



The World Bank

Panama Climate Resilience and Green Growth DPL (P179817)

Document of
The World Bank

FOR OFFICIAL USE ONLY

Report No: PCBASIC0270592

INTERNATIONAL BANK FOR RECONSTRUCTION AND DEVELOPMENT

PROGRAM DOCUMENT FOR A

PROPOSED LOAN

IN THE AMOUNT OF US\$150 MILLION TO

REPUBLIC OF PANAMA
FOR THE

Panama Climate Resilience and Green Growth Development Policy Loan
March 31, 2023

Energy & Extractives Global Practice
Environment, Natural Resources & Blue Economy Global Practice
Latin America And Caribbean Region

This document has a restricted distribution and may be used by recipients only in the performance of their official duties. Its contents may not otherwise be disclosed without World Bank authorization.

Republic of Panama
GOVERNMENT FISCAL YEAR
January, 1 – December, 31

CURRENCY EQUIVALENTS
(Exchange Rate Effective as of March 16, 2023)
Currency Unit = Panamanian Balboa (PAB)
PAB 1.00 = US\$1.00

ABBREVIATIONS AND ACRONYMS

AM	Accountability Mechanism	ENME	National E-mobility Strategy (<i>Estrategia Nacional de Movilidad Eléctrica</i>)
AML/CFT	Anti-Money Laundering and Combating the Financing of Terrorism	ENUREE	National Strategy for Rational and Efficient Use of Energy (<i>Estrategia Nacional de Uso Racional y Eficiente de la Energía</i>)
ASA	Advisory Services and Analytics	ESCOs	Energy Service Companies
ASEP	Regulatory Authority of Public Services (<i>Autoridad Nacional de los Servicios Públicos</i>)	EV	Electric Vehicle
ATE	Energy Transition Agenda (<i>Agenda de Transición Energética</i>)	FATF	Financial Action Task Force
AWS	Advanced Wireless Services	FDI	Foreign Direct Investment
BAU	Business as Usual	FONTE	Energy Transition Fund (<i>Fondo de Transición Energética</i>)
BNP	National Bank of Panama (<i>Banco Nacional de Panamá</i>)	FY	Fiscal Year
BO	Beneficial Ownership	GCRF	Global Crisis Response Framework
CA	Central America	GDP	Gross Domestic Product
CABEI	Central American Bank for Economic Integration	GHG	Greenhouse gas
CAD	Current Account Deficit	GLE	General Environmental Law
CC	Climate Change	GoP	Government of Panama
CIT	Corporate Income Tax	GRID	Green, Resilient and Inclusive Development
CPF	Country Partnership Framework	GRS	Grievance Redress Service
DPF	Development Policy Finance	IADB	Inter-American Development Bank
DPO	Development Policy Operation	IBRD	International Bank for Reconstruction and Development
EE	Energy Efficiency	ICE	Internal Combustion Engine
EIA	Environmental Impact Assessments	IDA	International Development Association
ENACU	National Strategy for Universal Access (<i>Estrategia Nacional de Acceso Universal</i>)	IFC	International Finance Corporation

IMF	International Monetary Fund	PEN	National Strategic Plan with State Vision 2030 (<i>Plan Estratégico Nacional con Visión de Estado 2030</i>)
INEC	National Institute of Statistics and Census (<i>Instituto Nacional de Estadística y Censo</i>)	PER	Public Expenditure Review
IP	Indigenous People	PFM	Public Financial Management
IRENA	International Renewable Energy Agency	PLL	Precautionary and Liquidity Line
ISTMO	Integrated Financial Management System	PLR	Performance and Learning Review
IT	Indicative Trigger	PPP	Public Private Partnerships
LAC	Latin America and the Caribbean	RTCA	Central American Technical Regulations (<i>Reglamento Técnico Centroamericano</i>)
LULUCF	Land Use, Land-Use change and Forestry	SCD	Systematic Country Diagnostic
MEF	Ministry of Economy and Finance (<i>Ministerio de Economía y Finanzas</i>)	SFRL	Social and Fiscal Responsibility Law
MEPS	Minimum Energy Performance Standards	SICA	Central American Integration System (<i>Sistema de la Integración Centroamericana</i>)
MFD	Maximizing Finance for Development	SINAP	National System of Protected Areas (<i>Sistema Nacional de Áreas Protegidas</i>)
MiAmbiente	Ministry of Environment (<i>Ministerio de Ambiente</i>)	SNE	National Secretariat of Energy (<i>Secretaría Nacional de Energía</i>)
MIDA	Ministry of Agricultural Development (<i>Ministerio de Desarrollo Agropecuario</i>)	UNFCCC	United Nations Framework Convention on Climate Change
NCAP	National Climate Action Plan	UREE	Rational and Efficient Use of Energy (<i>Uso Racional y Eficiente de la Energía</i>)
NGO	Nongovernmental Organization	VRE	Variable Renewable Energy
PA	Prior Action	WB	World Bank
PEG	Strategic Government Plan 2019-2024 (<i>Plan Estratégico de Gobierno 2019-2024</i>)	WBG	World Bank Group

Regional Vice President:	Carlos Felipe Jaramillo
Country Director:	Michel Kerf
Regional Director:	María Marcela Silva, Anna Wellenstein
Practice Manager (s):	Stephanie Gil, Genevieve Connors
Task Team Leader (s):	Peter Johansen, Katharina Siegmann



REPUBLIC OF PANAMA

PANAMA CLIMATE RESILIENCE AND GREEN GROWTH DPL

TABLE OF CONTENTS

SUMMARY OF PROPOSED FINANCING AND PROGRAM	3
1. INTRODUCTION AND COUNTRY CONTEXT	6
2. MACROECONOMIC POLICY FRAMEWORK.....	10
2.1. RECENT ECONOMIC DEVELOPMENTS.....	10
2.2. MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY	12
2.3. IMF RELATIONS	16
3. GOVERNMENT PROGRAM	16
4. PROPOSED OPERATION	19
4.1. LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION	19
4.2. PRIOR ACTIONS, RESULTS AND ANALYTICAL UNDERPINNINGS	20
4.3. LINK TO CPF, OTHER BANK OPERATIONS AND THE WBG STRATEGY	45
4.4. CONSULTATIONS AND COLLABORATION WITH DEVELOPMENT PARTNERS	46
5. OTHER DESIGN AND APPRAISAL ISSUES	47
5.1. POVERTY AND SOCIAL IMPACT	47
5.2. ENVIRONMENTAL, FORESTS, AND OTHER NATURAL RESOURCE ASPECTS	49
5.3. PFM, DISBURSEMENT AND AUDITING ASPECTS.....	51
5.4. MONITORING, EVALUATION AND ACCOUNTABILITY	53
6. SUMMARY OF RISKS AND MITIGATION	54
ANNEX 1: POLICY AND RESULTS MATRIX	56
ANNEX 2: FUND RELATIONS ANNEX	61
ANNEX 3: LETTER OF DEVELOPMENT POLICY.....	64
ANNEX 4: ENVIRONMENT AND POVERTY/SOCIAL ANALYSIS TABLE	68

The Panama Climate Resilience and Green Growth DPL was prepared by an IBRD team consisting of Peter Johansen (Senior Energy Specialist and Co-TTL, ILCE1), Katharina Siegmann (Senior Environment Specialist and Co-TTL, SLCEN), Ana Maria González (Senior Environment Specialist, SLCEN), Hulya Ulku (Senior Economist, ELCMU), Rafael Amaral Ornelas (Economist, ELCMU), Ruben Leonel Ruano Chinchilla (Senior Governance Specialist, ELCG2), Xingjun Ye (Governance Specialist, ELCG2), Maria Pia Cravero (Counsel, LEGLE), Marie Caroline Paviot (Senior Agriculture Economist, SLCAG) Kevin McCall (Senior Environmental Specialist, SLCEN), Maria

Vizeu (Environmental Specialist, SLCEN), Maria Elena Garcia Mora (Senior Social Development Specialist), Javier Romero (Economist, ELCPV), Angela Lopez (Consultant, ELCPV), Alejandro Roger Solanot (Senior Financial Management Specialist, ELCG1), Eric Lancelot (Lead Transport Specialist, ILCT1), Julian Najles (Digital Development Specialist, IDD07), Abel Lopez Dodero (Senior Transport Specialist, ILCT1), Paola Buitrago (Economist, ELCPV), Diana Galeano (Consultant, ELCPV), Yara Esquivel (Senior Financial Sector Specialist, EFNFS), Tatiana Cristina O. de Abreu Souza (Finance Specialist), Fabian Hinojosa (Senior Transport Specialist, ILCT1), Xavier Espinet (Transport Economist, ILCT1), Gabriela Alonso Mendieta (Consultant, SLCEN), Sara Paredes (Senior Executive Assistant, LCCPA), Mark Njore (Senior Program Assistant, ILCE1), Agostina Signorini (Program Assistant, ILCE1), Ainara Miranda (Temporary, ILCE1), and Andres Leonardo Sepulveda (Consultant, ILCE1). The team gratefully acknowledges the guidance provided by Stephanie Gil (Practice Manager, ILCE1), Genevieve Connors (Practice Manager, SLCEN), Michel Kerf (Country Director, LCC2C), Joelle Dehasse (Manager, Operations, LCC2C), Luis Anibal Cano (Senior Operations Officer, LCC2C), Meilyn Gem (Operations Officer, LCCPA), David Vilar (Senior Energy Specialist and Program Leader, ILCDR), David Treguer (Sector Leader, SLCDR), Aiga Stokenberga (Senior Transport Economist, ILCT1), Mariano Gonzalez (Senior Energy Specialist, IECE1), Ernesto Sanchez-Triana (Lead Environment Specialist, SENDR), Evelyn Awittor (Senior Operations Officer, LCROS).



SUMMARY OF PROPOSED FINANCING AND PROGRAM

BASIC INFORMATION

Project ID	Programmatic	If programmatic, position in series
P179817	Yes	1st in a series of 2

Proposed Development Objective(s)

The development objective is to establish policy foundations to foster low-emission and sustainable economic growth and climate change resilience.

Organizations

Borrower: REPUBLIC OF PANAMA

Implementing Agency: Ministry of Economy and Finance (MEF), Ministry of Environment (MiAmbiente), National Secretariat of Energy (SNE)

PROJECT FINANCING DATA (US\$, Millions)

SUMMARY

Total Financing	150.00
------------------------	---------------

DETAILS

International Bank for Reconstruction and Development (IBRD)	150.00
--	--------

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

Moderate



Results

Indicator Name	Baseline	Target
<i>Pillar I – Support reforms to implement energy transition and socially inclusive low-carbon growth</i>		
Results Indicator #1: Number of charging stations per 100 km of the primary and secondary road network	2.2 [2022]	17.3 [2025]
Results Indicator #2: Number of electric buses acquired or under procurement by the Panama City public operator (MiBus)	5 [2022]	55 [2025]
Results Indicator #3: Number of air conditioners with improved Minimum Energy Performance Standards (MEPS)	96,000 [2021]	124,000 [2025]
Results Indicator #4: Number of refrigerators with improved Minimum Energy Performance Standards (MEPS)	51,000 [2021]	117,000 [2025]
Results Indicator #5: Number of <i>Corregimientos Colmena</i> with implemented energy access interventions	0 [2021]	60 [2025]
Results Indicator #6: Number of female-headed households electrified through Plan Colmena	0 [2021]	550 [2025]
Results Indicator #7: Number of indigenous women with skills to perform installation and maintenance tasks of isolated photovoltaic systems in their communities	0 [2021]	200 [2025]
Results Indicator #8: Percentage of population covered by 4G networks	73 [2021]	87 [2025]
Results Indicator #9: Number of indigenous regions (provincial and comarca level) with at least 5 percent of their geographical area covered by 4G networks ¹	0 [2022]	3 [2025]
<i>Pillar II – Establish policy foundations to sustain natural capital for resilient growth</i>		
Results Indicator #10: Negative Carbon balance maintained ²	Yes [2021]	Yes [2025]
Results Indicator #11: Percentage of approved Environmental Impact Assessments (EIA) processes category II and III that integrate climate mitigation and resilience considerations	0 [2021]	100 [2025]
Results Indicator #12: Number of agritourism fincas certified	0 [2021]	480 [2025]
Results Indicator #13: Zero net deforestation of mangroves in National Protected Areas achieved	No [2021]	Yes [2025]

¹ Panama has 4 provincial-level indigenous regions: Emberá-Wounaan, Guna Yala, Ngäbe-Buglé, and Naso Tjër Di, as well as 2 municipal-level indigenous regions: Guna de Madungandí and Guna de Wargandí

² Based on national Greenhouse Gas (GHG) inventory



Results Indicator #14: Percentage of marine area under conservation and sustainable management schemes	30.5 [2021]	50 [2025]
---	-------------	-----------



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

1. INTRODUCTION AND COUNTRY CONTEXT

- 1. The development objective of the proposed operation is to establish policy foundations to foster low-emission and sustainable economic growth and climate change resilience.** This US\$150 million proposed operation is the first in a series of two programmatic Development Policy Loan (DPL) operations. Pillar I supports reforms that foster a clean energy transition, socially inclusive low-carbon growth, and technological innovation to enable disaster preparedness. Pillar II supports the country's efforts to sustain natural capital for resilient growth by strengthening climate and nature governance, enhance institutional capacity for advancing the country's climate change (CC) adaptation and mitigation agendas while fostering resilience and social inclusion. The proposed DPL series underpins Panama's efforts toward long term sustainable growth by addressing key institutional weaknesses for decarbonization and climate resilience.
- 2. Despite high economic growth, social inclusion and equity have been lagging behind.** Panama has been one of the fastest-growing economies in the world, with an average annual growth rate of around 6.1 percent between 2001-2019. This exceptional growth has made it one of the few countries in Latin America and the Caribbean (LAC) to make progress in converging to the income per capita of more developed economies. However, income inequality positions Panama as a country with one of the highest Gini Index in the region (49.8)³. Education and health outcomes also lag high- and middle-income countries significantly. Panama's Human Capital Index (HCI)⁴ of 0.50 is below that of middle-income countries in the region such as Costa Rica (0.63), El Salvador (0.55), and Nicaragua (0.51). In addition, social indicators such as poverty headcount⁵, rural poverty and poverty among Indigenous People (IP) are more aligned with those of countries with much lower income levels, representing approximately 12.0, 28.2 and 43.2 percent by 2019, respectively, and poverty in the *Comarcas* reached almost 70 percent in 2019. Labor force participation rate in Panama also shows high inequities between females (50.4 percent), and males (72.6 percent)⁶. Since 1990, female labor force participation has increased, but the employment rate of vulnerable females has worsened; additionally, women spend 2.4 times as much time on unpaid domestic and care work than men⁷.
- 3. Despite a deteriorating external environment, Panama's strong economic rebound in 2021 continued in 2022, however high energy and food inflation have resulted in instances of social unrest.** After suffering one of the most severe COVID-19 outbreaks in the region and a steep drop in real Gross Domestic Product (GDP) by 17.9 percent in 2020,⁸ Panama's economy rebounded quickly, supported by a gradual easing of containment measures, an effective fiscal policy response and a resolute vaccination program. The economy expanded at 15.3 percent and 10.5 percent in 2021 and 2022 in real terms, respectively. Yet, rising global food and energy prices, following the Russia's invasion of Ukraine, created significant inflationary pressures as food

³ World Bank Data. See: <https://data.worldbank.org/indicator/SI.POV.GINI?locations=PA>

⁴ The index measures how productive a child born today can expect to be by age 18, compared with a scenario where he/she would enjoy complete education and full health.

⁵ Using a threshold of US\$6.85/day, purchasing power parity 2017).

⁶ WBG. Panama Gender Landscape, 2022. Available at:

<https://documents1.worldbank.org/curated/en/099429407032211560/pdf/IDU007f3752f07c0e04e140835b0654155f0199b.pdf>. Access on: Jan. 8th, 2023.

⁷ WBG. Panama Gender Landscape, 2022. Available at: Access on: Jan. 8th, 2023.

⁸ Panama's GDP contraction for 2020 (-17.9 percent), stood well above the regional average of -6.6 percent.



and fuel imports tend to account for around 37 and 14 percent of total imports, respectively.⁹ In response to high inflation, social unrest broke out in July 2022, prompting the Government of Panama (GoP) to introduce several measures, including related to fuel subsidies, to alleviate the impact of the high food and energy prices on the population. In this context, energy security has become an important objective and policy efforts are focused on reducing Panama's exposure to international oil price volatility.

4. **Panama's clean energy transition, climate resilience and nature governance are critical to bridging inclusion gaps and fostering sustainable growth.** Vulnerable households are the most impacted by climate change-induced events and the most likely to benefit from clean energy and digital connectivity solutions. The key challenges to supporting vulnerable households are: (i) that the energy transition includes groups in low-income and indigenous regions that both lack access to clean, modern energy and digital connectivity, which constrains access to markets and employment opportunities; (ii) that resilience is increased among marginalized and disadvantaged groups, whose livelihoods are threatened due to climate change-induced natural hazards and alteration of weather patterns; and (iii) that improved nature governance policies are implemented to protect forests and coastal ecosystems that provide a wide array of economic goods and services, such as food, tourism, recreation and erosion prevention, particularly for indigenous communities. These challenges are presented in more detail in the following sections.
5. **While Panama is not a large greenhouse gas (GHG) emitter, decarbonization pathways are a crucial element of the country's sustainable green growth¹⁰ trajectory.** Panama is a carbon-negative country due to its forest carbon removals – meaning that its forests absorb more carbon than what the country emits. However, there is an important deforestation trend and removal of forest coverage already contributes significantly to Panama's GHG emissions¹¹. Additionally, while the latter are low compared with regional benchmarks, they remain relatively high in per capita terms. Thus, the conservation and sustainable management of natural capital and, specifically forest resources, as well as energy efficiency measures are crucial to maintain the country's carbon-negative status. This is a core objective of this operation, and policy reforms geared toward mitigation of GHG emissions and enhancing the country's carbon stock will support maintaining the negative carbon balance, that in absence of these measures would be at risk. In addition, forests are essential to provide local income opportunities through ecotourism and sustainable management of natural capital, while also enhancing resilience to climate change, while energy efficiency measures strengthen business competitiveness and affordability of energy bills for households.

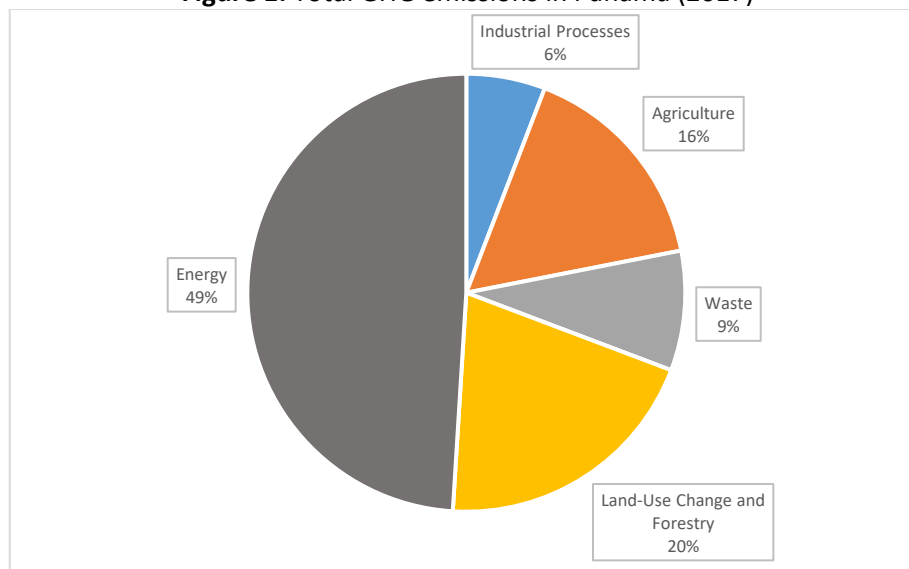
⁹ INEC: Panama's imports. See: https://www.inec.gob.pa/COMERCIO_EXT/Importacion.html.

¹⁰ Understood as low-emission economic growth, with focus on social inclusion and environmental sustainability.

¹¹ Emissions mainly stem from the energy sector contributing 49 percent of total emissions registered in 2017 (strongly driven by fuels for ground transportation), followed by the Land Use, Land Use Change and Forestry (LULUCF) sector with 20 percent, and the agriculture sector with 16 percent.



Figure 1. Total GHG emissions in Panama (2017)



Source: National GHG inventory (2020)

- The transport sector is the highest GHG emitter and energy consumer in the country.** According to the National Inventory Report 2020¹², the transport sector is largest contributors to GHG emissions (around 30 percent of total GHG emissions in the country) and the highest energy consuming sector with 47.4 percent of the national energy consumption in 2019. Most emissions in the sector are due to land transport (80.6 percent in 2017)¹³, which is almost entirely dependent on hydrocarbons¹⁴. Panama has not adopted any vehicle emission standards, which results in a highly contaminating and inefficient vehicle fleet and the share of electromobility remains marginal. The latter represents an important potential to be exploited for the decarbonization of the sector.
- Lack of digital connectivity is constraining the development of low-income and indigenous regions,** which have low ability to harness services provided by high-speed broadband (4G and higher), such as educational applications, optimization of transport planning, emergency response, among others. Furthermore, digital technologies play an important role in achieving greenhouse gases emission targets and enhancing resilience to climate change. Emission reductions may come from use of smartphone and smart Internet of Things (IoT) devices in all economic sectors, including to reduce the need for transportation and logistics, the largest GHG emitter in the country¹⁵. Enhanced access to digital technologies will enable rural and isolated parts of the

¹² National Inventory Report 2020. See: https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/0596231_Panama-BUR2-1-2020_IIN_PA.pdf

¹³ Idem. It is important to note, that these figures from the national balance relate only to the national transport sector, and do not include emissions related to hydrocarbon stored on national soil for international navigation and aviation, which represent 2.5 times more emissions than the national transport sector.

¹⁴ National Report on Monitoring the Energy Efficiency in Panama, CEPAL 2020, See: https://repositorio.cepal.org/bitstream/handle/11362/46536/1/S2000777_es.pdf

¹⁵ Research conducted by the GSMA (2019) found that while the mobile industry accounts for about 0.4% of carbon emissions, it may contribute to a reduction of up to 4.0 percent. / GSMA (2021) Mobile Net Zero. State of the Industry on Climate Action. See: <https://www.gsma.com/betterfuture/wp-content/uploads/2021/04/Mobile-Net-Zero-State-of-the-Industry-on-Climate-Action.pdf> / CAF (2021), *La Digitalización y su contribución en la agenda climática*. ITU Webinar, 10th Green Standard Week. See: <https://www.itu.int/en/ITU-T/Workshops-and-Seminars/gsw/202112/Documents/Mauricio%20Agudelo.pdf>



population to access better and more timely data on expected climate induced extreme weather events, changes in temperature and water cycles, among other, and thus should help improve the efficiency of productive rural activities.

8. **Panama is substantially exposed to climate change risks.** The country needs to continue strengthening the integration of climate change adaptation and mitigation to achieve sustainable and inclusive economic growth. Climate change threatens economic growth and livelihoods, especially among marginalized and disadvantaged groups. Panama suffers from the impacts of both climate-induced natural hazards and alteration of weather patterns. Climate change could affect major economic activities which are water dependent. Constraints in availability of water resources are already emerging and pose severe consequences for the country, in particular: (i) to the areas surrounding the Panama Canal, which are highly dependent on the sustainable management of forests and natural resources; and (ii) to hydroelectric production which accounted, in average, for nearly 63 percent of the electricity generation over 2017-21. The Panama Canal watershed, key to the country's economy¹⁶, and a strategic waterway for global trade has registered a 0.5 percent increase in temperature, with a reduction of up to 20 percent in the flow of the Chagres River, which provides water for the locks of the waterway and for the consumption of almost two million people in the provinces of Panama, Colón and West Panama, about 40 percent of Panama's population. Changing rainfall patterns and droughts can affect the water levels in the Canal, making it difficult for ships to pass through.
9. **Panama's natural capital, combined with the rest of the country's assets, including its social and cultural diversity, economic potential, and geographic situation, offer great potential for developing the economy, under an integrated approach in an inclusive and environmentally sustainable way.** The GoP has promoted a series of policy reforms to foster the sustainable use of natural resources, maintain the country's natural capital and the ecosystem services they provide while enhancing adaptation and resilience to the impacts of climate change. Currently, forest carbon removals exceed the total country's emission. Thus, forests and nature-based solutions, both inland and in coastal areas, play a crucial role in achieving the country's mitigation and adaptation targets. Better preserved forests including mangroves and enhanced conservation areas will support the country and local population in enhancing adaptive capacities. Forests and coastal ecosystems provide a wide array of economic goods and services, such as food, tourism, recreation and erosion prevention. These assets help reduce the country's vulnerability to natural disasters and contribute to sustainable and resilient livelihoods.
10. **The proposed operation is consistent with the International Bank for Reconstruction and Development (IBRD) principles for financing in a high-income country with GDP above the Graduation Discussion Income (GDI).** Building on Panama's capacity to innovate and serve as a regional climate leader, the operation will support global public goods. For instance, the operation supports policy reforms aimed at increasing the country's resilience, including the resilience of the Panama Canal by reducing the pressure on declining water resources, due to climate-change, through a combination of improved forest management and watershed protection policies. Key institutional reforms supported under this series include provisions on climate-change tagging in public expenditures to improve the efficiency of public spending and enhance institutional capacity to mainstream climate mitigation and adaptation criteria to governance, budgeting and spending, among others. Furthermore, the operation helps address climate change adaptation and mitigation challenges by backing reforms that support the decarbonization of land transportation, the implementation of energy efficiency policies, forest conservation, as well as protection of oceans. In the area of energy efficiency,

¹⁶ According to the World Trade Organization, the Panama Canal accounts for approximately 2.3 % of global trade.



Panama is encouraging the adoption of higher regional-level standards, which will increase potential markets for efficient appliances and avoid recycling of obsolete and inefficient cooling systems across borders. Finally, the operation supports gender and inclusion-focused policies on rural electrification by way of renewable energy and digital connectivity, setting the model for other Central America and regional peers. By promoting institutional strengthening, supporting gender and inclusion focused policy reforms, strengthening the framework for climate mitigation and adaptation, and contributing to the global public goods agenda, the operation is aligned with IBRD's Graduation Policy.

11. **The proposed operation is aligned with the WBG Global Crisis Response Framework (GCRF).** Specifically with its Pillar 3: "Strengthening Resilience" and Pillar 4: "Strengthening policies, institutions and investments for rebuilding better". Furthermore, this DPL is aligned with the Country Partnership Framework (CPF) for Panama (FY15-21) (Report # 93425-PA) discussed by the World Bank's Board of Executive Directors on March 2, 2015, and the Performance and Learning Review (PLR) for the CPF FY2015-21. This DPL series contributes to achieving the following objectives of the CPF: (i) Objective 4: Complement Social Assistance with Productive Inclusion under Pillar 2 (Ensuring Inclusion and Opportunities for Marginalized and Indigenous Groups); and (ii) Pillar 3: Bolstering Resilience and Sustainability. In addition, the reforms supported through this operation are aligned with four out of five priority areas linked to growth, inclusion, and sustainability in Panama, identified in the 2015 Systematic Country Diagnostic (SCD): (i) infrastructure improvements, especially energy; (ii) institutions (efficiency, regulation, and transparency); (iii) marginalized groups and Indigenous People; and (iv) management of water resources and resilience to natural disasters. This DPL series is also closely aligned with the directions of the World Bank Group's (WBG) Gender Strategy for 2016-23, from ownership and control of assets, more and better jobs, human endowments, to voice and agency. The proposed DPL also follows the Maximizing Finance for Development (MFD) approach, by enabling private capital leverage in key economic sectors, specifically transport, energy, digital and agriculture. Examples include private investments in charging infrastructure for e-mobility, mobilization of energy service companies (ESCOs) to promote energy efficiency solutions across the economy and private operators of broadband solutions.

2. MACROECONOMIC POLICY FRAMEWORK

2.1. RECENT ECONOMIC DEVELOPMENTS

12. **Strong growth over the past two decades, fueled by large investment projects and trade, turned Panama into one of the fastest growing economies in the world.** Panama's growth during 2001-2019, averaging 6.1 percent, was the highest in Latin America and the Caribbean (LAC) and was more than double the LAC's average growth. Between 2015 and 2019, economic growth was mainly driven by large investment projects such as the Canal and Tocumen airport expansions, which successfully transformed Panama into an important hub for freight and passengers. Panama expanded its services exports in transport and logistics, tourism, and the financial sector. Starting in 2019, a new large copper mine – Cobre Panamá – was opened, further increasing Panama's export potential. Yet, exports as share of GDP have declined substantially from 66 percent during 2008-2014 to around 42 percent by 2020-21, mainly due to decrease in merchandise re-exports (from 33 percent to 15 percent). Thus, during 2020-2021, exports excluding re-exports remained stable as 27 and 25 percent of GDP, respectably.
13. **The strong economic rebound in 2021 and 2022 was largely led by the service sector and Canal activities.** Real GDP growth in 2022, reached 10.5 percent driven primarily by investment and private consumption on



the demand-side. In terms of sectors, it was led by services and industry. Labor markets continued to recover in 2022, but employment and unemployment rates have not reached pre-pandemic levels. The employment rate increased from 60.4 percent in 2021 to 62.3 percent in 2022, and the unemployment rate dropped from 11.3 percent to 9.9 percent (neither has reached their pre-pandemic levels of 66.5 and 7.1 percent, respectively).

14. **Fiscal consolidation started to get back on track in accordance with the Social and Fiscal Responsibility Law (SFRL).** The COVID-19 crisis reduced revenues as GDP plummeted, while the government's response – though timely and adequate – further worsened the country's fiscal position. The overall fiscal deficit for 2020 expanded to 10.2 percent of GDP and debt-to-GDP ratio increased to 68.5 percent in 2020. Stronger than expected growth that improved nontax revenue combined with a decrease in COVID-19 related transfers, wage bill containment, and prudent public debt management, along with liability management transactions, has allowed the weighted average cost of public debt to be reduced from 4.6 percent in 2019 to 3.9 percent in 2021. These measures helped Panama reduce the fiscal deficit to 6.7 percent of GDP in 2021 and brought the primary deficit to 4.2 percent in 2021 (down from 7.6 percent in 2020). Public finances improved further in 2022 as the primary deficit declined to 2.2 percent of GDP and the fiscal deficit to 3.9 percent of GDP, supported by increased tax collection and prudent spending. The government's debt-to-GDP ratio declined to 63.7 percent in 2021 and is estimated to have declined further to 61.7 percent in 2022.
15. **The current account deficit (CAD) increased slightly in 2022 but remained fully financed by Foreign Direct Investment (FDI).** The CAD widened from 2.2 percent of GDP in 2021 to 2.9 percent in 2022, driven by a decline in the merchandise trade balance and a sharp deterioration in terms of trade. At the same time, FDI reached 4.1 percent of GDP in 2022, up by 60 percent from 2021. Panama has been a dollarized economy for over a century and international reserves are estimated to remain adequate. (Bank of Panama's gross international reserves stood at US\$8,832 million at the end of 2021, covering 3.3 months of imports).
16. **Financial soundness indicators have remained stable throughout the pandemic, and the banking sector continues to be solid.** Non-performing loans rose slightly in 2021 as forbearance policies expired, but the banking sector remains solid as it continues to be well capitalized and liquid, with both indices at double the regulatory minimum. The assets of the International Banking Center (IBC)¹⁷ totaled US\$140.1 billion in November 2022, with an increase of 5 percent or US\$6.7 billion since December 2021. During the same period, accumulated income of the IBC increased more than 50 percent, and the loan portfolio recorded a balance of US\$81,257 million, an increase of 13 percent. IBC deposits registered an increase of 1.2 percent on its balance, highlighting the confidence of internal and external depositors and the macroeconomic stability of the country. Panama's financial sector is exposed to a number of physical risks stemming from extreme climate events and natural hazards, but transition risks, related to economic adjustment costs during the transition towards a greener, carbon-neutral economy, are assumed to be low.
17. **Panama has evidenced progress in addressing deficiencies in its effectiveness in implementing the Anti-Money Laundering and Combating Financing of Terrorism (AML/CFT) and tax evasion global framework.** Panama was assessed against the revised Financial Action Task Force (FATF) standard in 2018, and it was subsequently placed on the FATF list of jurisdictions under increased monitoring in June 2019. Panama and the FATF agreed to an action plan of 15 items to address deficiencies. Main vulnerabilities included a lack of

¹⁷ The International Banking Center was created in 1970 to strengthen the stability, confidence, and competitiveness of the Banking System to maintain and deepen international financial integration, as well as the efficiency and security of financial intermediation and the monetary system.



understanding of the country's risks of money laundering and financing of terrorism (ML/FT); lack of transparency of the beneficial ownership (BO) of legal entities and arrangements; lack of adequate supervision of non-financial businesses and professions; and a low level of investigations and prosecutions of money laundering. Lack of information and transparency on the BO of legal persons and arrangements makes Panama vulnerable to criminal activities and can facilitate tax avoidance and evasion domestically and abroad. With World Bank (WB) support, the authorities have made progress to address these deficiencies. Under the FY21/22 DPL series (P174107 and P175930)¹⁸, and through WB Technical Assistance (TA), the government implemented part of the action plan agreed to with the FATF to overcome structural vulnerabilities on AML/CFT, namely through the creation of a beneficial ownership registry in 2020, by increasing sanctions for non-compliance with the AML/CFT law through Law 254/2021 as well as Law 129/2020 and implementing regulations, and a risk analysis of legal entities. However, two actions on the FATF action plan remain yet to be completed, both in relation to the adequate identification of BO: ensuring that resident agents adequately verify and maintain current BO information, and taking measures to prevent the misuse of nominee shareholders and directors. For these actions to be implemented, it is necessary that the BO registry continue to be populated, a process which the authorities are carrying out with TA from the European Union Global Facility. During the last FATF plenary session, the FATF again expressed concern that Panama failed to complete its action plan and strongly urged the country to complete it by June 2023. The authorities remain committed to implementing the FATF action plan and are confident that they will comply with this timeline.

2.2. MACROECONOMIC OUTLOOK AND DEBT SUSTAINABILITY

18. **A slowdown in global economic growth and monetary tightening is expected to reduce real GDP growth to at least 5.7 percent in 2023-25.** Growth is expected to be led by private investment, which is projected to grow around 9 percent in 2023-25, particularly as the pipeline of Public Private Partnership (PPP) projects mature. Public investment is forecast to slow down over this period. Private consumption is expected to grow at a solid pace of around 5.7 percent.
19. **The current account deficit (CAD) is expected to expand to 3.5 percent of GDP in 2023, affected by a deterioration in the trade balance.** Panama's terms of trade are expected to improve starting in 2023 as commodity prices stabilize, but overall import growth is projected to outpace export growth. FDI is projected to continue its recovery from 2021 when it achieved 2.6 percent of GDP, reaching 4.3 percent in 2023 and 4.5 percent in 2025, fully financing the CAD throughout 2023-2025 (Table 1).
20. **A gradual but firm fiscal consolidation process is also expected to continue, anchored in Panama's Social and Fiscal Responsibility Law.** Panama has a track record of fiscal discipline in line with its Social and Fiscal Responsibility Law (SFRL) that has been in place since 2008 and helped keep public debt low for over a decade until the pandemic hit the country. The response to the pandemic required relaxing the fiscal target to 10.5 percent of GDP to be gradually adjusted in subsequent years to reach 1.5 percent of GDP in 2025. The government plans to achieve this consolidation through tax administration reforms and by broadening some tax bases, removing some corporate income tax (CIT) and value added tax (VAT) exemptions and setting a minimum CIT effective rate. The authorities are also taking steps to contain current spending. Consequently, the primary deficit is expected to decrease to 0.7 percent of GDP in 2023 and turn to a surplus of 0.4 percent of GDP in 2025 (Table 1). The fiscal deficit is projected to decrease from 3.9 percent in 2022 to 3.0 percent in

¹⁸ P174107 approval date: 08-Dec-2020. P175930 approval date: 24-Jun-2022. Both DPLs are fully disbursed.



2023, 2.0 percent in 2024, and 1.5 percent in 2025. This fiscal framework is consistent with the progress on implementation of the decarbonization plan, which relies heavily on the mobilization of private resources in the next five years, including through measures supported by this DPL.

21. **The government's debt-to-GDP ratio is estimated to have peaked at 61.7 percent in 2022 and gradually decline over the medium term.** Given Panama's investment grade, able debt management, and relatively low cost of sovereign debt (at an average interest rate of 4.4 percent with 80 percent of the debt on a fixed interest rate) with long maturities (14 years on average). The debt sustainability analysis (DSA) shows that public debt remains manageable under all standardized independent stress scenarios, reaching a peak of 68.6 percent in 2027 under primary balance shock¹⁹, the most extreme stress test. Debt service payments as a share of GDP remain below 14 percent under all scenarios. However, under the baseline scenario, the government's gross financing needs are estimated to increase in 2024 and peak in 2026 (Figure 2). The financial reserves of the Exclusive Defined Benefit Subsystem (SEBD), which was the pension system for formal workers until it was replaced by a Mixed System in 2008, are expected to be exhausted in 2024, according to an actuarial study prepared by ILO independent experts in 2021, but the fiscal impact would need to be fully assessed together with reform options.²⁰ Both the debt and gross financing needs would exceed the high-risk threshold under a real GDP shock.²¹
22. **As a small, open economy, Panama is highly vulnerable to external and internal shocks.** Persistent global inflationary pressures and tighter financing conditions could further increase food and energy costs and put pressure on external and fiscal balances. Faster-than-expected monetary tightening in the US or weaker external demand could also slow down Panama's growth. Fiscal pressures associated with mitigating the impacts of these external shocks could slow the pace of consolidation as well as the elections in 2024. Internally there are also high contingencies associated with natural disasters, which add downside risks to the outlook. Potential medium-term fiscal risks include the actuarial deficit of the Exclusive Defined Benefit Subsystem. Continued social unrest, climate change, and natural disasters could trigger new expenditures.
23. **Panama's macroeconomic policy framework is deemed adequate for this operation.** The country's external position has strong underlying fundamentals, with a dollarized economy and healthy reserves. The structural CAD is fully funded by FDI. The country's ample access to capital markets can provide a first line of response to macroeconomic shocks, while the authorities have established a strong track record of prudent fiscal policy, anchored under the SFRL, and has effectively unwound the fiscal support provided during the pandemic. The US\$300 million cost of the temporary food and fuel subsidies that expired in January 2023, is offset by contained expenditures in wage bill and goods and services. In addition, the authorities are drawing private financing into much-needed infrastructure via PPPs and have taken measures to control the wage bill pace of growth, and the purchase of goods and services. The authorities are also implementing a revenue modernization project with the support of Interamerican Development Bank and have established a technical working group to assess pension reform options, paving the way for key reforms that would need to be enacted over the next few years.

¹⁹ Minimum shock equivalent to 50% of planned adjustment (50% implemented), or baseline minus half of the 10-year historical standard deviation, whichever is larger. The shock also assumes an increase in interest rates of 25bp for every 1% of GDP worsening in the primary balance.

²⁰ The ILO estimates that the costs – if not addressed – could amount to additional obligation of about 2.4 of GDP by 2030.

²¹ Real GDP growth is reduced by 1 standard deviation for 2 consecutive years; revenue-to-GDP ratio remains the same as in the baseline; level of non-interest expenditures is the same as in the baseline; deterioration in primary balance leads to higher interest rate; decline in growth leads to lower inflation (0.25 percentage points per 1 percentage point decrease in GDP growth).

**Table 1. Key Macroeconomic indicators**

Key Macroeconomic Indicators	2017	2018	2019	2020	2021	2022e	2023f	2024f	2025f
Real economy	Annual percentage change, unless otherwise indicated								
GDP (nominal - R\$ billion)	62.2	64.9	67.0	54.0	63.6	73.8	78.9	85.8	92.8
Real GDP	5.6	3.7	3.0	-17.9	15.3	10.5	5.7	5.8	5.9
Per Capita GDP (In real US\$)	15,186	15,588	15,826	12,569	14,618	16,732	17,651	18,948	20,224
Contributions:									
Private Consumption	2.7	3.8	5.0	-15.9	7.0	10.9	5.6	5.7	5.8
Investment	7.6	0.7	-0.6	-49.3	29.6	20.1	9.1	8.5	8.5
Net exports	0.7	0.8	3.7	13.4	-4.6	0.2	-1.2	-0.2	-0.3
Statistical discrepancy and change in inventories	-0.6	-0.7	-0.5	0.2	3.1	0.0	0.0	0.0	0.0
Imports, GNFS	4.3	4.5	-2.5	-34.0	25.2	12.5	7.5	7.9	8.2
Exports, GNFS	5.0	5.3	1.2	-20.6	20.6	12.7	6.3	7.7	7.9
Unemployment rate (ILO definition)	3.9	3.8	4.7	12.9	12.1	-	-	-	-
CPI (average period)	0.9	0.8	-0.4	-1.6	1.6	2.9	3.3	2.5	2.0
Fiscal Accounts	Percent of GDP, unless otherwise indicated								
Expenditures	21.9	22.5	21.3	28.6	24.8	22.0	21.7	21.0	20.7
Revenues	20.0	19.6	18.5	18.3	18.1	18.1	18.7	19.0	19.1
Overall Balance	-1.9	-2.9	-2.9	-10.2	-6.7	-3.9	-3.0	-2.0	-1.5
Primary Balance	-0.1	-1.1	-1.0	-7.6	-4.2	-2.2	-0.7	0.0	0.4
General Government Debt	37.6	39.6	46.3	68.5	63.7	61.7	60.6	59.6	58.7
Selected Monetary Accounts	Annual percentage change, unless otherwise indicated								
Base Money	-	-	-	-	-	-	-	-	-
Domestic Credit to the Private Sector (% of GDP)	87.3	87.0	86.8	105.9	-	-	-	-	-
Balance of Payments	Percent of GDP, unless otherwise indicated								
Current Account Deficit	-6.0	-7.6	-5.0	2.0	-2.2	-2.9	-3.5	-3.2	-3.2
Imports, GNFS	43.3	44.5	41.2	32.4	38.7	40.5	40.0	40.3	41.1
Exports, GNFS	43.6	44.0	42.7	37.4	42.8	43.4	42.8	43.0	43.7
Net Foreign Direct Investment	-7.1	-7.5	-5.6	-1.2	-2.6	-4.1	-4.3	-4.4	-4.5
Terms of Trade (% change)	-1.5	-1.8	0.0	1.5	10.8	-3.2	0.9	0.0	0.0
Exchange Rate (average)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

**BOP Financing Requirements and Sources (in % of GDP)**

	2017	2018	2019	2020	2021	2022e	2023f	2024f	2025f
Financing Requirements	9.9	9.4	7.1	-1.9	4.0	2.9	3.5	3.2	3.2
Current Account Deficit	6.0	7.6	5.0	-2.0	2.2	2.9	3.5	3.2	3.2
Trade Balance (GNFS) ^{1/}	0.3	-0.5	1.5	5.0	4.1	3.0	2.8	2.8	2.7
Primary and Secondary Incomes	-6.3	-7.1	-6.5	-2.9	-6.3	-5.9	-6.3	-5.9	-5.9
Net Errors and Omissions	3.9	1.8	2.1	0.1	1.8	0.0	0.0	0.0	0.0
Financing Sources^{2/}	9.9	9.4	7.1	-1.9	4.0	3.0	2.6	1.6	1.2
Capital Account Balance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Foreign Direct Investment	-7.1	-7.5	-5.6	-1.2	-2.6	-4.1	-4.3	-4.4	-4.5
Net Portfolio Investment	-2.0	-0.6	-4.7	-3.4	6.5	-1.3	-1.7	-1.7	-1.7
Net All Other Flows	-2.8	-3.6	-6.2	-10.3	-4.7	-4.7	-1.7	-1.3	-0.7
Change in reserve assets	-1.6	-1.0	1.8	10.3	-1.7	1.3	0.8	0.7	0.7
External Financing Gap	0.0	0.0	0.0	0.0	0.0	0.1	-0.9	-1.6	-2.0
Nominal GDP (USD billion)	62.2	64.9	67.0	54.0	63.6	73.8	78.9	85.8	92.8

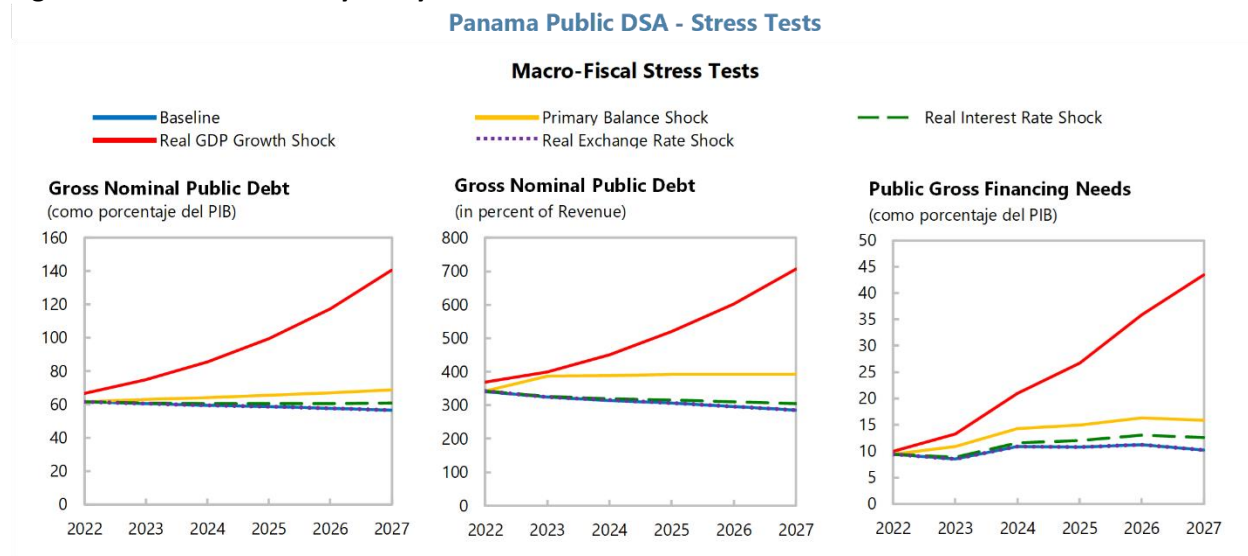
^{1/}GNFS: Goods and Non-factor Services.^{2/}(+) Net Borrowing/ (-) Net Lending.**Key Fiscal Indicators**

	2017	2018	2019	2020	2021	2022e	2023f	2024f	2025f
<i>Overall Balance</i>	(1.9)	(2.9)	(2.9)	(10.2)	(6.7)	(3.9)	(3.0)	(2.0)	(1.5)
<i>Primary balance</i>	(0.1)	(1.1)	(1.0)	(7.6)	(4.2)	(2.2)	(0.7)	0.0	0.4
<i>Total Revenues (and grants)</i>	20.0	19.6	18.5	18.3	18.1	18.1	18.7	19.0	19.1
<i>Total Primary Revenues (and grants)</i>	20.0	19.6	18.5	18.3	18.1	18.1	18.7	19.0	19.1
<i>Tax revenues</i>	14.9	14.7	13.8	13.1	12.5	13.0	13.2	13.5	13.7
Taxes on goods and services	4.3	4.0	3.8	3.2	3.2	3.4	3.5	3.6	3.7
Direct Taxes	4.9	5.1	4.4	4.2	3.9	4.5	4.5	4.6	4.7
Social insurance contributions	5.7	5.6	5.5	5.7	5.4	5.0	5.2	5.3	5.4
Taxes on international trade	-	-	-	-	-	-	-	-	-
Other taxes	-	-	-	-	-	-	-	-	-
<i>Non-tax revenues</i>	5.1	4.9	4.5	5.2	5.6	5.1	5.5	5.5	5.4
<i>Transfers and Grants</i>	0.0	-	-	-	-	0.0	(0.0)	(0.0)	(0.0)
<i>Total Expenditures</i>	21.9	22.5	21.3	28.6	24.8	22.0	21.7	21.0	20.7
<i>Total Primary Expenditures</i>	20.1	20.7	19.5	25.9	22.3	20.3	19.4	18.9	18.8
<i>Current expenditures</i>	15.4	15.9	15.9	21.5	19.2	16.5	16.4	15.8	15.6
Wages and compensation	4.6	4.8	4.8	6.5	6.0	5.3	5.0	4.8	4.8
Goods and services	1.0	1.2	1.2	1.3	1.3	1.1	1.2	1.2	1.2
Interest payments	1.7	1.8	1.9	2.6	2.4	1.7	2.3	2.1	1.9
Current Transfers	8.0	8.1	8.0	11.1	9.5	8.4	7.8	7.8	7.7
Pensions	5.2	5.2	5.2	6.9	6.2	5.5	5.5	5.5	5.5
Social Assistance	0.3	0.3	0.3	0.6	0.5	0.5	0.5	0.5	0.5
Other Current Transfers	2.5	2.6	2.5	3.5	2.8	2.4	1.8	1.8	1.8
<i>Investments (net)</i>	6.5	6.6	5.4	7.1	5.6	5.4	5.3	5.2	5.1
<i>General Government Debt</i>	37.6	39.6	46.3	68.5	63.7	61.7	60.6	59.6	58.7

Source: World Bank staff calculations.



Figure 2. Debt Sustainability Analysis



Source: World Bank staff calculations.

2.3. IMF RELATIONS

24. **Since the outbreak of the pandemic, Panama has taken advantage of the resources made available by the IMF.** It tapped US\$515 million under the Rapid Financing Instrument (RFI) in April of 2020 and in January of 2021 it obtained a Precautionary and Liquidity Line (PLL), a precautionary facility that only disburses at the request of the country, in the amount of US\$2.7 billion, which expired on January 18, 2023. Panama treated the PLL as an insurance against extreme shocks arising from eventual deterioration in the COVID-19 crisis. Panama qualified for the PLL due to its sound economic fundamentals, strong institutional policy frameworks, long track record of good economic performance and policy implementation, and its commitment to maintain such policies in the future. The IMF Board meeting on Panama’s Article IV 2022 took place on February 22, 2023 (see Annex 2). The IMF and World Bank staff meet regularly and closely coordinate activities in fiscal, AML/CFT and on broader economic management issues and reforms. A joint Fund/Bank Financial Sector Assessment Program (FSAP) is ongoing to be completed in 2023. Also, Bank and Fund are providing support to build the statistical capacity of Panama. IMF is focusing on fostering statistical development and helping advance toward IMF Standards for Data Dissemination (SDDS) subscription, while the Bank has recently carried out a productivity assessment of the National Statistics of Panama.

3. GOVERNMENT PROGRAM

25. **The National Strategic Plan with State Vision 2030 (PEN)²² includes the GoP’s long-term goals, reaffirming its commitment to sustainable development and aligning with the Sustainable Development Goals (SDG).** The PEN seeks to achieve the full inclusion of citizens and their articulation to economic growth, reducing poverty and finding new ways to protect the planet. To accomplish this state vision, the GoP raised five Objective Goals within the PEN to support the development of the country: (i) “good life for everyone”, by

²² National Strategic Plan with State Vision – Panama 2030. See: <https://observatorioplanificacion.cepal.org/sites/default/files/plan/files/PanamaPlanEstrategicoNacionalconVisiondeEstado.pdf>



eradicating poverty, ensuring the production and availability of food, and with a focus on gender equality and the empowerment of women and girls; (ii) “grow bigger and better”, based on an strategy of sustainable and inclusive economic growth, with full and productive employment and decent work for all the population, and including responsible production and consumption; (iii) environmental sustainability, based on climate change and its effects, as well as in a sustainable and cleaner production, and in reliable and greener energy; (iv) democratic participation, good governance, and promotion of a policy of transparency and accountability, with public institutions improving the quality and effectiveness of public policies and with a results-oriented management; and (v) strategic alliances for development, promoting the public-private association as a way to reinforce the implementation of the goals of sustainable development in Panama.

26. **Following the long-term objectives established in the PEN, the GoP developed its 2019-2024 Strategic Plan (PEG)²³, focused on meeting the immediate needs of the population and taking advantage of the country’s economic growth.** This plan includes an economic and social strategy composed of five strategic pillars²⁴, considering the existing gaps in the country. The proposed operation supports three out of five PEG pillars on “governance”, “competitiveness and job creation”, and “poverty and inequality reduction”, through measures in favor of a sustainable and inclusive energy transition by providing regulatory frameworks for a cleaner sector (i.e., e-mobility and energy efficiency), and including the most vulnerable population as a target for energy and digital access; as well as maintain the country’s natural capital and the ecosystem services they provide through policy reforms to promote the sustainable use of natural resources, while enhancing adaptation and resilience to the impacts of climate change.
27. **Panama’s updated Nationally Determined Contribution (NDC) submitted in 2020 adopts a cross sectoral approach reaffirming the country’s commitment to place sustainability and climate action at the center of economic and social management to overcome the barriers of poverty and inequality.** It undertakes climate action from an integrated approach, which seeks to overcome the adaptation-mitigation dichotomy, proposing commitments that integrate both dimensions. Panama’s updated NDC is structured around actions in ten sectors, focusing its mitigation commitments on the sectors with the largest mitigation potential: Energy and land use, land-use change, and forestry (LULUCF).
28. **The Energy Transition Agenda (ATE, per its Spanish acronym) constitutes the public policy instrument to guide the transformation of the energy sector.** The ATE establishes strategic priorities and climate action guidelines for a national energy policy focused on post-COVID-19 economic reactivation, envisioning the transition to clean energy to adequately promote equity and sustainability. The ATE recognizes that the transport subsector is the main responsible for GHG emissions, with 6,387.5 kt CO₂ eq, followed by electricity generation subsector with 2,212.7 kt CO₂ eq. The ATE outlines a vision towards decoupling economic growth from energy demand, developing a renewable and efficient energy matrix, promoting sustainable mobility and fostering an inclusive and fair energy transition.
29. **The GoP sees the energy transition as an instrument to generate 141,000 new jobs by 2050 and a means to allow the country to continue being one of the three carbon negative countries in the world²⁵.** The ATE highlights GoP’s commitment to improve economic growth while transitioning towards a cleaner energy

²³ Government Strategic Plan of Panama 2019-2024. See:

<https://observatorioplanificacion.cepal.org/sites/default/files/plan/files/PEG%202020-2024%20Panam%C3%A1.pdf>

²⁴ Strategic pillars: (i) governance; (ii) rule of law; (iii) competitiveness and job creation to reactivate economic growth; (iv) poverty and inequality reduction; and (v) education, science, technology, and culture.

²⁵ The three carbon negative countries correspond to Panama, Bhutan, and Suriname



sector, yielding important benefits estimated by the GoP to include creation of up to 35,000 direct and indirect jobs and savings in subsidies of nearly US\$2 billion by 2030²⁶. The ATE establishes four key pillars to implement a green recovery plan: (i) decarbonization, by transferring the sectoral fossil fuel demand to electricity, applying efficiency measures, and increasing renewable energy technologies in the generation matrix; (ii) decentralization, making use of technologies on a smaller scale and bringing electricity production closer to consumption centers; (iii) democratization, through the paradigm shift to the conventional model of the electricity sector, empowering the consumer; and (iv) digitalization, allowing the creation of new business models based on knowledge and the value of data. Implementation of the ATE will support the regional leadership role of Panama setting an example that will drive change in other countries in the region. It will also have important economic and developmental impact by supporting green industrial growth and employment. Furthermore, energy efficiency is expected to boost competitiveness by lowering energy costs and freeing up green energy for productive uses.

30. **The GoP has established a set of strategies for the electricity sector to achieve the implementation of the ATE, seeking the creation of public policies and recommendations.** Five main strategies are defined within the ATE: (i) universal access, with the objective of closing the energy poverty gap and bringing energy to more than 93,000 Panamanian families²⁷ including many belonging to the country's indigenous population²⁸; (ii) rational and efficient use of energy, based on the Energy Efficiency Law (UREE law, after its Spanish acronym)²⁹; (iii) e-mobility, reducing dependency on imported fossil fuels, contributing to the health of the population and care for the environment; (iv) distributed generation, allowing the population to take control of their energy and promoting global uptake of renewable energy; and (v) national interconnected system innovation, meeting the needs of the sector through technological innovation and regulatory and legal updating. In addition, the ATE establishes an institutional strengthening strategy, whose objective is to improve the formulation and execution of policies, and promote transparency, participation and accountability of all agents involved, focusing on a sustainable development. This strategy will allow institutions to adapt to the changes and new challenges that have arisen in the last decade, stipulate their role and the effective and open interaction between them, and align and harmonize the institutional framework for planning and implementation of energy policies appropriate to the country characteristics. In this sense, the implementation of the ATE will not only generate a green economic recovery focused on the build back better approach and complying with the international commitments, but also will contribute to the strengthening governance in the energy sector.
31. **The Government of Panama has made important progress in developing an institutional framework and regulatory framework for climate change.** The country has strengthened its climate change mitigation and adaptation legislation (DPL1 & DPL2 Pandemic Response and Growth Recovery Series supported this effort). This operation supports the country's gradual approach towards integrating climate change, green growth and resilient considerations into policy and institutional strengthening and climate-responsive investments.
32. **This DPL series builds upon a series of operations in Panama that have been supporting the country's reform**

²⁶ Nationally Determined Contributions (CDN1). First Update. December 2020. See: <https://unfccc.int/sites/default/files/NDC/2022-06/CDN1%20Actualizada%20Rep%C3%BAblica%20de%20Panam%C3%A1.pdf>

²⁷ These are the families who lack electricity access in the 300 municipalities (corregimientos) that were identified as the key target for Plan Colmena using a multi-dimensional poverty index.

²⁸ While 94% of the population has access to electricity, in the Comarca Ngöbe-Buglé—the ancestral lands of the country's largest indigenous populations—the proportion of households with electricity drops to just 4%.

²⁹ Law No. 69 of 2012. Establishes the general guidelines of the National Policy for the Rational and Efficient Use of Energy in the national territory. See: https://www.gacetaoficial.gob.pa/pdfTemp/27145_A/GacetaNo_27145a_20121018.pdf



agenda over a sustained period of time. The most recent being the Panama Pandemic Response and Growth Recovery DPL series, which contributed to protecting human capital during COVID-19 and supporting a more inclusive and sustainable economic recovery. This DPL series reflects a broad policy consensus with the GoP on the criticality of supporting a more green, resilient, and inclusive model in Panama. It is also closely aligned with the World Bank’s strategic framework to move “*From Crisis Response towards a Green, Resilient and Inclusive Development*” (GRID) and the World Bank Group Climate Change Action Plan 2021-2025 by integrating climate and development and identifying and prioritizing action on the largest mitigation and adaptation opportunities. This DPL series also builds on the reform program supported under previous projects, and specifically fosters a longstanding engagement with the GoP that recognizes the importance of sustainable development aspects to recovery and growth policies. In particular, the previous DPL series Panama Pandemic Response and Growth Recovery Development Policy Operation 1 (P174107) and 2 (P175930) included provisions under PA 8 of DPL 2 regarding approval of incentives for electric mobility for ground transportation (evidenced by Law No. 295). Under this new DPL series, this will be scaled up through the issuance of regulations that encourage the use of e-vehicles and that will provide an adequate regulatory framework for the deployment of charging stations. In addition, the previous program and current engagement centers around the importance of natural capital to promote rural poor’s economic inclusion, enhance climate change resilience and foster national growth strategies. To that extend, the Panama Sustainable Rural Development and Biodiversity Conservation project (P178063) and targeted analytical support under ProGreen³⁰ have helped to advance an integrated landscape agenda combining productive agriculture activities, ecotourism and conservation under PA 7. The ongoing analytical work on Panama’s Blue gender Gap Analysis³¹ (under the Gulf of Fonseca Transboundary Management of Coastal Natural Resources project - P176323) is informing Panama’s efforts to advance a blue economy strategy under the country’s climate commitments (PA 8).

4. PROPOSED OPERATION

4.1. LINK TO GOVERNMENT PROGRAM AND OPERATION DESCRIPTION

33. **The development objective of the proposed operation is to establish policy foundations to foster low-emission and sustainable economic growth and climate change resilience.** This operation is structured around two pillars: Pillar I supports reforms towards a clean energy transition and inclusive low-carbon development by: (i) implementing policies and institutional reforms to promote a transition to a greener and more resilient energy sector; (ii) promoting electric mobility; and (iii) reducing gender inequities and promoting digital connectivity. Pillar II supports the country’s efforts to sustain natural capital for resilient growth by strengthening climate and nature governance, enhance institutional capacity for advancing the country’s climate change adaptation and mitigation agendas, while fostering social inclusion. It will achieve these objectives by: (i) strengthening the country’s climate change strategic framework and promoting inclusion aspects for low carbon development by submitting to the National Assembly the Climate Change Framework Bill; (ii) mainstreaming climate change adaptation and mitigation considerations in public financial management and support consistent government spending with climate change mitigation and adaptation by appropriately tagging of public investment projects; (iii) promoting nature-based tourism as a strategic sector for green and inclusive growth; and (iv) strengthening climate resilience and promote a gender responsive

³⁰ See: <https://www.progreen.info/countries/knowledge/panama>

³¹ See: <https://www.worldbank.org/en/programs/problue/our-work#5>



blue growth approach to restore and conserve marine-coastal ecosystems by enacting Panama’s Oceans Policy.

34. **This operation is aligned with the Government’s objectives included in the Strategic Plan 2019-2024 (PEG), as well as the guidelines and strategies of the Energy Transition Agenda (ATE).** The proposed operation directly supports key priorities adopted and contributes to the promotion and strengthening of a comprehensive, environmentally and socially sustainable and competitive economy, by supporting the PEG’s *competitiveness and job creation to reactivate economic growth* pillar through direct contributions to energy sector and environment sectors. It also supports the reforms and strategies contained within the ATE to decouple economic growth from energy demand, develop a renewable and efficient energy matrix, and promote sustainable mobility, where inclusion is considered across all strategies. Additionally, this operation supports the institutional strengthening of the National Secretariat of Energy, who is responsible for guaranteeing the security of supply, the rational and efficient use of resources of energy in a sustainable manner, under criteria of economic efficiency, reliability and quality.

4.2. PRIOR ACTIONS, RESULTS AND ANALYTICAL UNDERPINNINGS

Pillar I – Support reforms to implement energy transition and socially inclusive low-carbon growth.

35. **The policy reforms supported by this operation shows the GoP’s continued commitment to sustainable and inclusive growth policies.** Pillar I of the operation focuses on reforms supporting an ambitious clean energy transition agenda, not only seen as the way forward for climate action in the sector, seeking to fulfil the commitments acquired in the updated NDC, but also promoting a resilient and inclusive economy that will have a positive fiscal impact. This pillar supports the country’s efforts to foster sustainability and resilience, addressing critical reforms aiming to strengthen governance while fulfilling climate change and long-term sustainable development goals. Supported reforms include new regulatory and policy instruments that tackle emissions from the energy and transport sector (PA 1 – PA 2) and promotes inclusion and gender equity (PA 3 – PA 4).

DPL1 Prior Action 1 – E-mobility: The Borrower has issued a decree pursuant to the E-mobility Law to further advance the decarbonization agenda by promoting e-mobility for ground transportation, as evidenced by Executive Decree No. 51, published in the Official Gazette on February 15, 2023.

DPL2 Trigger #1:

The Borrower has taken steps to scale up e-mobility by adopting technical standards and regulations to: (i) enable the conversion of Internal Combustion Engine (ICE) vehicles to electric vehicles; and (ii) support the installation and operation of electric car charging stations.

Results Indicator #1: Number of charging stations per 100 km of the primary and secondary road network:

Baseline: 2.2 (2022)

Target: 17.3 (2025)

Results Indicator #2: Number of electric buses acquired or under procurement by the Panama City public operator (MiBus):

Baseline: 5 (2022)

Target: 55 (2025)



36. **Rationale.** Following the commitments acquired within the United Nations Framework Convention on Climate Change (UNFCCC), the GoP issued an updated NDC³², which pledged a new commitment to achieve a reduction in total emissions from the country's energy sector by at least 11.5 percent by 2030, compared to the business-as-usual scenario. The transport subsector is the highest energy consuming sector accounting for 47.4 percent of the national energy consumption in 2019 and land transport is the largest contributor to GHG emissions accounting for 23 percent of total GHG emissions in the country.³³ Therefore, the decarbonization of that subsector is essential to meeting the country's climate change commitments. The national e-mobility strategy³⁴ includes both public transport and private vehicles, but also anticipates implication of future uses, such as battery disposal and recycling, and the need to prepare the necessary technical capacity.
37. Passenger cars, virtually all of which use Internal combustion engine (ICE) technology, continue to dominate in Panama, representing 75 percent of total vehicle fleet³⁵. So far, electric cars only represent approximately 200 units³⁶. The national e-mobility strategy identifies the scaling up of charging infrastructure among its top priorities for expansion of e-mobility. Regulation of charging stations is important because it will open the e-mobility market and provide fair and transparent competition between car brands. The effectiveness of focusing government support on charging infrastructure has been demonstrated in recent international studies that found that that public investment in charging infrastructure is more than 5 time more effective than direct subsidies towards vehicle purchases³⁷ to abate the same amount of CO₂ emission. Even though 40 percent of Panama's electricity is generated from fossil fuels, evidence from international experience³⁸ (e.g., Poland or Kazakhstan) shows that even in cases where the electric grid is not fully decarbonized, electric vehicles are more efficient than Internal Combustion Engine (ICE) cars.
38. On the public transport side, ICE buses (including MiBus, the main public transport operator and conventional concessions) account for about two thirds of the daily trips currently made in public transport³⁹ in the Metropolitan Area of Panama (MAP), which represents about 55 percent of motorized travel⁴⁰. MiBus accounts for 35-40 percent of public transport trips with an average of 450,000 passengers transported daily⁴¹. A recent WBG global study⁴² highlights electric buses as the first priority for developing countries embarking on electric mobility transitions, as conversion to electric buses results in a wide range of additional positive externalities (pollution, road safety, transport access etc.) and serves as a demonstration for other transport sectors. In Panama City, MiBus has undertaken bidding process for the acquisition of the first five

³² See: <https://unfccc.int/documents/499571>

³³ National Inventory Report 2020. See: https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/0596231_Panama-BUR2-1-2020_IIN_PA.pdf

³⁴ National E-mobility Strategy (ENME). See: https://www.gacetaoficial.gob.pa/pdfTemp/28891_C/75494.pdf

³⁵ World Road Statistics 2018

³⁶ Automobile Dealers Association of Panamá 2019

³⁷ World Bank (2022). Economics of Electric Vehicles for Passenger Transportation. See: <https://documents1.worldbank.org/curated/en/099330011042228036/pdf/P172382084bde40090817d0db756670bd3b.pdf>

³⁸ World Bank (2022). Economics of Electric Vehicles for Passenger Transportation. See: <https://documents1.worldbank.org/curated/en/099330011042228036/pdf/P172382084bde40090817d0db756670bd3b.pdf>

³⁹ Source: Panama Metro, 2015. See: <https://www.elmetrodepanama.com/wp-content/uploads/2020/03/01Situaci%C3%B3n-Actual-del-Transporte-P%C3%BAblico-en-Panam%C3%A1.pdf>

⁴⁰ Pre-feasibility Study for the New Master Network of the Panama Metro System, Executive Summary. Inter-American Development Bank / Panama Metro / Nippon Koei / Systra. See: https://www.elmetrodepanama.com/wp-content/uploads/2019/04/Resumen-ejecutivo-Prefactibilidad_Nueva-Red-Maestra-Metro-de-Panam%C3%A1.pdf

⁴¹ Source: WB team estimate based on ridership data for 2022 from Metrobus

⁴² World Bank (2022). Economics of Electric Vehicles for Passenger Transportation. See: <https://documents1.worldbank.org/curated/en/099330011042228036/pdf/P172382084bde40090817d0db756670bd3b.pdf>



electric buses as pilot.

39. Previous support from the WB through the Panama Pandemic Response and Growth Recovery DPL operation (P175930) supported the approval of incentives for e-mobility for ground transportation, as evidenced by Law No. 295 from April 25th of 2022⁴³, which establishes a regulatory framework for the development and operation of e-mobility in Panama, seeking the reduction of GHG emissions, and promoting an energy transition process for land transport with the implementation of measures and incentives directed both toward the public and private sector.
40. **Substance of the Prior Action.** On February 15, 2023, Executive Decree No. 51 was published in the Official Gazette. The decree aims to operationalize the implementation of Law No. 295, by defining the technical and institutional regulatory framework necessary for the implementation of e-mobility projects. It establishes in particular: (i) the regulatory framework for the electrification of the bus operators' fleet; (ii) the guidelines for electric vehicle inspections; (iii) the regulatory framework for the conversion of ICE vehicles into electric vehicles; (iv) the framework for academic training in electric mobility technologies; (v) the procedure for the environmentally friendly management of used batteries and their recycling; and (vi) the directive for the development of technical guidelines for design and installation of charging stations. It assigns technical responsibilities to the institutional actors involved, notably regarding the elaboration of technical norms, and lays the groundwork for the implementation of projects in the short term but also for the development of a national technical capacity in the medium term.
41. **Indicative Trigger.** The Borrower has taken steps to scale up e-mobility by adopting technical standards and regulations to: (i) enable the conversion of ICE vehicles to electric vehicles; and (ii) support the installation and operation of electric car charging stations. The adoption of these measures will lay the technical foundations for the appropriate development of the e-mobility sector in the country, contributing to the homogenization of ICE vehicle conversion processes, as well as the installation of operation of charging stations. These technical standards will provide clearer conditions to the private sector for its participation in this segment.
42. **Expected Results.** The strengthening of the legal and regulatory framework for e-mobility is expected to drive the implementation of projects, programs, and replacement plans for public institutions and public transport, while incentivizing the uptake of electric passenger cars, contributing to the reduction of the country's GHG emissions in line with its NDC commitments. This policy will be monitored by the number of public charging stations in the country and by the progress on the acquisition of public electric buses. By September 2022, the total number of public charging stations for electric cars in Panama was 132, with a significant coverage both in terms of road network and urban population. The present ratio of chargers for the primary and secondary road network is 2.2 chargers per 100km and this number is expected to reach 17.3 by 2025 as result of the expansion from 132⁴⁴ to 1,056 public chargers in the country⁴⁵. In terms of public transport, MiBus currently has acquired 5 electric buses and are expected to have 55 e-buses by 2025⁴⁶. Expanding the transition to electric buses in Panama City to about 20 percent of bus fleet by 2030, is expected to result in

⁴³ Law No. 295 from April 25th, 2022; published in the Official Gazette on April 25th, 2022.

⁴⁴ This number corresponds to 1.5 e-vehicles per charger and places Panama lower than regional peers, which typically have more than 5 e-vehicles per charger (see: <https://www.iea.org/data-and-statistics/charts/charging-points-per-ev-and-kw-per-electric-ldv-in-selected-countries-2021>)

⁴⁵ See: <https://portalmovilidad.com/como-impactara-en-panama-que-privados-comercialicen-energia-para-autos-electricos/>

⁴⁶ This would result in a 4% fleet transition in 2 years, a similar rate and ambition as other countries in the region such as Costa Rica, and in line to reach of their target of at least 15% by 2030.



net reduction of CO₂ of 63 percent⁴⁷ and other local air pollution.

DPL1 Prior Action 2 – Energy Efficiency: The Borrower has strengthened its energy efficiency regulatory framework by adopting and publishing the Central American Technical Regulations (“RTCA”) technical standards for energy efficiency for air-conditioning equipment, as evidenced by the Ministry of Industry and Commerce’s Resolution No. 23 and its annexes: Resolution No. 451-2021 (COMIECO-XCVIII) and RTCA 23.01.78:20, published in the Official Gazette on February 9, 2022.

DPL2 Trigger #2:

The Borrower has taken measures to promote energy efficiency by: (i) adopting the Minimum Energy Performance Standards (MEPS) for refrigerators and aligning its regulations with the standards published in the RTCA for energy efficiency for refrigerators; and (ii) approving the Energy Transition Fund (FONTE), through the Climate Change Law.

Results Indicator #3: Number of air conditioners with improved Minimum Energy Performance Standards (MEPS):

Baseline: 96,000 (2021)

Target: 124,000 (2025)

Results Indicator #4: Number of refrigerators with improved Minimum Energy Performance Standards (MEPS):

Baseline: 51,000 (2021)

Target: 117,000 (2025)

43. **Rationale.** With the passing of the Rational and Efficient Use of Energy (UREE) Law (Law 69 of October 12th, 2012⁴⁸), and its subsequent regulation,⁴⁹ Panama created the legal tools for the implementation of the measures that promote the efficient use of energy, as well as for the elaboration of standards and technical regulations for the rational and efficient use of energy for energy-consuming equipment and building of all kinds. With the approval of the ATE in November 2020, the GoP identified the importance to have policy signals or specific regulations that allow reducing the demand for energy services through behavioral changes, and thereby facilitate the achievement of energy savings and efficiency goals. As part of the ATE, the National Strategy for the Rational and Efficient Use of Energy (ENUREE, per its Spanish acronym), which includes priority lines of actions and energy efficiency targets, was approved in 2022. This strategy constitutes an advance in the fulfillment of the general guidelines established in the UREE Law and represents the construction of the roadmap to accelerate the achievement of the acquired commitments. The ENUREE entails economic, environmental and social benefits such as the reduction of final energy consumption across the sectors, energy intensity of the economy, GHG gas emissions and other polluting gases, and consumer spending for energy supply; in addition, the increase in consumer comfort, the revitalization of sustainable economic activity through the creation of new business and job opportunities, and the promotion of international cooperation and regional integration can also be listed among the benefits. In addition, the ENUREE looks into mitigation policy instruments, and includes the design and implementation of a National Energy Efficiency (EE) Certificates Program as one of its actions lines.
44. Under the Partnership for Market Readiness (PMR), the World Bank has worked with the GoP to identify mitigation policy instruments available to transition toward low-emissions development. Various instruments options were analyzed for initial voluntary participation and considering sectoral contexts (focusing on energy and transport sectors). As a result of a national decision-making process, the development of an EE Certificates

⁴⁷ World Bank (2021): Decarbonization of the energy sector in Panama (Programmatic ASA: P169052)

⁴⁸ See: https://www.gacetaoficial.gob.pa/pdfTemp/27145_A/GacetaNo_27145a_20121018.pdf

⁴⁹ Executive Decree No. 398 from June 19th of 2013. See: https://www.gacetaoficial.gob.pa/pdfTemp/27313_A/GacetaNo_27313a_20130620.pdf



program was prioritized. The design and implementation of such program will be supported through the Panama Partnership for Market Implementation (PMI) Project (P179771), currently under preparation.

45. Several efforts have been made by the GoP to break down the financial and economic barriers for the proper implementation of the energy efficiency policies in the country. Most recently, MEF has expressed the need to establish an Energy Transition Fund (FONTE, per its Spanish Acronym), including energy efficiency as one of its lines, which will be the financial vehicle to increase both public and private sector's capacity to develop collaborative solutions, and to incentivize and accelerate decarbonization of the economy, promoting a green, inclusive and sustainable post COVID-19 economic recovery.
46. Furthermore, the National Energy Plan (PEN 2015-2050) identified energy efficiency actions to meet the country's GHG mitigation targets, such as the development of standards for air conditioners (AC) and refrigeration equipment and highlighted the existing regional initiative with the Central American Integration System (SICA). The Sustainable Energy Strategy 2030 of the SICA Countries⁵⁰, considers within its objectives the increase in the rate of improvement in energy efficiency, and the harmonization of national markets through regulatory frameworks and standards. As part of the regional efforts made by SICA in terms of energy efficiency, the Member States⁵¹ have established a process of regional harmonization of technical regulations to create larger market shares and promote regional trade in efficient equipment, thus seeking to prevent illegal imports of inefficient equipment and appliances. The importance of efficient AC and refrigeration equipment is extremely relevant for the Panamanian case, due to its economic model mainly oriented to the provision of services and commerce. The electricity consumption of the commercial and services sector represents a concentration of nearly 48 percent of the national consumption, in addition to the 32 percent of electricity consumption in the residential sector. For the first of these sectors, about 42 percent of its electricity consumption corresponds to air conditioning, while for the residential sector, 44 percent corresponds to cooling (refrigeration and air conditioning).⁵²
47. In addition, by issuing a Cabinet Resolution on the National Strategy for the Rational and Efficient Use of Energy, the GoP has committed to the development and implementation of technical standards and regulations which among others will ensure that commercially available equipment meets minimum level of energy efficiency in accordance with international standard as well as taking steps to promote, disseminate measures that lead to rational use of energy. This strategy sets out the steps to follow for Panama to be energy efficient through the development of eight priority lines of action: (i) technical standards and regulations for energy efficiency; (ii) institutional steps to ensure energy administrators will oversee public use of energy; (iii) implementation of non-conventional technologies to ensure efficient energy use; (iv) financing mechanisms to promote energy efficiency measures; (v) implementation of sustainable building regulations; (vi) monitoring of the final use of energy; (vii) accreditation of companies that offer energy services and certification of professionals; and (viii) education, promotion and dissemination of measures for the rational and efficient use of energy.
48. **Substance of the Prior Action.** By adopting the Central American Technical Regulation (RTCA 23.01.78:20)⁵³, the GoP has established minimum energy efficiency and labeling requirements for air conditioners that are

⁵⁰ Sustainable Energy Strategy 2030 of the SICA Countries (*EES-SICA 2030*). See: <https://www.sica.int/download/?124775>

⁵¹ Member States: Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua and Panama.

⁵² Assessment on Energy Efficiency Potential and Demand-Side Management Opportunities in Panama. World Bank (2019).

⁵³ Established through Resolution No. 23 from January 26th, 2022 and published in the Official Gazette on February 9th, 2022.



manufactured, imported or marketed in the SICA Member States. In the context of expected increases in temperature and more intense use of air conditioning appliances, promoting the adoption of regional energy efficiency technical standards for air conditioners⁵⁴, plays an essential step for the adaptation to climate change in the region, seeking to reduce the levels of energy consumption coming from these appliances. The introduction and implementation of regional minimum standards will contribute to a market increase (from Panama to SICA) for air conditioner units. Increasing the market size will allow not only an improvement in the regional efficiency of air conditioning equipment, and with this, a reduction in GHG emissions, but it will also facilitate region-specific EE designs of appliances to manufactures, which can only be achieved when market scale financially justify it. In that sense, Panama is delivering a public good by advancing the implementation of regional regulations and kick-starting a regional market for energy efficiency.

49. **Indicative Trigger.** The Borrower has taken measures to promote energy efficiency by: (i) adopting the Minimum Energy Performance Standards (MEPS) for refrigerators and aligning its regulations with the standards published in the Central American Technical Regulations (RTCA) for energy efficiency for refrigerators⁵⁵; and (ii) approving the Energy Transition Fund (FONTE), through the Climate Change Law. The RTCA will directly contribute to the displacement of inefficient refrigerators in the country, thus reducing GHG emissions levels, as well as to the creation of a regional market with minimum energy performance standards for these appliances. The approval of the FONTE through the CC Law will lay the foundations for the creation of a fund that will serve as the main vehicle for mobilizing public and private capital towards the scaling up of energy efficiency measures, as well as distributed generation and e-mobility.
50. **Expected Results.** By mandating higher regional efficiency standards, the RTCA for air conditioning equipment and refrigerators will create a greater market for efficient cooling equipment, which will bring down prices and increase market uptake in the SICA countries, including Panama. Regional regulations on improved Minimum Energy Performance Standards (MEPS) for refrigerators and air conditioners in the SICA countries are expected to be adopted, with efficient refrigerators estimated to increase from 51,000 in 2021 to 117,000 in 2025 and efficient air conditioners from 96,000 to 124,000 in the same period. The impact of the improvements in energy efficiency for air conditioning and refrigeration would be tempered by an increase in the number of air conditioners and refrigerators and would therefore demand some incremental energy for cooling air (the “rebound effect”). However, the SNE estimates that this effect is going to be relatively minor compared to the greater efficiency of the equipment leading to a net energy savings. The prior action is expected to have additional climate co-benefits through the phasing out hydrofluorocarbon refrigerants (HFCs). Additionally, the implementation of the ENUREE will result in a 15 percent reduction of electric energy consumption by 2030, relative to a business as usual (BAU). Furthermore, an additional reduction of the fossil fuel consumption of nearly three percent is also expected through the implementation of this strategy, which would result in a total primary energy saving of six percent by 2030.

DPL1 Prior Action 3 – Improvement of energy access: The Borrower has promoted rural electrification and lighting for service provision support under the Plan Colmena Law for eradication of poverty and inequality, as evidenced by Article 14 (11) of Law No. 297, published in the Official Gazette on April 28, 2022.

⁵⁴ The World Bank has supported the GoPN in the previous DPL series, particularly PA 9 of the Third Programmatic Shared Prosperity Development Policy Financing to the Republic of Panama (P166159), which supported the issuance of the sustainable construction guidelines for saving energy in buildings, and the energy efficiency technical standards for air conditioners in the country.

⁵⁵ This action will strengthen the current MEPS by 20 percent and is expected to displace 50 percent of the market, saving 340 GWh of electricity consumption between 2024 and 2035.



DPL2 Trigger #3:

The Borrower has taken steps to implement its social inclusion policies by regulating the Plan Colmena Law.

Results Indicator #5: Number of *Corregimientos Colmena* with implemented energy access interventions:

Baseline: 0 (2021)

Target: 60 (2025)

Results Indicator #6: Number of female-headed households electrified through Plan Colmena:

Baseline: 0 (2021)

Target: 550 (2025)

Results Indicator #7: Number of indigenous women with skills to perform installation and maintenance tasks of isolated photovoltaic systems in their communities:

Baseline: 0 (2021)

Target: 200 (2025)

51. **Rationale.** Through the approval of Executive Decree No. 143 from April 24th of 2020⁵⁶, which adopts the strategy for eradication of poverty and inequality in the country (Plan Colmena Strategy), the GoP has made efforts to tackle rural poverty which by 2019 was 28.2 percent (\$6.85 USD Purchasing Power Parity 2017), seven times higher than urban levels (4.8 percent) for the same year. This Strategy prioritizes equal opportunities, intercultural and intersectional understanding, citizen participation, sustainability, and territoriality. It focuses on 12 intervention areas, one of which is rural electrification and public lighting. Although the GoP has made several efforts to achieve universal access, nearly 93,000 families across the country still do not have access to affordable, reliable, and modern energy services⁵⁷. Access to energy is a poverty alleviation strategy that reduces the disease burden from exposure to smoke and carbon monoxide, especially for women and young children, improves air quality by reducing the production of pollutants released into the atmosphere, and decreases the production of greenhouse gases and black carbon⁵⁸. According to the National Energy Plan (2015-2050), the use of firewood in Panama is linked to rural and poverty levels, which affects women and children to a greater extent due to the high levels of contamination inside homes as a result of the combustion of firewood and other traditional fuels in closed places. Due to their traditional domestic role, women and girls living in low-income households experience differential impacts from the lack of energy and electricity services, including cooking. In addition to being exposed to the gases and polluting particles from the combustion of firewood while cooking, women and girls devote part of their time to collecting firewood. In Panama, women spend more time than men (29.9 vs. 14.2 hours, respectively) on caregiving and household responsibilities⁵⁹. Additionally, improved clean energy access for the vulnerable rural communities could help reduce deforestation through reduced fuelwood use.
52. Women are crucial agents in the energy transition and in expanding access to sustainable energy in their families and communities. However, women are less likely than men to have access to education and training that would allow them to take advantage of productive opportunities in the energy sector. In Panama, a

⁵⁶ See: https://www.gacetaoficial.gob.pa/pdfTemp/29010_A/GacetaNo_29010a_20200424.pdf

⁵⁷ National Strategy for Universal Access to Energy – Panama, 2022. See: https://www.gacetaoficial.gob.pa/pdfTemp/29493_A/GacetaNo_29493a_20220311.pdf

⁵⁸ World Health Organization. Opportunities for transition to clean household energy in Panama. Application of the WHO Household Energy Assessment Rapid Tool (HEART).

⁵⁹ IDB et al. Initial Diagnosis of Gender Equality in the Energy Sector of Panama, 2021. See: <https://www.undp.org/sites/g/files/zskgke326/files/migration/pa/UNDP-PA-Diagnostico-Igualdad-Genero-Sector-Energetico.pdf>. Access on: Jan. 12th, 2023.



national survey on energy companies found that, on average, 17 percent of employees are women and only 5 percent were Indigenous or Afro-descendant women⁶⁰. In addition, only 36 percent of women received training after starting their jobs in the energy sector, which suggests that other unpaid responsibilities compete with their time and attention⁶¹. Indigenous women living in the most populated comarcas primarily work in agriculture, sell crafts, and hold precarious, poorly paid, low-skill jobs⁶². Based on the strategic guidelines of the ATE to achieve a transition towards the decarbonization of the energy sector, with energy access defined as the number one priority of the government in this transition, the GoP developed the National Strategy for Universal Access (ENACU, per its Spanish acronym), to achieve universal access to energy by 2030⁶³. To facilitate the active participation and empowerment of women in the implementation of the ATE, a priority line of action corresponding to the Women and Energy Nexus is included in the ENACU. This line of action recognizes that to address climate change, it is necessary to respect, promote and consider the obligations related to gender equality, the women empowerment, and intergenerational equity. The Plan Colmena, in combination with the ENACU, is the way forward in which Panama can alleviate the gender-differentiated impacts of lack of energy access, putting technology, creativity, and entrepreneurship at the service of transforming the productivity and quality of life of communities in rural and indigenous areas, facilitating access to connectivity, communication, and increasing economic income of these areas. It is also the way that will allow the promotion and active participation of women favoring the implementation of the ATE, demonstrating the strong commitment of the GoP to act as an accelerator of the competitiveness of the development of the country based on gender equity.

53. **Substance of the Prior Action.** The adoption of Law No. 297 from April 28th of 2022⁶⁴ (Plan Colmena Law), supports the rural electrification and public lighting intervention are of the Plan Colmena Strategy, vesting it as the fundamental instrument for closing social gaps and improving Panamanian's quality of life. Through Plan Colmena, 300 corregimientos (administrative level corresponding to municipality) have been selected for support across the country, using multidimensional poverty as the official selection criterion. The Plan Colmena Law establishes the adoption of the Plan Colmena Strategy as the state intervention with a multisectoral, interinstitutional, decentralized, participatory and sustainable character. The law uses a multidimensional approach to define social vulnerability for targeting of territorial constituencies at the corregimiento level, and it establishes the lines of action and strategic framework to address rural electrification and public lighting in these constituencies.
54. Additionally, the ENACU establishes the lines of action that seek to ensure the creation of the necessary enabling conditions so that by 2030, 100 percent of the population have access to electricity and sustainable energy sources for cooking, thus positively impacting in the long run the poverty reduction, equity and health indicators of vulnerable households. One of the ENACU's priority lines of actions is the Women and Energy Nexus, which aims to achieve gender equality in the energy sector and make the energy transition more

⁶⁰ IDB et al. Initial Diagnosis of Gender Equality in the Energy Sector of Panama, 2021. See: <https://www.undp.org/sites/g/files/zskgke326/files/migration/pa/UNDP-PA-Diagnostico-Igualdad-Genero-Sector-Energetico.pdf>. Access on: Jan. 12th, 2023.

⁶¹ IDB et al. Initial Diagnosis of Gender Equality in the Energy Sector of Panama, 2021. See: <https://www.undp.org/sites/g/files/zskgke326/files/migration/pa/UNDP-PA-Diagnostico-Igualdad-Genero-Sector-Energetico.pdf>. Access on: Jan. 12th, 2023.

⁶² PNUD (2019). Diagnosis of the Situation of the Indigenous Women of Panama.

⁶³ The development of this strategy contemplates four of the five pillars of the Government's Strategic Plan 2019-2024 (PEG): (i) governance; (ii) competitiveness and job creation to reactivate economic growth; (iii) poverty and inequality reduction; and (iv) education, science, technology and culture.

⁶⁴ See: https://www.gacetaoficial.gob.pa/pdfTemp/29526_C/GacetaNo_29526c_20220428.pdf



inclusive. To this end, this prior action will promote increase engagement of women in the energy transition by considering the local social culture and including elements that promote the country's adoption of the transition. For instance, the GoP will provide capacity building in the installation and maintenance of isolated photovoltaic systems to indigenous women in rural communities. This capacity building activities will be accessible to semi-illiterate or illiterate indigenous women, allowing for a fast transfer of skills and meaningful transformation. Having this knowledge will allow to empower indigenous women to play a more active role in their communities and provide them with agency within the renewable energy sector, encouraging indigenous areas to use solar energy while creating jobs and protecting the environment.

55. **Indicative Trigger.** The Borrower has taken steps to implement its social inclusion policies by regulating the Plan Colmena Law. This regulatory decree would set out the main regulatory provisions for the articulation, implementation and monitoring of the policies set out in the Law, thereby enabling its adequate implementation.
56. **Expected Results.** It is expected that the implementation of rural electrification programs from Plan Colmena, in combination with the ENACU, will allow the reduction of poverty and inequality in the 60 selected *Corregimientos Colmena*, as well as the decrease of household air pollution and, therefore, the mortality and morbidity among women and children in particular. By decreasing the need for firewood consumption for cooking, women are expected to experience a decrease in firewood collection times⁶⁵. This decrease is likely to lead to more time available for paid work in households headed by single women. In this regard, this DPL will track the number of female-headed households that are electrified through Plan Colmena, which by 2025 is expected to reach 550. Furthermore, deforestation levels are expected to drop as these *Corregimientos Colmena* move towards cleaner technologies, also contributing to the reduction of stunting and malnutrition among children under five years old should be expected. Providing nearly 200 indigenous women with the skills to install, operate, and maintain isolated photovoltaic systems in rural areas will facilitate their participation in the renewable energy sector and expand isolated solar systems, guaranteeing the capacity for their proper installation and maintenance. Through training, indigenous women can take on a more active role in their communities and gain more agency within the renewable energy sector. Their newly acquired skills will allow for more efficient energy management at the household and community levels. Once trained, women can engage in many solar panel installation and maintenance activities, depending on the community's needs. This may include installing and maintaining solar panels for homes, businesses, and community infrastructure and providing training and support to other community members. Finally, access to rural electrification would support vulnerable rural communities gain access to digital connectivity.

DPL1 Prior Action 4 – Digital Connectivity: The Borrower has taken measures to ensure connectivity, increase competition for broadband access, boosting the adoption and increasing quality of mobile telephony in underserved areas by setting a new tariff scheme for the advanced wireless services (“AWS”) radioelectric spectrum band to be used by mobile operators, as evidenced by Cabinet Resolution No. 41, published in the Official Gazette on April 13, 2022.

DPL2 Trigger #4:

The Borrower has taken steps to make markets more competitive by publishing regulatory instruments to allow mobile operators to reduce their spectrum costs and align their incentives to set more competitive prices for

⁶⁵ According to the ENACU, the use of firewood as an energy source in the country corresponds to a variety of factors as the availability, costs, and the difficulty of accessing other type of fuels and energy sources for cooking such as liquified petroleum gas or electricity. See: https://www.gacetaoficial.gob.pa/pdfTemp/29493_A/GacetaNo_29493a_20220311.pdf



spectrum.

Results Indicator #8: Percentage of population covered by 4G networks:

Baseline: 73 (2021)

Target: 87 (2025)

Results Indicator #9: Number of indigenous regions (provincial and comarca level) with at least 5 percent of their geographical area covered by 4G networks

Baseline: 0 (2022)

Target: 3 (2025)

57. **Rationale:** While Panama has achieved a high mobile coverage with 96 percent of the population, of which 84 percent are served by 4G technologies, an important part of the rural areas remains unserved, increasing digital inequalities. Remote rural areas, such as Panama’s six indigenous provinces and comarcas, may lack a critical mass of population to incentivize the deployment of digital infrastructure, but this deprives the population in remote areas of achieving the positive impacts related to access to healthcare, entertainment opportunities, more productive agriculture and more sustainable forestry. With 6.4 million mobile subscribers, Panama recorded 148 active lines per 100 inhabitants in 2021. However, only 65 percent of all mobile subscribers had access to broadband services.⁶⁶ The gap between mobile voice and broadband services opens an opportunity for increasing the penetration of mobile internet services among current mobile users, which will have a positive impact on climate change mitigation. Furthermore, mobile coverage boosts productivity in professions that involve travel and working outdoors, reduces working time losses and enables precision agriculture by allowing greenhouses to be controlled and managed remotely. Low-cost spectrum schemes make operators’ operational costs less burdensome and lower the threshold for the critical mass of population to invest in telecom networks, such as 4G. Further, effective spectrum pricing is associated with the expansion of mobile access, and it has a positive effect in the use of energy.
58. Competitive prices and quality for telecom mobile services will serve to reduce the digital divide in Panama where lack of access to digital services is a barrier to development. A reduction of sunk costs such as spectrum fees will provide operators with incentives to engage in competitive investments that would reduce retail prices, increase quality of the service and improve coverage of services for mobile broadband. In this context, less populated and remote areas and lower-income regions will become more attractive for service providers. For the quarter of the population that presently lack digital access, this poses a constraint on regional development, rapid access to health services and disaster preparedness and relief. The resilience of the remote regions of Panama to climate change induced severe weather events is severely impacted by the inability to use 4G/5G networks both preventively (in smart grid solutions designed to keep electricity networks functioning, even when parts of the network is put out of operation) and reactively (mobile connectivity for disaster response and relief).
59. The original concession contracts stipulated that the price for additional mobile telephony spectrum licenses must be based on the highest price paid at the auction, adjusted for inflation⁶⁷. However, such methodology has led to concentration, limited internet access and mobile phone connectivity, as well as high prices for

⁶⁶ ASEP, National Telecommunications Directorate, from “Technical, Commercial and Statistical Information Form (FICTE)”. See: https://www.asep.gob.pa/wp-content/uploads/telecomunicaciones/estadisticas/2022/banda_ancha_2022.pdf

⁶⁷ Personal Communication Services’ (PCS) concessions signed by Claro and Digicel in 2008 indicate that future spectrum assignments would be priced by adjusting the highest offer presented in the Tender No. 01-07-Telco. The adjustment should be made using the Consumer Price Index (CPI) published by the U.S. Bureau of Labor Statistics. See WB (2022). Review of Spectrum management in Central America.



broadband access. Panama is the Latin American country with the highest spectrum costs and the lowest *wireless score* (composed by average speed, coverage, and 4G uptake)⁶⁸. The GSMA (2018) report found a link between high spectrum prices and more expensive mobile broadband services and low quality⁶⁹, which suggests that high input costs are depressing investment and increasing retail prices in the absence of competition⁷⁰. A later (2019) GSMA report demonstrated that the correlation between high spectrum prices, among other poor spectrum management decisions is, in fact, causal and provided evidence that high spectrum prices indeed affect 3G and 4G coverage negatively by diminishing incentives for network investments and, in consequence and negatively impact mobile broadband services with good coverage.⁷¹

60. **Substance of the Prior Action:** On April 13th 2022, the Government of Panama issued the Cabinet Resolution No. 41 (CR41), by which the National Authority for Public Services (ASEP) set a new tariff scheme for the Advanced Wireless Services (AWS) radioelectric spectrum band to be used by mobile operators in Panama. The CR41 establishes a tariff of 1,214,287 balboas for the usage of 1 MHz, which represents a 60 percent reduction from the previous fee of around 3 million balboas⁷². The resolution gives the concession holders the right to be assigned new frequency bands for new mobile services thereby incentivizing telecommunication operators to develop infrastructure in rural areas with low population density and thus extend coverage in remote areas with high share of indigenous people. The resolution is an alternative to tackling obstacles in place for releasing spectrum in Panama at competitive prices due to requirements in concession contracts that ended with 2008 pricing levels without consideration of the evolution of market conditions. The Cabinet Resolution lowers prices of spectrum from for existing operators, while assigning additional frequencies. These measures are likely to mobilize private sector investments because operators will face lower operational expenses (due to the reduction of spectrum prices) and will leverage additional available spectrum. Investments can take place in forms of upgraded existing infrastructure (to deal with higher demand) or building new infrastructure to leverage the spectrum in uncovered areas.
61. **Indicative Trigger:** The Borrower has published regulatory instruments to make markets more competitive, reducing spectrum costs to mobile operators and align their incentives to set more competitive prices for spectrum. The GoP, through ASEP, has approved a decree lowering the price of spectrum frequencies (both 4G or 5G⁷³) incentivizing the private sector to invest in telecommunication infrastructure while reaching unserved areas and improving the quality of the service provided.
62. **Expected Results:** The resolution will encourage the industry to increase its investments and extend its services, which will contribute to the reduction of the digital gap. The lower cost of spectrum band is expected (i) to help the GoP in achieving its greenhouse gas emission targets through more effective use of energy because it is giving better opportunities for automation and reducing transport work and (ii) to improve the coverage of 4G and 5G technologies to previously underserved areas, which will serve to improve education and health care provision. This Prior Action will directly leverage and complement Prior Actions 2 and 3: the approval and implementation of the Energy Transition Agenda and the Plan Colmena will help reduce the digital gap by establishing the basis to increase internet coverage and facilitate affordable, reliable, and

⁶⁸ Latin American countries assessed were Chile, Colombia, Costa Rica, Brazil, Uruguay, Mexico, Argentina, Peru, Ecuador, and Panama

⁶⁹ A relevant finding of the report indicates that some Panamanian spectrum prices were too high to be considered in a statistical exercise

⁷⁰ See GSMA (2018). "Effective Spectrum Pricing in Latin America: Policies to support better quality and more affordable mobile services"

⁷¹ See GSMA (2019). "The impact of spectrum prices on consumers"

⁷² See: https://www.gacetaoficial.gob.pa/pdfTemp/29516_A/91223.pdf

⁷³ Panama has not assigned spectrum for 5G yet. 5G will necessitate quite large investments and the 5G coverage by 2025 is not expected to exceed 2 percent.



modern energy services to the 93,000 families across the country that still do not have access to such services. The Energy Transition Agenda specifically mentions the need for the energy sector digitalization to promote energy savings and digital skills trainings to facilitate the installation of solar panels and other clean energy methods.

63. Furthermore, digital technologies are critical to improving climate resilience. Different studies have shown that digital technologies enable better understanding and modelling of the spatiotemporal dynamics of hazards and infrastructure performance. For example, the accessibility of a substation, which is part of a power grid after a flood, can be facilitated using almost real-time 5G-enabled agent-based modelling for the affected and interdependent infrastructure systems, by deploying likely scenarios of functionality loss for the transport network⁷⁴. Similarly, Big Data can underpin sustainable solutions to combat climate change, by facilitating clean energy solutions and by enabling the measurement of carbon emission levels due to traffic and building services⁷⁵.
64. The PA is expected to enable private sector capital to be invested in the expansion of network coverage. It is expected that, as a result, the percentage of the population covered by at least 4G networks will increase from 73 percent in 2021 to 87 percent in 2025. This increase will come from increased private sector investments in the 4G network infrastructure estimated at \$35 million⁷⁶. The PA will also result in that the number of indigenous regions (provincial and comarca level) with at least 5 percent of their geographical area covered by 4G networks will increase from 0 in 2022 to 3 in 2025.

Pillar II – Establish policy foundations to sustain natural capital for resilient growth

65. Pillar II supports Panama’s reform program to conserve and sustainably manage natural capital for resilient growth by: (i) strengthening the country’s climate change strategic framework and promote inclusion aspects for low carbon resilient development by presenting to the Assembly the Climate Change Framework Bill; (ii) mainstreaming climate in public financial management and support consistent government spending with climate change mitigation and adaptation by appropriately tagging of public investment projects; (iii) promoting nature-based tourism as a strategic sector for green and inclusive growth; and (iv) strengthening climate resilience and promote a gender responsive blue growth approach to restore and conserve marine-coastal ecosystems by enacting Panama’s Oceans Policy.

DPL1 Prior Action 5 – Climate Change Legal and Regulatory Framework: The Borrower has taken measures to promote long-term national climate targets and accelerate the inclusive dimensions of climate smart development by submitting to the National Assembly a climate change framework bill, as evidenced by the bill submitted on January 24, 2023 to the National Assembly as initiative No. 942 and published in the National Assembly’s website.

DPL2 Trigger #5:

The Borrower has issued a regulatory decree to the Climate Change Framework Law establishing mandatory measures for the country’s long-term low greenhouse gas emission development.

⁷⁴ IdealCity: A hybrid approach to seismic evacuation modeling. See:

<https://www.sciencedirect.com/science/article/abs/pii/S0965997820310024?via%3Dihub>

⁷⁵ Big data analytics for mitigating carbon emissions in smart cities: opportunities and challenges. See:

<https://www.tandfonline.com/doi/epdf/10.1080/09654313.2017.1294149?src=getftr&>

⁷⁶ Based on: <https://www.iadb.org/es/noticias/cerrar-la-brecha-digital-podria-crear-15-millones-de-empleos-en-america-latina-y-el-caribe>



Results Indicator #10: Negative Carbon balance maintained⁷⁷:

Baseline: Yes (2021)

Target: Yes (2025)

66. **Rationale.** Panama has taken proactive steps to support global climate targets under the Paris Agreement through ambitious national adaptation and mitigation commitments. Panama’s updated NDC⁷⁸ is structured around actions in ten sectors focusing its mitigation commitments specifically on the Energy (including transport) and Forestry sectors, which have the largest mitigation potential. Recognizing that climate change is an added stressor that aggravates women’s vulnerability⁷⁹, Panama’s updated NDC highlights the government’s commitment to mainstream gender equality and support inclusive approaches in climate action building on the fundamental role that women and indigenous peoples can play in this regard⁸⁰. Also, recognizing the importance of having a planning instrument to promote the integration and mainstreaming of a gender perspective into climate actions to accelerate resilient and inclusive development, the GoP has approved a National Plan on Gender and Climate Change⁸¹. Through this Plan, integrating gender-based strategies for the NDC’s included sectors will facilitate more efficient low-emissions development pathways⁸². Additionally, as part of the country’s NDC implementation strategy, the GoP has adopted the National Climate Action Plan (NCAP)⁸³, a key instrument that promotes the country’s implementation of key mitigation and adaptation measures in a period of five years, sets the strategic orientation and guiding principles that will enable the implementation of climate actions in the medium term, and guarantees that the country complies with its long-term climate change commitments yet to be defined.
67. **Substance of the Prior Action.** To promote long-term national climate targets, accelerate the inclusive dimensions of climate smart development, and strengthen the current Climate Change agenda, the Borrower has submitted to the National Assembly a Climate Change Framework Bill; as evidenced by the bill submitted on January 24, 2023 to the National Assembly as initiative No. 942 and published on the National Assembly’s website. Panama has made significant progress on its mitigation and adaptation efforts. Executive Decree No. 100, approved in October 2020 (under DPL1 Pandemic Response and Growth Prior Action 10) was a key milestone to address the country’s climate challenges. This Decree regulates the climate change mitigation aspects of the General Environmental Law (GLE) and sets forth important aspects of a decarbonization strategy. To advance in its climate adaptation pathway, the GoP adopted Executive Decree No. 135, dated April 30, 2021, (under DPL2 Pandemic Response and Growth Prior Action 7). In order to strengthen its response to climate change and to have a comprehensive law that addresses both decarbonization and

⁷⁷ Based on national GHG inventory

⁷⁸ Submitted on December 28, 2020 <https://unfccc.int/documents/499571>

⁷⁹ Climate change and climate-related shocks are experienced differently by men and women, as well as amplified in different vulnerabilities intersections, due to gendered norms, roles, and responsibilities, which affect people’s exposure as well as coping strategies. Thus, differences in access to and ownership of assets, resources and labor, mobility challenges related to social stigma and social norms, care and domestic responsibilities, and access to information or resources often disadvantage women compared to men.

⁸⁰ In Panama, women face barriers to access health services, and perform poorly in markers of voice and agency when compared to the LAC region. Also, indigenous women are traditionally excluded from decision-making structures. This lack of agency is further aggravated by a disparity in incomes. Lack of economic opportunities in indigenous territories translates into the highest internal migration of indigenous peoples in the region. Despite some progress, gender gaps, gender-based violence, and disadvantageous social norms facing women and girls persist; and gains in human capital of women and girls remain untapped. Thus, it is essential that climate policy actions are gender-responsive, recognizing gender-differentiated vulnerabilities and promoting their key role in addressing climate change.

⁸¹ Executive Decree No. 10, 2022

⁸² Evidence shows that women’s participation and leadership in climate action is associated with better resource governance, conservation outcomes, and disaster readiness. Source: UN Women (2016) Implementation of gender-responsive climate action in the context of sustainable development. https://unfccc.int/files/gender_and_climate_change/application/pdf/egmreport.pdf

⁸³ Executive Decree No. 11, 2022



adaptation, the GoP aims to adopt a General Law on Climate Change. This law will strengthen the current institutional framework, integrate previous regulations, create management instruments, and build on key instruments to achieve the Paris agreement (e.g., NCAP).

68. **Indicative Trigger.** To further integrate the low-carbon transition pathways, identify and implement ambitious decarbonization and adaptation investments, the Borrower will issue a regulatory decree to the Climate Change Framework Law establishing mandatory measures for the country's long-term low greenhouse gas emission development. The development and implementation of the long-term low greenhouse gas emission development strategy (LTS) will not only guide the GoP towards larger-scale transformational changes to low-carbon and climate resilient economic development, but also will support the mandatory measures established by the Climate Change Framework Law. The LTS can help the country unlock new economic opportunities, innovate, and create future jobs. It can help the GoP recognize climate-related risks, as well as direct impacts and the low-carbon transition itself, which could dramatically devalue high-carbon assets⁸⁴.
69. **Expected Results.** The policy actions will be monitored by an indicator that measures that the country continues to be a net GHG sink, that is the country absorbs more carbon than it emits and hence maintains a negative carbon balance. This is a result of strengthening the climate change governance, developing and better aligning the regulatory framework and implementing the different policy instruments. The progress on the country's climate legal framework includes a National Gender and Climate Change Plan which will improve the effectiveness of climate actions by ensuring the gender lens and gender relations are considered when designing, implementing and measuring climate policy. Based on this, the GoP is designing sector specific climate plans under a gender approach. These sector climate gender plans will aim at including indicators to monitor the progress of closing specific the gender gaps related to: (i) Building and Protecting Human Capital; (ii) Opening More and Better Jobs; (iii) Expanding Ownership, Control and Management of Assets; and (iv) Enhancing Women's Leadership, Voice and Agency.

DPL1 Prior Action #6 – Climate Smart Investments: The Borrower has taken measures for improving the quality of public expenditures, including for the tagging of climate-related expenditures, by: (a) mandating public entities to implement technical guidelines for ensuring efficient and transparent quality in service provision; and (b) issuing guidelines for the formulation and evaluation of public investment projects with specific provisions on climate-change tagging; as evidenced, respectively, by: (i) Article 361 of Law No. 336, published in the Official Gazette on November 14, 2022; and (ii) the Methodological General Guidelines for the Formulation and Evaluation of Public Investment Projects from 2022, published in the Ministry of Finance's website.

DPL2 Trigger #6:

The Borrower has mandated climate change mitigation and climate impact assessment considerations as part of the country's Environmental Impact Assessment Process.

Results Indicator #11: Percentage of approved Environmental Impact Assessments (EIA) processes category II and III⁸⁵ that integrate climate mitigation and resilience considerations:

⁸⁴ Mukhi, Neha; Rana, Suneira; Mills-Knapp, Sara; Gessesse, Eskedar. 2020. World Bank Outlook 2050 Strategic Directions Note : Supporting Countries to Meet Long-Term Goals of Decarbonization. World Bank, Washington, DC. © World Bank. <https://openknowledge.worldbank.org/handle/10986/33958> License: CC BY 3.0 IGO.

⁸⁵ Category II EIA requires mitigation and prevention measures. In Category II EIAs, a Citizen Participation Plan, and a formal citizen consultation is required so that any observations or objections deemed necessary can be raised during the EIA review stage. Category III EIA requires an Environmental Management Plan. In Category III EIAs, in addition to the citizen participation plan, the citizen consultation, a public forum must be held during the evaluation phase and before the EIA decision phase.



Baseline: 0 (2021)

Target: 100 (2025)

70. **Rationale.** The updated NDC shows an increasing ambition and defines actions in key sectors to achieve a low carbon and climate resilient and inclusive development, which are translated to several policies and institutional arrangements⁸⁶. The GoP aims to mainstream its updated NDC into national public financial management (PFM) systems to ensure the implementation and achievement of NDC goals. PFM is a central element to the government’s efforts for a transition towards low-carbon and resilient development, aiming at best practices to achieve cost-effective solutions to climate change⁸⁷. As such, the GoP has begun to take steps toward considering and integrating climate change into macroeconomic policy, fiscal planning, budgeting, public investment management, and procurement practices. In addition, the country’s NDC focal point (MiAmbiente) and MEF have been closely coordinating for years to further advance climate policy and enhance ambition. Ideally, a climate-smart public investment management system would be implemented that could provide information on the climate-responsiveness of the national investment portfolio and inform decisions on resource allocation towards achieving NDC goals. Through this, Panama could adequately integrate climate change considerations into economic and financial decision-making.
71. **Substance of the Prior Action.** Incorporating climate tags in public investment projects provides information to the GoP on the climate-responsiveness of their public investment portfolio. Therefore, the Borrower has taken measures for improving the quality of public expenditures, including for the tagging of climate-related expenditures, by: (i) mandating public entities to implement technical guidelines, which now include specific guidelines for climate tagging, for ensuring efficient and transparent quality in service provision, through Article 361 of Law No. 336, published in the Official Gazette on November 14, 2022; (ii) issuing guidelines for the formulation and evaluation of public investment projects with specific provisions on climate-change tagging, published in the MEF website; and (iii) adopting a manual for tagging of climate-related expenditures in public spending; through Resolution No. DM-0110-2022, published in the Official Gazette on May 3, 2022. Through the proposed prior action, which solely focuses on the new climate tagging provisions, public budget will address criteria on climate change mitigation and adaptation. Public Investment Projects will be assessed based on four methodologies⁸⁸. During project design and appraisal, public institutions are required to answer a series of questions to verify whether the project contributes to mitigation, adaptation, and NDC goals. If they do, they will be accounted as the GoP’s climate finance. Public institutions are also required to assess whether their proposed projects are subject to climate risks. Those that are subject to medium and high risks are required to assess whether the projects are indeed feasible and if so, develop adequate risk management measures. The climate-related tagging will be applied starting with the projects that will be registered in the public investment systems for the Fiscal Year 2023 budgeting process and will also be retroactively applied on the public investment projects from 2019 to 2022, to collect information on past investment. By incorporating climate change criteria into the public finance system, the prior action will enable easier identification and aggregation of climate investments that would as a result allow for better decision making to identify where investments are most efficient and redirect them. As such, the longer term expected outcome of this prior

⁸⁶ Including Decree No. 100, 2020 and Decree No.135, 2021 supported by the previous DPL series Panama Pandemic Response and Growth Recovery Development Policy Loan 1 and 2 (P174107 – P174107).

⁸⁷ The six Helsinki Principles that guide the Coalition’s commitments are: 1) align policies with the Paris agreement, 2) share experience and expertise, 3) promote carbon pricing measures, 4) mainstream climate in economic policies, 5) mobilize climate finance, and 6) engage in NDC development.

⁸⁸ The manual consists of four methodologies: 1) methodology that defines whether a project contributes to mitigation; 2) methodology that defines whether a project contributes to adaptation; 3) methodology that defines whether a project contributes to the NDC; and 4) methodology that defines whether a project is subject to climate risks.



action is that public investments could be prioritized based on climate adaptation and mitigation criteria. However, the initial climate tagging is a first step to achieving this.

72. **Indicative Trigger.** The Borrower has mandated climate change mitigation and climate impact assessment considerations as part of the country’s Environmental Impact Assessment (EIA) Process. In Panama’s existing EIA processes⁸⁹, the impacts of climate change on the sustainability of construction or other long-term infrastructure projects are not assessed. During the environmental assessment, the ecological and socioeconomic assessments that are conducted do not require a review of climate change impacts and possible adaptation programs; furthermore, no assessment is made as to whether institutional programs enhance adaptive capacities. Because EIAs are required for many projects that have a relatively long-life span, such as physical infrastructure of all types, it is important to consider how climate change will influence the project and how the project will affect nearby resources, society and the environment not only under present conditions, but also under future ones. Integrating climate change considerations into the EIA process will identify and assess climate change impacts of a project as well as potential mitigation and adaptation measures. As a result, and if needed, alternative design and implementation options can be imposed on public and private project developers prioritizing climate change mitigation and adaptation around these projects. Incorporating climate change considerations into the EIA can help determine whether projects are consistent with climate change policies. It can also provide the private sector/developer with the use of best practices to adapt to the potential impacts of climate change, such as intensity of extreme weather events, and altered precipitation patterns. Also, by considering climate change impacts on proposed activities, the process could support the GoP as an effective instrument for climate change adaptation planning and management⁹⁰. The implementation of appropriate adaptation planning and management mechanisms is favored in addressing anticipated adverse impacts from climate change.
73. **Expected Results.** Incorporating climate change considerations will enhance the effectiveness of environmental impact assessments. Hereby, it will not only help the GoP address climate change but has the potential to impact the long-term sustainability of private and public investments by incorporating adaptation and mitigation considerations. As a result, 100 percent of approved EIA processes category II and III will integrate climate mitigation and resilience considerations.

DPL1 Prior Action #7 – Enhanced conservation of rural, coastal and marine areas for resilience: The Borrower has taken measures to enhance forest conservation, create opportunities to develop nature-based tourism, generate jobs and sustain livelihoods through the expansion of the protected area of Iguana Island Wildlife Refuge as part of the Borrower’s national protected areas and the regulation of the Agritourism Law, as evidenced by Executive Decree No. 1, published in the Official Gazette on February 2, 2022 and Executive Decree No. 11, published in the Official Gazette on May 9, 2022.

DPL2 Trigger #7:

The Borrower has updated the Forest Law to: (i) strengthen legal recognition of forest to provide ecosystem services hereby allowing for economic schemes to compensate forest protection; (ii) strengthen planning and management instruments for sustainable forest management; and (iii) regulate land use changes.

⁸⁹ The term EIA process covers a variety of tools including project level EIAs, Strategic Environmental Assessments.

⁹⁰ Article 4 of the United Nations Framework Convention on Climate Change outlines commitments to be undertaken by parties signing the Convention, which include the following: Take climate change considerations into account, to the extent feasible, in their relevant social, economic and environmental policies and actions, and employ appropriate methods, for example impact assessments, formulated and determined nationally, with a view to minimizing adverse effects on the economy, on public health and on the quality of the environment, of projects or measures undertaken by them to mitigate or adapt to climate change.”



Results Indicator #12: Number of agritourism fincas certified:

Baseline: 0 (2021)⁹¹

Target: 480 (2025)

Results Indicator #13: Zero net deforestation of mangroves in National Protected Areas achieved

Baseline: No (2021)

Target: Yes (2025)

74. **Rationale.** Panama is a net GHG sink as its forests absorb more GHGs than what the country emits⁹². This provision of climate mitigation ecosystem service depends on a continued protection of inland and coastal forest⁹³, nature-based solutions and restoration⁹⁴. These activities and the protection of forest land also sustain important adaptation co-benefits that result in protecting ecosystems and population. In addition, scaling up these activities is key given a raising deforestation trend due to the expansion of agricultural frontier⁹⁵. Panama's rural economy and employment in sectors like agriculture and tourism depend on the country's forests and biodiversity⁹⁶ including those ones under the national system of protected areas (SINAP)⁹⁷. The GoP promotes nature-based tourism experiences that encourage the conservation and restoration of Panama's natural resources, empower local communities, and diversifies their local livelihoods. The country is also working towards accelerating the decarbonization of the sector and is developing public policies towards more low-carbon, sustainable and resilient tourism models.
75. As indicated in Panama's Strategic Plan 2019-2024 tourism is a strategic sector in the economy⁹⁸ and an effective tool to combat poverty, by creating quality jobs. Particularly, nature-based sustainable tourism represents a strategic sector for green and inclusive growth⁹⁹. In the country's natural protected areas, tourism has been one of the main activities and its economic contribution has increased in the latest years¹⁰⁰. This has been enabled by different policy instruments¹⁰¹ (including the Action Plan 2016-2026 for the

⁹¹ By December 2021 there were 220 agritourism fincas but they were not certified by ATP and MIDA.

⁹² Panama Biennial update report (2021) BUR2 National inventory report. <https://unfccc.int/documents/279123>.

⁹³ Coastal and marine ecosystems, including mangroves and coral reefs, provide coastal protection and carbon sequestration. GCF (2022). Ecosystem and Ecosystem Services Sectoral Guide. Sectoral Guide Series. Yeonsu: Green Climate Fund. ⁹³ E. McLeod, et al. (2011), A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂ Front. Ecol. Environ. (2011), pp. 552-560, 10.1890/110004

⁹⁴ The LULUCF sector NDC target is to restore 50,000 ha of national forests and this is expected to result in the absorption of around 2.6 million tons of carbon dioxide by 2050 on top of other benefits such as addressing biodiversity loss.

⁹⁵ The Land Use Land Use Change Forest (LULUCF) sector with a total of 4,358 kt CO₂ eq (more than 70% of the emissions derived from forestlands converted to grasslands)

⁹⁶ Panama's remaining forest overlaps with areas that provide 60 – 90 percent employment opportunities in agriculture, World Bank internal estimates.

⁹⁷ Over 43.5% of the national forestland is within the SINAP. With 114 national protected areas, it covers approximately 32% of the land area and 12% of marine areas of the national territory. MiAmbiente (2021). Diagnosis on the coverage of forest and other wooded lands in Panama, 2021. https://www.gacetaoficial.gob.pa/pdfTemp/29591_A/92835.pdf. UNEP-WCMC (2022). Protected Area Profile for Panama from the World Database on Protected Areas. Available at: www.protectedplanet.net

⁹⁸ In the Competitiveness Report 2019 of the World Economic Forum, Panama is ranked 47 from 133 countries and sixth in the Americas Region. According to UNWTO Tourism dashboard (<https://www.unwto.org/unwto-tourism-dashboard>), in 2019 tourism accounted for 9% of the country's GDP.

⁹⁹ World Bank (2020), Policy notes for Panama.

¹⁰⁰ In 2015 income from visits to protected areas increased by 23%, reaching almost one million dollars. MiAmbiente (2016): Action Plan for the Development of Green Tourism in Protected Areas in the Republic of Panama 2016-2026.

[https://chm.cbd.int/api/v2013/documents/32A91AB9-5938-67D5-6748-](https://chm.cbd.int/api/v2013/documents/32A91AB9-5938-67D5-6748-BA2B6D039C80/attachments/Plan%20de%20acci%C3%B3n%20para%20desarrollo%20de%20Turismo%20Verde%20en%20C3%81reas%20Prot)

[BA2B6D039C80/attachments/Plan%20de%20acci%C3%B3n%20para%20desarrollo%20de%20Turismo%20Verde%20en%20C3%81reas%20Prot](https://chm.cbd.int/api/v2013/documents/32A91AB9-5938-67D5-6748-BA2B6D039C80/attachments/Plan%20de%20acci%C3%B3n%20para%20desarrollo%20de%20Turismo%20Verde%20en%20C3%81reas%20Prot)
[egidas%202016-2026.pdf](https://chm.cbd.int/api/v2013/documents/32A91AB9-5938-67D5-6748-BA2B6D039C80/attachments/Plan%20de%20acci%C3%B3n%20para%20desarrollo%20de%20Turismo%20Verde%20en%20C3%81reas%20Prot)

¹⁰¹ Sustainable Tourism Plan in Panama, Action Plan for green tourism in protected areas, sustainability standard.



Development of Green Tourism in Protected Areas¹⁰²) and projects involving MiAmbiente and the Ministry of Agricultural Development (MIDA). Together, the aim is to increase competitiveness while preserving its natural capital and allowing local communities and indigenous peoples to take advantage of the territories' natural potential and their traditions to increase their income and reduce vulnerability to climate change. Of particular relevance, in October 2021, Panama's Agritourism Law was enacted to promote agritourism within rural tourism as an alternative for the sustainable development of the agricultural sector, in order to foster the implementation of sustainable food systems within the touristic spots but also to enhance and promote the use of sustainable agricultural practices.

76. **Substance of the Prior Action.** Nature based tourism in rural and protected areas (agritourism, ecotourism) can enhance climate change resilience enhancing conservation and providing complementary income. New forms of tourism are emerging as a growing niche market that provides local rural producers with alternative outlets and sources of income¹⁰³. The Borrower has regulated via Executive Decree No. 11, May 9th 2022 Panama's agritourism law (Law 240) and recognizes tourism as an alternative for sustainable development that can generate jobs and complementary income to agricultural activities, mainly in rural areas. The Government will promote and support the implementation of sustainable agritourism in lagging rural areas.
77. Protected areas maintain essential ecosystem services which can increase resilience and reduce the vulnerability of livelihoods against climate change. The GoP has strengthened its National Protected Areas (NPA) system by enacting Executive Decree No. 1 as published in the Official Gazette on February 2, 2022, that increases the protected area of the Iguana Island Wildlife Refuge by over 300 percent¹⁰⁴. The coral reefs, along with the mangroves on the island and on the mainland, support artisanal fisheries on which the livelihoods of more than 200 families in the area depend¹⁰⁵. This expansion strengthens the country's efforts of protection and conservation of terrestrial and marine ecosystems, its efforts to promote tourism for coastal communities and contribute to the country's Climate Change Mitigation and Adaptation targets. Enhanced protected areas will contribute to the resilience of coastal ecosystems and communities, increased protection will also ensure the preservation of important carbon stocks, which would be at risk of being lost. Through this expansion, the government fosters a complementary approach of conservation and creating income opportunities in rural areas. This complementary approach benefits rural communities in both natural protected areas and other lands, including farms.
78. **Expected Results.** Through the regulation of the Agritourism law, an increased number of rural land areas will be certified to engage in sustainable productive activities. It is expected that 480 agritourism fincas will be certified by 2025. In addition, by expanding the protection area of the Iguana Island Wildlife Refuge, and therefore its sustainable management, the GoP is strengthening the protection of mangroves forests within the area hereby enhancing the resilience to climate change of marine-coastal areas and benefiting the livelihoods and income opportunities for the communities that depend on the island. Controlling recreational activities in the marine protected area will preserve its biodiversity and the coral and sediments capacity for carbon storage. This, in turn increases fish populations in surrounding areas, providing a direct benefit to communities in terms of food security and income opportunity.

¹⁰² This plan does not have a regulatory instrument. It is based on Executive Decree 1 of April 22, 2015, which establishes the initiative for the development of ecotourism in Protected Areas of Panama.

¹⁰³ Torres & Momsen (2011).

¹⁰⁴ The area of the protected area was originally 148.23 hectares and is quadrupled to a perimeter of 650.9 hectares.

¹⁰⁵ <https://www.miambiente.gob.pa/miambiente-aclara-las-pautas-para-visitar-el-refugio-de-vida-silvestre-isla-iguana/>



79. **Indicative Trigger.** The Borrower has updated the Forest Law to: (i) strengthen legal recognition of forest to provide ecosystem services hereby allowing for economic schemes to compensate forest protection; (ii) strengthen planning and management instruments for sustainable forest management; and (iii) regulate land use changes. Over 47 percent of the national forests is within the national system of protected areas (SINAP).¹⁰⁶ While the country overall showcases negative emission due to its large forest coverage, there is an important deforestation trend that significantly contributes to Panama’s GHG emissions. Strengthening provisions within the Forest Law will allow the country to include, enhance and better articulate specific policies to conserve, restore and appropriately manage its forests. Landscape restoration plays a crucial role in achieving Panama’s Nationally Determined Contribution (NDC) target. The country has a restoration target of 50,000 hectares of forest, and 130,000 ha of degraded areas with agroforestry and silvopastoral systems. The GoP is implementing the Restoration Program (2021-2025) to achieve productive restoration of forest landscapes and restoration through agroforestry systems. By updating its Forest Law, the GoP aims to strengthen its capacity to identify and develop policies and programs to scale-up ecosystem service restoration, sustainable landscape management, and low-carbon development, as well as to attract green and socially conscious private or institutional financing for investment in resilient, inclusive, sustainable rural areas.

DPL1 Prior Action #8 – Scale up Marine Protection: The Borrower has approved a National Oceans Policy to boost low carbon and resilient growth based on marine natural resources, as evidenced by Executive Decree No. 27, published in the Official Gazette on March 21, 2022.

DPL2 Trigger #8:

The Borrower has strengthened the sustainable management and conservation of the country’s marine and coastal ecosystems by issuing a decree to increase the area of the marine-coastal natural protected areas.

Results Indicator #14: Percentage of marine area under conservation and sustainable management schemes.

Baseline: 30.5 (2021)

Target: 50 (2025)

80. **Rationale.** Coastal ecosystems represent an important contribution to Panama’s economy and social development. Panama has two extensive coasts: the Pacific (1,700 km in length) and the Caribbean (1,287 km). This interoceanic position has allowed Panama to have a strategic position on maritime transportation and the world’s blue economy through the Panama’s Canal. The wealth of marine and coastal resources in Panama range from estuaries and mangroves to reefs and underwater vegetation. Mangroves are not only important for the country’s economy providing nurseries for shrimp and commercially caught fish, an industry that was valued at over \$225 million a year in 2015¹⁰⁷, but are also key in reducing vulnerability to climate change. Most mangrove forests in Panama are located within protected areas or in specifically managed coastal/marine areas. However, they are subject to intense pressure, primarily from unsustainable production practices, expansion of the agricultural frontier, unplanned tourism, real estate developments and environmental pollution, particularly around the Panama Canal area¹⁰⁸. The loss of coverage of wetland

¹⁰⁶ MiAmbiente (2021). Diagnosis on the coverage of forest and other wooded lands in Panama, 2021. See: https://www.gacetaoficial.gob.pa/pdfTemp/29591_A/92835.pdf

¹⁰⁷ See: <http://www.fao.org/fishery/facp/PAN/es#CountrySector-ProductionSector>

¹⁰⁸ USAID (2016). Central America mangroves, tenure, and REDD+ assessment. Tenure and Global Climate Change (TGCC) Program. https://www.land-links.org/wp-content/uploads/2018/03/USAID_Land_Tenure_TGCC_Central_America_Mangroves_REDD_Assessment_Tenure.pdf



ecosystems, mainly mangroves, increases the levels of vulnerability of the coastal zone. Marine-coastal zones have been seriously threatened by the pressure exerted by human activities and the impacts associated with climate change. The vulnerability of coastal inhabitants and economic sectors is threatened, particularly in the face of changes in climate variability that year after year seem to intensify the extreme values of rainfall and temperature. Climate change threats in coastal areas include sea level rise, storm surges, floods, droughts, and landslides, among others. This, in turn, produces an impact on local populations such as damages to the infrastructure upon which fishing communities depend, aquifer loss due to saline intrusion and coastal erosion.

81. Panama's updated NDC emphasizes the nature-based solutions in coastal and marine areas (i.e., conservation and restoration of mangroves, seagrasses) as a mitigation and adaptation component. Panama's updated NDC states that the livelihoods of women who depend on marine-coastal resources will suffer disproportionate impacts caused by the degradation of natural resources, oceans and loss of marine biodiversity. Thus, it is essential that the regulations and strategies related to coastal systems management are gender-responsive, recognizing gender-differentiated vulnerabilities, and how women in marginalized communities could become agents of change, bringing about positive change in affected areas Coastal and marine ecosystems, including mangroves and coral reefs, provide coastal protection¹⁰⁹ and carbon sequestration¹¹⁰. With a total of 183,773 hectares of mangrove forest¹¹¹, Panama is the Central American country with the largest area of mangrove cover¹¹² and the country with the greatest variety of species in the continent. Mangroves are essential carbon sinks whose carbon is unrecoverable¹¹³. Protecting and proactively managing these ecosystems, is essential for ecological and human resilience¹¹⁴, delivering national and global climate mitigation and adaptation benefits and providing jobs and food security to coastal communities.
82. **Substance of the Prior Action.** Panama acknowledges the importance that marine and coastal ecosystems have in its economic growth through tourism, fisheries, and enhanced opportunities of coastal communities' livelihoods, as well as its cross-cutting role to tackle climate change. Therefore, the GoP enacted Panama's National Ocean Policy, by Executive Decree No. 27 from March 21, 2022. The policy provides the country's vision and a framework for sustainable management of Panama's ocean resources which are vital for climate resilience. The Policy aims to generate the development of a sustainable blue economy through the sustainable use of marine resources and the promotion of activities capable of generating wealth while preserving an adequate quality of the environment and promoting climate resilience. The National Ocean Policy of Panama has five fundamental strategic axes and sets forth actions and key results indicators to be achieved in 2030. The National Ocean Policy highlights the government's commitment to: (i) integrate a gender responsive approach to restore and conserve marine-coastal ecosystems; (ii) tackle marine pollution and improvement in the management of spills and marine waste; and (iii) protect and restore critical ecosystems to address climate change and safeguard food security.
83. **Expected Results.** It is expected that the National Oceans Policy will lead to a sustainable management of

¹⁰⁹ GCF (2022). Ecosystem and Ecosystem Services Sectoral Guide. Sectoral Guide Series. Yeonsu: Green Climate Fund.

¹¹⁰ E. McLeod, et al. (2011), A blueprint for blue carbon: toward an improved understanding of the role of vegetated coastal habitats in sequestering CO₂Front. Ecol. Environ. (2011), pp. 552-560, [10.1890/110004](https://doi.org/10.1890/110004)

¹¹¹ MiAmbiente (2021). Diagnosis on the coverage of forests and other wooded lands in Panama. See: https://www.gacetaoficial.gob.pa/pdfTemp/29591_A/92835.pdf

¹¹² Chamberland-Fontaine S, Heckadon-Moreno S and Hickey GM (2022). Tangled Roots and Murky Waters: Piecing Together Panama's Mangrove Policy Puzzle.

¹¹³ Goldstein et al. (2020)

¹¹⁴ GCF. (2022). Ecosystem and Ecosystem Services Sectoral Guide. Sectoral Guide Series. Yeonsu: Green Climate Fund.



marine and coastal areas, and consequently to an enhanced climate resilience¹¹⁵. The outcomes of these policies will be measured by the country’s capacity to address vulnerability to climate change in the long term. In the short term, this enhanced resilience will be achieved through the incorporation and enhancement of coastal areas under sustainable management and protection schemes, as expressed in the strategic axis 1 of the National Oceans Policy. It is expected that the currently protected ocean areas that account for 30.5 percent of Panama’s total marine areas, increase to 50 percent. This reflects an increase from 98,230 km² to 163,000 km². These protected areas will be governed under the Coordination Center for the Monitoring, Preservation and Protection¹¹⁶ of the marine and coastal ecosystem. The center will coordinate, plan, establish and operate at an inter-institutional level the national activities of monitoring, control and surveillance (MCS) aimed at preventing, discouraging and eliminating illegal, unreported and unregulated (IUU) fishing, and the prevention of pollution of marine and coastal ecosystems, both in port facilities, as well as in Panamanian jurisdictional waters and marine protected areas and Panamanian flagged fishing vessels operating in international waters.

- 84. **Indicative Trigger.** The Borrower has strengthened the sustainable management and conservation of the country’s marine and coastal ecosystems by decreeing an increase of area of the marine-coastal natural protected areas. The extension of the marine protected area serves as a major driver for improved fisheries and tourism and provide benefits for natural hazard prevention and climate adaptation¹¹⁷.

Table 2: DPL Prior Actions and Analytical Underpinnings

Prior Actions	Analytical Underpinnings
Pillar I – Support reforms to implement energy transition and socially inclusive low-carbon growth	
Prior Action #1 – E-mobility. The Borrower has issued a decree pursuant to the E-mobility Law to further advance the decarbonization agenda by promoting e-mobility for ground transportation.	World Bank (2021): Decarbonization of the energy sector in Panama (Programmatic ASA: P169052). An analytical work that covered regulatory and technical key issues to deploy a long-term e-mobility strategy. Studies, CBA, and final report indicated that choice of charging technology is closely related to distance traveled by buses, with opportunity charging used in daily distances of more 200 km, while plug-in (depot) charging is mostly used over shorter distances. Although deployment of electric buses (with the strongest use case for depot charging in Panama) requires significant capital investment, it is possible to reduce upfront costs through enabling mechanisms such as cost transmission and operating efficiency improvements. It is also important to implement phased fleet deployment giving the time lag in some of these enabling conditions. World Bank (2022): The Economics of Electric Vehicles for Passenger Transportation (ASA: P172382). This study finds feasible entry points to an electric mobility transition in

¹¹⁵ Strategic Axis 2: Marine Governance and security

¹¹⁶ Executive Decree No. 15 of December 19th, 2022

¹¹⁷ Cabral et al, 2020. <https://www.pnas.org/doi/10.1073/pnas.2000174117>



	<p>developing countries. It finds that for the low emitting developing countries (such as Panama), transitioning from conventional vehicles to electric vehicles (Evs) brings additional benefits: such as improved local air quality and reduced dependency on imported fuel. The report finds that even in cases where the electric grid is not fully decarbonized, electric vehicle motor are more efficient than an ICE, with estimated reduction of CO₂ emission of 35 percent for cases countries that generate electricity primarily from fossil fuels (e.g. Poland or Kazakhstan). Additionally, it finds that in most countries overall energy demand associated with adopting electric mobility is not large relative to the scale of the power system with about 1 percent boost in electricity demand for a 30 percent target for vehicle electrification by 2030.</p>
<p>Prior Action #2 – Energy Efficiency. The Borrower has strengthened its energy efficiency regulatory framework by adopting and publishing the Central American Technical Regulations (“RTCA”) technical standards for energy efficiency for air-conditioning equipment.</p>	<p>World Bank (2021): Assessment on Energy Efficiency Potential and Demand Management in Central America (Programmatic ASA: P169052). This study identified potential high-impact opportunities for improvements in energy efficiency and demand side management and evaluated their impact on the electricity system and consumers. Electricity demand was analyzed, determining sectors, end uses and geographical areas responsible for the highest consumption. Assumptions considered, and input data were validated by the SNE. Based on impacts disaggregation by sector and individual measure, EE prioritization in Panama corresponded to retrofitting programs for residential refrigerators, commercial lighting and air conditioning of commercial and public sectors.</p> <p>World Bank (2021): Energy Efficiency Guarantee Fund (Programmatic ASA: P169052). A financial instrument designed to reduce risk with a financial structure based on guarantees and a public-private collaboration across commercial banks. Fondo UREE sought to blend international and domestic financial resources to optimize the use of limited public spending while using international green bond standards to leverage private financing for EE and other energy-related projects. While the fund was ultimately not implemented by the Government of Panama, it created synergies which made it possible to seek a broader scope for the fund and technical support was requested for the design and implementation of an Energy Transition Fund, which will incorporate valuable technical experience and lessons learned.</p> <p>World Bank (2021): Technology and business strategy assessment to replace inefficient cooling appliances</p>



	<p>(Programmatic ASA: P178163). This assessment provides a detailed overview of the cooling equipment market in Panama to support the energy efficiency strategy of the country. This market evaluation seeks to characterize the different actors in the supply chain, the market at the national level with an analysis of sales and technology trends. In addition, a collection of data at the level of the models, allowed the evaluation of prices, efficiency levels and types of refrigerants used in the cooling equipment found in the Panamanian market. Finally, this report considers international trends in terms of EE technologies and policies to recommend future steps for Panama’s EE strategy. Recommendations considering the labeling and MEPS program and a replacement program to promote efficient cooling equipment and refrigerants using low GWP, in line with the Kigali amendment to the Montreal Protocol (United Nations, 2016).</p>
<p>Prior Action #3 – Improvement of Energy Access. The Borrower has promoted rural electrification and lighting for service provision support under the Plan Colmena Law for eradication of poverty and inequality.</p>	<p>World Bank (2021): Behavioral change communications campaign (Programmatic ASA: P169052). Surveys showed that women are the decision makers when it comes to energy efficiency in the household, but they are also the group that is least likely to know about energy efficiency measures. Although efficiency is viewed positively, the use of “energy efficiency” has a negative context given poor feelings about the quality of electricity service through transmission and distribution. There is also a difficulty in seeing the long-term benefits to energy savings after the upfront cost, and the need of the government to serve as a “good example” when it comes to energy savings, rather than propagating wasteful heating and cooling practices. Moreover, there remains a lack of understanding regarding terms such as “energy transition” in the consumer space.</p>
<p>Prior Action #4 – Digital Connectivity. The Borrower has taken measures to ensure connectivity, increase competition for broadband access, boosting the adoption and increasing quality of mobile telephony in underserved areas by setting a new tariff scheme for the advanced wireless services (“AWS”) radioelectric spectrum band to be used by mobile operators.</p>	<p>World Bank (2021). Spectrum management for Digital Development Report (Programmatic ASA: P177684). The report reviewed international and regional experiences and existing models in managing spectrum, including allocation, design of bidding processes, pricing strategy, and obligations; and (ii) analyze the policy, regulatory, commercial and technological context of spectrum management in three Central American countries (El Salvador, Honduras, and Panama) and developed recommendations to increase a more efficient management of spectrum in Panama.</p> <p>World Bank (2020) Central America Digital Economy</p>



(Programmatic ASA P171654), completed in June 2020, highlighted the need to make progress towards the better management of spectrum. While the situation varies country by country, the document recommends making available more spectrum frequency bands for mobile services to promote deployment of high quality mobile broadband services (4G+) and promote entry of new players in all six Central American countries. A better management of spectrum will help Central American countries and Panama, in particular, promote deployment of high quality advanced mobile broadband services. Availability of spectrum in Central American countries for IMT services, key for deployment of 4G and 5G services, is low compared to other countries in the Region, such as Brazil (700 MHz), Mexico (650 MHz), or Peru (562 MHz).

Pillar II – Establish policy foundations to sustain natural capital for resilient growth

Prior Action #5 – Climate Change Legal and Regulatory Framework. The Borrower has taken measures to promote long-term national climate targets and accelerate the inclusive dimensions of climate smart development by submitting to the National Assembly a climate change framework bill.

World Bank (2011) Gender and Climate Change: Three Things You Should Know. Washington, DC. World Bank. The publication states how low-emissions development pathways can be more effective and more equitable when they are designed using a gender-informed approach.

Mukhi, Neha; Rana, Suneira; Mills-Knapp, Sara; Gessesse, Eskedar. (2020). World Bank Outlook 2050 Strategic Directions Note: Supporting Countries to Meet Long-Term Goals of Decarbonization. World Bank, Washington, DC. The report examines how the World Bank can help countries plan for and achieve long-term decarbonization. The Outlook 2050 approach prioritizes four economy-wide strategic directions: 1. Embed long-term climate priorities in country macroeconomic frameworks, to ensure that those frameworks, which guide fiscal policy and major national investments, properly account for climate risks and the benefits of ambitious climate action. 2. Embed long-term climate planning in national budgets and expenditure frameworks, to provide adequate budgetary support for climate action, optimize the overall allocation of public resources, and unlock private financial flows. 3. Embed long-term climate objectives in financial sector regulations and incentives, to ensure that the sector is resilient both to climate change impacts and to low-carbon transition risks, and to mobilize finance for climate action. 4. Embed long-term climate objectives in systems planning, to integrate climate with economic, social inclusion, and other objectives; assess cross-sectoral links and regional



	<p>impacts; and identify trade-offs and synergies.</p> <p>World Bank (2021) Forest and Climate Change for COVID Recovery (ASA P175311) Supported Panama develop the National Climate Change Action Plan to accelerate Panama’s transition towards an inclusive, sustainable, low carbon and climate resilient development, closely linked to economic recovery. Forest and Climate Change for COVID Recovery (ID: P175311)</p>
<p>Prior Action #6 – Climate Smart Investments. The Borrower has taken measures for improving the quality of public expenditures, including for the tagging of climate-related expenditures, by: (a) mandating public entities to implement technical guidelines for ensuring efficient and transparent quality in service provision; and (b) issuing guidelines for the formulation and evaluation of public investment projects with specific provisions on climate-change tagging.</p>	<p>World Bank. (2021) Climate Change Budget Tagging: A Review of International Experience. Equitable Growth, Finance and Institutions Insight – Governance. World Bank, Washington, DC. The study showcase how climate change budget tagging allows governments to align definitions of climate-relevant activities and expenditures with national climate change policies and strategies.</p> <p>World Bank. (2020) World Bank Reference Guide to Climate Change Framework Legislation. This guide explains how national framework legislation on climate change can help put these institutions in place. It can enshrine stable and ambitious targets, create mechanisms for realizing these targets, and ensure proper oversight and accountability.</p> <p>World Bank (2019) Guidance on PPP Contractual Provisions. The study provides a justification of the relevance of including climate considerations on environment legislation.</p>
<p>Prior Action #7 – Enhanced conservation of rural, coastal and marine areas for resilience. The Borrower has taken measures to enhance forest conservation, create opportunities to develop nature-based tourism, generate jobs and sustain livelihoods through the expansion of the protected area of the Iguana Island Wildlife Refuge as part of the Borrower’s national protected areas and the regulation of the Agritourism Law.</p>	<p>World Bank (2021). Exploring the Development Potential of Panama’s Rural Economy Advisory Services and Analytics (ASA). It illustrates how rural inhabitants’ livelihood opportunities are central to the preservation of Panama’s natural capital. Nature based and agritourism represent livelihoods opportunities.</p> <p>World Bank (2020), Policy notes for Panama. The report highlights the importance of sustainable tourism in Panama’s economy and how it has the potential to serve as a catalyst of economic growth.</p> <p>Panama Biennial update report (2021) BUR2 National inventory report. Panama’s report submitted to UNFCCC</p>



	<p>presents the country’s emissions per sector and highlights the importance of the Land-use, land use change and Forestry (LULUCF) sector as an important source of CO2 removals in the country.</p> <p>World Bank (2023) Green Resilient and Inclusive Landscapes in Central America (ASA P176670). The technical assistance supported the GoP analyzing incentives schemes for Panama’s integrated landscape management, including an analysis of the country’s current forest policies, programs, and regulatory framework under a landscape lens.</p>
<p>Prior Action #8 – Scale up Marine Protection. The Borrower has approved a National Oceans Policy to boost low carbon and resilient growth based on marine natural resources.</p>	<p>World Bank (2023) Panama’s Blue Gender Gap Analysis and Action Plan (ASA P176323) The technical assistance supports Panama’s NDC commitment to an integrated gender-responsive approach to restore and conserve marine and coastal ecosystems. The Gender Action Plan supports the GoP to better understand the gender gap in coastal areas, providing recommendations to enhance women’s adaptive capacity to climate change. Also it identifies design gender-responsive policies, and monitor gender-inclusive practices. Panama’s blue gender gap analysis aims to foster climate change resilience, promoting long-term economic opportunities for women in marine and coastal areas.</p>

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

85. **The proposed operation is fully aligned with the objectives of the FY15-21 CPF for Panama discussed by the World Bank’s Board of Executive Directors on March 2, 2015, and the Performance and Learning Review (PLR) for the CPF FY2015-21.** The proposed programmatic DPL series is a core instrument to achieve the following objectives of the CPF: (i) Objective 4: Complement Social Assistance with Productive Inclusion under Pillar 2 (Ensuring Inclusion and Opportunities for Marginalized and Indigenous Groups); and (ii) Pillar 3: Bolstering Resilience and Sustainability. In addition, the program reforms supported through this operation are aligned with 4 out of 5 priority areas linked to growth, inclusion, and sustainability in Panama, identified in the 2015 SCD: (i) infrastructure improvements, especially energy; (ii) institutions (efficiency, regulation, and transparency); (iii) marginalized groups and Indigenous People; and (iv) management of water resources and resilience to natural disasters. This DPL series builds upon a series of operations in Panama that have been supporting the country’s reform agenda over a sustained period of time, the latest of which is the Panama Pandemic Response and Growth Recovery DPL series (P174107 and P175930), which contributed to protecting human capital during COVID-19 and supporting a more inclusive and sustainable economic recovery. The DPL is also closely aligned with the directions of the World Bank Group’s Gender Strategy for 2016-23, from ownership and control of assets, more and better jobs, human endowments, to voice and



agency.

86. **This programmatic DPL series is aligned with the three dimensions set forth in the WB Development Committee paper “From COVID-19 Crisis Response to Resilient Recovery – Saving Lives and Livelihoods while Supporting Green, Resilient and Inclusive Development (GRID)” (2021), as a strategic complement to the GCRF framework.** *Green*, to promote environmental sustainability by supporting policies aimed to implement energy transition and low-carbon development; *Resilient*, by supporting the country’s efforts to improve climate change governance and connect the climate adaptation agenda to broader policy efforts on improving environmental and pollution management capacities; and *Inclusive*, by ensuring that energy access and gender dimensions are included within the supported policies. Additionally, the proposed operation is aligned with the WBG’s Maximizing Finance for Development (MFD) approach and includes support for private sector participation within the implementation of the ATE, as well as mobilization of private capital in energy efficiency measures and digital development. The DPL is in line with the World Bank’s 2021-2025 Climate Change Action Plan, and the Roadmap for Climate Action in Latin America and the Caribbean, 2021-2025¹¹⁸, by supporting policies that will enable greater use of renewable energy and energy efficiency investments. It also contributes to the implementation of the WBG Gender Strategy (FY16-23) by facilitating the integration of gender considerations and mainstreaming gender equality in energy and mining sector policies.

4.4. CONSULTATIONS AND COLLABORATION WITH DEVELOPMENT PARTNERS

87. **The Government’s reform program is the result of an open and participatory process.** The approval of laws, presidential decrees and other reforms is informed by public and private sector stakeholder participation, in general. Reforms around climate change policy and environmental management are the result of a comprehensive participatory process. The National Climate Action Plan (NCAP) actions, an important input for the general climate law, were defined through a participatory process, that included five targeted virtual workshops with academia, the National Climate Change Committee of Panama (CONACCP), civil society, and youth¹¹⁹. Definition and subsequent approval of the Energy Transition Agenda and National Strategies (ENME, ENUREE, and ENACU) occurred through an open and participatory dialogue with several social, political, environmental, business, institutional, NGOs, and academic sectors, those who formed the different work groups and participated in meetings, workshops, and analysis of the sector. Finally, Plan Colmena establishes citizen participation as a fundamental pillar, where community, civil society, academia, private sector, and different social organizations are considered strategic allies of any impulse for local and regional development; in addition, it also establishes the creation of Colmena Technical Roundtables, which are spaces of dialogue and articulation of the provincial or regional social cabinets, mayors, corregimiento representatives, traditional authorities, private sector, academia, social organizations, and the community.
88. **Reforms related to sustainable land management, blue economy and conservation have been consulted with multiple stakeholders.** The expansion of the Iguana Island Wildlife Refuge was consulted in a public forum in Pedasi¹²⁰ where local communities, fisherman, tourism organizations and NGOs participated. A

¹¹⁸ “World Bank Group. 2022. A Roadmap for Climate Action in Latin America and the Caribbean, 2021-2025. Washington, DC: World Bank. © World Bank Group. <https://openknowledge.worldbank.org/handle/10986/38001>.

¹¹⁹ A total of 115 persons (75 women, 40 men) participated. <https://dcc.miambiente.gob.pa/panama-inicia-construccion-del-plan-nacional-de-accion-climatica/>

¹²⁰ The public forum was held on March 1st, 2022.



technical study was prepared and publicly released. The National Oceans Policy was consulted by a forum series with a total of 236 participants¹²¹.

89. **The program is also aligned with the support of other development partners.** The program complements efforts of other donors in Panama providing support to enhance the country's climate ambition. Specifically on climate policy, important synergies have been established with the United Nation's Program for Development and the Inter-American Development Bank. Around Forestry and Land Use Change, the World Bank has collaborated with the United Nation's Program for Food and Agriculture Organization. Prior Action 8 on blue economy and gender specific aspects under the National Climate Policy Framework have benefitted from ProBlue support, a multidonor trust fund with the World Bank. Prior Actions around forestry and land use change and specifically PA 7 has been informed by technical assistance financed with ProGreen support, a multidonor trust fund with the World bank. The World Bank exchanges views and information and collaborates closely with the IMF on macroeconomic and structural issues.

5. OTHER DESIGN AND APPRAISAL ISSUES

5.1. POVERTY AND SOCIAL IMPACT

90. **The DPL supports several actions that are expected to build the grounds for positive effects on poverty reduction and shared prosperity.** The Prior Actions that support rural electrification through Plan Colmena is expected to have the most significant effects on poverty reduction and shared prosperity. As the climate and energy agenda require cross-sectoral actions, strategic coordination between government initiatives and entities are likely to enable the swift implementation of the policy frameworks, maximize efficiency, and increase the benefits for vulnerable populations.
91. **Policies in Pillar I set the legal framework to enable the implementation of Panama's Energy Transition Agenda and can help reduce energy poverty and boost prosperity for vulnerable populations when materialized into specific policy actions.** The PAs in this Pillar (i) support the creation of the legal framework of the ETA action lines (PA 1, 2); (ii) support the implementation of rural electrification through Plan Colmena (PA 3); and (iii) take steps to lower the price of broadband access and boost adoption of mobile telephony in underserved areas (PA 4). The ETA can potentially have significant and positive social and poverty in the long term, especially Prior Action 3 on universal energy access and gender equality. Other prior actions are expected to positively impact labor market activation, access to essential services, and poverty reduction for vulnerable groups by promoting a green and inclusive economy.
92. **Prior Actions 1 and 2 are not expected to have negative impacts on poverty, with positive health impacts in the short run (PA 1), and a more efficient and rational use of energy (PA 2).** PA 1 can potentially have direct health benefits for vulnerable populations. Prior Action 1 is expected to have direct health implications, helping to prevent the premature death of more than 400 people due to respiratory diseases associated with air quality when the transition is effectively implemented.¹²² In the short term, however, analyzing the

¹²¹ Forums for the public consultation of the National Oceans Policy. Metropolitan Forum, June 22, 2021. Eastern Forum (Darién), June 25, 2021. Western Forum (Chiriquí), June 29, 2021. Central Forum (Veraguas), July 2, 2021. 105 men, 128 women and 3 did not specify. Total: 236 participants.

¹²² UNEP, 2019. See: <https://www.unep.org/es/events/evento-de-onu-medio-ambiente/panama-presento-estrategia-nacional-de-movilidad-electrica>



potential impacts of the PA on the pricing of and equitable access to green public transport to final users is recommended. While direct subsidies to purchase of private electric cars may be a regressive policy, the focus on electric buses (as indicated in the Law) has a strong pro-poor impact, as low-income groups tend to use public transport more. On the other hand, the energy efficiency policy supported by Prior Action 2 can enable broader access to essential energy-efficient appliances for the population. Although the entry costs and energy-efficient appliances mandate can affect lower-income populations' access and small companies' sustainability, the IT contemplates financing mechanisms to promote energy efficiency measures that should mitigate these risks. In addition, inclusive information campaigns about energy efficiency's financial and environmental benefits need to be extended all over the country, especially for vulnerable populations. In the long run, households and small business should benefit from additional savings generated by energy-efficient appliances.

93. **Prior Action 3 has the potential to set and implement rural electrification through Plan Colmena, while Prior Action 4 promotes broadband connectivity and mobile telephony adoption for vulnerable populations.** The effective implementation of the Plan Colmena in combination with the National Strategy for Universal Access (ENACU) in PA 3 is expected to benefit 90,000 rural households with no electricity access and more than 70,000 with no access to improved energy sources for cooking, by 2030. In the long run, the latter is expected to impact poverty reduction, equity, and health positively, as vulnerable households with access to electricity for the first time might see positive impacts on employment, productivity, and education. Similarly, households using improved energy for cooking are likely to see improvements in health outcomes (especially for women and children). Lastly, Prior Action 4 is expected to have positive impacts on poverty reduction and shared prosperity in the short and in the long run if broadband access reaches low-income households and other digital divides such as service quality, digital literacy, and access to equipment are also met. The latter could allow vulnerable populations' access to educational resources, easier transport planning, emergency response and potential new markets, among others.
94. **The Prior Actions in Pillar II are not expected to affect poverty or income distribution negatively. Instead, they can bring direct (PA 5, 7, and 8) and indirect (PA 6) positive welfare effects in the long run if their action lines are effectively implemented.** Prior Action 5 supports Panama's National Plan of Climate Action, updated NDC, and the resulting proposal for a general climate law. The Law's sectorial actions will potentially (i) foster the human development of more than 90 thousand rural households when the universal energy strategy is implemented; (ii) improve the health conditions in the long term of 259 thousand people by promoting universal access to improved sewage services; and (iii) promote equity and poverty reduction by fostering sustainable tourism and creating new jobs for the local communities of the protected areas under the biodiversity strategy if effectively implemented. In addition, actions on risk identification in the Sustainable Agriculture sector or towards improving safety and resilience standards for human settlements are expected to positively impact the population's food security and build the climate resilience of vulnerable people when effectively implemented.
95. **Prior Action 6 can impact poverty and equity indirectly by promoting better public spending and improving government efficiency.** Prior Action 6 has the potential to boost better public spending and allocation by generating granular information that might allow the government to monitor and steer climate policy implementation. The PA sets a precedent for identifying and accounting for public spending on cross-sectoral activities that might spread to other public social sectors and promote poverty and inclusion investment in the long term. Additionally, Prior Action 6 can improve the government's Environmental Impact Assessment



Process, and it is expected to have a neutral impact on poverty and equality in the short term.

96. **Similarly, Prior Actions 7 and 8 have the potential to promote equity and reduce poverty in the long run by generating jobs and sustainable livelihoods in rural and coastal regions.** These PAs aim to (i) create opportunities to develop nature-based tourism in protected and dense-forest areas; and (ii) help promote the sustainable management of Panama’s ocean resources. If natural assets are protected, and the benefits are shared directly with local communities in rural and coastal regions. The latter could contribute to poverty reduction and shared prosperity in the long term when well-designed projects are put in place.¹²³ In this regard, ensuring that the natural assets underlying the nature-based tourism sector are well-managed and maintained, that the nature site demand is sufficient, and that local communities benefit directly from tourism activities through jobs and other economic opportunities, revenue-sharing arrangements, or the targeted provision of public goods (such as schools, roads, and clinics) are essential conditions for this linkage.

5.2. ENVIRONMENTAL, FORESTS, AND OTHER NATURAL RESOURCE ASPECTS

97. **The measures supported under the proposed DPL are expected to have an overall positive impact on the environment, forests, or other natural resources.** The proposed policy reforms aim at fostering low carbon development and enhance resilience. Most of proposed prior actions are likely to have a positive impact on Panama’s environment, natural resources, and forests. Two prior actions (PA 1 and PA 2) could have a potentially negative impact if direct and indirect effects from investments incentivized by policy changes are not managed adequately, but Panama has a robust system for their adequate management. Annex 4 includes the environmental assessment for each prior action, highlighting the expected effects.
98. **Panama has the regulatory and enforcement systems in place to reduce any potential adverse environmental effects, and direct or indirect risks.** As such, the operation is not expected to result in any significant environmental harm. Potential negative impacts may arise from PA 1, 2, and 3, given the potential downstream investments associated with enhanced e-mobility, energy efficiency investments. In relation to PA 1, the new legislation regulates internal combustion engine vehicle replacement and the framework for electric vehicles. Also, it sets the basis for battery reuse, recycling and waste regulations. This PA contributes to emission reductions while reducing e-waste. However, potential negative effects might arise from the inadequate final disposition of old ICE fleet vehicles and e-waste from electric fleets. However, those effects are expected to be mitigated by Panama’s regulatory and enforcement system. Particularly through the General Law of the Environment, the GLE (Law N.41/1998), and the Waste Management Law (Law N.33/2018) that sets the framework for its adequate management.
99. **Any potential negative impacts in relation to the installation of the charging stations, are expected to be addressed through the application of the Electrical Installations Regulations of Panama N. 59 of August 1, 2018 (Art. 10 of the *Reglamento para las Instalaciones Eléctricas de la República de Panamá*), which sets mandatory compliance with the international standard of the National Fire Protection Association (NFPA, number 70 edition 2014 corresponding to the National Electric Code (NEC)).** Similarly, any potential negative environmental impacts arising from installation of transmission lines or distribution networks with more than 5km of extension under PA 3 and PA 1 will be managed by the Environmental Impact Assessment license

¹²³ WB (2015) *Harnessing the potential of Nature-based tourism for poverty reduction*. Retrieved from: <https://thedocs.worldbank.org/en/doc/137751449520243805-0120022015/original/ENR2015NatureBasedTourism.pdf>



required by the General Environmental Law Decree (Article 16 of Executive Decree 123 of 2009). Also, an EIA will be required if the planned work is located within an environmentally fragile area, affects any environmental protection criteria, or generates cumulative, indirect, or synergistic impacts.

100. **Furthermore, it is expected that the Energy Transition Fund (Indicative Trigger 2) will set forth standards for environmental and social due diligence based on international best practice**, thus ensuring an adequate institutional and regulatory basis to minimize the likelihood of any negative effects downstream resulting from policy areas supported under this program. While PA 3 is mainly focused on gender inclusiveness in access to energy, through implementation of Plan Colmena, significant positive environmental outcomes could be achieved specifically in terms of reduced emissions and better environmental management by mainstreaming best practices in environmental impact assessment and compliance. Lowering the production of pollutants released into the atmosphere due to the reduction of firewood and charcoal usage will substantially improve indoor air quality and the health of children and women who are particularly exposed.
101. **Most Prior Actions have the potential to deliver significant positive environmental outcomes over the long-term particularly with regard to low-carbon and climate-resilient development.** PA 1, PA 2 and PA 3 will directly contribute to mitigating GHG, and thereby not only advance the Government’s ambitious zero net emission target, but also enhance air quality through reduced particle pollution. PA 5 will further strengthen the country’s policy framework for climate change adaptation and mitigation, and harnessing co-benefits through policies and investments. Mainstreaming climate criteria in public and private investments based on PA 6 will further strengthen the country’s investment framework, and amend an already robust environmental impact system with additional long term resilience criteria and mitigation considerations. PA 7 will enhance the country’s conservation framework, and help rural population to diversify income through nature based tourism while safeguarding the country’s natural capital. PA 7 and PA 8 will promote a sustainable blue economy, and thereby contribute to reducing environmental degradation, mitigate GHG emissions, and enhance the livelihood of coastal populations.
102. **Policy interventions supported under this operation are expected to bring mitigation benefits locally** – with positive co-benefits to human health and well-being through improved air quality and a longer-term trend in decarbonizing economic activity, especially through future offsets for the private sector. These interventions will likely have a significant positive impact in terms of reduced air pollution at the national level, while generating benefits as a global public good in supporting Panama’s Nationally Determined Contribution under the global climate regime, in line with commitments made in the Paris Agreement.
103. **In terms of the national institutional framework to manage any potential negative impacts on the environment, forests, or natural resources, Panama has created a legal framework for addressing environmental and social issues.** The maintenance of “ecological equilibrium” and the avoidance of “ecosystem destruction” are enshrined in the 2004 National Constitution (Art. 119) along with the “preservation, renewal and permanence” of terrestrial, riverine, and marine natural resources (Art. 120). This constitutional grounding emanated from prior legislative and institutional developments, notably the General Law of the Environment, the GLE (Law N.41/1998), which serves as the cornerstone of the country’s environmental management framework. It was enacted after thorough consultation with both the private sector and NGOs, among other key stakeholders, and since then has had subsequent amendments enhancing environmental protection. The law provides general policy guidelines for both public and private institutions and sets out the role of MiAmbiente, the Inter-institutional Environmental System (SIA), and other



government entities and coordinating bodies.

104. **Effective environmental protection has increased as a national priority over the last two decades. Environmental governance was strengthened in 2015 with the creation of the MiAmbiente, elevating environmental protection to ministerial level.** Many of MiAmbiente’s regulatory and enforcement powers emanate from the GLE, which serves as an overall framework for regulating and managing environmental issues, including those related to pollution control and conservation. It articulates a set of ambitious principles of environmental policy, including the obligation of the government to provide a healthy environment and the principle of incorporating environmental considerations into government decision-making. Through the GLE, MiAmbiente touches on practically all the key elements recognized internationally as good environmental policy approaches, including environmental assessment, enforcement, and compliance as well as mainstreaming environmental policies and ensuring public participation and environmental education in decision-making. In 2019, MiAmbiente strengthened its environmental assessment and monitoring functions through the roll-out of online tools to centralize all assessment processes and increase transparency and public participation in environmental decision-making. The elevation to ministerial level and resulting budgetary provision reduced some previous human and financial resource challenges that historically impeded full application and enforcement of national environment regulation, including the GLE. MiAmbiente has leveraged the strong foundations laid by the former National Environmental Authority (ANAM) to make environmental coordination and compliance more influential and effective in national policymaking. MiAmbiente ensures robust environmental governance and has the capacity to manage potential negative effects that any prior actions supported under the DPL may generate.

5.3. PFM, DISBURSEMENT AND AUDITING ASPECTS

105. **Main strengths of Panama Public Financial Management (PFM) system are characterized by:** (i) timely review and approval of the national budget by the National Assembly; (ii) good and timely public debt management and reporting; (iii) readily accessible information on government expenditure to the public; (iv) effective payroll controls; and (v) some progress recently achieved in the preparation of central government consolidated financial statements.
106. **However, the ongoing PFM dialogue has identified several areas that would benefit from improvement:** (i) budget credibility is affected by significant and numerous budget modifications throughout the year; (ii) the predictability of the availability of funds for commitment of expenditures is uneven; (iii) a mechanism for the proper control of payment arrears should be put in place; (iv) more accurate and comprehensive budgetary and financial reporting is needed, including the implementation of new asset management framework; (v) the central government is still struggling to produce a set of consolidated financial statements; and (vi) there is need for a strengthened internal and external audit functions as well as the implementation of International Standards of Supreme Audit Institutions (ISSAIs).
107. **Government commitment to support PFM reforms.** Over the recent few years, Panama has embarked on a set of reforms to address its PFM weaknesses. Notably, the GoP has introduced a new Integrated Financial Management System (ISTMO for its acronym in Spanish). ISTMO was rolled out to all Central Government entities in 2016 and to Decentralized Agencies by 2019. ISTMO has enabled: integration of budget and accounting classifications; dynamic reporting and availability of real time budget execution information; integrated controls; automated debt management; budget scenarios; automatic transaction accounting; and



automatic reconciliation of bank accounts.¹²⁴

108. **Panama’s annual budget is published promptly in the Official Gazette after legislative approval.** The annual budget law is made publicly available online by the government and the Legislature immediately after approval.¹²⁵
109. **Procurement processes in Panama are largely competitive and transparent and have been improving overtime.** The GoP spent \$15.3 billion on the procurement of goods, works, and services from 2014 to 2018, 62 percent of which was spent on the health sector (medication and public works). All these transactions were implemented using the *PanamaCompra* system. The system was used to advertise procurement opportunities and contract awards. It was also accessible to anyone interested in viewing these. During this period, the procurement through bidding by best value increased up to 45 percent of the awarded amount. In addition, the process of quote requests registered the greatest volume of processes, at 65 percent of the total. Furthermore, 5 percent of the awarded amount was through framework agreements, which represented almost 25 percent of all transactions. Panama is improving its procurement processes in various ways, including approving of a new law, launching a new version of the system, and conducting analysis of procurement outcomes. The new procurement law enhances policies and procedures, with a focus on overcoming very common obstacles in their public procurement processes. The new version of the system, *Panama Compra 3*, considers lessons learned from its predecessor and incorporates the changes from the new procurement law. Additionally, the National Procurement Entity has conducted several market research activities in order to obtain updated and valuable information for the establishment of new procurement frameworks and/or the improvement of those already in place. The new *PanamaCompra 3* system is being rolled out to all the central government agencies since January 2021. Despite all this progress, there is still room for improvement in terms of practices to address inefficiencies in the system. This could lead to important savings that have been estimated between 16 and 22 percent of the annual amount awarded through public contracts (\$2.5 to \$3.4 billion). The country also has an agenda to improve integrity of its procurement processes as several problems arose with pandemic-related procurement.
110. **Based on the analysis of conclusions of the latest PEFA Report¹²⁶ and ongoing PFM dialogue,** it is confirmed that budget resources management by Panama’s Central Government PFM system and its commitment to PFM reform are reliable to support this operation.
111. **The most recent IMF Safeguards Assessment¹²⁷ was reviewed to assess foreign exchange control environment in place at Banco Nacional de Panamá (BNP).** Based on this review, it is concluded that controls over FOREX do not pose major risks to the achievement of PDO.
112. **The proposed loan will follow the World Bank’s standard disbursement procedures for development policy support.** Upon approval of the operation, effectiveness of the Loan Agreement, and the submission of a signed withdrawal application, the proceeds of the loan will be disbursed into MEF Treasury Single Account (TSA), which will form part of the country’s Foreign Exchange Reserves. This account is denominated in US

¹²⁴ The WB continues to assist the GoP in producing consolidated financial statements for the central government and improved procurement processes and is currently preparing a new IPF operation Improvement of the quality of (PFM data through better integration and consolidation of the information ecosystem P180872).

¹²⁵ <https://www.gacetaoficial.gob.pa/Busqueda-Avanzada>

¹²⁶ The PEFA report was conducted jointly by the WB and the IDB and published in July 2013.

¹²⁷ IMF Safeguards Assessment Final Report, September 29, 2020.



dollars, which is legal tender in the country. It is held at the *Banco Nacional de Panamá* (BNP), a state-owned bank and the government's financial agent (as Panama has no Central Bank). Within thirty (30) days of the withdrawal of the DPL proceeds, the Borrower shall report to the Bank: (a) the exact sum received into said account; (b) the details of the account to which the local currency equivalent of the loan proceeds was credited; and (c) confirm that an equivalent amount has been accounted for in the Borrower's budget management systems. The financial support provided under this operation is not intended to finance goods or services on the list of Excluded Expenditures.¹²⁸ If any portion of the loan is used to finance excluded expenditures as so defined in the General Conditions, the Bank shall require the Borrower to refund the amount and such payments made for excluded expenditures will be cancelled.

5.4. MONITORING, EVALUATION AND ACCOUNTABILITY

113. **MEF will be the main responsible agency for the monitoring, evaluation, and results framework and will coordinate actions across relevant ministries and agencies involved in the operation.** The agencies responsible for the implementation of the prior actions and triggers supported by the DPL series include the following: (i) Pillar I: Ministry of Social Development (MIDES), National Secretariat of Energy (SNE), and Public Services National Authority (ASEP); Pillar II: Ministry of Agricultural Development (MIDA), and Ministry of Environment (MiAmbiente). The World Bank will be monitoring the implementation of the DPL program through regular supervision missions, including virtual missions. The World Bank will maintain close dialogue with counterparts throughout preparation and collaborate with MEF for the monitoring of indicators.
114. **While data availability in Panama lags its structural peers, the administrative data needed to monitor the operation can be accessed.** The registry, maintenance, and availability of data in Panama is below the practices of countries with similar level of income. National statistics and administrative data are released with longer lags and less coverage than its peers. Nonetheless, the quality of the data available does not seem to compromise the information. The operation will be monitored by administrative data maintained by the government agencies involved in the operation.
115. **Grievance Redress.** Communities and individuals who believe that they are adversely affected by specific country policies supported as Prior Actions or tranche release conditions under a World Bank Development Policy Financing may submit complaints to the responsible country authorities, appropriate local/national grievance mechanisms, or the Bank's Grievance Redress Service (GRS). The GRS ensures that complaints received are promptly reviewed in order to address pertinent concerns. Project affected communities and individuals may submit their complaint to the Bank's independent Accountability Mechanism (AM). The AM houses the Inspection Panel, which determines whether harm occurred, or could occur, as a result of Bank 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 World Bank's attention, and Bank Management has been given an opportunity to respond. For information on how to submit complaints to the World Bank's corporate Grievance Redress Service (GRS), please visit <http://www.worldbank.org/GRS>. For information on how to submit complaints to the Bank's Accountability Mechanism, please visit <https://accountability.worldbank.org>.

¹²⁸ See the *General Conditions for DPL: "Excluded Expenditure"* for DPL covers items such as alcoholic beverages; tobacco; radioactive and associated materials; nuclear reactors and parts thereof; jewelry of gold, silver, or platinum; goods intended for a military or paramilitary purpose or for luxury consumption; or expenditures for environmentally hazardous goods.



6. SUMMARY OF RISKS AND MITIGATION

116. **The overall risk of the operation is moderate.** The only risk category assessed as substantial is institutional capacity for implementation and sustainability. Despite of moderate risk ratings for all other categories, some additional mitigation measures are in place. These include strong joint dialogue with the IMF on macroeconomic policy, related to the macroeconomic risk, and cooperation with other development partners and stakeholders, related to the stakeholder risk. In addition, there is a provision of technical assistance to the GoP on the main policy areas of this operation to provide overall support for enhanced results. A brief description of the main risk and mitigation measures for this operation follows.
117. **The risk associated with institutional capacity for implementation and sustainability is rated substantial.** Strong institutions are an essential element of advancing climate change adaptation and mitigation policies and reform programs. Institutions also impact the vulnerability of individuals and communities, they mediate between individual and collective responses to climate impacts, and influence how different actors in climate action access and use resources. Both formal and informal institutions are important building blocks for short and long-term actions on climate change.¹²⁹ The relatively low technical capacity of government institutions, combined with a complex reform program that requires implementation coordination across government agencies, represents a substantial risk for implementation and sustainability of the reform program. The country’s institutional capacity constraints are exacerbated when multiple government agencies might be involved in the implementation of policy actions. This already substantial risk could be exacerbated by the upcoming elections in the country. However, the risk is mitigated in a number of ways, including by: a consistent and strong GoP engagement in the reform-implementing sectors; the provision of comprehensive technical assistance, especially for the most complex policy actions; and regular coordination efforts led by MEF that ensure the reform program is moving forward satisfactorily. To that regard, the proposed policy operation will be accompanied by a technical assistance program to MEF, MiAmbiente and SNE.

Table 3: Summary Risk Ratings¹³⁰

Risk Categories	Rating
1. Political and Governance	● Moderate
2. Macroeconomic	● Moderate
3. Sector Strategies and Policies	● Moderate
4. Technical Design of Project or Program	● Moderate
5. Institutional Capacity for Implementation and Sustainability	● Substantial

¹²⁹ Challenges ahead: climate change in the context of weak institutions; <https://www.un.org/development/desa/dspd/wp-content/uploads/sites/22/2020/03/Ampaire-paper.pdf>.

¹³⁰ There are allegations of forced labor in the production of solar panels and components. This DPL focuses on policies and institutional reforms in Panama. DPL proceeds are not earmarked to any specific purpose, including the manufacture or procurement of solar panels or components.



6. Fiduciary	● Moderate
7. Environment and Social	● Moderate
8. Stakeholders	● Moderate
9. Other	
Overall	● Moderate



ANNEX 1: POLICY AND RESULTS MATRIX

Prior actions and Triggers		Results		
Prior Actions under DPL 1	Triggers for DPL 2	Indicator Name	Baseline	Target
Pillar I – Support reforms to implement energy transition and socially inclusive low-carbon growth.				
<p>Prior Action #1 – E-mobility. The Borrower has issued a decree pursuant to the E-mobility Law to further advance the decarbonization agenda by promoting e-mobility for ground transportation.</p> <p>Status: Completed.</p> <p>Legal Evidence: <i>Executive Decree No. 51</i>, published in the Official Gazette on February 15, 2023.</p>	<p>(Indicative) Trigger #1. The Borrower has taken steps to scale up e-mobility by adopting technical standards and regulations to: (i) enable the conversion of Internal Combustion Engine (ICE) vehicles to electric vehicles; and (ii) support the installation and operation of electric car charging stations.</p>	<p>Results Indicator #1: Number of charging stations per 100 km of the primary and secondary road network.</p> <p>Results Indicator #2: Number of electric buses acquired or under procurement by the Panama City public operator (MiBus).</p>	<p>2.2 (2022)</p> <p>5 (2022)</p>	<p>17.3 (2025)</p> <p>55 (2025)</p>
<p>Prior Action #2 – Energy Efficiency. The Borrower has strengthened its energy efficiency regulatory framework by adopting and publishing the Central American Technical Regulations (“RTCA”) technical standards for energy efficiency for air-conditioning equipment.</p> <p>Status: Completed.</p> <p>Legal Evidence: <i>Ministry of Industry and Commerce’s Resolution No. 23</i> and its annexes: Resolution No. 451-2021 (COMIECO-XCVIII) and RTCA</p>	<p>(Indicative) Trigger #2. The Borrower has taken measures to promote energy efficiency by: (i) adopting the Minimum Energy Performance Standards (MEPS) for refrigerators and aligning its regulation with the standards published in the RTCA for energy efficiency for refrigerators; and (ii) approving the Energy Transition Fund (FONTE), through the Climate Change Law.</p>	<p>Results Indicator #3: Number of air conditioners with improved Minimum Energy Performance Standards (MEPS) adopted.</p> <p>Results Indicator #4: Number of refrigerators with improved Minimum Energy Performance Standards (MEPS).</p>	<p>96,000 (2021)</p> <p>51,000 (2021)</p>	<p>124,000 (2025)</p> <p>117,000 (2025)</p>



Prior actions and Triggers		Results		
23.01.78:20, published in the Official Gazette on February 9, 2022.				
<p>Prior Action #3 - Improvement of Energy Access. The Borrower has promoted rural electrification and lighting for service provision support under the Plan Colmena Law for eradication of poverty and inequality.</p> <p>Status: Completed.</p> <p>Legal Evidence: <i>Article 14 (11) of Law No. 297</i>, published in the Official Gazette on April 28, 2022.</p>	<p>(Indicative) Trigger #3. The Borrower has taken steps to implement its social inclusion policies by regulating the Plan Colmena Law.</p>	<p>Results Indicator #5: Number of <i>Corregimientos Colmena</i> with energy access interventions.</p> <p>0 (2021)</p> <p>60 (2025)</p> <p>Results Indicator #6: Number of female-headed households electrified through Plan Colmena.</p> <p>0 (2021)</p> <p>550 (2025)</p> <p>Results Indicator #7: Number of indigenous women with skills to perform installation and maintenance tasks of isolated photovoltaic systems in their communities.</p> <p>0 (2021)</p> <p>200 (2025)</p>		
<p>Prior Action #4 - Digital Connectivity. The Borrower has taken measures to ensure connectivity, increase competition for broadband access, boosting the adoption and increasing quality of mobile telephony in underserved areas by setting a new tariff scheme for the advanced wireless services (“AWS”) radioelectric spectrum band to be used by mobile operators.</p> <p>Status: Completed.</p> <p>Legal Evidence: <i>Cabinet Resolution No. 41</i>, published in the Official Gazette on April 13, 2022.</p>	<p>(Indicative) Trigger #4. The Borrower has taken steps to make markets more competitive by publishing regulatory instruments to allow mobile operators to reduce their spectrum costs and align their incentives to set more competitive prices for spectrum.</p>	<p>Results Indicator #8: Percentage of population covered by 4G networks.</p> <p>73 (2021)</p> <p>87 (2025)</p> <p>Results Indicator #9: Number of indigenous regions (provincial and comarca level) with at least 5 percent of their geographical area covered by 4G networks</p> <p>0 (2022)</p> <p>3 (2025)</p>		



Prior actions and Triggers		Results		
Pillar II – Establish policy foundations to sustain natural capital for resilient growth				
<p>Prior Action #5 - Climate Change Legal and Regulatory Framework. The Borrower has taken measures to promote long-term national climate targets and accelerate the inclusive dimensions of climate smart development by submitting to the National Assembly a climate change framework bill.</p> <p>Status: Completed.</p> <p>Legal Evidence: Bill submitted on January 24, 2023 to the National Assembly as initiative No. 942 and published in the National Assembly’s website.</p>	<p>(Indicative) Trigger #5. The Borrower has issued a regulatory decree to the Climate Change Framework Law establishing mandatory measures for the country’s long-term low greenhouse gas emission development.</p>	<p>Results Indicator #10: Negative Carbon balance maintained¹³¹.</p>	<p>Yes (2021)</p>	<p>Yes (2025)</p>
<p>Prior Action #6 - Climate Smart Investments. The Borrower has taken measures for improving the quality of public expenditures, including for the tagging of climate-related expenditures, by: (a) mandating public entities to implement technical guidelines for ensuring efficient and transparent quality in service provision; and (b) issuing guidelines for the formulation and evaluation of public investment projects with specific provisions on climate-change tagging.</p> <p>Status: Completed.</p> <p>Legal Evidence:</p> <p>Article 361 of Law No. 336, published in the</p>	<p>(Indicative) Trigger #6. The Borrower has mandated climate change mitigation and climate impact assessment considerations as part of the country’s Environmental Impact Assessment Process.</p>	<p>Results Indicator #11: Percentage of approved Environmental Impact Assessments (EIA) processes category II and III that integrate climate mitigation and resilience considerations.</p>	<p>0 (2021)</p>	<p>100 (2025)</p>

¹³¹ Based on national GHG inventory



Prior actions and Triggers	Results						
<p>Official Gazette on November 14, 2022¹³².</p> <p>Methodological General Guidelines for the Formulation and Evaluation of Public Investment Projects 2022 published in the Ministry of Finance’s website¹³³.</p>							
<p>Prior Action #7 - Enhanced conservation of rural, coastal and marine areas for resilience. The Borrower has taken measures to enhance forest conservation, create opportunities to develop nature-based tourism, generate jobs and sustain livelihoods through the expansion of the protected area of Iguana Island Wildlife Refuge as part of the Borrower’s national protected areas and the regulation of the Agritourism Law. Status: Completed.</p> <p>Legal Evidence: Executive Decree No. 1, published in the Official Gazette on February 2, 2022. Executive Decree No. 11, published in the Official Gazette on May 9, 2022.</p>	<p>(Indicative) Trigger #7. The Borrower has updated the Forest Law to (i) strengthen legal recognition of forest to provide ecosystem services thereby allowing for economic schemes to compensate forest protection; (ii) strengthen planning and management instruments for sustainable forest management; and (iii) regulate land use changes.</p>	<p>Results Indicator #12: Number of agritourism fincas certified.</p> <p>Results Indicator #13: Zero net deforestation of mangroves in National Protected Areas achieved</p>	<table border="1"> <tr> <td data-bbox="1558 560 1696 885">0¹³⁴ (2021)</td> <td data-bbox="1696 560 1879 885">480 (2025)</td> </tr> <tr> <td data-bbox="1558 885 1696 1234">No (2021)</td> <td data-bbox="1696 885 1879 1234">Yes (2025)</td> </tr> </table>	0 ¹³⁴ (2021)	480 (2025)	No (2021)	Yes (2025)
0 ¹³⁴ (2021)	480 (2025)						
No (2021)	Yes (2025)						

¹³² See: https://www.gacetaoficial.gob.pa/pdfTemp/29662_A/GacetaNo_29662a_20221114.pdf

¹³³ See: https://www.mef.gob.pa/wp-content/uploads/2022/02/2022-Guia-Metodologica-General-Panama_MEF.pdf

¹³⁴ By December 2021 there were 220 agritourism fincas but they were not certified by ATP and MIDA.



Prior actions and Triggers		Results		
<p>Prior Action #8 - Scale up Marine Protection. The Borrower has approved a National Oceans Policy to boost low carbon and resilient growth based on marine natural resources.</p> <p>Status: Completed.</p> <p>Legal Evidence: Executive Decree No. 27, published on the Official Gazette on March 21st, 2022.</p>	<p>(Indicative) Trigger #8. The Borrower has strengthened the sustainable management and conservation of the country’s marine and coastal ecosystems by issuing a decree to increase the area of the marine-coastal natural protected areas.</p>	<p>Results Indicator #14: Percentage of marine area under conservation and sustainable management schemes.</p>	30.5 (2021)	50 (2025)



ANNEX 2: FUND RELATIONS ANNEX



PRESS RELEASE

PR23/95

IMF Executive Board Concludes 2022 Article IV Consultation with Panama

FOR IMMEDIATE RELEASE

Washington, DC – March 24, 2023: On February 22, the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation.¹

In the decade-and-half preceding the Covid-19 pandemic, an unprecedented construction and investment boom precipitated a rapid economic expansion in Panama. The Panama Canal and Tocumen Airport were expanded, there was large scale building of new skyscrapers in Panama City, and one of the largest copper mines in the world was constructed. Economic growth was further supported by the expansion of the services and logistics sectors, which benefited from the widening of the Panama Canal. With a rapid expansion of the capital stock, real GDP grew by 6 percent annually, poverty declined sharply, and income levels rapidly converged with those in advanced countries.

The Covid-19 pandemic led to a deep downturn, with real GDP shrinking by 18 percent and unemployment spiking to 18½ percent in 2020, from 7 percent in 2019.

The recovery has been very strong, but the outlook is uncertain. Output expanded by 15 percent in 2021 and a projected 9 percent in 2022. Employment has rebounded strongly, while inflation remained low compared with other countries. The fiscal deficit declined to from 10.4 percent of GDP in 2020 to 4 percent of GDP in 2022. Nonetheless, risks of new external shocks have emerged, including a sharper than expected downturn of the world economy, renewed surges of food and energy prices, and disruptions to global capital markets. There are also uncertainties about when the rebound of the deep Covid-related downturn will have run its course, and what the medium-term growth potential of Panama will be given that construction is unlikely to provide the same support to growth as it has in the past decade and a half. Other domestic risks include a prolonged inclusion of Panama in the Financial Action Task Force (FATF) grey list and disruptions to copper mining activities after negotiations between the government and Minera Panama on a new contract failed to meet a mid-December 2022 deadline.

Executive Board Assessment²

Executive Directors agreed with the thrust of the staff appraisal. Panama witnessed a strong post-pandemic economic recovery, supported by a rebound in the global economy. However,

¹ Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board.

² At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.imf.org/external/np/sec/misc/qualifiers.htm>.



the outlook remains uncertain, with risks of new external shocks, vulnerabilities from a prolonged inclusion in the Financial Action Task Force (FATF) grey list, and possible disruptions to copper mining activities following delays in reaching a new mining agreement. Looking ahead, Directors concurred that policies should focus on rebuilding buffers and ensuring the convergence of Panamanian income levels with those in advanced countries continues. While welcoming the recent progress, they underscored the critical importance of prioritizing an exit from the FATF grey list at the earliest date possible by expeditiously addressing the remaining deficiencies in the AML/CFT regulatory framework.

To ensure debt sustainability in the medium term, Directors highlighted the importance of further reducing the fiscal deficit, in accordance with the fiscal rule. They agreed that tax revenue will need to increase to sustainably reduce the fiscal deficit while preserving social spending and creating room for more education spending. In this context, Directors stressed the importance of improving tax and customs collection efficiency; broadening the tax base by reducing exemptions, deductions, and tax expenditures; and addressing the deficits in the defined-benefit pension component of the social security system.

Directors noted that capital adequacy and liquidity indicators in the banking sector are well above regulatory minima. As Panama does not have a lender of last resort and deposit insurance, they emphasized the importance of keeping the banking system well capitalized and liquid. In this context, they highlighted the need for continued intensive supervision and monitoring and expanding the macroprudential policy toolkit to mitigate future asset quality and liquidity risks. They also urged AML/CFT regulation and supervision to be applied to Fintech companies.

Directors noted that Panama's past income convergence to advanced-economy levels was driven by an unprecedented construction boom. To sustain convergence, Directors underscored the necessity for other productive sectors to take over, and for governance and human capital to improve. They also called for structural reforms to enhance innovation, improve critical infrastructure, and strengthen labor policies to bolster competitiveness and growth potential. Directors encouraged the authorities to work toward SDDS subscription, and stressed the importance of more timely statistics, which would reinforce transparency.



	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028
Population (millions, 2021)	4.3										
Population growth rate (percent, 2021)	1.4										
Life expectancy at birth (years, 2019)	78.5										
Total unemployment rate (October 2021)	11.3										
Poverty line (percent, 2019)	21.5										
Adult literacy rate (percent, 2019)	95.7										
GDP per capita (US\$, 2021)	14,664										
IMF Quota (SDR, million)	376.8										
					Est.			Projections			
Production and Prices											
Real GDP (2007 prices)	3.7	3.0	-17.9	15.3	9.0	5.0	4.0	4.0	4.0	4.0	4.0
Consumer price index (average)	0.8	-0.4	-1.6	1.6	2.9	2.2	2.2	2.0	2.0	2.0	2.0
Consumer price index (end-of-year)	0.2	-0.1	-1.6	2.6	2.1	3.1	2.0	2.0	2.0	2.0	2.0
Output gap (% of potential)	4.2	2.0	-17.1	-6.3	-0.9	0.0	0.0	0.0	0.0	0.0	0.0
Demand Components (at constant prices)											
Public consumption	6.5	4.9	16.2	5.4	-5.4	-0.4	2.0	2.6	2.1	3.1	3.1
Private consumption	2.3	4.9	-15.5	-0.7	15.8	6.0	3.6	3.4	3.0	3.5	3.7
Public investment ^{1/}	6.9	1.0	-62.4	133.7	13.5	12.4	-4.6	-3.4	5.1	8.4	7.7
Private investment	-0.4	-0.9	-45.4	47.4	15.5	5.2	5.9	5.7	3.9	3.2	3.4
Exports	5.3	1.2	-20.6	25.4	12.3	5.4	6.6	5.3	5.5	5.4	5.1
Imports	4.5	-2.5	-34.0	32.4	7.7	2.5	8.7	5.9	5.2	5.7	5.7
Financial Sector											
Private sector credit	4.5	2.4	-2.6	1.5	5.4	5.6	6.1	6.1	6.1	6.1	6.1
Broad money	2.8	2.3	9.5	4.1	12.1	7.4	6.3	6.1	6.1	6.1	6.1
Average deposit rate (Percent)	1.9	2.0	1.8	1.4	1.8						
Average lending rate (Percent)	7.8	7.8	7.7	7.6	7.6						
Saving-Investment Balance											
Gross domestic investment	41.5	38.3	24.1	32.5	34.3	34.7	34.8	34.8	34.8	34.8	34.8
Public sector	6.2	6.0	2.6	5.2	5.4	5.8	5.3	4.9	5.0	5.2	5.4
Private sector	35.3	32.3	21.5	27.3	28.9	28.9	29.4	29.9	29.9	29.6	29.4
Gross national savings	33.9	33.3	23.7	29.3	30.4	30.7	31.2	31.8	32.1	32.1	32.3
Public sector	4.2	2.6	-4.2	-2.1	0.4	2.4	2.6	3.1	3.6	3.8	4.0
Private sector	29.7	30.8	27.9	31.4	30.1	28.3	28.6	28.7	28.4	28.3	28.3
Public Finances ^{1/}											
Revenue and grants	22.0	20.8	21.5	20.5	22.2	23.1	23.3	23.5	23.6	23.8	23.9
Expenditure	24.9	23.9	30.7	27.1	26.0	25.8	25.1	24.6	24.5	24.7	24.9
Current, including interest	17.2	17.7	25.2	21.9	20.6	20.0	19.8	19.7	19.6	19.5	19.5
Capital	6.6	6.2	5.5	5.2	5.4	5.8	5.3	4.9	5.0	5.2	5.4
Overall balance, including ACP	-2.9	-3.1	-9.2	-6.5	-3.8	-2.7	-1.8	-1.2	-0.9	-0.9	-1.0
Overall balance, excluding ACP	-3.2	-3.4	-10.4	-6.7	-4.0	-3.0	-2.0	-1.5	-1.5	-1.5	-1.5
Total Public Debt											
Debt of Non-Financial Public Sector ^{2/}	37.3	41.9	65.6	58.4	55.4	54.9	54.1	53.2	52.4	51.5	50.8
External	31.1	35.2	54.1	50.6	50.9	50.8	51.1	50.5	50.2	49.5	48.8
Domestic	6.3	6.7	11.5	7.8	4.5	4.1	3.0	2.7	2.2	2.0	2.0
Debt of ACP	4.2	3.8	4.2	3.2	2.6	2.1	1.7	1.3	1.0	0.7	0.4
Other ^{3/}	4.2	4.1	5.1	4.3	3.9	3.6	3.4	3.2	3.0	2.8	2.7
External Sector											
Current account	-7.6	-5.0	-0.4	-3.2	-3.9	-4.0	-3.5	-3.0	-2.8	-2.7	-2.5
Net exports from Colon Free Zone	2.5	2.7	3.1	2.5	2.2	2.2	2.2	2.3	2.3	2.4	2.4
Net oil imports	4.4	3.8	1.7	3.1	4.2	3.5	3.2	3.0	2.8	2.6	2.5
Net foreign direct investment inflows	7.5	5.6	0.1	2.6	4.0	4.3	4.3	4.2	4.1	3.9	3.8
External Debt	153.0	155.0	209.4	188.3	169.4	168.1	167.0	166.5	166.0	164.3	162.5
Memorandum Items:											
GDP (in millions of US\$)	64,929	66,984	53,977	63,605	71,299	76,540	81,383	86,331	91,580	97,148	103,055

Sources: Comptroller General; Superintendency of Banks; and IMF staff calculations.

^{1/} Includes Panama Canal Authority (ACP). Includes Staff adjustment to account for the accrual of previously unrecorded expenditure for 2015-18. These estimates are preliminary.

^{2/} Non-Financial Public Sector according to the definition in Law 31 of 2011.

^{3/} Includes debt of public enterprises outside the national definition of NFPS (ENA, ETESA, and AITSA) and non-consolidated agencies.



ANNEX 3: LETTER OF DEVELOPMENT POLICY



MINISTERIO DE
ECONOMÍA Y FINANZAS
Despacho Viceministerio de Economía
Dirección de Financiamiento Público

21 de marzo de 2023
MEF-2023-15346

Mr. David Malpass
President
International Bank for Reconstruction and Development
Panama

Dear Mr. Malpass:

We are writing on behalf of the Government of Panama, to submit for consideration of the Bank, the provision of financial resources to support the General State Budget for fiscal year 2023 and other fiscal periods for an amount of up to one hundred and fifty million dollars from the United States of America with 00/100 (USD150,000,000.00), through the preparation of a Program based on Development Policy Reforms that support the foundations of economic impulse called Loan for the Development of Climate Resilience and Green Growth Development Policies Panama.

This Development Policy Loan is an effective tool for the Government to anchor key policies and institutional reform measures towards climate resilience and green growth in the country. The Government continues to pursue a medium and long-term reform agenda for which the International Bank for Reconstruction and Development (IBRD) has been a key, effective and strong relationship partner; aspect that we value and appreciate for the collaboration of the Bank since 1946.

The Republic of Panama has been taking the necessary measures, with the purpose of maintaining a sustainable and stable growth, after the fall in Gross Domestic Product (GDP) in 2020, as a result of the COVID-19 Pandemic Crisis; therefore, the growth trend is reflected in the period ended September 30, 2022, in which the GDP growth was 10.8%, compared to 14.9% in 2021.

At the same time, within the framework of economic stability, other aspects that are reflective as such and have contributed to these variations include inflation, measured by the average CPI with the base year 2013, which was 2.7% in 2023.

In this sense, we detail a summary of the outstanding aspects of the program, which the Government of Panama undertakes to support through this Ministry, and organized into two Pillars, made up of eight priority policy actions, which are detailed below:

Pillar I – Support a clean energy transition and socially inclusive low-carbon growth.

Pillar I supports the country's efforts to foster sustainability and resilience by addressing critical reforms aimed at strengthening

① La autenticidad de este documento puede ser validada mediante el código QR.





governance while meeting long-term climate change and sustainable development goals. Supported reforms include: i) new regulatory and policy instruments that tackle emissions from the energy and transport sector and, ii) promote gender inclusion and equity.

The first prior action supports the legal reforms taken by the Government of Panama to further advance the decarbonization agenda by promoting e-mobility for land transportation. This will be followed by the issuance of a procedure for the operation of charging infrastructure services and tax incentives for the electrification of the public bus fleet. The expected results are to drive the implementation of projects, programs, and replacement plans for public institutions and public transportation, while encouraging the adoption of electric passenger cars, contributing to the reduction of the country's greenhouse gas (GHG) emissions in line with its commitments in the Nationally Determined Contribution (NDC).

The second prior action supports the measures taken by the Ministry of Industry and Commerce to strengthened Panama's energy efficiency regulatory framework through the adoption and publication of the Central American Technical Regulation (RTCA) technical standards on energy efficiency for air-conditioning equipment. As a follow-up measure, the Government will take steps to promote energy efficiency by: (i) adopting the Minimum Energy Performance Standards (MEPS) for refrigerators and aligning its regulations with the Central American Technical Regulation (RTCA) for energy efficiency for refrigerators; and (ii) approving the Energy Transition Fund (FONTE), through the Climate Change Law. As an expected result, the RTCA for air conditioners and refrigerators will create a larger market for efficient cooling equipment, which will reduce prices and increase market acceptance in the Central American Integration System (SICA), including Panama.

The third prior action, includes rural electrification and lighting as one of the areas of intervention to support service provision under the Plan Colmena Law for the eradication poverty and inequality. The enactment of the law will be followed by measures to implement its social inclusion policies. The implementation of Plan Colmena's rural electrification programs, in combination with the National Universal Access Strategy (NUAS)- is expected to reduce poverty and inequality in the selected Corregimientos Colmena, as well as reduce household air pollution and, consequently, mortality and morbidity among women and children.

The fourth prior action supports the measures taken by the National Authority for Public Services (ASEP) to ensure connectivity, increase competition for broadband access and increase the quality of mobile telephony in underserved areas by establishing a new tariff scheme for the Advanced Wireless Services (AWS) band of the radio spectrum to be used by mobile operators. This will be followed by measures to make markets more competitive by issuing regulatory instruments to allow mobile operators to reduce their spectrum costs and align their incentives to set more competitive spectrum prices. These policies are expected to reduce the cost of the spectrum band and help the Panamá of Government (GoP) achieve its greenhouse gas emission targets through more effective



energy use and improve coverage of 4G and 5G technologies in previously underserved areas.

Pillar II – Establish policy foundations to sustain natural capital for resilient growth

Pillar II supports the country's efforts to sustain natural capital for resilient growth by strengthening climate and nature governance, enhancing institutional capacity to advance the country's climate change mitigation and adaptation agendas, while fostering resilience and social inclusion. These objectives will be achieved by: (i) strengthening the country's strategic climate change framework and promoting inclusion aspects for resilient low-carbon development, through the submission of the Climate Change Framework Law to the Assembly; (ii) mainstreaming climate change adaptation and mitigation considerations into public financial management and support public spending consistent with climate change mitigation and adaptation, through appropriate tagging of public investment projects; (iii) promoting nature-based tourism as a strategic sector for green and inclusive growth; and (iv) strengthening climate resilience and promote a gender-responsive blue growth approach to restore and conserve marine-coastal ecosystems by enacting Panama's Oceans Policy.

The fifth prior action supports measures to promote long-term national climate goals and accelerate the inclusive dimensions of climate-smart development through the submission to the National Assembly of a Climate Change Framework Law. This Law will be followed by measures for the country's long-term development with low greenhouse gas emissions. The expected result is to maintain the country's negative carbon balance by strengthening the climate change governance, developing and better aligning the regulatory framework and implementing the different policy instruments.

The sixth prior action supports measures to improve the quality of public spending, including the tagging of climate-related expenditures. This will be followed by the incorporation of climate change impact assessment and mitigation considerations to the country's Environmental Impact Assessment Process. As a result, the long-term sustainability of private and public investments is expected to be improved by incorporating adaptation and mitigation considerations into the EIA process.

The seventh prior action supports measures to improve forest conservation, create opportunities to develop nature-based tourism, generate jobs and sustain livelihoods through the expansion of the Iguana Island Wildlife Refuge protected area as part of the Borrower's national protected areas and the regulation of the Agritourism Law. This will be followed by the updating of the Forest law. It is expected that through the regulation of the Agritourism law, a greater number of rural land areas will be certified for sustainable productive activities. In addition, by expanding the protection area of the Iguana Island Wildlife Refuge, and therefore, its sustainable management, the GoP is strengthening the protection of the mangroves forests within the area, improving the resilience to climate change of marine-coastal areas and benefiting the livelihoods and income opportunities for the communities that depend on the island.



The eighth prior action enacted the National Oceans Policy to boost resilient, low-carbon growth based on marine and coastal natural resources. The National Oceans Policy is expected to lead to sustainable management of marine and coastal areas, and consequently, greater climate resilience. This policy will be followed by an increase in the marine-coastal natural protected areas and the expected outcome is to protect 50 percent of the country's marine and coastal area.

The Government of Panama is committed to each of the policy actions taken, aimed at supporting the country's efforts towards decarbonization and long-term sustainable growth by promoting social inclusion within the country's green, resilient and sustainable growth objectives.

Panama highlights its strong commitment to meeting our sustainable development goals and achieving its climate change mitigation, adaptation, and finance flow consistency objectives under the Paris agreement, by advancing our reform agenda, important aspects supported by this Program.

We inform you of our firm decision to continue working on the fulfillment and development of the Program. In this regard, we reiterate our gratitude for the support provided by the Bank and we look forward to the pertinent steps to carry out this operation.

We are confident that our request will receive the endorsement of the World Bank's Board of Directors.

Sincerely,

Eneida Medrano de González
Vice Minister of Economy



EMdG/EPCJ/VDLR/vv



ANNEX 4: ENVIRONMENT AND POVERTY/SOCIAL ANALYSIS TABLE

Prior Actions	Significant positive or negative environmental effects	Significant poverty, social or distributional positive or negative effects
<i>Pillar I - Support reforms to implement energy transition and socially inclusive low-carbon growth.</i>		
<p>Prior Action #1 - E-mobility. The Borrower has issued a decree pursuant to the E-mobility Law to further advance the decarbonization agenda by promoting e-mobility for ground transportation.</p>	<p>Positive impacts. This PA will reduce GHG emissions in the transport sector, therefore minimizing effects on climate change. It also promotes the reduction of atmospheric pollutant emissions, reducing negative impacts on human health.</p> <p>Potential long term negative effects might arise for the inadequate disposal of batteries however, those are expected to be mitigated by Panama’s regulatory and enforcement system. Particularly through the General Law of the Environment, the GLE (Law N.41/1998), and the Waste Management Law (Law N.33/2018) that sets the framework for its management. In addition, the Executive Decree N.51/2023 of the Law 295 on electric mobility establishes the legal responsibility of the Ministry of Environment in defining further procedure for recycling, reuse and disposal of batteries. Lastly, Panama drafted legislation (Bill N.092/2022) that dictates rules for the collection and final disposal of vehicles in disuse and a specific regulation for e-waste (Bill N.164/2021).</p>	<p>Potential positive impacts on health by averting respiratory diseases, especially among those with health vulnerabilities.</p> <p>Neutral impacts on poverty and the bottom 40 in the short term, with potentially positive impacts in the medium run as the PA Incentivize the improvement of public transport (through electrification) and public transport is a public good that tends to benefit poor and vulnerable groups that are the majority users of that service.</p> <p>Additionally, while upfront cost of e-buses is higher than diesel ones, when consider operational and maintenance, the total cost of ownership es expected to reach parity in 2 to 3 years hence the risk of any increase of pricing of final user due to the fleet renewal may be very low.</p>
<p>Prior Action #2 - Energy Efficiency. The Borrower has strengthened its energy efficiency regulatory framework by adopting and publishing the Central American Technical Regulations (“RTCA”) technical standards for energy efficiency for air-conditioning equipment.</p>	<p>Likely positive impacts through enhanced efficient use of energy. But it could also generate wastes as a result of replacement and disposal of old-fashioned equipment to mitigate these potential effects, those are expected to be managed by the Waste Management Law (Law N.33/2018) General Law on Solid Waste (<i>Ley General de Residuos Sólidos</i>).</p>	<p>Neutral to small positive economic impacts in the long run. Small businesses, low-income households, and vulnerable groups could be negatively affected by regulations dictating adoption of new energy-efficient equipment or exhibit low take-up. However, the PA considers broad promotion and dissemination, as well as financial incentives to boost adoption. In the long run, adoption energy-saving technologies and behaviors would generate savings.</p>



<p>Prior Action #3 - Improvement of Energy Access. The Borrower has promoted rural electrification and lighting for service provision support under the Plan Colmena Law for eradication of poverty and inequality.</p>	<p>Positive impacts on reduced air pollutants and emissions, if implementation through Plan Colmena includes environmental best practices. Potential negative effects from installation of transmission lines or distribution networks with more than 5km of extension of will be managed by the required EIA.</p>	<p>Positive impacts on poverty reduction and equity, in the long run, as vulnerable households with access to electricity for the first time might see positive impacts in employment, productivity, health, and education, and ultimately in incomes and poverty. In addition, the integration of a gender strategy in the PA would increase access to labor markets for women.</p>
<p>Prior Action #4 - Digital Connectivity. The Borrower has taken measures to ensure connectivity, increase competition for broadband access, boosting the adoption and increasing quality of mobile telephony in underserved areas by setting a new tariff scheme for the advanced wireless services (“AWS”) radioelectric spectrum band to be used by mobile operators.</p>	<p>Neutral impacts.</p>	<p>Neutral impacts in the short run. Likely positive impacts on poverty reduction shared prosperity in the long run if broadband access reaches low-income households.</p>
<p>Pillar II - Establish policy foundations to sustain natural capital for resilient growth</p>		
<p>Prior Action #5 - Climate Change Legal and Regulatory Framework. The Borrower has taken measures to promote long-term national climate targets and accelerate the inclusive dimensions of climate smart development by submitting to the National Assembly a climate change framework bill.</p>	<p>Significant positive impacts through the economy wide decarbonization, contributing to positive environmental outcomes nationally (with co-benefits for human health and the environment) and contributing to carbon mitigation globally in line with Paris agreement commitments.</p>	<p>Neutral impacts in the short run. Expected positive impacts on poverty reduction, shared prosperity, and gender equity; Although impact sizes would depend on the specific actions implemented.</p>
<p>Prior Action #6 - Climate Smart Investments. The Borrower has taken measures for improving the quality of public expenditures, including for the tagging of climate-related expenditures, by: (a) mandating public entities to implement technical guidelines for ensuring efficient and transparent quality in service provision; and (b) issuing guidelines for the formulation and evaluation of public investment projects with specific provisions on climate-change tagging.</p>	<p>Positive impacts through low carbon resilient public investments. Also, the PA is likely to generate long-term positive environmental effects as public budget expenditure is considered through a climate lens with the objective of maximizing both mitigation and adaptation effects. Significant positive impacts through enhanced environmental impact assessment.</p>	<p>Neutral impacts in the short run. Potentially positive impacts on poverty reduction and shared prosperity in the long run if investments increase resilience of poor households in areas vulnerable to climate change.</p>
<p>Prior Action #7 - Enhanced conservation of rural, coastal and marine areas for resilience. The</p>	<p>Significant positive impacts through enhanced conservation. A technical study prepared to justify the</p>	<p>Neutral impacts in the short run. Potentially positive impacts on poverty reduction and shared prosperity in the long run as forest</p>



<p>Borrower has taken measures to enhance forest conservation, create opportunities to develop nature-based tourism, generate jobs and sustain livelihoods through the expansion of the protected area of the Iguana Island Wildlife Refuge as part of the Borrower’s national protected areas and the regulation of the Agritourism Law.</p>	<p>National Protected Area expansion, that is the increase of the Iguana Island Refuge, shows that by increasing the limits the efforts to conserve and protect environmental and terrestrial ecosystems will be strengthened. The extension incorporates new areas with fauna and flora elements that have characteristics of high fragility and/or in danger of extinction.</p> <p>Nature-based tourism can have both positive and negative impacts. Nature-based tourism may cause resource degradation, disturbance of animals from inappropriate feeding. To mitigate the negative impact of nature-based tourism the GoP developed a visitor management principle to limit the number of visitors to 300 a day. 200 visitors and 100 MiAmbiente’s personnel¹³⁵.</p>	<p>conservation and tourism materialize into economic opportunities for rural households.</p>
<p>Prior Action #8 - Scale up Marine Protection. The Borrower has approved a National Oceans Policy to boost low carbon and resilient growth based on marine natural resources.</p>	<p>Significant positive impacts through enhanced ocean management. The Ocean Policy supports sustainable management and conservation of Panama’s ocean resources. For instance, its first pillar aims to effectively conserve vulnerable species and ecosystems, protecting the ecosystem services and avoiding irreparable damage.</p>	<p>Neutral impacts in the short run. Potentially positive impacts on poverty reduction and shared prosperity in the long run as the PA materializes into a sustainable management of marine and coastal areas, climate resilience, and better livelihoods.</p>

¹³⁵ See: <https://www.miambiente.gob.pa/miambiente-aclara-las-pautas-para-visitar-el-refugio-de-vida-silvestre-isla-iguana/#:~:text=La%20capacidad%20de%20carga%20de,de%20partida%20hacia%20Isla%20Iguana>.