms part of a package of coordinated technical and financial assistance from international partners, including the IMF, IADB, and CAF.** The institutions' staffs have met regularly to coordinate efforts and align messages. Strong complementarities, which exist in selected areas of support, derive from coordinated technical assistance activities. For example, PA#2 under Pillar 1 involved coordination between the CAF (which provided financing) and the Global Green Growth Institute, or GGGI (which provided

technical assistance) for the development of the governance and institutional framework for the issuance of green bonds, in alignment with the Green Bond Principles of the International Capital Market Association (ICMA).

5. OTHER DESIGN AND APPRAISAL ISSUES

5.1. POVERTY AND SOCIAL IMPACTS[45]

77. **The poverty and social impacts of the policies supported by this operation are expected to be positive, with most of the benefits expected to be realized in the medium- and long term.** The operation's poverty and social impact analysis (PSIA) focuses on the potential impact of prior actions on poverty, income distribution, employment, and gender. The quantitative analysis relies on official information, household surveys, own estimations, and academic research. Overall, the set of policies in this operation aims to continue supporting economic recovery in the short term and laying the foundations to achieve sustainable development with broad social benefits in the medium and long runs. The first pillar supports critical elements of the DPF's economic, social, and integral security pillars that will boost productivity, with important effects on reducing poverty, protecting families, and promoting social inclusion for the vulnerable in the medium and long run. The second pillar will promote green growth measures through a low-carbon economy and climate change mitigation and adaptation measures without negative welfare effects in the short run. These measures will create an adequate environment to boost productivity and promote job creation, setting the conditions for poverty reduction in the medium and long run.

78. **Prior actions supported under Pillar 1 are expected to have small impacts on poverty and inequality in the short-term, but positive impacts on household's welfare in the medium to long run.** The removal of the fuel subsidy for large shrimp farms is not expected to significantly impact poverty due to the remaining benefit for small and artisanal shrimp farm production and small businesses in the sector. Financial measures related to green bond issuance and quantifying contingent liabilities caused by climate change and climate-related disasters for PPPs are not expected to significantly impact equity and poverty in the short run. In the long run, indirect positive welfare impacts could be expected by increasing green financing and procuring more resilient infrastructure (e.g., energy, transport, and water sanitation). The implementation of a partly conditional cash transfer (Bono 1000 días) for poor pregnant women and children up to 2 years old is expected to have positive welfare impacts in the medium to long run, considering that investments in early childhood have proven crucial to improve health, economic and social outputs at the individual and society levels. Moreover, increasing women's representation in the power sector is also expected to improve welfare in the medium to long term by addressing gender disparities.

79. **Prior actions supported under Pillar 2 aimed to strengthen low-carbon development are not expected to impact the well-being of poor households in the short term; nevertheless, positive effects are expected in the medium and long term.** Policies aimed at increasing clean energy use, such as the promotion of distributed renewable generation for non-regulated customers and the tariff reduction on lithium batteries, can have medium and long-run welfare effects by increasing private investment in clean energy projects, which could lead to lower generation costs, affordable energy access in remote areas, and job creation. Institutional measures that facilitate energy transition, increase the energy sector's efficiency, and establish a

[45] A comprehensive analysis on the poverty and social impacts can be found in Annex 4.

neutralization mechanism under the PECC for public and private entities can reduce emissions and reduce negative externalities associated with fossil fuels in the long run, such as adverse health impacts, particularly of poor households living near oil fields. Integrated forest management plans and regulations on the traceability of timber and non-timber exports and imports can positively impact the welfare of rural populations by improving sustainable forest management and could create opportunities for poor households in rural areas, including indigenous groups whose subsistence and income depend on forest products.

5.2. ENVIRONMENTAL, FORESTS, AND OTHER NATURAL RESOURCE ASPECTS

80. **In aggregate, policy measures supported by the DPF operation are expected to have positive effects on Ecuador's environment, including forests and other natural resources.** Potential adverse effects from PA#6 related to promoting distributed renewable generation at the industrial and commercial levels and from PA#7 related to the tariffs on lithium batteries to foster the use of clean energy can be adequately managed by Ecuador´s legal framework. Annex 4, and the text below, includes the environmental assessment for each prior action, highlighting the expected effects.

81. **The measures supported under Pillar 1, aiming to tackle selected structural challenges to foster green growth, inclusion, and climate resilience of the proposed DPF, are expected to have overall positive effects on the environment, forests, and other natural resources.** The proposed policy reforms aimed at reducing the diesel subsidy to large shrimp farms (PA#1), setting up a new governance and institutional framework to enable the issuance of green bonds (PA#2), and assessing climate-related expenditures in PPPs (PA#3) are all expected to have a positive effect on Ecuador´s environment, forests, or other natural resources. Eliminating the diesel subsidy for large shrimp farms (PA#1) is expected to incentivize more efficient fuel use and a reduction in GHG emissions derived from fuel consumption. Better-allocating climate expenditures (PA#2) and enhancing the capacity to assess climate-related contingent liabilities and quantify disaster risks (PA#3) are expected to have a positive effect on the environment as it will promote more efficient use of resources. Actions under PA#4 and PA#5, related to fostering inclusion and social resilience, are expected to have neutral impacts on the environment and natural resources.

82. **Policy measures supported by Pillar 2 related to strengthening low-carbon development are expected to have positive effects on the environment, forests, or other natural resources**. PA#9 will promote resilience and carbon neutrality in non-forest areas, and it is expected produce positive effects for the environment in a country aiming to achieve carbon neutrality in the productive and services sectors. PA#10, which foster sustainable forestry management by promoting deforestation-free integrated forest management plans and enacting regulations on the traceability of timber and non-timber exports and imports are expected to result in better forest conservation while promoting sustainable management practices.

83. **PA#6 fosters the modernization of the regulatory framework to promote distributed renewable generation at industrial and commercial levels and PA#7 reduces the tariffs on lithium batteries to encourage the use of variable renewable energy[46] while helping balance the grid. Both measures are expected to result in positive effects for the environment through lowering the GHG emissions profile in the energy sector.** However, negative effects on the environment could result from the inadequate installation, connection, and operation of distributed renewable energy generation systems and poor

[46] Variable renewable energy refers to intermittent generation such as solar and wind energy generation.

management of batteries disposal. Potential risks from the installation and operation of clean energy projects will be managed under Environmental Organic Code No. 983, 2017 (article 172 to 190), which requires project developers to prevent and reduce potential environmental impacts and requires notification if an impact is caused.

84. **There are no standards in place to regulate lithium specifically, but Ecuador has a strong regulatory system that enables the proper management and disposal of products that fall into the hazardous products/waste category**. This system would cover the risks that may arise from improper management and disposal of lithium batteries. The regulatory powers lie within the MAATE legal framework to manage hazardous waste and, more specifically, with compliance and enforcement powers derived from (i) the Environmental Organic Code, which establishes macro criteria for the management of hazardous products and waste; (ii) the Political Constitution of the Republic of Ecuador, which establishes the prevention of environmental damage as a priority (article 14) and mandates effective mechanisms for the prevention and control of environmental pollution, regulating the production, importation, distribution, use, and final disposal of toxic and hazardous materials for people or the environment (article 397); (iii) Ministerial Agreement 161, which regulates the prevention and control of contamination by hazardous chemicals as well as hazardous and special wastes; (iv) Ministerial Agreement 026, which regulates from the administrative point of view the generation, transportation, and treatment of hazardous waste; and (v) Ecuadorian Technical Standard 807-4:2010, which establishes basic criteria for the management of lithium batteries. In addition, it is expected that Ecuador will develop specific e-waste regulation and collection programs by 2025.[47]

85. **Regarding the GoE's capacity for effective implementation and enforcement of PA#2, several measures have been put in place**. The Ecuadorian Sovereign Green Bond Framework, supported by various ministries, including MAATE and MEF, incorporates the assessment and management of environmental risks in Section 2.2. Environmental considerations are required in project proposals, which the GoE subsequently reviews. The framework also establishes a reporting and monitoring process that builds upon existing mechanisms within *Planifica* and sectoral ministries. In addition, independent external auditors will oversee annual impact reports (page 29). The GoE receives technical assistance and capacity building from CAF and the GGGI to further strengthen its implementation efforts and build capacity.

86. **Regarding PA#10, the MAATE plays a supervisory role as the forestry management plans and traceability of timber and non-timber exports are carried out by certified private professionals**. To streamline and automate the processes for both procedures, MAATE is currently developing digitalization initiatives. This effort will be covered under a Unified Environmental Information System. In addition, MAATE collaborates with the MAG and the Ministry of Foreign Affairs to enhance traceability coordination, part of PA#10. The green climate fund and KfW has also been providing training to improve capacity to develop the forestry management plans, also part of PA#10. Technical support from organizations like German Agency for International Cooperation (GIZ) and UN Food and Agricultural Organization (FAO) has been assisting MAATE in both processes.

5.3. PFM, DISBURSEMENT, AND AUDITING ASPECTS

87. **Ecuador has improved its public financial management (PFM) system and its foreign exchange**

[47] See https://incompliancemag.com/article/latin-america-regulators-embracing-e-waste-and-battery-collection-laws/.

(FOREX) internal control environment. Based on this, the assessment concludes that the management of budget resources and the FOREX control environment do not involve major risks to the development objectives of the operation, resulting in a moderate risk.

88. **The most recent Public Expenditure and Financial Accountability (PEFA) assessment (April 2019) concluded that Ecuador's PFM is partly aligned with international best practices.** Its main strengths are a strong regulatory framework and the integrated financial management system (known as e-SIGEF) that registers operations and transactions at the central government level. The annually approved budget and its execution reports are publicly available on the MEF internet site. The main challenges were *inter alia*: (i) the need to strengthen transparency in public finances; (ii) weaknesses in asset and liability management; (iii) a lack of aggregate fiscal discipline; (iv) the need to improve fiscal strategy and the budget management and control framework; (v) the need to improve internal controls and external oversight of the public finances. Some of these challenges are being addressed through gradual implementation of a number of reforms introduced in July 2020,[48] including: (i) a four-year medium-term fiscal framework (MTFF); (ii) a scaling-up of the scope of fiscal rules; (iii) a reduction in the margin for approving changes to the central government budget; and (iv) better integration of the public investment operations into annual budgets.

89. **Budget predictability, reporting, and control. The general government budget is made publicly available.[49]** Policies and priorities are explicit in the regulatory framework, including the Constitution, the COPLAFIP, and the NDP. The COPLAFIP requires budget projections for the next four years, prepared on a rolling annual basis. The 2023 budget pro forma included 2022-2026 forecasts fiscal aggregates based on economic classifications.

90. **Treasury.** The resources of the central government are managed through a Single Treasury Account (STA) using the e-SIGEF system. However, there are still some weaknesses, mainly due to limitations for preparing adequate cash projections and the establishment of ceilings, which also generated poor control of payment arrears. To avoid liquidity constraints, MEF has established additional layers of control over payments related to fixed assets and transfers. There is room to improve by exercising centralized control over cash payments and upgrading cash forecast mechanisms. The PFM reform plan also covers these issues by implementing a new monitoring system to evaluate the central government's existing stock of domestic payment arrears.

91. **Government accounting and financial reporting.** Ecuador's public accounting records are prepared on an accrual basis. The country is pursuing a gradual convergence to International Public Sector Accounting Standards (IPSAS) and has put a comprehensive plan in place to that end. The GoE prepared and issued the first financial statements with partial alignment to IPSAS for calendar year 2021, and the statements are publicly available on the MEF's website. The conversion process to IPSAS will continue in upcoming years.

92. **Public procurement system.** Public procurement is governed by the Public Procurement Law (*Ley Orgánica del Sistema Nacional de Contratación Pública*), with its amendments and rulings, which establishes

[48] In July 2020, the National Assembly approved a COPLAFIP reform, which introduced key adjustments to the normative framework. Some of these reforms were supported through previous DPF operations: First Inclusive and Sustainable Growth DPF (P169822), Second Inclusive and Sustainable Growth (P171190), and the Third Inclusive and Sustainable Growth Development Policy Loan (P174115).

[49] The central government budget is available at the MEF's website (*https://www.finanzas.gob.ec/ejecucion-presupuestaria/*) and the subnational level budgets are available at the website of each subnational government. The COPLAFIP reform approved in July 2020 requires all government entities to submit their budgets to the MEF for publication.

the criteria to carry out procurement with transparency, efficiency, competitivity, equality, and integrity. The law complies with good international practices on the control of public procurement regarding independent control institutions and the existence of defined control mechanisms under the direction of the General Comptroller. In 2021, the President approved a new decree (Decree No. 155) that requires the country's Supreme Audit Institution (*Contraloría General del Estado*, CGE) to issue a pertinence report for public procurements before they can be initiated. The GoE prepared a reform to the Public Procurement Law, which has been under discussion in the National Assembly since 2021. In addition, the National Procurement Entity (*Servicio Nacional de Contratación Pública*, SERCOP), after numerous consultations with several sectors, prepared a new regulation of the Public Procurement Law that entered into force in August 2020 and was made official through a Presidential Decree in June 2022. The new regulation includes clauses related to beneficial ownership and sustainable procurement, among other topics. For public procurement, the electronic procurement system (*Compras Públicas*) is mandatory, easily accessible, and free for all user levels, providing information on contracting terms and the variety of goods available. The GoE developed a sustainable public procurement strategy that was made official through a resolution issued by SERCOP in October 2022. This strategy enables government entities to utilize sustainable procurement criteria in their processes, focusing on a direct reduction in dangerous wastes, improving efficiency, and other benefits in purchasing goods and services. SERCOP is currently developing specific tools and guidance notes to better implement the objectives of the sustainable procurement strategy. In light of these events, no major procurement risks related to implementation of the prior actions are expected.

93. **External scrutiny of public expenditures.** The country's normative framework establishes the obligation to present GoE financial statements to CGE. Nevertheless, there is no specific date for such presentation, and the CGE has no obligation to issue an opinion on the financial statements.

94. **Foreign exchange management. Ecuador's official currency is the USD.** The Central Bank of Ecuador (*Banco Central de Ecuador*, BCE) has made progress since the latest IMF safeguard assessment completed in 2019 by gradually implementing reforms aimed at strengthening its transparency and accountability framework. Based on an agreement with the IMF on the EFF program, the BCE has introduced structural reforms to improve its governance arrangements, including the creation of an audit committee, a strengthened internal audit function, and implementation of International Financial Reporting Standards (IFRS).[50] In that regard, the IMF sixth and final review of the EFF program for Ecuador of December 14, 2022, concluded that the independence of the Central Bank had been strengthened. BCE is regularly audited by an international auditing firm, and its audited financial statements are published on its website in a timely manner.[51] The 2022 audit was conducted in accordance with International Standards on Auditing, and the auditors issued an unqualified opinion on the financial statements. Such improvements provide a reasonable assurance that the resources channeled by the WB will be subject to an adequate level of control. As an additional mitigating factor, the resources will be channeled through Ecuador's STA system, which has an adequate level of control due to automation of the e-SIGEF system.

95. **Disbursement arrangements.** The current operation will follow the same fiduciary design and disbursement arrangements as previous DPFs. Based on this, the WB would disburse the financing proceeds, denominated in US dollars, into a bank account held by the BCE that forms part of the country's official foreign exchange reserves. After receiving the funds in such an account, the GoE will transfer the proceeds into the

[50] As part of the 2021 audit, auditors noted the BCE is gradually adopting IFRS.
[51] The audited financial statements for the year 2022 are available.

STA managed by the MEF. The Borrower, within 30 days after the withdrawal of the financing from the loan account, shall report to the Bank: (i) the exact sum received into the bank account held by the BCE; (ii) the details of the account to which the equivalent of the financing proceeds will be credited; and (iii) the record that an equivalent amount has been accounted for in the Borrower's budget management systems.

96. **Closing Date**. The closing date of the proposed operation is December 31, 2024.

5.4. MONITORING, EVALUATION AND ACCOUNTABILITY

97. **The MEF will be the main coordinating agency for monitoring and evaluating other participating ministries.** The prior actions detailed in this operation are the prime responsibility of the following ministries and agencies: MEF, Ministry of Production, Investment, Commerce and Fisheries, National Planning Agency, Ministry of Labor, Ministry of Economic and Social Inclusion (*Ministerio de Inclusión Económica y Social*, MIES), Ministry of Foreign Affairs and Human Mobility, MEM, MAATE, Internal Revenue Service, and the Office of the Presidency. MEF will coordinate with other ministries to monitor the results indicators based on publicly available information. The WB will monitor the implementation of the DPF through regular supervision missions.

98. **Program outcomes will be monitored by measuring progress toward achieving results indicators included in the policy and results matrix (Annex 1).** They will be evaluated following the disbursement of the third DPF. MEF will be responsible for presenting the information related to the reform implementation and progress made toward results on time upon request and in a format satisfactory to the WB.

99. **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 WB Development Policy Financing may submit complaints to the responsible country authorities, appropriate local/national grievance mechanisms, or the WB's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed to address pertinent concerns. Project-affected communities and individuals may submit their complaints to the WB's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred or could occur due to WB non-compliance with its policies and procedures, and the Dispute Resolution Service, which provides communities and borrowers with the opportunity to address complaints through dispute resolution. Complaints may be submitted at any time after concerns have been brought directly to the WB's attention, and WB Management has been given an opportunity to respond. For information on how to submit complaints to the WB's corporate GRS, please visit http://www.worldbank.org/GRS. For information on how to submit complaints to the WB's AM, please visit https://accountability.worldbank.org.

6. SUMMARY OF RISKS AND MITIGATION

100. **The overall risk of this operation is substantial.** Key risks include political and governance risks, macroeconomic risks, institutional capacity, fiduciary risks, and stakeholder risks, some of which cannot be fully mitigated (Table 7). However, a strategic approach allows the DPF series to be adjusted if these risks

materialize. Specific risks, along with mitigation measures, are discussed below.[52]

101. **Political and governance risks are high.** The recent dissolution of the National Assembly and call for early elections has increased political uncertainty about Ecuador's future policy stance and the continuity of some measures the current administration has implemented. To mitigate this and other political and governance risks, this DPF series has mainly supported policies that would not be reversed by a wide range of the political spectrum, including all those measures that help Ecuador to deal with climate change challenges. Following this principle, the prior actions of this DPF mainly support relevant and uncontentious measures that, in most cases, underpin the reforms supported by the two previous DPFs. This DPF does not include the urgent economic measures the GoE has submitted for review by the Constitutional Court since the National Assembly was dissolved.

102. **Macroeconomic risks are substantial.** Ecuador could be hit by the compounding international crises that are increasing international interest rates, dampening economic recovery, and reducing commodity prices. The country is also exposed to natural disasters like floods and earthquake, weaker-than-expected recovery of private investment, and lower-than-expected oil production. Despite the strong track record in fiscal consolidation attained in recent years, Ecuador is also exposed to delays in the ongoing fiscal consolidation resulting from the ongoing political transitions that will lead to early elections in 2023 and a new general election in 2025, which could delay the sovereign bond issuance, increasing refinancing risks. Without a new IMF program or a return to the international capital market based on prudent fiscal management, the upcoming administrations would need additional financing from official creditors to complete their fiscal consolidation and be able to repay rising debt service. However, these macroeconomic threats do not entail a high risk for this DPF program to achieve its Program Development Objectives or the implementation of the prior actions. Moreover, some actions supported by this DPF series aim to mitigate fiscal risks by, for example, supporting measures to make fiscal accounts more resilient and improving the fiscal balance to accumulate fiscal buffers and regain access to international capital markets. Although President Lasso has recently called for early elections, widely supported dollarization, and limited access to external financing are expected to preserve prudent fiscal management in many political scenarios.

103. **Institutional implementation capacity risks are substantial.** The GoE is deeply committed to the proposed program, but implementation capacity is low. The authorities have mobilized technical assistance, including expertise from the WB, in many areas supported by this operation to mitigate these risks. WB's technical assistance includes support for enhancing institutional governance for issuing sovereign green bonds, improving fuel subsidy targeting, designing an instrument to measure and manage climate-related risks, and setting up the institutional arrangement to promote energy transitions. Other multilateral donors have also provided significant technical support. The WB's dialogue is supported by and closely coordinated with the IMF, IADB, and CAF to avoid duplication and enhance synergies.

104. **Stakeholder risks are substantial.** Although the selection of prior actions has factored into local political economy considerations, political and social tensions can adversely affect the successful implementation of the overall GoE reform agenda. This operation seeks to mitigate stakeholder risks by assessing the scope of potential opposition extending beyond the specific operation. The GoE mitigates these risks through consultations to ensure that critical reforms are well communicated and understood.

[52] There are allegations of forced labor in the production of solar panels and components. This DPF focuses on policies and institutional reforms in Ecuador. DPF proceeds are not earmarked to any specific purpose, including the manufacture or procurement of solar panels or components

Table 7: Summary risk ratings

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

ANNEX 1: POLICY AND RESULTS MATRIX

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
Pillar 1- Tackle selected structural challenges to foster green growth, inclusion, and climate resilience						
1. Improve fiscal management by increasing tax collection in an inclusive, transparent, efficient, and green way, focalizing the fuel subsidy, and enhancing the institutional framework to deal with climate-related challenges.		**PA#1.** To make Ecuador's tax system more progressive, transparent, and climate-friendly, the Borrower has enacted legislation which: (i) introduces measures to improve progressivity (i.e., temporary wealth tax for 2022, reduction of income tax credits for the top income quintile) and define and identify beneficial owners; and (ii) eliminates the ICE for electric and hybrid vehicles. Evidence: (i) Articles 5-11, 40, 43, and 189 and (ii) Articles 60-61, respectively, of the *Ley Orgánica para el Desarrollo Económico y Sostenibilidad Fiscal Tras la Pandemia COVID-19,* as published in Official Gazette (*Tercer Suplemento*) No. 587 on November 29, 2021.		**RI#1.** Increase in Central Government Tax revenues, excluding tariffs and the tax on transfers abroad (ISD), US$ million.	2019= 12,048	At least 14,320
				RI#2. Increase the share of imported electric and hybrid vehicles, percent of imported vehicles.	2021= 3.8	At least 6.0
			PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms. Evidence: Executive Decree No. 614 issued on December 2, 2022.	**RI#3.** Increase PetroEcuador diesel sales to the large shrimp farms as a percentage of its total fuel sales, excluding sales to transport, tuna, and fishing.	2021= 6.9	At least 10.0
	PA#1. To facilitate the mobilization, access and monitoring of public financing flows for climate change mitigation and adaptation programs, the Borrower has established a " Institutional Committee for Financing and Thematic Monitoring (*Comité Institutional de*	**PA#2.** To better monitor and manage climate-change-related expenditures, the Borrower has expanded its budget tagging mechanisms to include climate change policy expenditures and made their use mandatory for all public sector entities in budget		**RI#4.** Increased the number of central government's budgets submitted to the	0	2

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	Financiamiento y Seguimiento Temático)" with the mandate of supporting the development, consolidation, coordination, and implementation of national strategies for accessing financing, and implementing economic and financial policies, for climate and sustainable development, as evidenced by Ministerial Agreement No.0097 issued by the Minister of Economy and Finance (October 15, 2021).	preparation from 2024 onward. Evidence: Ministerial Agreement No.0065, made by the MEF on September 22, 2022, and published in the Official Gazette (*Cuarto Suplemento*) No. 160 on September 30, 2022.		National Assembly (pro forma) using the COGPACC.		
			PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds. Evidence: Inter-Ministerial Agreement No. MEF-SNP-MAATE-01 signed by MEF, MAATE and SNP on June 5, 2023.	**RI#5.** Increase the number of pre-identified projects that could be financed by sovereign green bonds.	0	2
		PA#3. To better manage fiscal risks due to climate and natural hazards, the Borrower has required the public sector entities involved in PPPs to use new guidelines for defining contingent government liabilities caused by climate and other climate-related disasters in designing, structuring, bidding, and contracting of PPPs. Evidence: Ministerial Agreement No. 0018 issued by MEF on April 4, 2022, as published in the Official Gazette (*Tercer Suplemento*) No. 43 on April 14, 2022.	**PA#3.** To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects. Evidence: Ministerial Agreement No. 028 issued by MEF on June 3,2023, as published in Official Gazette No. 333 on June 16, 2023.	**RI#6.** Increase the number of PPP projects assessed using the methodology to identify contingent liabilities related to climate and other climate-related disasters.	0	At least 5
	PA#2. To reduce trade barriers, the Borrower has: (i) reduced the tariffs of 796 tariff lines, as evidenced by the following resolutions of the Foreign Trade Committee (*Comité de Comercio Exterior*) (COMEX): Resolution No. 007-2021 adopted on May 20, 2021 and effective May 31, 2021; and Resolution No. 009-2021 adopted July 9, 2021 and fully			**RI#7.** Increase in the percentage of imports benefiting from the measures (reducing tariffs and non-tariff measures).	0	At least 30

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	effective as of October 1, 2021; and (ii) in accordance with the recommendation of *Informe Técnico* No. MPCEIP-CTCE-008-2921 approved by the COMEX on July 22, 2021, eliminated one or more pre-import control documentation requirements with respect to 1,466 tariff subheadings, as evidenced by COMEX Resolution 010-2021 adopted on July 22, 2021, as published in the Official Register (*Suplemento*) No. 527 on August 31, 2021.					
2. Strengthen mechanisms to support vulnerable groups, including women, and help to close the gender gap.	**PA#3.** To protect vulnerable populations, the Borrower has: (i) modified Executive Decree No. 712 of April 11, 2019, which established the Social Registry and its related administrative units, by enhancing the management of the Social Registry by targeting and including households and individuals (in addition to families) as well as the most vulnerable groups including those without administrative data, the future establishment of a model for permanent updating of the Social Registry, and mandating public executive agencies to provide their registers of data requested by the Social Registry Unit (e.g., on identity, tax, social security, socioeconomic status) to help keep the Social Registry updated and generate inputs for social protection policies and programs, and raising the profile of the Social Registry Unit by attaching it to the Presidency, as evidenced by Executive Decree No. 228 issued on October 20, 2021, as published in the Official Register (*Suplemento*) No. 575 on November 11, 2021 ; and (ii) (A) approved the implementation of a prioritized package of goods and services	**PA#4.** To foster inclusion and social resilience to support vulnerable groups (victims of climate-related and other natural disasters, malnourished children, malnourished pregnant women, and migrants), including those exposed to climate-related threats, the Borrower has: (i) created the RUAD and provided for it to be supplied with information from the Social Registry, as a tool for identifying and supporting to people at risk from natural disasters, such as vulnerable households headed by single women; (ii) issued "Guidelines in the framework of the implementation of 'Budget for Results' for the reduction of Chronic Child Malnutrition", for aligning the budget with the coverage goals of the prioritized package; and (iii) (A) issued regulations for granting humanitarian visas, including for victims of human trafficking and natural disasters, and for declaring extraordinary migratory regularization processes and amnesties; and (B) granted a migratory amnesty and initiated a process for extraordinary migratory regularization of migratory status to Venezuelan migrants. Evidence: (i) Tripartite Agreement among the		**RI#8.** Increase the percentage of poor female-headed households (without a partner) settled in parishes with the greatest vulnerability to disasters registered and potentially eligible at RUAD.	2019= 20	At least 80
			PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two. Evidence: Executive Decree No. 435, issued on June 1, 2022, as published in Official Gazette (*Tercer Suplemento)* No. 84 on June 15, 2023.	**RI#9.** Increase the percentage of pregnant women and children younger than 2 years old who receive timely health check-ups, birth registration, and, according to their poverty status, receive	August 2020= 14.3	At least 30

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	for pregnant women and children under 24 months of age to combat child and maternal malnutrition and (B) mandated an annual statistical survey of chronic child malnutrition rates, as evidenced by Executive Decree No. 1211 issued on December 15, 2020, as published in the Official Register (*Suplemento*) No. 356 on December 23, 2020.	Social Registry Unit, the National Risk Management and Emergencies Service, and the Ministry of Economic and Social Inclusion dated July 14, 2022, as published in Official Gazette (*Segundo Suplemento*) No. 156 on September 26, 2022; (ii) Interinstitutional Agreement issued by the MEF and the Ecuador Grows Without Child Malnutrition Technical Secretariat on August 11, 2022, and published in the Official Gazette (*Tercer Suplemento*) No. 154 on September 22, 2022; and (iii) Executive Decree No. 354, issued on February 18, 2022, as published in Official Gazette (*Tercer Suplemento*) No. 18 on March 10, 2022, and Executive Decree No. 436 issued on June 1, 2022, as published in Official Gazette (*Tercer Suplemento*) No. 84 on June 15, 2022.		child development services and cash transfers.		
				RI#10: Increase the number of Venezuelan migrants: (i) registered at the Migrant Registry with relevant certificates; and (ii) granted VIRTE visa.	0	Registered with relevant certificates: At least 221,500 (of which 50% female); VIRTE: At least 176,497 (of which 50% female)
			PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector. Evidence. (i) *Ley Organica para Impulsar la Economia Violeta*, as published in Official Gazette (*Suplemento*) No. 234 on January 20, 2023; and (ii) Ministerial Agreement No. MEM-VEER-2023-0001-AM, issued by MEM on March 8, 2023, as published in Official Gazette No. 278 on March 28, 2023.	**RI#11.** Increase in the percentage of competitive processes for the procurement of services and works in the electricity sector that adhere to gender-inclusive qualification criteria.	2022=0	2024=100
Pillar 2: Strengthen low-carbon development						
3. Facilitate a low-carbon developme	**PA#4.** To facilitate private investment in energy generation (including from non-conventional renewable sources) and electromobility, the Borrower has enacted	**PA#5.** To facilitate private investment in non-conventional renewable energy, the Borrower has issued the regulation entitled "Economic and Tariff Regime for the	**PA#6.** The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	**RI#12.** Increase renewable energy generation capacity awarded	310	At least 650

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
nt by mobilizing private capital for clean energy provision, fostering energy efficiency, and decarbonizing the transport sector.	the Organic Law Reforming the Law of the Public Electric Energy Service (*Ley Orgánica Reformatoria a la Ley Orgánica del Servicio Público de Energía Eléctrica*) which removes certain obstacles to private financing of non-conventional renewable electric generation and electric vehicle charging projects (e.g., clarifies operation license and concession termination events, lowers barriers to transfers of minority interests, provides for the authorization and regulation of commercial electric vehicle charging, and allows security interests in immovable project assets and transferability of license rights in favor of financiers), as published in the Official Register (Suplemento) No. 452 on May 14, 2021.	provision of Electric Energy and General Public Lighting utility services" which establishes an order of priority of payments that prioritizes private electric generation. Evidence: Resolution No. 033/21, issued by ARCERNNR on December 14, 2021, as published in Official Gazette No. 622 on January 20, 2022.	Evidence: Resolution No. ARCERNNR 017/2023, issued by ARCERNNR on May 24, 2023.	through PPS, MW.		
	PA#5. To reduce energy costs, increase productivity and create jobs, the Borrower, through the Agency for Regulation and Control of Energy and Non-Renewable Natural Resources, has issued the regulatory framework for the qualification, connection, installation and operation of small (less than 1 MW) renewable distributed generation systems for self-supply, as evidenced by Resolution No. ARCERNNR-013/2021 (containing Regulation No. ARCERNNR-001/2021) (April 5, 2021).		**PA#7.** The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources. Evidence: COMEX Resolution No. 001-2023 adopted on February 24, 2023, and effective March 1, 2023.			
	PA#6. To promote consumer-side energy efficiency and reduction of greenhouse gas emissions, the Borrower has issued the General Regulations of the Organic Law on Energy Efficiency (*Reglamento General de la Ley Orgánica De Eficiencia Energética*), establishing the roles and responsibilities of	**PA#6.** To improve energy efficiency in the economy's productive sectors and reduce GHG emissions, the Borrower has issued a regulation requiring public and private enterprises operating oil fields to take measures to reduce associated gas flaring. Evidence: Ministerial Agreement No. MEM-		**RI#13.** Decrease volume of associated gas flared, percent.	0	At least 15
			PA#8. The Borrower has mandated that all public and semi-public power companies in the power sector prepare	**RI#14.** Decrease energy consumption as	0	At least 3,000

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	the National Committee on Energy Efficiency (CNEE); the selection criteria, functions and governance for the CNEE's Advisory Council consisting of representatives from interested energy consumers, academia, professional unions, productive sectors, and civil society; the classification of energy consumers by sector and energy use (large, medium and small); obligations of large energy consumers to report periodically on their energy use, energy efficiency measures implemented and the results thereof, and to implement in their operations and (starting 2025) obtain certification under ISO 50001 (Energy Management) standards; requirements for entities to register as Energy Auditors, Energy Managers (under ISO 50001), or Energy Service Companies in the national Catalog of Energy Services Providers; mechanisms for the promotion of energy efficiency projects and the methodology for prioritizing and evaluating them; and policy mechanisms for meeting the targets in the national energy efficiency plan (such as "energy efficient" labeling of products and buildings, and issuing "energy savings" certificates to projects that demonstrate energy savings or carbon emissions avoided, entitling them to benefits such as lower tariffs), as evidenced by Executive Decree No. 229 issued on October 20, 2021, as published in the Official Register (*Suplemento*) No. 575 on November 11, 2021.	MEM-2022-0047-AM, issued by MEM on September 24, 2022, and published in Official Gazette No. 175 on October 24, 2022.	five-year energy efficiency plans**.** Evidence: Ministerial Agreement No. MEM-MEM-2023-0010-AM, issued by MEM on May 12, 2023.	per NDP 2021-2025, kBOE.		
	PA#7. To promote a more efficient, greener and safer road transport sector, the Borrower has enacted the Organic Law Reforming the Organic Law on Land Transportation, Transit			**RI#15.** Decrease CO_2 emissions from transport, percent change	2018= 0	2025= At least 2.0

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	and Road Safety (*Ley Orgánica Reformatoria de la Ley Orgánica de Transporte Terrestre, Tránsito y Seguridad Vial*) that establishes incentives for the use of sustainable, environmentally-friendly means of transportation (including walking, bicycle use, and zero emissions vehicles), "green" labeling of license plates of electric/zero-emission vehicles to give effect to the applicable incentives, and enhanced measures for road safety, as published in the Official Register (*Suplemento*) No. 512 on August 10, 2021.			from BAU (2018).		
4. Enhance measurement and reporting of GHG mitigation initiatives and improve sustainable forest management	**PA#8:** To strengthen the ability of different sectors to monitor collect and report information on greenhouse gas emissions, and of the Borrower to prepare national greenhouse gas inventories and monitor its nationally determined contributions in relation to GHG reduction in the context of the Enhanced Transparency Framework of the Paris Agreement, the Borrower, through the Ministry of Environment, Water and Ecological Transition (MAATE) and with participation and input from relevant sector stakeholders, has issued and made public on its website four new technical guides containing updated procedures and methodologies for the collection, assessment and management of data required for the preparation of national greenhouse gas inventories, for the following sectors: (i) agriculture; (ii) waste; (iii) industrial processes and product use (mineral products category); and (iv) energy (fuel combustion in manufacturing and construction subcategory), as confirmed by Circular No.	**PA#7.** To support tracking the contribution of GHG emission reduction to its NDCs, the Borrower has issued organization- and product-level guidelines and technical criteria for the implementation of the Ecuador Carbon Zero Program, which establish a MRV system for GHG mitigation in productive and service sectors of the economy. Evidence: The following Ministerial Agreements issued by MAATE: No. 2021-046, issued on October 18, 2021, as published in Official Gazette (*Suplemento*) No. 128 on August 17, 2022, and No. 2021-047, issued on October 18, 2021, as published in Official Gazette No. 129 on August 18, 2022.	**PA#9.** To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives. Evidence: Ministerial Agreement No. MAATE 2023-053 issued by MAATE on June 11, 2023, as published in Official Gazette (*Tercer Suplemento*) No. 333 on June 16, 2023.	**RI#16.** Increase the number of public and private institutions quantifying intended mitigation measures under the PECC.	Oct 2021=0	At least 50

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
	MAAE-MAAE-2021-0228-C dated October 20, 2021 from the Minister of Environment, Water and Ecological Transition to the Minister of Agriculture and Livestock, the Minister of Energy and Non-Renewable Natural Resources, the Minister of Production, Foreign Trade, Investment and Fisheries, and the Undersecretary of Environmental Quality of MAATE.					
	PA#9. To foster greenhouse gas emission reductions in all productive sectors of the economy, the Borrower has created the Ecuador Carbon Zero Program (*Programa Ecuador Carbono Cero*) (PECC), which establishes the processes and requirements for private and public institutions to quantify, reduce and offset/compensate their carbon emissions, and obtain one of three different "green" certifications for their climate change mitigation and adaptation actions (i.e., carbon footprint quantification; carbon reduction; or carbon neutrality) and its associated benefits, as evidenced by Ministerial Agreement No. MAAE-2021-18 issued by the Ministry of Environment and Water on May 6, 2021.					
		PA#8. To promote value-added production in rural landscapes, the Borrower has issued technical standards for the issuance of certificates of legal origin and voluntary certificates of good forestry practices, which are tools promoting deforestation-free forestry products, for example, as conditions for public contracting for wood purchases and obtaining lumber export licenses. Evidence: Interministerial Agreement No. MAATE-MAG-2022-003, made by MAATE	**PA#10.** To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest	**RI#17.** Decrease the annual forest loss in rural/forest frontiers, percent change from BAU (2019).	2019=0	At least 4

Objective	Prior Actions and Triggers			Results		
	Prior Action (PA) under DPF 1	Prior Actions (PA) under DPF 2	Prior Actions (PA) under DPF 3	Results Indicator (RI)	Baseline 2020	Target 2024
		and MAG on September 19, 2022, as published in Official Gazette (*Tercer Suplemento*) No. 177 on October 26, 2022.	products. Evidence: (i) (A) Ministerial Agreement No. MAATE-2022-091, issued by MAATE on September 16, 2022, as published in Official Gazette (*Segundo Suplemento*) No. 175 on October 24, 2022; and (B) Ministerial Agreement No. MAATE-2023-052, issued by MAATE on June 7, 2023, as published in Official Gazette (*Cuarto Suplemento*) No. 328 on June 9, 2023; and (ii) Ministerial Agreement No. MAATE 2023-035, issued by MAATE on April 28, 2023 and published in Official Gazette (*Segundo Suplemento*) No. 325 on June 6, 2023.			
		PA#9. To promote private sector financing for priority environmental conservation, restoration, remediation, and bio-enterprise projects, including sustainable forest management projects, the Borrower has issued a regulation for the qualification of such projects the financing in which entitles the donor/investor to an additional 100 percent income tax deduction, and for the certification of beneficiaries of those tax deductions. Evidence: Ministerial Agreement No. MAATE-MAG-2022-113, made by MAATE on October 21, 2022, as published in Official Gazette (*Segundo Suplemento*) No. 177 on October 26, 2022.				

ANNEX 2: FUND RELATIONS ANNEX

Ecuador—Assessment Letter for the World Bank
July 13, 2023

At end-2022 Ecuador completed the 27-month Extended Fund Facility (EFF) that disbursed a total of US$6.5 billion since its approval in September 2020. Following the program's conclusion, risks to the outlook have shifted to the downside amid the ongoing political uncertainty, natural disasters, lower oil production and prices, tighter financial conditions, and worsening security situation. Maintaining prudent fiscal policy remains key to ensure debt sustainability and re-establish market access.

1. **The IMF Executive Board concluded the sixth and final review of the 27-month Extended Fund Facility (EFF) in December 2022.** The program helped Ecuador recover from the pandemic, restore fiscal sustainability with more equity, reduce procyclicality of fiscal policy with respect to oil prices, improve the quality of fiscal statistics, strengthen the basis for dollarization, and advance the transparency and anti-corruption agenda. Following the completion of the EFF-supported program, a Post Financing Assessment (PFA) has been initiated for Ecuador.

2. **The political situation remains uncertain with upcoming electoral cycles.** The President dissolved the National Assembly and called for early presidential and legislative elections on May 17, amid an ongoing impeachment process. The elections are slated for August 20, with a presidential run-off scheduled for October 15, if needed. In case of a second round, the elected president would take office on November 30. The new administration will remain in office until the next general election in 2025. Ecuador's sovereign risk remains elevated amid the political uncertainty.

3. **Growth in 2022 was strong, but a slowdown is underway.** Real GDP in 2022 expanded by 2.9 percent, mostly driven by private consumption. In 2023, first quarter real GDP growth of 0.7 percent year-on-year and other high frequency indicators point to a sharp and broad-based slowdown, including due to oil production disruptions. Growth for the whole year was projected at about 2½ percent, but the near-term outlook has worsened and downside risks have increased. Inflation in 2022 rose to 3½ percent, reflecting higher energy and food prices, but has eased since 2022H2 and is forecasted to decline to 2 percent on average in 2023. Ecuador's external position in 2022 was moderately weaker than implied by medium-term fundamentals and desirable policies.

4. **The fiscal position has weakened since the EFF conclusion.** The nonfinancial public sector deficit was 0.2 percent of GDP in 2022, the lowest in more than a decade. Nevertheless, this fell short of the 1 percent of GDP surplus envisaged at the final EFF review, because of a deterioration in the oil balance and higher spending on wages and goods and services. The fiscal deficit is projected to widen in 2023 owing to lower oil revenues, higher interest payments, and persistent spending pressures including from recent natural disasters. Moreover, in January the authorities implemented small tax cuts in the form of lower excise taxes on selected products, gradual reduction of the tax on transfers abroad, and VAT reductions during some official holidays. The fiscal deterioration requires strengthening fiscal discipline and developing domestic funding markets to stay within the financing plan as envisaged at the EFF conclusion. Such policy actions and a reinvigorated reform momentum in 2023 and beyond are key to cement sustainability and gradually re-establish market access in view of upcoming large debt amortization.

5. The banking system remains stable. Banks' average capital adequacy ratio stood at 15 percent as of end-December 2022, while reported nonperforming loans are moderate. Following resilient growth during the pandemic, private sector credit has slowed in 2023 and liquidity conditions have tightened. Higher international interest rates and funding costs, combined with caps on lending rates, are driving lower profitability.

6. Risks to the outlook are tilted to the downside. Domestic risks include social unrest and worsening security conditions, which could disrupt economic activity; a further decline in oil production including from the upcoming referendum on August 20 on drilling activities in the Yasuni protected natural area; and a backtracking of fiscal and structural reforms. External risks stem from weaker-than-anticipated global growth and tighter global financing conditions. On the upside, higher-than-expected oil prices would boost revenues and improve growth prospects, while lower political uncertainty following the upcoming elections could restore the reform momentum.

7. The tax reform enacted in 2021 has been partially reversed. Following the dissolution of the National Assembly, the government issued an emergency economic decree containing a new tax reform that was approved by the Constitutional Court. The main change includes a reduction in personal income tax (PIT) estimated by the authorities at about US$200 million (0.2 percent of GDP) and stemming from higher tax rebates for qualifying personal expenses and an increase in the PIT brackets. The decree contained some partial compensatory measures, though their impact is yet to be determined.

8. The authorities terminated diesel subsidies for large shrimp farms at end-2022, but fuel subsidies remain sizeable. The estimated fiscal savings are about 0.1 percent of GDP. Nevertheless, the fuel subsidy bill in 2022 doubled to 4 percent of GDP compared to 2021, due to the combination of higher oil prices, refinery margins and transportation costs, and the reversal of the fuel subsidy reform in 2021-22. This underscores the need to continue reform efforts to reduce the large fiscal costs of fuel subsidies.

9. Progress on some structural reforms envisaged by the EFF has been slower than expected. The authorities have hired a firm to conduct the 2023 medical audits and begun implementing the agreement between the Ministry of Economy and Finance (MEF) and the Social Security Fund (IESS) on the transfers of pension and healthcare obligations. The authorities continue working with the IDB to procure an independent auditor of the financial statements of public oil companies. The national procurement agency (SERCOP) is expected to issue a set of resolutions to operationalize the bylaws of the Procurement Law. However, the processes have been delayed by changes in Petroecuador's and SERCOP's top management respectively. Finally, the conflict of interest and AML/CFT laws are still pending enactment by the National Assembly.

10. Staff and the authorities maintain a close dialogue on economic developments and policies. Regular engagement has continued following the EFF conclusion. The IMF undertook assessments of tax administration (TADAT) and public investment management (PIMA) during January-February 2023. The Financial Sector Assessment Program (FSAP) mission fielded by both IMF and World Bank staff was concluded in May 2023.

ANNEX 3: LETTER OF DEVELOPMENT POLICY

Gobierno del Ecuador

Mister
Ajay Banga
President of the World Bank

Ecuador Third Green and Resilient Recovery (GARR) Development Policy Loan (DPL) Program

Dear Mr. Banga,

Please receive my congratulations and best wishes for your tenure as President of the World Bank Group. This is a critical time in history where multilateral action is needed more than ever and we wish you the best and reiterate our utmost support, please count on us in this endeavor.

In a year where we have recovered pre-pandemic levels in GDP, our goal has been to promote inclusion and private investment while maintaining a steady path toward fiscal sustainability. Ecuador recently completed an IMF program which has helped the country in its commitment to rebalancing the foundations of the economy and embarking on a more sustainable development path.

The assistance of the international community is critical for helping countries like Ecuador which are undertaking reforms to reduce poverty and increase prosperity and opportunities for their citizens in a sustainable way for our planet. Those are the objectives that we share with the World Bank Group and that are at the core of the program that we are presenting today. Without the support of multilateral organizations these reforms would not be sustainable.

This administration has been committed to order and fiscal sustainability and continues working along these lines. In this sense, this third DPL in the GARR series is included within this year's central government budget. Additionally, the reforms included in this program enjoy support across the political spectrum and therefore are not expected to present a high risk of reversal in case of a change in administration.

The program that we present today contains two pillars and benefits from strong social and political consensus. The first is centered on tackling structural

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República del Ecuador

challenges to foster growth, inclusion and climate resilience, and the second on strengthening low-carbon development.

Under the first pillar, we have taken crucial steps. Notably, we have continued to reduce fossil fuel subsidies. At a time when energy prices were increasing, we eliminated the diesel subsidy to large shrimp farms, but left them in place for smaller farmers to continue to help them. We issued the methodology to ensure that contingent liabilities that may originate in climate-related and other natural disasters are accounted for when appraising Public Private Partnership opportunities. Additionally, we now have issued a framework to facilitate the issuance of sovereign green bonds once market conditions enable Ecuador to return to the capital markets.

Furthermore, the first pillar includes what has been the iconic social policy of this administration: the fight against malnutrition. In a middle income country where about one in every five children has suffered stunting, the creation of conditional cash transfers to support and encourage healthcare and nutrition for expecting mothers and their children during the first one thousand days of life. Additionally, the National Assembly enacted the Violet Economy Law, which includes numerous innovative measures aimed at eliminating gaps and discrimination that hinder women's participation in the workforce, education, society, and politics. We are expecting very good results from these and other complementary programs that we have prioritized and implemented.

The second pillar strengthens the foundations for low-carbon growth and employment. Ecuador is rich in the currency of biodiversity. This is why we have a ministry focused on Environment and Ecological transition which designs cross-cutting policies to ensure alignment with other line ministries such as that of Production and Competitivness, Agriculture and Energy.

Under this principle, Ecuador has issued a regulation to promote distributed renewable energy generation for non-regulated customers. Along the same lines, we reduced the tariff on types of lithium batteries used for storage of power generated from renewable energy sources, making such clean energy more accessible. We have also mandated that public and semi-public power companies develop and implement five-year plans to implement energy efficiency measures.

Additionally, to incentivize companies to reduce greenhouse gas emissions, Ecuador issued technical criteria for carbon offsets needed for the implementation of the Ecuador Carbon Zero Program (PECC for its acronym in Spanish). Ecuador has also issued procedures for integrated forest management plans and export

Gobierno del Ecuador

and import certificates for forest products to promote deforestation-free production. We believe this is the right thing to do and that it will also allow our firms to become more competitive in markets that value the protection of nature and that are willing to put a price on it.

With the projected growth for this year, and current indicators of sales and poverty reduction, we are confident that these actions increase much needed employment opportunites for the people of Ecuador and we thank you for the analytical and financial support. Our citizens demand swift action and, while we strive to provide quality services to those in need, we must keep on creating the conditions for poverty reduction, prosperity, social mobility, and environmental sustainability.

In order to break the political gridlock in Ecuador, President Lasso has exercised a constitutional mechanism to dissolve the National Assembly and call for new elections in which he has decided not to stand for reelection. Under his leadership, we are working to ensure an orderly transition so that the new government will be well-positioned to continue advancing these important reforms.

Our primary objective is to guide Ecuador along a development path that upholds principles of equity, sustainability, and equal opportunities, while fostering a harmonious coexistence with our planet. We firmly believe that addressing these dimensions will contribute to the global challenges we face collectively, like conflict, financial instability, and climate change. We share these objectives with the World Bank and are happy to work together and request the approval of this development policy loan of USD 500 million, which is the third and last loan in this programmatic series and is a key piece of our financing plan for 2023.

Thank you for the support with this ambitious and challenging agenda.

Yours truly,

Daniel Lemus Sares
Acting Minister of Economy and Finance

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ANNEX 4: ENVIRONMENT AND POVERTY/SOCIAL ANALYSIS TABLE

Prior Actions	Significant positive or negative environmental effects	Significant positive or negative poverty, social or distributional effects
Pillar 1: Tackle selected structural challenges to foster green growth, inclusion, and climate resilience		
PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.	Positive impacts on the environment. Eliminating the diesel subsidy for large shrimp farms is expected to result in a reduction in GHG emissions, reducing pressure on the environment.	The removal of the fuel subsidy for large shrimp farms is not expected to significantly impact poverty considering the subsidy continues with a new quota mechanism for small and artisanal shrimp production farms (those with less than 30 productive hectares). Therefore, small businesses in this sector will not be affected if this mechanism is properly implemented.
PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.	Positive impacts on the environment. Strengthening governance and the institutional framework will enable better-allocating climate expenditure and promote a more efficient use of environmental resources. The approved framework requires the assessment and management of environmental risks in its Section 2.2	No distributional and poverty effects are expected in the short run. In the medium to long-term, small indirect positive welfare impacts could result conditional on the projects financed by the bonds. Special consideration of the constitution of risk across different scales and social groups might be important to prevent adverse impacts on inequality.
PA#3. To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.	Long-term positive impacts through mitigation efforts that reduce pressure on the natural environment.	No welfare impacts are expected in the short run. In the long run, indirect positive effects on welfare could be expected by quantifying the fiscal risk caused by climate and climate-related disasters for PPP projects, which could result not only in a better project design and a more resilient infrastructure (e.g., energy, transport, and water sanitation) but also could help prevent damage to infrastructure and protect the most vulnerable from the negative impacts of natural disasters.
PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two.	Environmentally neutral impacts.	In the medium and long run, positive welfare effects are expected since investments in early childhood are crucial to improve health, economic and social outputs at the individual and society levels.
PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector.	Environmentally neutral impacts.	In the medium and long run, positive welfare effects are expected from training for women, and positive discrimination in hiring procedures and procurement processes in the electricity sector, where women represent only 18.2 percent of workers and earned 13 percent less than their male counterparts.
Pillar 2: Strengthen low-carbon development		
PA#6. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	Positive effects derived from the potential reduction of GHG resulted from fostering clean energy.	This PA is not expected to affect poverty and inequality in the short run. Yet, positive effects are expected in the medium and long run by increasing private sector investment in renewable energy projects.
PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.	Negative effects on the environment might result if batteries are not adequately managed, although the body of legislation in place adequately addresses these risks, as more fully highlighted in Section 5.2	This PA is not expected to affect poverty and inequality in the short run. Contingent on complementary policies, the availability of batteries could increase resilience for isolated regions in the long run.
PA#8. The Borrower has mandated that all public and semi-public power companies in the power	Long-term positive impacts through mitigation efforts that reduce pressure on the natural environment, reduced air pollution with co-benefits for human health,	Requiring power distribution companies to present their energy efficiency plans is expected to have neutral effects on poverty and inequality in the short run. However, this prior action could improve welfare in the long run by promoting the transition to

Prior Actions	Significant positive or negative environmental effects	Significant positive or negative poverty, social or distributional effects
sector prepare five-year energy efficiency plans.	and positive contribution to global public goods through reduced emissions.	cleaner energy sources, reducing negative externalities associated with fossil fuel use.
PA#9. To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.	Positive impact on environment due to enhanced climate smart investments with benefits for an improved management of climate resilience activities and environmental governance and monitoring system.	The compensation mechanism under PECC is expected to not impact poverty and inequality in the short run. It will encourage entities to reduce emissions, therefore some positive impacts could be expected in the long term, from the health and environmental co-benefits of reduced pollution. However, long-term impacts would depend on the interaction between this program and other environmental policies applied in the country, and whether these take a pro-poor approach and efforts are made to counter potential negative effects.
PA#10. To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.	Positive impact through reduced emissions in the forest sector and the maintenance of integrity of the natural environment by promoting sustainable forest practices.	Policies under this PA would positively impact the welfare of rural populations in the long term by creating better economic opportunities aligned with sustainable forest management and by increasing the value of wood and non-wood forest products. While regulation on the traceability of timber and non-timber exports and imports may not immediately impact poverty and inequality, it could significantly benefit well-being in the medium to long term by creating incentives for sustainable forest management practices that could reduce greenhouse gas emissions, increase the value of forest products in local and international markets, and create employment opportunities for poor communities that rely on forestry products.

POVERTY AND SOCIAL IMPACT ASSESSMENT (PSIA)

PILLAR 1: TACKLE SELECTED STRUCTURAL CHALLENGES TO FOSTER GREEN GROWTH, INCLUSION, AND CLIMATE RESILIENCE

Prior Action 1: To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.

1. **The removal of the fuel subsidy for large shrimp farms is not expected to have significant impacts on poverty and inequality.** Decree 614 of December 2022 eliminated the diesel subsidy for shrimp farms with more than 30 producing hectares. Considering that diesel accounts for only 2 percent of total costs of the shrimp sector and that marine aquaculture employs merely 0.32 percent of all occupied population in Ecuador (about 26 thousand people)[53] and less than 2 percent of registered employment in 2022[54], impacts should be small. Additionally, the subsidy continues with a new quota mechanism for micro, small, and artisanal shrimp production farms (those with less than 30 producing hectares), which represent about 13.5 percent of total production surface and have annual sales of about US$1 million. This means that the smallest businesses in this sector will not be affected, preserving the employment (and livelihoods) of the most vulnerable shrimp farm workers and their families.

2. **The aquaculture sector is highly formal with most workers in medium and large firms. However, gender gaps are evident.** In Ecuador, aquaculture and shrimp production has grown in the last decade, at 15 percent each year on average, contributing to 1.8 percent of real GDP (from 0.5 percent in 2013). Shrimp is also one of the main export products, and increasingly so in the last five years, reaching over 22 percent of total exports and 27 percent of primary exports. Employment in aquaculture has also grown in the last years at an annual rate of 7 percent between 2018 and 2022, from less than 20 thousand to over 25 thousand people. Yet, they represent only 0.32 of total employment in 2022.[55] Aquaculture is a highly formal activity (87 percent of workers are in the formal sector), workers earn higher incomes than those in other industries (mean labor income for aquaculture workers is $565 a month versus the average labor income of $458), and an important proportion of workers (47 percent) is employed in medium and large enterprises.[56] However, this activity is predominantly male (91 percent), although on average women received higher incomes than men (by 45 percent) in 2022. There is 15 percent of workers in aquaculture who live in poor households (national poverty line).

3. **Fuel subsidies in aquaculture, as well as in other productive activities, enhance the negative externalities of this industry by promoting the emission of pollutants.[57]** Aquaculture has been recognized

[53] According to the ENEMDU 2022 annual data by INEC, including both primary and secondary occupations (ISIC R4 is A0321). Available at: https://www.ecuadorencifras.gob.ec/enemdu-anual/

[54] According to the Social Security Employment Registry produced by INEC. Available at: https://www.ecuadorencifras.gob.ec/registro-empleo-seguridad-social/

[55] ENEMDU anual 2022.

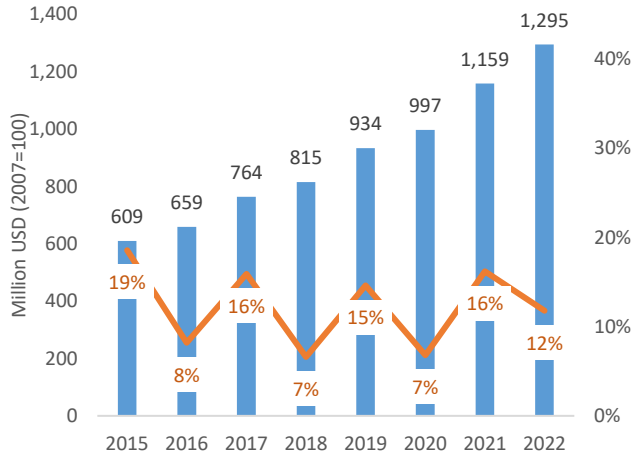
[56] Enterprise size is defined by number of employees. Medium and large are those with 50 employees or more. Small are those with 6 to 49 employees and micro, those with less than 5 employees.

[57] Peñalosa, D.; Vergara-Solana, F.; Araneda, M.; Ponce, G.; Mejaes, A.; Varela, M. and U. Rashid Sumaila. 2021. *Social effects of energy subsidies and taxes on CO2 emissions: The case of Mexican aquaculture public policies*. Marine Policy, Volume 128, 2021, 104481. ISSN 0308-597X. https://doi.org/10.1016/j.marpol.2021.104481.

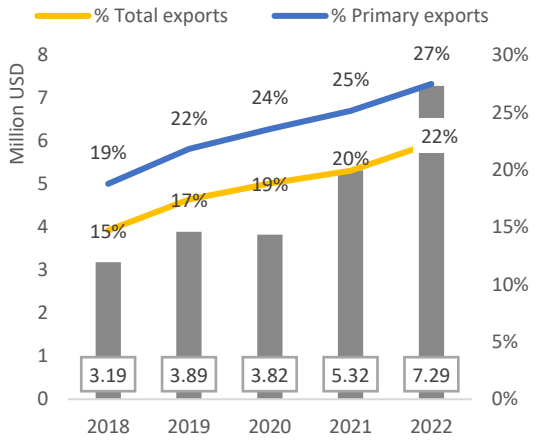
as a highly polluting activity,[58] even more so in the case of shrimp. Therefore, the reduction of the subsidy for diesel could incentive the use of more energy-efficient technologies, and the use of alternative more environmentally friendly energy sources, nudging the bigger (more capable) shrimp farms to transit to more sustainable practices. On the other hand, these types of subsidies are justified on the need to promote food production, exports, growth and even poverty reduction and food security (Peñalosa et al., 2021). Therefore, the removal of the diesel subsidy for large shrimp farms while maintaining it for the smaller ones could bring positive welfare impacts in the long run, from less pollution but also from growth in sustainable aquaculture. No direct impacts are expected on poverty and inequality provided that the subsidy is still in place for small shrimp farms, protecting their production costs and profitability, and their workers and families, allowing them to continue to grow (albeit at the risk of increased emissions).

Figure A1. Evolution of Aquaculture GDP and Shrimp Exports

A. Shrimp and aquaculture real GDP and annual growth rate



B. Shrimp exports (million USD, share of total and share of primary exports)



Prior Action 2: To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.

4. **No distributional and poverty effects are expected in the short run from setting the governance and institutional framework for future issuance of sovereign green bonds.** The Sovereign Green Bond Framework is a pre-requisite for the issuance of sovereign bonds to finance compliant green projects, thus facilitating climate adaptation and mitigation activities. The framework identifies the eligible sectors that can benefit from green bond proceeds (renewable energy, energy efficiency, low-carbon transport, sustainable management of natural resources, land use and protected areas, sustainable water and wastewater management, sustainable agriculture, solid waste, pollution prevention and control); project evaluation and selection criteria; how proceeds will be managed; and how allocations and impact will be reported. This framework is expected to improve prioritization of green project identification and expenditure tagging, developing a sovereign green benchmark to catalyze further green capital market activity. Since this in an intermediate outcome, no welfare impacts are expected.

[58] FAO. 2022. *The State of* World Fisheries and Aquaculture 2022. Towards Blue Transformation. Rome, FAO. https://doi.org/10.4060/cc0461en

5. **However, in the medium to long-term, small indirect positive welfare impacts could be expected once sovereign green bonds are issued and projects are implemented.** Ecuador is highly vulnerable to natural and climate-induced hazards.[59] According to the Global Facility for Disaster Reduction and Recovery (2017), assets at risk due to natural disasters in Ecuador represent 1.94 percent of GDP, and risk to wellbeing is 2.93 percent of GDP.[60] Climate change intensifies and increases the number of extreme weather events, and the poor are among the most vulnerable and least able to overcome them, increasing inequality.[61,62] This is also the case for Ecuador, where climate change is projected to intensify extreme precipitation events (floods, landslides),[63] and the poorest households are settled in high-risk areas, which makes them more vulnerable to climate-related disasters.[64] Therefore, indirect positive impacts on poverty and equity are expected in the future, once this financing mechanism is in place and climate mitigation and adaptation investments are implemented. Benefits would come from saving lives and reducing losses from climate-related disasters. Positive impacts from increased protection of the assets and livelihoods of the most vulnerable populations could be expected if prioritized, eligible climate-change adaptation and mitigation projects tend highest risk areas (and people living/working there), thus enabling conditions for formal adaptation finance for the poorest. It is also Important to consider that "Investments in any form of capital asset to support adaptation need to be mindful of reinforcing existing inequalities and introducing new ones, particularly if transformation takes place" (Birkmann et al., 2022: 1250).[65, 66]

Prior Action 3: To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.

6. **Regulations to quantify contingent liabilities caused by climate and climate-related disasters for PPP projects caused by climate and other climate-related disasters are not expected to impact welfare in the short term**. In the long run, indirect positive effects on welfare impacts could be expected by assessing the potential fiscal risks that may affect the sustainability of the government's debt and fiscal position

[59] Thinkhazard: https://thinkhazard.org/en/report/73-ecuador
[60] World Bank & GFDRR (2017). Unbreakable Resilience Indicator Tool. Available at: https://unbreakable.gfdrr.org/countrytool
[61] Global Center on Adaptation (2021). "A Green and Resilient Recovery for Latin America." Available at: https://gca.org/reports/a-green-and-resilient-recovery-for-latin-america/
[62] Hallegatte, S., Fay, M. and Barbier E. B. (2018). "Poverty and climate change: introduction." Environment and Development Economics, Volume 23, Special Issue 3: Poverty and Climate Change. June 2018, pp. 217 – 233.
DOI: https://doi.org/10.1017/S1355770X18000141
[63] Castellanos, E., M.F. Lemos, L. Astigarraga, N. Chacón, N. Cuvi, C. Huggel, L. Miranda, M. Moncassim Vale, J.P. Ometto, P.L. Peri, J.C. Postigo, L. Ramajo, L. Roco, and M. Rusticucci, 2022: Central and South America. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1689–1816, doi:10.1017/9781009325844.014.
[64] Canavire-Bacarreza, G., Conconi, A., Olivieri, S and Serio, M. 2022. Understanding Vulnerability to Natural Shocks in LATAM, Mimeo
[65] Birkmann, J., E. Liwenga, R. Pandey, E. Boyd, R. Djalante, F. Gemenne, W. Leal Filho, P.F. Pinho, L. Stringer, and D.Wrathall. 2022. *Poverty, Livelihoods and Sustainable Development*. In: Climate Change 2022: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [H.-O. Pörtner, D.C. Roberts, M. Tignor, E.S. Poloczanska, K. Mintenbeck, A. Alegría, M. Craig, S. Langsdorf, S. Löschke, V. Möller, A. Okem, B. Rama (eds.)]. Cambridge University Press, Cambridge, UK and New York, NY, USA, pp. 1171–1274. doi: 10.1017/9781009325844.010
[66] Jones R, Baker T, Huet K, Murphy L, Lewis N. (2020) *Treating ecological deficit with debt: The practical and political concerns with green bonds*. Geoforum. 2020 Aug; 114:49-58. doi: 10.1016/j.geoforum.2020.05.014. PMID: 32536703; PMCID: PMC7274626. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7274626/

associated with natural disasters of these projects, such as a more careful project design and implementation (Irwing, 2020),[67] resulting in more resilient infrastructure (e.g., energy, transport, and water sanitation) that can better withstand the impacts of climate and climate-related disasters. This, in turn, could help prevent damage to property and infrastructure, protecting the most vulnerable from the negative impacts of natural disasters.

7. **In the short term, regulations aimed at quantifying contingent liabilities arising from climate change and climate-related disasters for PPP projects are not expected to impact well-being. Yet, in the long run, indirect positive impacts on welfare could be expected by assessing the potential financial risk associated with climate disasters in PPP projects that may affect the government's finances during the implementation of these projects to improve the country's infrastructure.** Climate change introduces additional challenges by increasing uncertainty and the probability of extreme weather events, and the risk of climate and natural disasters affecting infrastructure projects must be considered throughout the project cycle, particularly their impact on public finances. For instance, the impact of extreme climate events on infrastructure has been estimated to costs more than 1 percent of GDP annually in Costa Rica, the Dominican Republic, Guatemala, Haiti, Honduras, Panama, and Paraguay (World Bank, 2022).[68,69] For PPP projects, natural disasters and climate change could have significant negative impacts on government finances,[70] returns on private investment through damages to infrastructure, could increase operation costs, and disruptions to service provision for consumers. As a result, the design and implementation of PPPs projects not only need to consider financing, construction, regulatory, demand, and operational risks; but also the fiscal risks and mitigation costs of these projects (World Bank 2019).[71] Given the complexity of these tasks, it is becoming more popular for governments, particularly ministries of finance, to implement regulations and create specialist teams to manage fiscal risks arising from contingent liabilities, particularly those associated with PPP. In particular, regulations under this prior action establish the methodology to quantify fiscal risk in PPP projects, including the expected direct and indirect costs of disaster-related contingent liabilities, and systematically incorporate them into the budget process. These usually include a contingency reserve within the annual budget that can adapt the spending to changing circumstances or emergencies, including natural disasters, or a dedicated fund to provide a dedicated financing source for handling natural disaster risks (IMF 2018).[72,73]

[67] Irwin, Timothy C., and Tanya Mokdad. 2010. Managing Contingent Liabilities in Public-Private Partnerships: Practice in Australia, Chile, and South Africa. Washington, DC: World Bank.

[68] Between 1998 and 2017, disaster-hit countries reported direct economic losses of approximately US$2.9 trillion, 77 percent of it related to climate-related disasters. Reported losses from extreme weather events were 151 percent higher than the total reported losses of US$1.3 trillion from 1978 to 1997. Floods accounted for approximately 43 percent of recorded events affecting more than 2 billion people, followed by storms (28 percent) and earthquakes (8 percent). In this period, climate-related and geophysical disasters took the lives of 1.3 million people and left 4.4 billion people injured, homeless, displaced, or in need of emergency assistance (see CRED and UNISDR. 2018. Economic Losses, Poverty & Disasters: 1998–2017. https://www.unisdr.org/we/inform/publications/61119). Recent natural disasters in Latin American countries have had a large economic impact; for instance, damages and losses from the Chile earthquake in 2010 were around 18 percent of GDP. The Pisco earthquake in 2007 resulted in US$1.2 billion in economic losses, which was only 0.001% of Peru's GDP but left the affected area devastated (see OECD/The World Bank. 2019. Fiscal Resilience to Natural Disasters: Lessons from Country Experiences. OECD Publishing, Paris. https://doi-org.libproxy-wb.imf.org/10.1787/27a4198a-en).

[69] World Bank. 2022. A Roadmap for Climate Action in Latin America and the Caribbean, 2021-2025. Washington, DC: World Bank. http://hdl.handle.net/10986/38001.

[70] Effects on government finances could include relief payments to affected populations, spending for the reconstruction of damaged public infrastructure and assets, social assistance to affected populations, and expenditures to stimulate the economy following a disaster.

[71] World Bank. 2019. Technical Brief on Resilient Infrastructure PPPs–Contracts and Procurement. World Bank, Washington, D.C.

[72] These funds usually include restricted rules on how resources are used.

[73] IMF. 2017. How to manage the fiscal cost of natural disasters. How to note. International Monetary Fund. Washington, D.C.

8. **Many countries have effectively implemented regulations and programs for the government's contingent liabilities, designed to mitigate the negative effect caused by climate and natural disasters.** The Australian government includes and assesses disaster-related contingent liabilities as part of budget planning and fiscal-risk considerations. For this, central and subnational governments carry out regular inventories of past disaster-related expenditures and expected future expenditures arising from past incidents. The process is jointly managed by the Attorney General's Department, the Treasury, and the Ministry of Finance (OECD/ World Bank, 2019).[74] Disaster risk insurance is available in Kenya to cover risks of drought and flood, among other natural hazards, in infrastructure PPP contracts with specific requirements for mandatory disaster risk insurance coverage implemented by the government (World Bank, 2019). Japan has a supplementary budget for emergency measures to cover unforeseen and unavoidable expenditures, including natural disasters, representing 0.36 percent of national government expenditures in 2017. It was used to cope with the economic cost of the earthquake that struck Japan in 2011.

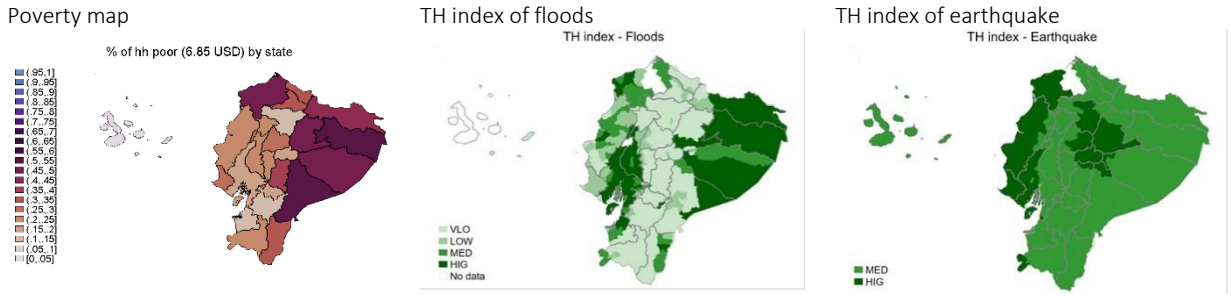
9. **Ecuador is highly vulnerable to natural and climate-induced hazards and experienced significant economic losses over the past five years, causing significant adverse impacts on the well-being of poor and vulnerable households (i.e., homes destroyed, job losses, etc.).** According to Thinkhazard, the country is at high risk of floods, earthquakes, landslides, extreme heat, wildfires, tsunamis, and volcanoes,[75] and it ranks 13th among countries most at risk for natural hazards and third in Latin America and the Caribbean (behind Peru and Haiti), according to the INFORM Global Risk Index.[76] Ecuador is also highly vulnerable to the El Niño and La Niña phenomena, which increase the risks of flooding and droughts. It is estimated that 20 percent of Ecuador's population is exposed to 15 centimeters or more flood inundation risk (World Bank 2020).[77] The economic losses generated by these hazards are significant. Over the past 50 years, the climatic effects resulting from El Niño and La Niña have produced losses of US$4.4 billion, and the estimated reconstruction costs for the affected areas by the major earthquake that affected the country in 2016 and destroyed about 22,000 jobs are US$3.3 billion, mainly in the social, productive, and infrastructure sectors.[78]

10. **Implementing regulations to identify contingent government liabilities caused by natural and climate-related disasters in PPP projects is the first step to mitigating its adverse effects on the poor and vulnerable**. While natural disasters are unforeseen events, the adverse effects on the welfare of Ecuador's poor could be significant in terms of loss of assets, income, and jobs because of the high probability that poor households could be the most affected when disasters occur.[79] Most poor households are settled in areas with higher risks of floods and earthquakes (Figure 4). In this context, a systematic and unified approach to risk management for PPP projects will improve financial protection, preparedness, responsiveness, and recovery from large-scale climate disasters and reduce contingent liabilities from

[74] OECD/ World Bank (2019). Fiscal Resilience to Natural Disasters: Lessons from Country Experiences. OECD Publishing. Paris. https://doi.org/10.1787/27a4198a-en.
[75] Thinkhazard: https://thinkhazard.org/en/report/73-ecuador.
[76] See https://drmkc.jrc.ec.europa.eu/inform-index/INFORM-Risk.
[77] World Bank. 2020. *People in harm's way: Flood exposure and poverty in 189 countries*.
[78] See https://blogs.worldbank.org/latinamerica/ecuadors-innovative-disaster-risk-financing-strategy-essential-tool-responding.
[79] Between 2000 and 20202, Ecuador has experienced 42 natural disaster episodes related to flooding (19 events), volcanic activity (10 events), landslides (6 events) and earthquakes (5 events). The frequency of these events is high, as there have been, on average, 2 events recorded per year, putting the country's infrastructure at risk and many poor households every year. See IMF. 2021. Natural disasters, climate-related physical and transition risk in Ecuador. Washington, D.C.: International Monetary Fund. https://www.elibrary.imf.org/view/journals/002/2021/229/article-A005-en.xml

climate and disaster events. Also, Ecuador's social protection system has to adapt to understand natural hazards and their risks, implementing information systems that help governments respond in an inclusive manner to disasters (Cubas and Escobar, 2023).[80]

Figure A2. Poverty and risk of natural disasters



Source: Canavire-Bacarreza, G., Conconi, A., Olivieri, S and Serio, M. 2022. Understanding Vulnerability to Natural Shocks in LATAM, mimeo

Prior Action 4: The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two.

11. **PA4 is expected to have positive impacts on welfare in the medium to long run considering the cash transfer contemplates a conditional component aimed at improving mothers' demand for the prioritized package to prevent child and maternal malnutrition.** In keeping with the GoE efforts to tackle child malnutrition, Decree 435 created the Bono 1000 días for poor and rural pregnant women and children up to 2 years of age in 2022. This transfer has been designed to overcome the fact that the main conditional cash transfers in Ecuador (BDH and BDH-V) have not impacted children's development due to lack of follow-up on the health conditions and lack of early enrollment (the average age is 2 years old). The Bono 1000 días features monthly unconditional (US$50) and conditional (US$10) transfers, access to early childhood development services, preventive health controls for the conditional component, and registration of a bank account to ensure continuity. Compliance with conditions will be enforced and verified with an integrated information system that combines MIES and MSP data. This design is expected to improve alignment of supply and demand and increase the effectiveness of the intervention. Additionally, this transfer targets poor mothers who do not receive other monetary transfers, widening the social protection net.

12. **Ample evidence points to investments in early childhood (ages 0 to 5) as a crucial factor in improving health and economic and social outputs at the individual and society levels.**[81] In the case of chronic undernutrition, there is a limited window of time for prevention (and effective intervention): the first 1,000 days from conception. After that, it seems difficult to reverse short-term (increased risk of morbidity and mortality) and long-term consequences (decreased cognitive development, lower economic

[80] Adapting social protection systems to build disaster and climate resilience for all. World Bank Blogs, March 7: https://blogs.worldbank.org/sustainablecities/adapting-social-protection-systems-build-disaster-and-climate-resilience-all

[81] Heckman, J. (2012). "Invest in early childhood development: Reduce deficits, strengthen the economy". Available at: https://heckmanequation.org/resource/invest-in-early-childhood-development-reduce-deficits-strengthen-the-economy/

productivity, and restrained social function).[82] The design of the cash transfer considers the importance of targeting vulnerable mothers and children in this time frame. This together with timely delivery and compliance of conditions, should guarantee that this instrument is effective in preventing child malnutrition.

13. **There is mixed evidence on the effectiveness of cash transfers to fight child malnutrition and program characteristics modify the outcomes.** Manley et al (2020)[83] do a meta-analysis of 74 studies from 40 cash transfer programs and they find that cash transfer programs for households with children under 5 years have a small but significant effect on height-for-age z-score, decreased stunting, increased consumption of animal-source foods and decreased child illness. However, they find these impacts are not significant when restricting to studies on children under 2 years old. Survey research by Bastagli et al (2016)[84] finds that "Cash transfers stimulate health service use and improve dietary diversity, but there is less evidence that they affect the height and weight of children" and hypothesize this may result from the fact that optimal child growth has multiple determinants. They also stress the importance of design and implementation features for programs to be more effective in preventing malnutrition. For Ecuador, there are several evaluations of the BDH program on child nutrition with mixed results. The most recent studies find that receiving the BDH had no effect on the height and weight of infants (after 2 years), but losing the transfer had negative effects;[85] that increases in BDH coverage at the canton level decreased mortality rate from malnutrition in children under 5,[86] and others find no significant effects.[87,88] This heterogeneity of results is likely to be associated to factors such as the size of the transfer and duration of the program, conditionality, the age at which children receive the program, the effectiveness to target the most vulnerable populations, and the access and quality of the complementary services.[89]

14. **Nutrition intervention programs are more likely to be effective when a favorable context is achieved through a combination of components and factors.** While there is little in generalizing positive findings, Hossain et al. (2017) find that programs were more successful (showed an average annual rate of reduction of stunting prevalence in children under 5 at least equal to the median of 3 percent) "…where there is an evidence of strong political commitment, multi-sectoral collaboration between government, nongovernment, national and international organisation, active community engagement, and where the

[82] Independent Evaluation Group (2010). "What Can We Learn from Nutrition Impact Evaluations? Lessons from a Review of Interventions to Reduce Child Malnutrition in Developing Countries." Washington, DC: World Bank. https://openknowledge.worldbank.org/handle/10986/2524 License: CC BY 3.0 IGO."

[83] Manley J.; Balarajan Y.; Malm S. et al. 2020. *Cash transfers and child nutritional outcomes: a systematic review and meta-analysis.* BMJ Global Health 2020. DOI:10.1136/bmjgh-2020-003621

[84] Bastagli, F., Hagen-Zanker, J., Harman, L., Barca, V., Sturge, G., Schmidt, T. (2016) *Cash transfers: what does the evidence say? A rigorous review of programme impact and the role of design and implementation features*. London: Overseas Development Institute. Available at: https://odi.org/en/publications/cash-transfers-what-does-the-evidence-say-a-rigorous-review-of-impacts-and-the-role-of-design-and-implementation-features/

[85] Buser, T., Oosterbeek, H., Plug, E., Ponce, J. and Rosero, J. (2014) *The impact of positive and negative income changes on the height and weight of young children*. IZA Discussion Paper 8130. Bonn: IZA.

[86] Moncay, A.; Granizo, G.; Grijalva, M. and D Rasella. 2019. *Strong effect of Ecuador's conditional cash transfer program on childhood mortality from poverty-related diseases: a nationwide analysis*. BMC Public Health (2019) 19:1132. https://doi.org/10.1186/s12889-019-7457-y

[87] Fernald, L.C.H. and Hidrobo, M. 2011. *Effect of Ecuador's cash transfer program (Bono de Desarrollo Humano) on child development in infants and toddlers: a randomized effectiveness trial*. Social Science & Medicine 72(9): 1437–1446.

[88] Paxson, C. and Schady, N. 2010. *Does money matter? The effects of cash transfers on child development in rural Ecuador*. Economic Development and Cultural Change 59(1): 187–229.

[89] De Groot, R.; Palermo, T.; Handa, S.; Ragno L. and A. Peterman. 2017. Cash Transfers and Child Nutrition: Pathways and Impacts. Development Policy Review, Volume 35, Issue 5, p. 621-643. Available at: https://doi.org/10.1111/dpr.12255

programme is delivered through community-based platforms with high coverage and compliance."[90] Considering the Bono 1000 días is part of a more comprehensive package, that also considers supply-side interventions, and there is a follow-up mechanism for the conditional part already in place, positive impacts on child nutrition are expected in the medium-to-long term.

Prior Action 5: The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector.

15. **Prior Action 5 is expected to have small but positive impacts on equity by foster the inclusion and professional development of women into the power sector.** In Ecuador, only 0.15 percent of the working population is employed in this sector,[91] and women represent only 18.2 percent among them, and earned on average 13 percent less than man.[92] Despite the underrepresentation of women in the energy sector, investment in energy efficiency projects by distribution companies offers an opportunity to close the gender gap in this sector. [93] According to a recent study conducted by the IDB, emerging companies in the energy sector have the potential to enhance inclusion and employment opportunities for women. For instance, the study found that 60 percent of the workforce in the only hydrogen-focused company in Chile are women. Similarly, the only energy efficiency firm surveyed in Bolivia reported that 55 percent of its labor force consists of women. Additionally, the installation of solar panels in Uruguay has substantial female participation, with an average of 85 percent female employment across firms and an impressive 91 percent in the overall industry (Ravillard et al., 2021).[94] Solar photovoltaic (PV) industry offers long-term and challenging career opportunities that can also foster inclusion of women both on-grid and off-grid contexts, with real potential for women as construction managers, technicians, electricians, plumbers, sales representatives, installers, human resource managers, and marketers.[95] A recent study by the International Renewable Energy Agency shows that 40 percent of the full-time workforce in the solar PV industry are women, which nearly doubles the share in the wind industry (21 percent) and the oil and gas sector (22 percent). Regarding leadership positions in this sector, 30 percent of women have managerial positions, but only 13 percent of senior management roles are held by women (IRENA 2022).[96] However, the transition of women towards the power sector should be complement with establishing better workplace practices, policies, and regulations; and forming networks and systems to support training and mentorship to assist women workers in making these transitions smoothly to benefit from the opportunities in this sector. This is something the MEM is doing under PA4iii to reduce the gender gap in the power sector. In this context, vocational and on-the-job training programs are important to improve the employability of

[90] Hossain M, Choudhury N, Adib Binte Abdullah K, et al. (2017) "Evidence-based approaches to childhood stunting in low- and middle-income countries: a systematic review." Archives of Disease in Childhood 2017; 102: 903-909. DOI: https://doi.org/10.1136/archdischild-2016-311050

[91] Workers in the "D3510 - Electric power generation, transmission and distribution" sector according to ISIC Rev. 4 were considered.

[92] INEC, ENEMDU 2022 annual data. Available at: https://www.ecuadorencifras.gob.ec/enemdu-anual/

[93] Data for Germany, for instance, suggests that women are underrepresented in the sector—23.6 percent against 45 percent in the broad economy. This share equals the percentage of women in the energy and water supply sector as a whole, which implies that the new sector replicates existing gender patterns. Policies to ensure gender equality should also be implemented. See ILO. 2011. Investment in Renewable Energy Generates Jobs. Supply of Skilled Workforce Needs to catch Up. Research Brief.

94 Ravillard, P., Ortega, B., Paramo, A., Chueca, E., Weiss, M and Hallack, M. 2021. Implications of the Energy Transition on Employment Today's Results, Tomorrow's Needs. Washington, D.C.: Inter-American Development Bank

[95] In 2021, solar PV was the fastest-growing sector, accounting for more than a third of the total renewable energy workforce. See: IRENA and ILO (2022), Renewable energy and jobs: Annual review 2022, International Renewable Energy Agency, Abu Dhabi and International Labor Organization, Geneva.

[96] IRENA (2022), Solar PV: A gender perspective, International Renewable Energy Agency, Abu Dhabi.

the unemployed and upgrade the skills women who need to adapt to new occupational profiles (ILO 2017).[97,98] Therefore, an integrated approach that simultaneously considers social protection and poverty reduction policies is needed to materialize the positive welfare impacts of this prior action in the long term.

PILLAR 2: STRENGTHEN LOW-CARBON DEVELOPMENT

Prior Action 6: The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.
Prior Action 7: The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.

16. **Regulations to promote distributed renewable generation at the industrial and commercial level (PA6) and reduction of lithium batteries tariffs to foster the use of clean energy (PA7) are not expected to affect households' welfare in the short run.** Yet, in the medium and long run, positive effects are expected by promoting private sector investment in renewable energy projects, which could lead to reduced generation costs, accelerate the transition to a low-carbon economy, and create green jobs (OECD, 2015).[99] Also, vulnerable households could benefit from access to services provided by critical facilities supported by solar systems, including water, educational services, and health care (World Bank, 2022).[100]

17. **Promoting private sector investments in renewable energy is not expected to affect welfare in the short run. Yet, positive effects are expected in the medium to long run from increasing private sector investment in renewable energy projects, reducing generation costs, providing environmental benefits, and creating more jobs.**[101] According to the IFC's Climate Investment Opportunities report, opportunities for investment in new, green, and clean technology projects in developing countries are estimated to be around US$23 trillion through 2030.[102] Investment in renewable energy technologies creates more jobs

[97] ILO. 2017. Green incentive policy brief: Active labor market policies. International Labor Organization. Geneva.
[98] In Mexico, through the Additional Financing for Energy Efficiency in Public Facilities Project (2018-21), the WBG is expanding investment in energy efficiency in public schools. The project also includes a "Women in STEM" program that mentors young women in public high schools to increase their interest in science and engineering. The activity responds to long-standing low participation by women in STEM education and employment in Mexico (See: World Bank. 2020. Closing Gender Gaps in Latin America and the Caribbean. Washington, D.C.: World Bank).
[99] OECD. 2015. Policy Guidance for Investment in Clean Energy Infrastructure Expanding Access to Clean Energy for Green Growth and Development. OECD Publishing, Paris.
[100] World Bank. 2022. Boosting Access to Affordable Solar Energy in Yemen. Washington, DC: World Bank. See https://www.worldbank.org/en/results/2022/07/18/-boosting-access-to-affordable-solar-energy-in-yemen
[101] Investment in clean energy could also help reduce local air pollution and improve health. It can also facilitate cost-effective access to energy in rural and remote areas, improve energy security and decrease excessive reliance on fossil-fuel imports, and stimulate technology transfer and innovation across the clean energy value chain (equipment manufacture and distribution, project development, construction and installation, operations and maintenance). See: OECD. 2015. Policy Guidance for Investment in Clean Energy Infrastructure Expanding Access to Clean Energy for Green Growth and Development. OECD Publishing, Paris.
[102] The OECD identified five areas to address to take full advantage of new, green, and clean technology investment opportunities in developing economies: (i) Regulated, transparent power arrangements. Broadly, policies must establish transparency and predictability, which gives investors greater confidence they will recover investments in power generation; (ii) Specific clean energy/climate incentives. Having an integrated, multi-year energy strategy with short-term targets for retiring fossil-fuel plants, if applicable, and building renewable energy helps lay the foundation for conducive policies; (iii) General business-friendly measures. Several general policies (i.e., not necessarily energy specific) that can facilitate renewable energy investment (e.g., not withholding taxes on profits and no VAT on clean power sales); (iv) Innovative financing mechanisms. Financing mechanisms of different types can be useful in mitigating risk, offering additional return potential or creating more investment opportunities; and (v) Early risk assumption. Several successful projects have included an early sponsor willing to assume various risks. See: https://www.weforum.org/agenda/2021/06/boost-renewable-energy-investment-in-developing-economies/.

than fossil-fuel technologies. Chen (2017) estimates that spending on renewable energy will produce nearly 70 percent more jobs per dollar than spending on fossil fuels.[103] For instance, solar PV could create more than twice the number of jobs per electricity generation unit, compared with coal or natural gas (UKERC, 2014).[104] In addition, the number of people employed, directly and indirectly, in the renewable energy sector (excluding large hydropower) rose from 5.7 million in 2012 to 8.3 million in 2016, and that number could expand to 25 million by 2030 with proper policy support.[105]

18. **In the long run, the transition from fossil fuels to renewables will generate employment losses and create new jobs.** About 7.5 million jobs are expected to be lost during the transition to a net zero-carbon economy in fossil-fuel electricity, fossil-fuel extraction, and animal-based food production in Latin America. However, these lost jobs are expected to be more than compensated by new employment opportunities—22.5 million jobs created in agriculture and plant-based food production, renewable electricity, forestry, construction, and manufacturing.[106] Yet, efforts to promote investment in the transition to new, green, and clean technology must be accompanied by policies that facilitate the reallocation of workers, promote decent work in rural areas, offer new business models, and support displaced workers and their communities. Thus, one of the key policy areas will revolve around measures to assist workers in making these transitions smoothly, particularly for low-skill and vulnerable workers who are most likely to be affected by this short-term. In this context, active labor market programs can play an important role in retraining workers and upgrading skills, which are central in facilitating a smooth and just transition to a low-carbon, green economy. Also, vocational and on-the-job training programs improve the employability of the unemployed and upgrade the skills of workers laid off from high-carbon sectors and workers who need to adapt to new occupational profiles (ILO 2017).[107] For instance, the local government in Santa Fe, Argentina, has established *Empleos Verdes—Cuidar el planeta da trabajo,* a green occupation program to help workers develop skills for green jobs in collaboration with the national authorities. Under this program, workers are trained, re-qualified, and certified in green job competencies, and they analyze and develop occupational standards to improve working conditions. Since 2016, more than 1,500 participants have been trained in green occupations.[108] Guyana provides another example of the importance of anticipating skills gaps and new occupations and effectively coordinating with relevant stakeholders in the energy sector to meet the demands of the transition to a low-carbon economy. The Guyana Energy Agency has been preparing a 10-year Human Resource Development Plan.[109] It collaborates with the University of Guyana and technical and vocational education and training institutions to update electrical engineering and renewable energy courses. The plan also requires certification updates for standardizing skills, professional competencies, and practices for renewable energies.

19. **Private investments in renewable energy could also facilitate cost-effective access to energy in rural and remote areas.** For instance, solar and wind mini-grid technologies in many developing countries such as Ecuador could bring energy to remote areas as solar and wind are abundant, cost-competitive, and a

[103] Chen, Y. (2017), Renewable Energy Investment and Employment in China, PERI Working Paper Series Number 439, Political Economy Research Institute (PERI), University of Massachusetts, Amherst, MA.
[104] UKERC (2014), Low Carbon Jobs: The Evidence for Net Job Creation from Policy Support for Energy Efficiency and Renewable Energy.
[105] United Nations. 2018. Interlinkages Between Energy and Jobs. Strengthening Interlinkages Between SDG 7 and other SDGs. Policy Brief #13.
[106] Saget, C., Vogt-Schilb, A., & Luu, T. (2020). Jobs in a net-zero emissions future in Latin America and the Caribbean. Washington DC and Geneva: Inter-American Development Bank and International Labour Organization.
[107] ILO. 2017. Green incentive policy brief: Active labor market policies. International Labor Organization. Geneva.
[108] See http://www.ramcc.net/es/posts/view/339/la-provincia-de-santa-fe-apuesta-a-la-generacion-de-empleos-verdes.
[109] ILO. 2017. Skills for Green Jobs Study–Guyana (Report). Office for the Caribbean—Port of Spain, Port of Spain.

source of reliable power when combined with battery storage. Nowadays, mini-grids provide electricity to about 18 million people in Asia, 27 million in Africa, and 2 million in Latin America; a further 14 million people in Asia and 20 million people in Africa are expected to receive electricity from investments in renewable energy mini-grids. The largest off-grid program in the world implemented in Bangladesh benefits 4 million people in rural areas from reliable access to clean energy through 2.41 million solar home systems, 1,300 solar irrigation pumps, 14 solar-based mini-grids, and 3 million efficient cookstoves (Cabraal et al., 2021).[110] Additional benefits of these technologies for households in rural and remote areas include accessible energy prices; as the cost of electricity generated by solar mini-grids has gone down from $0.55/kWh in 2018 to $0.38/kWh today and a reduction is CO2 emissions (ESMAP, 2022);[111,112] In addition, investment in renewable energy technologies (e.g., solar and wind) could reduce the dependence on fossil fuels. In the Maldives, installing over 50 MW of solar capacity and 40 megawatt hours of battery storage has saved about 30 million liters of diesel and reduced fuel imports by $30 million annually (Guangzhe et al., 2023).[113] In Haiti, for example, a combined solar and battery storage project will ultimately provide electricity to 800,000 people and 10,000 schools, clinics, and other institutions, and in Gambia, an emergency solar and battery storage power plant is being built, as are mini-grids in several island states to boost their resilience. Also, India is developing one of the world's largest hybrid solar, wind, and storage power plants, while South Africa is developing a 1.44 gigawatt-hours of battery storage capacity, which is expected to be the largest project in Sub-Saharan Africa (World Bank, 2019).[114]

Prior Action 8: The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans.

20. **Requiring power distribution companies to present their energy efficiency plans (PA 8) is expected to have neutral effects on poverty and inequality.** Yet, in the medium to long run, this policy could positively affect well-being by reducing energy consumption, leading to cost savings for individuals, businesses, and governments, while also protecting the environment by lowering greenhouse gas emissions and combating climate change.[115]

21. **Implementing energy efficiency measures and regulations in Ecuador could lead to some initial costs for industries, which might be passed on to consumers, potentially impacting inequality in the short run, although they are expected to be negligible.** For instance, industries might need to invest in upgrading their equipment and infrastructure and implementing energy audits and reporting systems. These upfront

[110] See: Cabraal, A., Ward, W., Bogach, S. and Amit, J. 2021. *Living in the Light: The Bangladesh Solar Home Systems Story. Washington, DC.: World Bank.* http://hdl.handle.net/10986/35311.

[111] See: Energy Sector Management Assistance Program. 2022. Mini Grids for Half a Billion People: Market Outlook and Handbook for Decision Makers. Washington, DC: World Bank. License: Creative Commons Attribution CC BY 3.0 IGO

[112] Connecting 490 million people to solar minia-grids could avoid 1.2 billion tons of CO2 emissions (ESMAP, 2022). In India, renewable energy programs such as solar parks, roof-top solar installations, and battery capacity are saving more than 2.4 million tons of greenhouse gas emissions annually (See https://www.worldbank.org/en/topic/energy/overview#3).

[113] Guangzhe, C., Jain, A. and Simon,S. (2023). Why the Maldives 5 MW solar project is a game changer. World Bank Blogs, 8thJanuary:*https://blogs.worldbank.org/endpovertyinsouthasia/why-maldives-5-mw-solar-project-game-changer?CID=WBW_AL_BlogNotification_EN_EXT*

[114] Word Bank. 2019. Four Things You Should Know About Battery Storage. World Bank Feature Story. May 16: https://www.worldbank.org/en/news/feature/2019/05/16/four-things-you-should-know-about-battery-storage.

[115] Energy efficiency contributes to climate change mitigation by reducing fossil fuel consumption and related greenhouse gas emissions. Energy efficiency could reduce annual energy-related emissions by 12 percent compared with 2017 levels—an amount equivalent to 3.5 gigatons of carbon dioxide—thereby delivering over 40 percent of the abatement required by the Paris Agreement (see IEA. 2019. Multiple Benefits of Energy Efficiency. International Energy Agency. https://www.iea.org/reports/multiple-benefits-of-energy-efficiency).

costs might be shouldered by the consumers through increased prices for goods and services, disproportionately affecting low-income households in the short run.[116] Nevertheless, this prior action will promote energy efficiency among the largest consumers and reduce costs of power generation, which is expected to improve energy supply services to the population. It must also be remarked that these regulations are mostly related to higher-end consumers, so they may not have a meaningful effect on those at the bottom of the distribution.

22. **The potential benefits of increased energy efficiency are expected to outweigh the initial costs in the medium to long run.** Improved energy efficiency can lead to cost savings for both industries and consumers by reducing energy consumption and associated expenses.[117] Furthermore, a more reliable and resilient energy system can contribute to economic growth, job creation, and poverty reduction by increasing productivity and reducing losses associated with power outages.[118] By enhancing energy efficiency in various end-user segments, such as industry, buildings, and appliances, Ecuador could unlock low-cost opportunities for reducing energy consumption and GHG and air pollutant emissions, leading to long-term socioeconomic and environmental benefits.

23. **Developing targeted policies and programs that ensure equitable access to the benefits of energy efficiency improvements is crucial to minimize the potential negative impacts of energy efficiency measures on poverty and inequality in the short run.** Since market failures could arise from energy efficiency measures and regulations, the government might consider offering financial incentives, targeted subsidies, or low-cost financing options for low-income households and small businesses to adopt energy-efficient technologies.[119] In addition, enhanced energy efficiency can reduce the country's dependence on imported fuels, promoting energy security and stabilizing energy prices. This can be particularly beneficial for low-income households, which are often more vulnerable to fluctuations in energy prices. By integrating energy efficiency policies within a broader development strategy, Ecuador can foster inclusive and sustainable growth while addressing the challenges of poverty and inequality.

Prior Action 9: To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.

24. **The establishment of the offset mechanism under PECC is not expected to have any impacts on equity and poverty in the short run.** The emissions offset mechanism includes the operational flow, the roles and responsibilities of all actors (offsetting initiatives implementing entities, trust funds, proponents and organizations outside of the incentive), the technical guidelines for emission offsetting initiatives in non-forest areas, monitoring and reporting, validation and verification, and the registration of such

[116] Gillingham, K., Newell, R. G., & Palmer, K. (2009). Energy efficiency economics and policy. Annual Review of Resource Economics, 1(1), 597-620. https://doi.org/10.1146/annurev.resource.102308.124234

[117] Ryan, L., Moarif, S., Levina, E., & Baron, R. (2011). Energy Efficiency Policy and Carbon Pricing. International Energy Agency. https://www.iea.org/reports/energy-efficiency-policy-and-carbon-pricing

[118] Pargal, S., & Banerjee, S. G. (2014). More power to India: the challenge of electricity distribution (English). Directions in development. Energy and mining. Washington, D.C.: World Bank Group. http://documents.worldbank.org/curated/en/815021468042283537/More-power-to-India-the-challenge-of-electricity-distribution

[119] Goulder, L. H., & Parry, I. W. (2008). Instrument choice in environmental policy. Review of Environmental Economics and Policy, 2(2), 152-174. https://doi.org/10.1093/reep/ren005

activities in the Emissions Offset Portfolio within the Climate Change National Registry. Individual initiatives that reduce, capture, or remove GHG emissions from a defined baseline and are validated and verified by the MAATE will be integrated in a National Emissions Offset Portfolio for its posterior traceability, and eligibility for retribution (payment) from proponents. Initiatives can be implemented by public, private, community, mixed and popular and solidarity economy entities, and retribution will be used to ensure sustainability and monitoring of the emission offsetting activity and for distribution to beneficiaries via an approved benefit distribution plan. This technical document advances in the implementation of the PECC, which in turn will promote actions to reduce GHG emissions in all productive sectors of the economy.

25. **Evidence and modelling show both synergies and trade-offs between climate change mitigation policies and sustainable development, especially on inequality and poverty.** "Many of Ecuador's systems are highly vulnerable and already have shown great sensitivity to climate variability and long-term change. Ecuador's ecosystems provide a range of environmental services that are critical to rural livelihoods and urban welfare. As these systems come under pressure from altered climate patters as well as other direct and indirect factors (i.e., deforestation, agricultural and livestock practices), it is likely they will deteriorate due, and the quality of environmental goods and services will also decrease."[120] Considering this and the fact that poor households are also more at risk of suffering the consequences of climate change in terms of food insecurity, higher food prices, reduced income (over 30 percent of employed population in Ecuador work in agriculture, forestry, and livestock activities), climate change mitigation measures could have positive impacts in the long run (Roy et al. 2018). However, trade-offs between mitigation actions to limit global warming and reduction of poverty and inequality have been identified in the literature (IPCC, 2014; Roy et al., 2018; Markkanen & Anger-Kraavi, 2019).[121,122,123] This is especially true in countries with high fossil-fuel dependency for revenue or employment generation, and in contexts of high poverty and social and economic inequalities. Which is why it is required that potential negative impacts on poverty and inequality are identified and considered in all stages of policy making and clear action is taken to minimize them (Markkanen & Anger-Kraavi, 2019). Ecuador's PECC falls within the less traditional Results-Based Carbon Financing mechanisms that incentivize emission reductions while considering other benefits such as poverty reduction and community benefits.[124] For instance, it is required that emission offsetting initiatives promote at least one (environmental, social, cultural or governance) co-benefit, additional to the reduction of GHG emissions, such as: climate-change adaptation, improvement of production activities of communities and poverty reduction, reduction of gender gaps and economic empowerment of women, among others. In addition, the mitigation activities will be classified as: a) small scale with direct benefits to rural areas, small producers, indigenous and/or most vulnerable populations; and b) other larger

[120] World Bank – Climate Change Knowledge Portal (2021). "Ecuador country summary". Available at: https://climateknowledgeportal.worldbank.org/country/ecuador

[121] IPCC (2014). "Climate Change 2014: Synthesis Report". Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change. [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC. Geneva, Switzerland. 151 pp.

[122] Roy, J., P. Tschakert, H. Waisman, S. Abdul Halim, P. Antwi-Agyei, P. Dasgupta, B. Hayward, M. Kanninen, D. Liverman, C. Okereke, P.F. Pinho, K. Riahi, and A.G. Suarez Rodriguez (2018). "Sustainable Development, Poverty Eradication and Reducing Inequalities." In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty. Available at: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/05/SR15_Chapter5_Low_Res.pdf

[123] Markkanen, S. and A. Anger-Kraavi. 2019. Social impacts of climate change mitigation policies and their implications for inequality. Climate Policy, 19:7, pp. 827-844. DOI: 10.1080/14693062.2019.1596873

[124] World Bank Carbon Pricing Dashboard. 2021. *What is carbon pricing?* Available at: *https://carbonpricingdashboard.worldbank.org/what-carbon-pricing*

initiatives that need to be registered under a validated national GHG program.

26. **In the medium to long run, impacts depend on the proper implementation of the program itself, considering there are both synergies and trade-offs between climate change mitigation policies and sustainable development, especially on inequality and poverty.**[125] Positive impacts could be expected in the long term, from health and environmental co-benefits of reduced pollution, including the promotion of sustainable circular economies However, overall welfare impacts would depend on the interaction between this program and other environmental policies applied in the country, and whether these take a pro-poor approach and efforts are made to counter potential negative effects.

Prior Action 10: To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.

27. **The procedure for preparing, approving, registering, and updating integrated forest management plans is not expected to have any impacts on poverty and inequality in the short run.** This procedure is the first step to demonstrate a deforestation-free production, to ensure traceability of information and sustainable management of native forests, and to formally register the productive activities with authorities. The Forest Management Plan is mandatory for all people and organizations that carry out sustainable forest management activities (conservation, restauration activities and land legalization) in native forests. This will enable the use of the legal origin, good practices certificates, and the tax incentives regulations issued previously as part of the sustainable forest management strategy.

28. **In the long-term, positive impacts on the welfare of rural populations could be expected, through improved economic opportunities aligned with sustainable forest management and increased value of wood and non-wood forest products.**[126,127,128] Ecuador is considered one of the world's megadiverse countries in the world, with about half of its territory covered by forest.[129] In 2015, the forestry sector contributed 2.3 percent to GDP and 8 percent to total employment. It also provides livelihoods for many indigenous peoples and local communities living in rural areas and high levels of poverty rates.[130] However, Ecuador suffers from high gross rates of deforestation. Between 1990 and 2000, Ecuador experienced an annual deforestation rate of 1.5 percent; between 2005 and 2010, the annual average rose to 1.9 percent.

[125] Markkanen, S. and A. Anger-Kraavi. (2019). "Social impacts of climate change mitigation policies and their implications for inequality". Climate Policy, 19:7, pp. 827-844. DOI: 10.1080/14693062.2019.1596873

[126] See Angelsen, A., Jagger, P., Babigumira, R., Belcher, B., Hogarth, N.J., Bauch, S., Börner, J., Smith-Hall, C. & Wunder, S. 2014. Environmental income and rural livelihoods: a global-comparative analysis. World Development, 64: S12–S28. *https://doi.org/10.1016/j.worlddev.2014.03.006*

[127] See World Bank. 2020. Forests for People, the Planet and Climate. March 19, 2020. World Bank, Washington, DC. At:*https://www.worldbank.org/en/news/feature/2020/03/19/forests-for-people-the-planet-and-climate;* and, World Bank. 2013. Forests and Poverty Reduction. Brief. August 18, 2013. World Bank, Washington, DC. At: *https://www.worldbank.org/en/topic/forests/brief/forests-poverty-reduction*.

[128] Cheng, S.H., MacLeod, K., Ahlroth, S. et al. 2019. *A systematic map of evidence on the contribution of forests to poverty alleviation*. Environ Evid 8, 3 (2019). https://doi.org/10.1186/s13750-019-0148-4

[129] The majority of forest biomass - approximately 9.8 million hectares - is in the Amazon region (80%), with about 13% near the coast and the remaining 7% in the Andean highlands. See *https://forestlegality.org/risk-tool/country/ecuador*.

[130] World Bank. 2020. Ecuador Forest Investment Program. World Bank. Washington, D.C.

The country has experienced major changes to its forest cover for many decades, mostly due to agricultural expansion and illegal logging, and has traditionally had one of the highest deforestation rates in the world.[131] This Prior Action, being part of the regulatory framework for the establishment of sustainable forest management, could benefit poor households in rural areas that depend on forest products for their subsistence.

29. **It is important to consider that the regulations for sustainable forest management do not exclude local people and forest-proximate populations for benefits to reach the most vulnerable.** Moreover, sustainable forest interventions and policies should recognize and meet their needs.[132] For instance, the Community Forest in Nepal promotes community rights to forests, enhances forest sector governance and local democracy, and mitigates adverse environmental and climate change effects. This project requires that 35 percent of the income generated by Community Forest User Groups be used to improve the social and economic condition of the poorest households, indigenous peoples and ethnic groups, and women benefiting more than a third of Nepal's population. In Peru, the Alto Mayo Conservation Initiative incentivizes inhabitants to conserve the forest and protect its precious resources by signing conservation agreements in exchange for benefits, such as agricultural training, farming equipment, public health campaigns, and school supplies. The main requirement of these agreements to pledge beneficiaries is not to cut down trees, use sustainable farming practices, and engage in various other conservation activities. By 2016, 848 settlers (about 60 percent of the population) had signed conservation agreements and indirectly benefitted 240,000 people. [133]

30. **Administrative procedures for obtaining export and import certificates for timber and non-timber forest products and homologation of forest professionals and advisors are not expected to impact well-being in the short run**. However, in the medium and long run, these policies could have a significant effect on well-being by creating incentives to implement sustainable forest management plans that reduce greenhouse gas emissions from deforestation and forest degradation, increase the value of forest products in local and international markets and provide an inclusion mechanism into the formal economy of poor communities that depend on forestry products by creating employment opportunities (World Bank, 2021; and, FAO and UNEP, 2020).[134]

31. **Promoting administrative procedures for obtaining export and import certificates for timber and non-timber forest products is not expected to impact welfare in the short run. However, positive effects from the traceability of timber and non-timber on welfare are expected in the long run by reducing deforestation, increasing the value of forest products, and being an inclusion mechanism into the formal economy of poor communities that depend on forestry products.[135]** The traceability of timber and non-

[131] See *https://forestlegality.org/risk-tool/country/ecuador*
[132] Razafindratsima, O. H.; Kamoto, J; Sills, E. et al. 2021. *Reviewing the evidence on the roles of forests and tree-based systems in poverty dynamics*". Forest Policy and Economics, Volume 131, 2021, 102576, ISSN 1389-9341. https://doi.org/10.1016/j.forpol.2021.102576.
[133] World Bank. 2019. *Benefit Sharing at Scale: Good Practices for Results-Based Land Use Programs*. World Bank, Washington, DC. https://openknowledge.worldbank.org/handle/10986/32765 License: CC BY 3.0 IGO
[134] World Bank. 2021. Designing Fiscal Instruments for Sustainable Forests. Washington, D.C.: World Bank. *https://www.cif.org/news/new-report-shows-how-fiscal-reforms-can-positively-influence-forest-conservation-and-ecosystem*; and FAO and UNEP. 2020. The State of the World's Forests 2020. Forests, biodiversity, and people. Rome. *https://doi.org/10.4060/ca8642en*
[135] Traceability refers to the capacity to trace a product's history, utilization, and whereabouts, including the origin of its materials and parts, its processing history, and its distribution and location after delivery (See International Standards Organization (ISO). 2015. ISO 9001: 2015. Quality Management Systems – Requirements. Traceability systems consolidate and record information about the product, its

timber exports and imports could significantly benefit developing countries by helping them to combat illegal logging and deforestation, promote sustainable forest management, and protect biodiversity. Traceability also strengthens forest governance by ensuring transparency and accountability in the supply chain. It enhances market access and trade opportunities by complying with international regulations, leading to increased exports, higher prices, and improved competitiveness. For poor households whose livelihoods depend on forest products' traceability of timber and non-timber exports and imports could provide employment opportunities and better incomes. In Latin America, several countries have proactively begun implementing traceability systems while demonstrating a relatively high capacity to implement such systems and leveraging technological applications to respond to the unique needs of their countries. For instance, in Brazil, organizations like BVRio, UNIFLORESTA, and IMAFLORA combine publicly available data with data from other sources to increase transparency in timber supply chains. This helps end buyers of forest products, especially in international markets, assess and manage the risk of illegal timber in their supply chains so that they can comply with legality requirements from international markets. By supporting buyers to assess and manage risk, these civil society initiatives can help promote legal timber products in legality-sensitive markets. In addition to legality requirements, supply-chain transparency can also contribute to compliance with buyer social and environmental commitments. In Colombia, multiple traceability systems and forest authorities ensure that only legal timber products are harvested and produced within the country, while in Guatemala, traceability systems have been implemented to regulate informality in the forest sector and reduce tax evasion (Nogueron et al., 2022).[136, 137]

32. **Ecuador could benefit from implementing regulations for traceability of timber of non-timber products to protect its rainforest and improve the livelihoods of many poor households living in the forest.** Countries can attract responsible investment and foster sustainable economic development by integrating traceability systems with sustainable forestry management within the timber value chains could reduce and prevent environmental degradation, increase yields and generate a more stable supply of raw materials, and increase the long-term profitability of firms (Waldron 2017).[138] This would also benefit poor communities when these are integrated into those supply value chains.[139,140] In Côte d'Ivoire is the world's largest producer of cocoa the Conseil du Café-Cacao (CCC) has developed a sustainable cocoa and coffee sector in Côte d'Ivoire by improving productivity, securing the income of producers and promoting national

potential modifications, and the transactions carried out among various stakeholders, which allows the product to be traced back through any transformations to its origin (Mundy and Sant, 2015). As such, traceability systems validate the origins of raw materials, along with the product's compliance with legal, environmental, and social claims.

[136] Nogueron, R., Knorr-Evans, M., Stauble, T. and Laprte, J. 2022. Timber traceability - A Management Tool for Governments. Case Studies from Latin America. Food and Agricultural Organization and World Resources Institute.

[137] For a review of different traceability systems implemented in developing countries, see: Mundy, V. and Sant, G. 2015. Traceability systems in the CITES context: A review of experiences, best practices and lessons learned for the traceability of commodities of CITES-listed shark species. TRAFFIC report for the CITES Secretariat.

[138] Waldron A, Garrity D, Malhi Y, Girardin C, Miller DC, Seddon N. 2017. Agroforestry Can Enhance Food Security While Meeting Other Sustainable Development Goals. Tropical Conservation Science. doi:10.1177/1940082917720667.

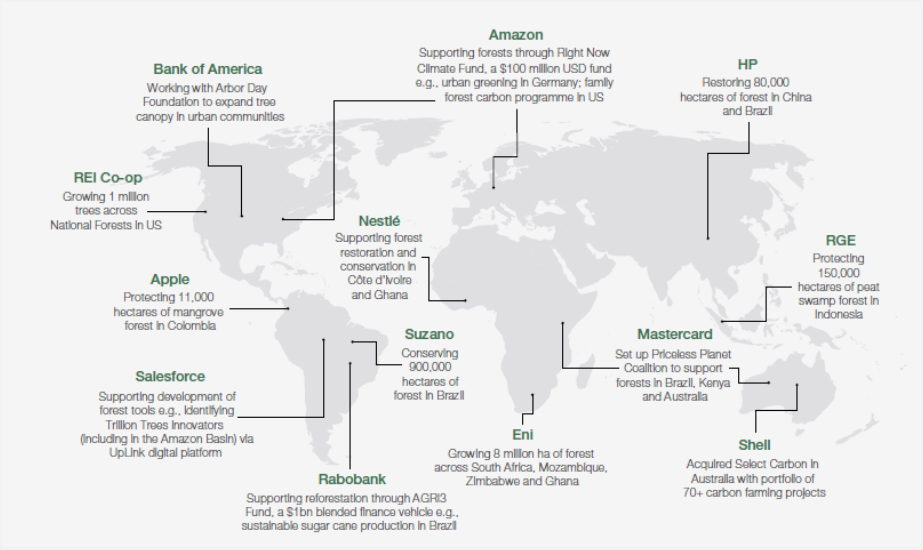
[139] It is estimated that sustainable forest management could generate around US$230 billion in business opportunities and create 16 million jobs worldwide by 2030. See *https://www.forbes.com/sites/worldeconomicforum/2021/06/04/3-reasons-companies-are-investing-in-forest-conservation-and-restoration-and-how-they-do-it/?sh=50df60b211e0*

[140] Traceability within the value change depends on the different roles of stakeholders: i) for a consumer, traceability needs to assured of the safety and/or sustainability of the product they are consuming, ii) for firms, it assures proper management and mitigation of risks such as safety, quality, and sustainability of production and supply, or even tracking payments to farmers, iii) for governments, it could act as a tool to ensure compliance with sector policy and/ or sustainability requirements and to verify payments made to farmers and farmer organizations (IDH et al., 2021).

and international consumption of coffee and cocoa.[141] Under this system, the cocoa supply chain begins with the farmer. If part of a cooperative or farmers' organization, the farmer is identified and registered by the cooperative. Depending on accessibility to the cooperative, farmers may sell directly to it or may sell to the cooperative through a délégué. From the cooperatives and buying centers, a portion of the cocoa beans may be processed locally and exported as semi-finished cocoa products or end up on the local consumer market (IDH et al., 2021).[142] This initiative also attracted private investment for a multinational corporation to promote sustainable forest managnent. Nestlé agroforestry initiatives and forest restoration projects in Côte d'Ivoire and Ghana work with its cocoa supply-chain partners to grow 2.8 million trees on their farms and surroundings by 2022. This initiative is also expected to train its farmers to implement agroforestry practices (Nestlé 2020).[143] Natura & Co, a Brazilian-based multinational cosmetics group, is working with indigenous communities in the Amazon to sustainably manage and restore the forests from which they get the input for their products. This process can guarantee the conservation of biodiversity and the supply of forestry products needed for producing and innovating different product lines (World Economic Forum 2020).[144] Other incentives by multinationals to promote sustainable forestry management include: Apple's project to protect 11,000 hectares of mangroves in Cispatá Bay, Colombia; Mastercard's Priceless Planet Coalition is expected to plant around 100 million trees in Brazil, Kenya, and Australia; and RGE has a protect-to-protect swamp forests in Indonesia (World Economic Forum 2021).[145] Figure 3 shows private sector financial initiatives that integrate sustainable forest management into its global supply value chain. The United Kingdom is now developing its own legislation which will require companies to account for deforestation issues within their supply chains.[146]

[141] The proposed system includes both physical traceability and financial traceability as well as data analysis and resulting 'alarms' to identify any risks of unsustainable practices or fraud in the traceability system.
[142] IDH, GISCO, C-lever.org. 2021. Technical Brief on Cocoa Traceability. P. Stoop, N. Ramanan, H. Geens, A. Lambrecht and S. Dekeister.
[143] See also Nestlé. 2020. Nestlé Invests CHF 2.5 Million and Partners with the Government of Côte d'Ivoire to Protect and Restore the Cavally Forest Reserve. *https://www.nestle.com/media/news/nestle-partners-government-cote-ivoire-protect-cavally*
[144] World Economic Forum. 2022. Scaling Investments in Nature the Next Critical Frontier for Private Sector Leadership. White paper.
[145] World Economic Forum. 2021. Investing in Forest: The Business Case. Insight Report. June. See also Nestlé, Nestlé Invests CHF 2.5 Million and Partners with the Government of Côte d'Ivoire to Protect and Restore the Cavally Forest Reserve, 2020, *https://www.nestle.com/media/news/nestle-partners-government-cote-ivoire-protect-cavally*
[146] See European Commission. 2021. Commission Staff Working Document – Impact Assessment Report: Minimizing the risk of deforestation and forest degradation associated with products placed on the EU market.

Figure A3. Private sectors initiatives to finance sustainable forestry management



Source: World Economic Forum. 2021. Investing in Forest. The Business Case. Insight Report. June

ANNEX 5: PARIS ALIGNMENT ASSESSMENT

Program Development Objective(s): is to assist the GoE in its agenda to tackle selected structural challenges to foster inclusive, resilient, and low-carbon development.	
Taking into account our climate analysis, is the operation consistent with the country climate commitments, including for instance, the NDC, NAP, LTS, and other relevant strategies?	Yes, the operation is consistent with the country's NDC. Prior actions supported by this operation will contribute to a decrease of CO_2 emissions from land transportation and decrease of annual forest loss, which will contribute to meet NDC GHG emissions targets.
Mitigation goals: assessing and reducing the risks	
Pillar 1: Tackle selected structural challenges to foster green growth, inclusion, and climate resilience	
PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: The PA will eliminate the fuel subsidy for large shrimp farms, which will create the incentive to transition to cleaner energy and reduce GHG emissions.
Conclusion for PA#1: ALIGNED	
PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: The objective of this regulation is to set the new governance and institutional framework to issue bonds to finance green-eligible projects.
Conclusion for PA#2: ALIGNED	
PA#3. To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: The norm establishes the methodology to quantify contingent liabilities caused by climate and climate-related disasters for PPP projects.
Conclusion for PA#3: ALIGNED	
PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: A cash transfer to pregnant women in rural areas or to poor families with children under 2 years is not likely to cause a significant increase in GHG emissions.
Conclusion for PA#4: ALIGNED	
PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**:. *This* measure is not likely to cause a significant increase in GHG emissions.
Conclusion for PA#5: ALIGNED	
Pillar 2: Strengthen low-carbon development	
PA#6. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: This regulation would enable distributed renewable generation among non-regulated customers. It would determine requirements and remuneration for surplus green energy produced by non-regulated customers and supplied to the electricity system, increasing the deployment of distributed renewable generation.
Conclusion for PA#6: ALIGNED	
PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.	
Step M2.1: Is the prior action likely	**Answer** No. **Reasoning**: This regulation would facilitate investments in distributed solar PV

to cause a significant increase in GHG emissions?	systems for key industries and overall integration of NCRE in the power system in Ecuador.
Conclusion for PA#7: ALIGNED	
PA#8. The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans**.**	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning:** The mandate for power companies to present their energy efficiency plans would lead foster energy efficiency in the power sector.
Conclusion for PA#8: ALIGNED	
PA#9. To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: The PECC is a voluntary program that seeks to promote actions to reduce GHG emissions in all productive sectors of the economy, including the private and public sector, helping to achieve NDC commitments and carbon neutrality.
Conclusion for PA#9 ALIGNED	
PA#10. To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving, registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.	
Step M2.1: Is the prior action likely to cause a significant increase in GHG emissions?	**Answer** No. **Reasoning**: The procedure will contribute to promoting more sustainable practices in rural landscapes and deforestation-free- production. Also, this regulation increases the information and transparency of the traceability of sustainably sourced timber for exports. It will also enable the MAATE and MAG to manage forests and better track illegal activities that may contribute to deforestation
Conclusion for PA#10: ALIGNED	
Adaptation and resilience goals: assessing and managing the risks	
The contribution of all Prior Actions to the PDO is not expected to be significantly impacted by current or future physical risks from climate hazards. PAs #2, 3, 6, 7, 8, 9, and 10 are consistent with national climate adaptation strategies, while PAs #1, 4, and 8 are neutral. While risks from climate hazards could adversely affect forest ecosystems, PA#10 focuses on a reform that contributes to reduce this risk to an acceptable level.	
Conclusion for Adaptation Criteria: ALIGNED	
Adaptation and resilience: Conclusion of the Assessment for the Program	
OVERALL CONCLUSION OF PARIS ALIGNMENT ASSESSEMENT: ALIGNED	

ANNEX 6: DISSEMINATION AND CONSULTATION PROCESS FOR WORLD BANK DPF PROGRAM 2022

PA- DPL 3	DISSEMINATION / CONSULTATION PROCESS
PA#1. To reduce the fiscal impact of fuel subsidies, the Borrower has reduced the fuel subsidy for large shrimp farms.	The GoE organized working sessions to facilitate discussions on the draft Executive Decree and to prepare the technical reports required to substantiate and regulate the measure. These sessions were held from November 8, with the participation of the following stakeholder institutions: the ARCERNNR, the MEM, the Ministry of the Government (MG), the MEF, and the Ministry of Production, Foreign Trade, Investments and Fisheries (MPCEIP). After the Executive Decree was issued, MPCEIP held meetings with the shrimp sector as part of its outreach to external actors. Furthermore, within the framework of the implementation of Executive Decree 614, various forums for dialogue and discussions were coordinated in December 2022 between ARCERNNR, MEM, MG, MEF and MPCEIP and private sector stakeholders from the sector, such as marketing companies from the industrial sector. These meetings were designed to promote awareness of the measure and to identify the next steps required for issuing the directive on domestic shrimp volumes.
PA#2. To finance green investments to promote a low-carbon economy, the Borrower has issued the green bond framework, which establishes the processes for evaluating and selecting projects eligible to be financed with green bond proceeds, and for reporting on the allocation and impact of those proceeds.	The MEF has prepared the Green Bond Framework document, in collaboration with the technical assistance facility of the GGGI and with financing from CAF. This document has been disseminated and comments have been received from the Ministry of Agriculture and Livestock, the Ministry of Public Health, the Ministry of Energy and Mines, the Ministry of Transport and Public Works, the Ministry of the Environment, Water and Ecological Transition, and the National Planning Secretariat. After taking account of the comments from the agencies mentioned above and in order to launch the Second-Party Opinion (SPO) process, MEF submitted the final version of this document on April 4, 2023, to the Green Growth Institute, under cover of Memorandum No. MEF-VE-2023-0049-O.
PA#3. To better manage fiscal risks due to climate and natural hazards, the Borrower has issued the methodology for quantifying contingent liabilities caused by climate-related disasters in PPP projects.	These regulations will be sent to all public entities and consultations workshops will be held.
PA#4. The Borrower has created the Bono 1000 días program for providing conditional grants for expecting mothers and children under two.	
PA#5. The Borrower has: (i) enacted a law to incentivize women's participation and gender equality in the workplace; and (ii) issued guidelines for its implementation in the power sector.	Prior to the issuance of the ministerial agreement, between January and February 2023, an information gathering process was carried out in the Galapagos electricity distribution company (initial pilot) to probe and gather knowledge and expectations about the Violet Economy Law in the sector. These data served to constrain the final version of the ministerial agreement, which was officially sent to all distributors and socialized in a workshop attended by more than 100 participants at the end of January. Additionally, after the issuance of the ministerial agreement, information-gathering processes were carried out in all the distribution companies of the country to feed the implementation and monitoring of the agreement.
PA#6. The Borrower has issued a regulation to promote distributed renewable generation for non-regulated customers.	The efficient, rational and sustainable use of energy in all its forms has been declared a matter of national interest and enshrined as State policy in the Organic Law on Energy Efficiency. Against this background and in order to promote energy efficiency in the productive sector, a proposal to reduce the tariffs on lithium batteries was submitted to the Technical Interinstitutional Committee of the Foreign Trade Committee. Subsequently, on February 24, 2023, the Plenary of the Foreign Trade Committee, composed of the Ministry of Production, Foreign Trade, Investments and Fisheries, the Ministry of Economy and Finance, the Ministry of Agriculture and Livestock and the Ministry of Foreign Affairs and Human Mobility, representing the Office of the President of the Republic, adopted a resolution to approve the reduction of tariffs on the importation of lithium batteries, classified in subheading 8507.60.00.99. The resolution

PA- DPL 3	DISSEMINATION / CONSULTATION PROCESS
	called for the reduction of the ad valorem tariff from 25 percent to zero percent (Resolution No. 001-2023 of February 24, 2023), a proposal that entered into force as of March 1, 2023, and was implemented through the ECUAPASS system of Ecuador's National Customs Service. The new measures were published on the institutional website of the Ministry of Production, Foreign Trade, Investments and Fisheries (https://www.produccion.gob.ec/resoluciones-pleno-comex-2023/).
PA#7. The Borrower has reduced the tariffs on lithium batteries used for storing power generated from variable renewable energy sources.	The Energy Efficiency Law has declared the efficient, rational, and sustainable use of energy, in all its forms, both national and state policy. In this context, on January 10, 2023, the proposal for tariff reduction of lithium accumulators was presented to the Interinstitutional Technical Committee of the Foreign Trade Committee to promote energy efficiency in the productive sector. A meeting was held in January 2023 between representatives of the National Chamber of Aquaculture and Ministers of State to discuss the change in the energy matrix of the shrimp sector. In this context, the strengthening of island electrification explored the possibility of deploying photovoltaic systems to shift from diesel to clean energy. Tariff reduction was provided for rechargeable lithium batteries used in photovoltaic projects. Subsequently, on February 24, 2023, the Full Chamber of the Foreign Trade Committee comprising the Ministry of Production, Foreign Trade, Investment and Fisheries, the Ministry of Economy and Finance, the Ministry of Agriculture and Livestock, and the Ministry of Foreign Affairs and Human Mobility as delegate to the Presidency of the Republic, resolved to approve the tariff reduction on imports of lithium accumulators classified under subheading 8507.60.00.99, passing the ad valorem tariff of 25% to 0% (Resolution 001-2023, of February 24, 2023), which entered into force and was implemented through the ECUAPASS system of the National Customs Service of Ecuador, as of March 1, 2023, as well as published in the institutional web publication of the Ministry of Production. Foreign Trade, Investment and Fisheries
PA#8. The Borrower has mandated that all public and semi-public power companies in the power sector prepare five-year energy efficiency plans.	Prior to the issuance of the regulations, energy distribution companies were asked to deliver their current comprehensive energy efficiency plans, for the management of baseline indicators and the mapping of local energy generation, self-generation, transmission, distribution, and commercialization initiatives that are currently being developed. Similarly, prior to the issuance of the standard, the Ministry of Energy and Mines (MEM) sent the distribution companies a form guiding the design of plans, periodic reports on the energy variables for analysis and decision-making, and the adoption of energy efficiency measures specific to the National Plan. The General Secretariat of the Ministry of Energy and Mines was commissioned to publish the Ministerial Agreement in the Official Register for general knowledge.
PA#9. To encourage public and private entities to reduce GHG emissions and support achievement in carbon neutrality goals, while enhancing the resilience activities in non-forest areas, the Borrower has issued the Technical Norm Establishing the Ecuador GHG Emissions Offset Scheme under the PECC which governs the design, eligibility, validation, valuation, registration, and monitoring and verification of GHG mitigation initiatives.	The MAATE is still to outline to the World Bank the scope of technical assistance required and provide the résumés of the experts needed to support the design of the technical standards for the compensation mechanism. By means of Memorandum No. MAATE-DCI-2023-0162-O of April 14, 2023, the International Cooperation Department of the MAATE submitted the draft standards for the national compensation mechanism to the MEF, under the heading "Draft Technical Standards for the Compensation of Greenhouse Gas Emissions," for onward transmission to the World Bank. With respect to the process of issuing the Ministerial Agreement, determining the applicability or non-applicability of pre-legislative consultations in respect of this instrument is still pending. Furthermore, in terms of training activities designed to encourage companies to sign up for and participate in the PECC, the process of territorialization of the PECC was launched on April 19, 2023, in Quito, with the participation of 30 companies. A total of 12 events are planned at the national level to promote participation in and commitment to the Ecuador Zero Carbon Program.
PA#10. To promote deforestation-free and value-added production in rural landscapes, and to promote traceability of forest resources and control their illegal exploitation, the Borrower has issued: (i) the procedure for preparing, approving,	Draft Ministerial Agreement outlining the Administrative Procedures for the Issuance of the Export-Import Certificate for Timber and Non-Timber Forest Products from Natural Forests and Trees Outside Forests. In accordance with the provisions of the Organic Code on the Environment and its Regulations and in keeping with the principle of participation, the Directorate of Forests organized workshops with the industry sector on the following dates: -On November 17, 2022, a virtual working meeting was held by Zoom between the technical staff of the Directorate of Forests, DPSGC and SITEAA, and the technical staff of the Technical Offices of MAATE.

PA- DPL 3	DISSEMINATION / CONSULTATION PROCESS
registering, and updating integrated forest management plans; and (ii) the administrative procedures for obtaining export and import certificates for timber and non-timber forest products.	-On December 8, 2022, a face-to-face working meeting was held on the third floor of the Zonal Government of the city of Guayaquil between the technical staff of the Directorate of Forests, DPSGC and SITEAA, and private sector exporters and importers of timber and non-timber forest products. -On February 27, the Deputy Minister of the Environment, approved the validation form. The Technical Standards to be developed in accordance with Ministerial Agreement No. 023, which are outlined in the Organic Statute for Processes of the Ministry of the Environment and Water, have been sent by the Under Secretariat for Natural Heritage, under cover of Memorandum No. MAATE-SPN-2023-0382-M, to the Office of the General Coordinator of Legal Affairs to be reviewed before they are issued. "Draft Ministerial Agreement regulating the Registration and Obligations of Forest Professionals in relation to Technical Assistance Activities within the framework of the Sustainable Forest Management of the country's natural forests." In keeping with the principle of participation, workshops were held on the preparation of technical standards. The workshops were attended by forest engineers, representatives of academia and the college of forest engineers and were designed to generate inputs that could be used for the development of appropriate standards. The workshops were held as follows: Imbabura (February 17, 2023), Napo (March 1, 2023), Loja (March 3, 2023), Chimborazo (February 16, 2023), Santo Domingo (March 3, 2023, Online information-sharing workshop, College of Forest Engineers of Pichincha (March 2, 2023). The technical components of the Standards to be developed in accordance with Ministerial Agreement No. 023, which are outlined in the Organic Statute for Processes of the Ministry of the Environment, are at the final review stage, prior to their submission to the Office of the Coordinator of Legal Affairs.