Mexico Country Planning Framework 2021-2025

GGGI
Mexico Country
Planning Framework
2021-2025

Foreword

Mexico's development priorities have evolved in the context of global and domestic changes, resulting in a significant push to transform the public life to achieve a greater benefit for all. This intent is ingrained in the National Development Plan 2019-2024, which serves as an umbrella for sectoral and institutional plans and a key tool for cooperation fostering inclusive development. The ultimate goal of its political, social and economic pillars is to bring the nation toward prosperity, security, sustainability; thus, green growth and a low-carbon society are key development objectives for the country.

Over the last decade, the Global Green Growth Institute (GGGI) has consolidated its role as a trusted advisor to Mexico's federal and subnational governments, actively working shoulder-to-shoulder with key counterparts to establish a strong green growth foundation in the country. In 2014, the Mexican Senate ratified the Agreement for the Establishment of GGGI, which signals Mexico's commitment to green growth and its recognition of the shared value of this development paradigm in cooperation with GGGI.

From its inception in Mexico (2013), GGGI has supported the federal government to develop the National Climate Change Strategy and the Special Climate Change Program. From there, GGGI expanded its work to support the government with tools and analyses to manage air quality, improve public transport, reduce the use of private vehicles and promote cleaner, more efficient mobility. GGGI has also partnered with the Secretariat of Environment and Natural Resources (SEMARNAT) to develop workstreams at the subnational level. One such initiative (2013) was GGGI's technical and advisory role for the Environmental Commission of the Megalopolis (CAMe), where GGGI supported efforts to improve the air quality of the region. In addition, GGGI worked alongside the State of Sonora to develop and adopt its Green Growth Strategy (SGGS) and governance mechanism, which has been instrumental for the development of green growth initiatives in the state in line with the priority areas of the GGS. In more recent years, GGGI has also partnered with Mexico's Secretariat of Finance (SHCP) and the Green Climate Fund (GCF) to improve the climate finance architecture in the country and enhance Mexico's access to climate finance through preparing local financing institutions to access funds from the GCF. Lastly, Mexico also hosts GGGI's Regional Office for Latin America and the Caribbean.

To further assist the Government of Mexico accomplish its development objectives, SDGs and NDC targets in the following years under this Country Planning Framework (CPF) 2021-2025, GGGI will continue to catalyze resource mobilization to bridge the significant climate finance gap. Simultaneously, GGGI will promote technical advisory in the following sectors: sustainable landscapes, transport, waste, climate resilient agriculture and marine and coastal resilience. Finally, GGGI will continue to foster resilient recovery initiatives at both the federal and subnational levels, with the aim to boost decent jobs and green growth engines throughout the country.

Mexico's development model and GGGI's vision for a resilient world achieved through strong, inclusive and sustainable green growth are unambiguously complementary to each other. It is our belief that the collaboration between Mexico and GGGI will lead the country to meet its country development vision in the next years.

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Abbreviations and Acronyms

BANOBRAS	Bank of Public Works (Public Development Bank)
CAMe	Environmental Commission for the Megalopolis
CONAGUA	National Water Commission
CPF	Country Planning Framework (this documents)
EE	Energy Efficiency
FSM	Faecal Sludge Management
GCF	Green Climate Fund
GGGI	Global Green Growth Institute
GGS	Green Growth Strategy (subnational)
GoM	Government of Mexico (federal)
GOP	Global Operational Priority
GHG	Greenhouse Gases
INECC	Institute of Ecology and Climate Change, GoM
LT-LEDS	Long-Term Low-Emission Development Strategies
MRV	Monitoring, Reporting and Verification
NAFIN	Nacional Financiera (Public Development Bank)
NBS	Nature Based Solutions
NFV	National Financing Vehicle
NDC	Nationally Determined Contribution
PV	Photo-voltaic
RE	Renewable energies
REDD+	Reducing Emissions from Deforestation and forest Degradation
SDGs	Sustainable Development Goals
SME	Small and Medium Enterprises
SADER	Secretariat of Agriculture and Rural Development
SEDATU	Secretariat of Agricultural, Territorial and Urban Development
SEMARNAT	Secretariat of Environment and Natural Resources
SHCP	Secretariat of Finance and Public Credit

Executive Summary

Background

With a population of around 126 million, Mexico is among the 15 largest economies of the world and the second largest in Latin America. It has strong macroeconomic institutions and a significant openness to trade (11 Free Trade Agreements with 46 countries[1]). While its economy is largely services (64.5% of GDP) and manufacture (31.9%) based[2], a large informal sector employs half of the workforce, which adds to fiscal, regulatory and wellbeing complexities. Roughly 48% of the population was below the poverty line in 2018 (CONEVAL). In 2020, the covid-19 pandemic caused Mexico's economy to drop 8.5% (GDP).

Mexico is the world's 12th emitter of greenhouse gas emissions (GHG), driven primarily by the power and transport sectors. Mexico's recently updated NDCs (December 2020) include ambitious adaptation and mitigation goals to unconditionally reduce GHG emissions by 22% and 51% of black carbon emissions by 2030 (as compared to the baseline business-as usual scenario or BAU), and to increase its contribution to up to 36% of GHG emissions and 70% of black carbon emissions, conditional to significant international assistance (namely, access to appropriate technology transfer and financial resource mobilization).

National Priorities

The Mexican Government recognizes the importance of a green growth approach to reach its full development potential. To do so, the CPF 2021-2025 has identified the following challenges and opportunities to lend a strategic approach to country-level initiatives and contribute to transformational impacts in the long term:

- *Reduce poverty and construct social welfare*
- *Enhance capacities to mobilize significant climate finance flows*
- *Wider adoption of climate technologies while integrating solutions considering local contexts and traditional customs*
- *Paradigm shift towards clean energy*
- *High potential for gender equality and social inclusion*
- *Protect natural resources*
- *Foster a greener post Covid-19 recovery*

About the Country Planning Framework

This Country Planning Framework (CPF) outlines five strategic outcomes that will guide the next phase of GGGI's partnership with Mexico from 2021 to 2025. At its core, this CPF aims to assist Mexico in delivering its NDC mitigation and adaptation targets:

Green Investments. GGGI will support the strengthening of institutional capacities to increase both flows, sustainability and greater democratization of access to inclusive[3] climate finance (US$650 million).

Climate Action. GGGI will provide technical assistance to national and local counterparts to mainstream their climate agendas (plus enabling conditions) to ultimately increase overall climate ambition (20 technical advisory documents and 10 capacity strengthening activities).

Sustainable Forests/Landscapes. To ensure a sustainable circular bioeconomy which secures healthy natural systems, GGGI will foster wellbeing creation practices using a sustainable land use approach, replacing deforestation with regeneration and harnessing the AFOLU sector as an engine for green jobs, greener recovery plus enhanced gender inclusion (3 sectoral knowledge exchange events; 3 regenerative interventions mobilizing USD $50M).

Waste Management. GGGI aims to provide comprehensive solutions away towards circular approaches to waste (mobilize USD$300M).

Sustainable Mobility/Transport. GGGI will support relevant stakeholders to accelerate the transition to a more inclusive and less-carbon intensive mobility, as it is key to achieve Mexico's NDCs (2 sectoral policies developed; financial facility of USD$250M; implementation of 3 projects).

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1. Introduction

1.1 Global Green Growth Institute (GGGI)'s Strategy 2030, Global Operational Priorities (GOPs), and Programmatic Solutions

The GGGI Strategy 2030[4] sets out its long-term ambitions to help its member countries achieve environmentally sustainable and socially inclusive economic growth as fully aligned with the Paris Agreement and the UN Sustainable Development Goals (SDGs).

To achieve the GGGI Strategy 2030 goals, GGGI focuses on the delivery of the following Programmatic Global Operational Priorities (GOP): 1) catalysing and accelerating access to climate finance and green investment for members' public and private sectors with an equitable and inclusive approach; 2) supporting GGGI members in strengthening policy planning, regulatory frameworks, and institutional capacity to achieve green growth outcomes; 3) achieving a sustainable and circular bioeconomy while securing healthy natural systems; 4) making cities and communities sustainable, liveable, and resilient through supporting green jobs, services, and green infrastructures; and 5) accelerating progress in eradicating poverty and gender inequality through GGGI's country programs. To support implementation at the country level, Programmatic Solutions (PS) have been identified for each GOP as presented in Figure 1.

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[4] GGGI Strategy 2030, available at:
http://gggi.org/site/assets/uploads/2019/11/GGGI-Strategy-2030_External-and-Internal-Combined-191002.pdf

1.2 GGGI's Operation in Mexico

In less than one decade, GGGI has consolidated its role as a trusted advisor to Mexico's federal and subnational governments in the design and implementation of green growth initiatives. From its inception in Mexico (2013), GGGI supported the federal government to develop the National Climate Change Strategy and the Special Climate Change Program. From there, GGGI expanded its work to support the government with tools and analyses to manage air quality, improve public transport, reduce the use of private vehicles and promote cleaner, more efficient mobility. GGGI has also partnered with the Secretariat of Environment and Natural Resources (SEMARNAT) to develop workstreams at the subnational level. One such initiative (2013) was GGGI's technical and advisory role for the Environmental Commission of the Megalopolis (CAMe) – conformed by 7 subnational states: Mexico City, Hidalgo, State of Mexico, Morelos, Puebla, Querétaro and Tlaxcala) – in which GGGI supported efforts to improve the air quality of the region. In addition, GGGI worked alongside the State of Sonora to develop and adopt the Sonora Green Growth Strategy (SGGS) and governance mechanism, which has been instrumental for the development of green growth initiatives in the state in line with the priority areas of the GGS. GGGI has also partnered with Mexico's Secretariat of Finance (SHCP) and the Green Climate Fund (GCF) to improve the climate finance architecture in the country and enhance Mexico's access to climate finance through preparing local financing institutions to access funds from the GCF. Mexico is also the host of GGGI's Regional Office for Latin America and the Caribbean.

1.3 Objectives of the Country Planning Framework (CPF) and Strategic Relevance to Mexico's Planning Process

The Mexico CPF was formulated through analyses of several climate and development indicators and consultations with critical green growth stakeholders, including significant input and validation by the Government of Mexico (GoM). The participation of the government was crucial, as the CPF is co-owned by GGGI and the GoM. The consultation process sought feedback from a wide range of government and non-government

stakeholders engaged in energy, green cities, sustainable landscapes and consisted of an online survey with 79 responses followed by one-on-one interviews. The draft report was circulated for broad government stakeholder comment through GGGI's main counterpart in the GoM, SEMARNAT.

The GGGI Country Planning Framework (CPF) for Mexico covers the 2021-2025 period and has the following aims:
  i)   ensure strategic alignment between country-level interventions and GGGI's 2030 Strategy;
  ii)   deliver transformational programs with measurable attributed and contributed outcomes;
  iii) ensure government ownership, commitment, and support (at both the federal and local levels) to GGGI's interventions in Mexico;
  iv)   develop strong partnerships and facilitate resource mobilization to accelerate green growth adoption;
  v)   promote knowledge sharing by bringing together cross-selection of GGGI experts to deliver an "One GGGI" country approach; and
  vi)   strengthen linkages among international commitments and GGGI's 2030 Strategy.

The CPF aligns country level interventions with both the GGGI Strategy 2030 and the priorities of the Government as outlined in strategic and programmatic documents such as the National Development Plan 2019–2024, Mexico's Nationally Determined Contributions (NDCs) and the 2030 Agenda and its Sustainable Development Goals (SDGs).

1.4 Past GGGI Results and Highlights in Mexico

The partnership between the GGGI and the GoM has produced several key results to date. The most relevant interventions of the Mexico Program are summarized around the thematic priorities mentioned below:

1. CLIMATE ACTION
Through the past 7 years, GGGI has provided technical assistance to federal and local governments in developing strategic climate outputs. Early in its inception in 2013, GGGI supported the National Institute of Ecology and Climate Change (INECC) through technical contributions for the development of the *National Climate Change Strategy* (2013) and the *Special Climate Change Program (2014-2018)*. Both policy documents provide a long-term vision to combat climate change, as well as propose specific actions to be taken by the federal administration.

In 2015, GGGI partnered again with INECC to analyse the potential for the country to develop innovative low-carbon technologies. The *Technological Innovation Needs Assessment* (TINA) report assessed the mitigation and value creation potential of various climate technologies by analysing the value chains of present and future climate technologies and

assessing the country's competitive advantage and opportunity for market capture of value chain components. In 2016, GGGI partnered with SEMARNAT and the state of Sonora to develop the *Sonora Green Growth Strategy* (SGGS), the first of its kind in Latin America. The SGGS, which launched in 2017, proposes a set of activities around 4 objectives setting out a less carbon-intensive and resilient economic growth path. To accompany the SGGS, GGGI supported the development of governance mechanisms and capacity building with government, private sector and civil society stakeholders. The SGGS is a prime example of how GGGI can catalyse the green growth efforts of its partner governments by providing technical support and leveraging support from partner organizations.

Lastly, in 2020 and in the wake of the Covid-19 pandemic, GGGI launched a *Post Covid-19 Recovery Report*, which consolidates relevant emerging literature, utilizes GGGI's Green Growth Index as framework of analysis, and delivers recommendations to foster a greener recovery with high long-term economic multipliers plus social and environmental cobenefits at the subnational level (states).

2. GREEN CITIES
The transport sector is the second largest GHG emitter in the country and key to achieving Mexico's NDCs. Poor air quality – aggravated by the poor quality of public transport and dependence on private vehicles – generates significant costs for human health and reduces urban competitiveness, so addressing these issues generates climate, environmental, economic and social benefits. Between 2013 and 2017, GGGI supported the *Environmental Commission of the Megalopolis* (CAMe) through several activities aimed at improving the air quality of the region. These included support for the development of an updated air quality index, proposals for the development of low-emission city zones, green license plates and region-wide air contingency plans. Two knowledge products derived from this workstreams are the *Public Transport Concessions Report* and the *Health Externalities Calculator from Transport Emissions*. While the former highlights successful public transportation concession models, plus compiles good practices developed by five Latin American and two European cities (to document and inform local decision-making processes on concession schemes), the latter provides a tool to estimate the health benefits that can be expected from decreased transport emissions at the city level. Additionally, this tool provides a cost-benefit analysis component which can be used by city planners to evaluate the costs of various rates of integration of transport technologies (such as electric buses) vs the health benefits accumulated during a set period.

As GGGI transitioned to assist governments in provincial/local levels, its involvement in providing recommendations around the provision of local solutions fostering sustainable services has increased. Examples of this are public transport policy recommendations for the states of Morelos (2016-17) and Sonora (2018), plus studies evaluating circular economy solutions for the city's waste (with support from the Korean Knowledge Sharing Program, KSP; 2019-20).

3. GREEN INVESTMENTS

As part of the Sonora Green Growth Strategy, GGGI fostered the development of local capacities within the State's Financial Secretariat by developing of a subnational green bond framework, which is replicable across Mexico's 32 states. GGGI also prepared the Municipal Pooled Finance Mechanism (2017-19) for Mexico's Secretariat of Finance (SHCP). Both knowledge products were developed to lower entry barriers of a sector with traditionally little or no take-up subnationally (despite having better prospects than traditional borrowing).

More recently, between 2019-21 GGGI has implemented the *GCF Readiness Program*, which supports the SHCP plus national development banks, NAFIN and BANOBRAS, to mobilize climate finance and enhance their institutional capacities to access GCF funds. Some key deliverables within this project are Mexico's Country Programme; the No Objection Procedure; the generation of institutional capacities within NAFIN and BANOBRAS in gender, environmental and social risks management in support of their accreditation as Direct Access Entities before the GCF; plus supporting SHCP in launching the Green Finance Taskforce of the Inter-Ministerial Climate Change Commission and its efforts in support of the development of a Sustainable Taxonomy for Mexico.

Box 1. About GGGI

GGGI was founded to support and promote a model of economic growth known as "green growth", which targets key aspects of economic performance such as poverty reduction, job creation, social inclusion, and environmental sustainability.

GGGI envisions a resilient world achieved through strong, inclusive, and sustainable growth, and is dedicated to supporting the transition of GGGI partner countries toward a green growth model. In pursuit of these goals, GGGI works with developing and emerging countries to design and deliver programs and services that demonstrate new pathways to pro-poor economic growth.

GGGI supports stakeholders through two complementary and integrated work streams—Green Growth Planning & Implementation, and Investment & Policy Solutions—that deliver comprehensive products and services designed to assist in developing, financing, and mainstreaming green growth into nation economic development plans.

GGGI's interventions emphasize changes in four priority areas considered to be essential to transforming countries' economies including energy, water, land use and green cities.

Headquartered in Seoul, Republic of Korea, GGGI has representation in 38 partner countries.

2.Country Overview and National Goals and Targets

2.1 Country Overview

With a population of around 126 million, Mexico is among the 15 largest economies of the world and the second largest in Latin America. It has strong macroeconomic institutions and a significant openness to trade (11 Free Trade Agreements with 46 countries[5]). While its economy is largely services (64.5% of GDP) and manufacture (31.9%) based[6], a large informal sector employs half of the workforce, which adds to fiscal, regulatory and wellbeing complexities. Roughly 48% of the population was below the poverty line in 2018 (CONEVAL). In 2020, the covid-19 pandemic caused Mexico's economy to drop 9%.

Mexico is the world's 12th emitter of greenhouse gas emissions (GHG), driven primarily by the power and transport sectors. Mexico's recently updated NDCs (December 2020) include ambitious adaptation and mitigation goals to unconditionally reduce GHG emissions by 22% and 51% of black carbon emissions by 2030 (as compared to the baseline business-as usual scenario or BAU), and to increase its contribution to up to 36% of GHG emissions and 70% of black carbon emissions, conditional to significant international assistance (namely, access to appropriate technology transfer and financial resource mobilization). In its updated NDCs, Mexico recognizes that both climate adaptation and mitigation are key elements for the consolidation of trajectories that are more resilient to climate impacts and that enhancing these synergies will have an integral benefit for the development of the country and may generate structural changes and modifications in the patterns of production and consumption.

To provide policymakers in our partner countries with universal benchmark metrics on which to compare their green growth performance against their peers and to provide them with insights in support of policy development, GGGI launched the first benchmarked *Green Growth Index* in 2019. This composite index measures a country's performance in achieving sustainability targets including Sustainable Development Goals (SDGs), Paris Climate Agreement, and Aichi Biodiversity Targets for four green growth dimensions – *efficient and sustainable resource use*, *natural capital protection*, *green economic opportunities, and social inclusion* (see Figures 3 and 4 below for further details).

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[5] https://www.gob.mx/se/acciones-y-programas/trade-and-investment

[6] https://www.cia.gov/the-world-factbook/countries/mexico/#economy

Figure 2. Country at a Glance

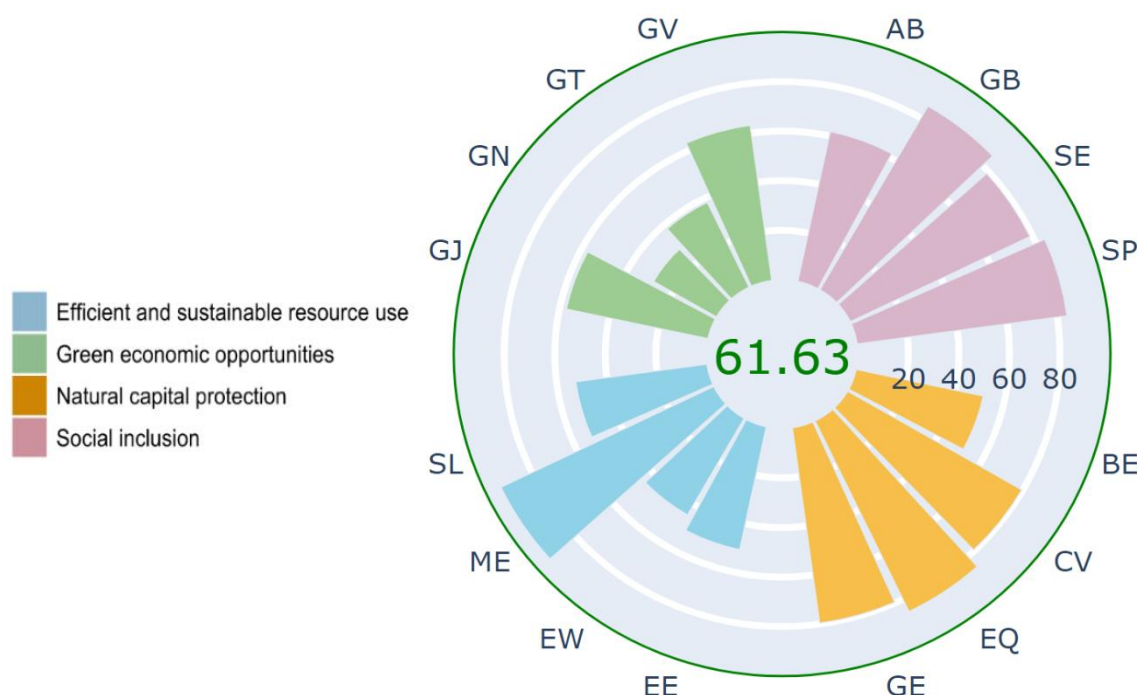| Country at a Glance			
Indicator Name	**Data**	**Year**	**Source**
Population	126,014,024	2020	INEGI
GDP per capita, PPP (current international $)	20,944.00	2019	World Bank
World Bank income group classification	Upper-Middle Income Economy	2019	World Bank
Poverty incidence	48.8; 16.8 (extreme)	2018	CONEVAL
Unemployment total (% of total labour force)	4.7 (Mujeres: 4.2; Hombres: 5.0)	2020	INEGI
Informal Economy Employment Rate, %	56.1	2020	INEGI
Inflation, consumer prices annual %	3.76	2021	INEGI
Central government debt, total (% of GDP)	53.5	2020	SHCP
ODA as a percentage of overall government budget	0.208	2019	World Bank
Human Development Index (Ranking)	74th	2020	UNDP
Gender Inequality Index (Ranking)	71st	2020	UNDP
Gini coefficient	45.4	2018	World Bank
CO2e emissions (metric tons per capita)	3.9	2016	World Bank
Forest area (% of land area)	34	2016	World Bank
Agricultural land (% of land area)	55	2016	World Bank
Agriculture, value added (% of GDP)	3.5	2019	World Bank
Renewable energy consumption (% total final consumption)	10.5	2019	IEA
Fossil fuel energy consumption (% of total)	89.4	2019	IEA
Annual freshwater withdrawals (% of internal resources)	20	2012	World Bank
Urban population growth (annual %)	1.45	2019	World Bank
Urban population (% of total)	80.4	2019	World Bank
Sanitation facilities (% of population with access)	52.2	2017	World Bank
Environmental Performance Index (Ranking)	72st	2018	Yale
Global Competitiveness Index (Ranking)	51 st	2017	WEF
ND-GAIN Adaptation Index (Ranking)[7]	82nd	2020	ND-GAIN

With score of 61.64 in the Green Growth Index (2020) [8], Mexico ranks first among its North and Latin American peers; nevertheless, the country shows great potential to improve its performance further and generate inclusive prosperity while achieving sustainability targets. Figure 3 visually condenses such areas of improvement in the dimensions of Green Economic Opportunities (particularly under Green Innovation/GN and Green Trade/GT), Efficient and Sustainable Resource Use (particularly under sustainable land use/SL, energy efficiency/EE and efficient and sustainable water use/EW) and Natural Capital Protection (particularly under Biodiversity and Ecosystem Protection/BE).

Figure 3. Green Growth Index, 2020

Dimension	Indicator / Acronym	
EFFICIENT AND SUSTAINABLE RESOURCE USE	* Efficient and sustainable energy (EE)	* Sustainable land use (SL)
	* Efficient and sustainable water use (EW)	* Material use efficiency (ME)
NATURAL CAPITAL PROTECTION	Environmental quality (EQ)	Greenhouse gas emissions reductions (GE)
	Biodiversity and ecosystem protection (BE)	Cultural and social value (CV)
GREEN ECONOMIC OPPORTUNITIES	Green investment (GV)	Green employment (GJ)
	Green trade (GT)	Green innovation (GN)
SOCIAL INCLUSION	Access to basic services and resources (AB)	Gender balance (GB)
	Social equity (SE)	Social protection (SP)

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[7] The Notre Dame Global Adaptation Initiative (ND-GAIN) Country Index summarizes a country's vulnerability to climate change and other global challenges in combination with its readiness to improve resilience.
[8] https://greengrowthindex.gggi.org/wp-content/uploads/2021/01/2020-Green-Growth-Index.pdf

Legend:
- Efficient and sustainable resource use
- Green economic opportunities
- Natural capital protection
- Social inclusion

61.63

2.2 Key Challenges

From a broad set of green growth challenges and opportunities, the CPF 2021-2025 has identified the following areas of focus to lend a strategic approach to country-level initiatives and contribute to transformational impacts in the long term:

- *Reduce poverty and construct social welfare.* The current administration recognizes social and economic inequality as key factors affecting the wellbeing of the population. In Mexico's National Development Plan 2019-2024[9], the government sets poverty alleviation and inclusive economic growth as top government priorities.

- *Enhance capacities to mobilize significant climate finance flows.* Mexico's National Strategy for the Implementation of the 2030 Agenda plus various climate change policies of the country call for concrete actions to mobilize even more green investments. As stated in the previous section, Mexico will need to mobilize important climate finance to comply with its unconditional NDCs (circa 10% of its GDP[10] or US$126 billion[11]) and mitigate 1,520 MtCO2e by 2030. The leading sectors are the electricity sector (US$67.7 billion, 54% of the total) followed by the transportation sector (US$29.5 billion, 24%), the USCUSS forestry and land use sector (US$11.8 billion, 9%) and the industrial

sector (US$7.8 billion, 6%). As of 2018, INECC estimated that Mexico invested 8% of its financial capital to mitigate climate change to which it committed when entering into the Paris Agreement (i.e., 10,146 million dollars). Similarly, the GFLAC estimates that considering the financing channelled through public international sources, the national public sector, green bonds and private banking between 2014 and 2018 equivalent to $ 7.703 million dollars, only 6% of the $ 126 billion goal in mitigation. In parallel, out of 21 countries surveyed, Mexico ranks 18th in the regional *Sustainable*

Figure 4. Mexico's unconditional NDC implementation costs, billion USD (INECC, 2018)
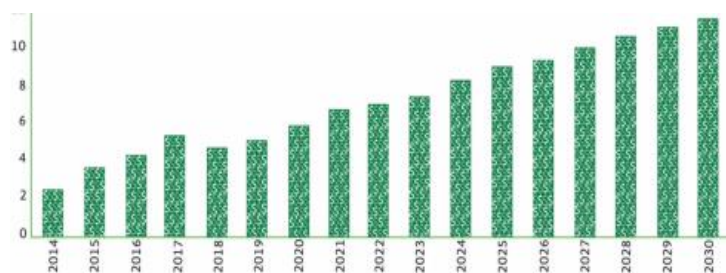
Hence, a greater mobilization of resources is necessary to meet the goals of interest. Enhancing both greater flows and sustainability of climate finance will require encouraging greater private investment in low-carbon technologies plus investments that have a social return; for this, the government should promote the strengthening and sustainability of its finances through the integration of Environmental, Social and

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[9] National Development Plan 2019-2024
[10] 2019 estimates
[11] INECC. (2018). *Costos de las Contribuciones Nacionalmente Determinadas de México. Medidas Sectoriales No Condicionadas*. Final report. National Institute of Ecology and Climate Change (INECC), Mexico

[12] https://www.sustainablefinance4future.org/principales-resultados-edicion-2020

Governance (ESG) standards in its financial sector.

- ***Wider adoption of climate technologies while integrating solutions considering local contexts and traditional customs.*** This is reflected in Mexico's environment sector plan PROMARNAT 2020-2024, under Priority 2 (*"Strengthen climate action in order to move towards a low-carbon economy and a resilient population, ecosystems, productive systems and strategic infrastructure, with the support of available scientific, traditional and technological knowledge"*); in parallel, Mexico's 6th National Communication of Climate Change identifies opportunities to foster a wider adoption of climate technologies (including but not limiting to the energy sector), which could serve as points of entry for subsequent relevant interventions.

- ***Paradigm shift towards clean energy***. Globally, clean energy production is projected to overtake gas and coal generation capacities as early as 2024[13]. Hence, a shift away from fossils and towards renewable energies, accompanied by larger investments in energy storage and smart grids could prove beneficial in the long run. The GoM seeks to improve energy access through distributed generation and bolster energy independence and reliance through a strategy which, at least at the short-term, is decreasing the rate of renewable energy uptake and investment, with annual investment in renewables decreasing by 38% in 2018 and recovering by 17% the year after[14]. A key challenge for the government will be to articulate an energy strategy which is compatible with its NDC commitments and ensure the country can add 9.6 GW of additional capacity to meet its 2030 targets.

- ***High potential for gender equality and social inclusion.*** At 45%, participation of Mexican women in labour has space to improve in this area compared to other countries (Canada, 75%; United States, 70%; OECD average, 63%; Colombia, 60%; Brazil, 57%; Chile, 55%). Besides being an imperative for social justice, acknowledging entry points for bridging the gender gap in the labour force offers an opportunity to increase Mexico's GDP by $0.8 trillion (or an additional 70%) to Mexico's GDP[15]. Mounting evidence also shows that gender equality and the empowerment of women and youth accelerate achievement across the SDGs and is critical for effective climate action.

- ***Protect natural resources.*** Mexico's PROMARNAT 2020-2024[16] indicates that despite significant efforts made in recent years to protect and conserve forests, some biodiversity-rich states have lost up to 80% of their original ecosystems to agricultural land. Deforestation and degradation of ecosystems pose high risk of species' extinction: around half of the species of mammals, amphibians and reptiles known in the country. Protecting Mexico's natural resources necessarily entails the conservation and sustainable use of oceans, seas and marine resources for sustainable development, plus fostering a more sustainable use of land ecosystems, combating desertification, reversing land degradation and halting the loss of biological diversity, by carrying out governing actions by the Mexican state aligned to the promotion, verification and surveillance of the regulatory framework in the field of natural resources.

- ***Foster a greener post Covid-19 recovery.*** Intertwined with the previous point, Mexico's federal and subnational governments face a challenge and an opportunity when designing stimulus packages: whether to use public funds to maintain the Business as Usual (BAU) scenario or implement transformational measures and set the course for the global economy for years to come.

2.3 Policy Landscape

Building on GGGI's previous interventions, this CPF 2021-2025 aligns with relevant government policies in the areas of inclusive growth, aiming to sustain poverty alleviation and equality (enshrined in the National Development Plan 2019-2024) and climate action efforts (as stated in Mexico's Mid-Century Strategy, Climate Change Special Plan, the 2020 updated version of Mexico's NDCs[17] and the 2030 Agenda):

- **National Development Plan (2019-2024).** The 2019-2024 National Development Plan (NDP) aims to promote "*a development model that is respectful of the inhabitants and the habitat, equitable, aimed at correcting and not exacerbate inequalities, defender of cultural diversity and the natural environment, sensitive to both regional and local economic modalities and singularities, in addition to being aware of the needs of the future inhabitants of the country, from whom we cannot inherit a territory in ruins*". Its Social Policy section commits to promoting sustainable development, and that the Federal Executive will consider in all circumstances the impacts that its policies and programs will have on the social fabric, ecology and political and economic horizons of the country. In addition, it will be guided by an idea of development that remedies social injustices and promotes economic growth without causing harm to peaceful coexistence, ties of solidarity, cultural diversity or the environment.

[13] https://www.carbonbrief.org/iea-wind-and-solar-capacity-will-overtake-both-gas-and-coal-globally-by-2024

[14] *Global Trends in Renewable Energy Investment 2019* and *Global Trends in Renewable Energy Investment 2020* Reports; Frankfurt School-UNEP Collaborating Centre. Available at https://www.fs-unep-centre.org

[15] https://www.mckinsey.com/~/media/mckinsey/featured%20insights/americas/one%20aspiration%20two%20realities%20promoting%20gender%20equality%20in%20mexico/one-aspiration-two-realities-promoting-gender-equality-in-mexico.ashx

[16] https://www.dof.gob.mx/nota_detalle.php?codigo=5596232&fecha=07/07/2020

[17] https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Mexico%20First/NDC-Eng-Dec30.pdf

- **Environmental Sector Programme, PROMARNAT 2020-2024.** Derived from the National Development Plan, SEMARNAT (in coordination with the decentralized institutions from the sector it leads) contemplates specific goals and actions to prevent and protect the environment, which are indicated in the PROMARNAT 2020-2024. Relevant priority objectives from the PROMARNAT 2020-2024 are highlighted below:

Figure 6: PROMARNAT 2020-2024's Priority Objectives

Priority objectives of the Sectorial Program for Environment and Natural Resources 2020-2024
1.- Promote the conservation, protection, restoration and sustainable use of ecosystems and their biodiversity with a territorial and human rights approach, considering biocultural regions, to maintain functional ecosystems that are the basis for the well-being of the population.
2.- Strengthen climate action to move towards a low-carbon economy and a resilient population, ecosystems, productive systems and strategic infrastructure, with the support of available scientific, traditional and technological knowledge.
3.- Promote water as a pillar of well-being, managed by transparent, reliable, efficient and effective institutions that ensure a healthy environment and where a participatory society is involved in its management.
4.- Promote an environment free of contamination of water, air and soil that contributes to the full exercise of the right to a healthy environment.
5.- Strengthen environmental governance through free, effective, meaningful and co-responsible citizen participation in public policy decisions, ensuring access to environmental justice with a territorial and human rights approach and promoting environmental education and culture.

Nationally Determined Contributions (NDC): In its 2020 NDC updated version, Mexico confirmed its unconditional target of 22% GHG emissions and 51% of black carbon emissions by 2030 as compared to the BAU baseline and increases its attention in the reduction of vulnerabilities through a more comprehensive adaptation plan.

1) ADAPTATION. The Adaptation component expands its scope by integrating cross-cutting elements such as Nature-based Solutions (NBS) and Community-Based Adaptation (CBA) approaches; Ecosystem-Based Adaptation (EBA); as well as Disaster Risk Reduction (DRR) based on Adaptation. This component is divided in five subcomponents:

    a. Prevention and management of negative impacts on the human population and the territory,
    b. Resilient production systems and food safety,
    c. Conservation, restoration and sustainable use of biodiversity and ecosystem services,
    d. Comprehensive water resources management with a focus on climate change,
    e. Protection of strategic infrastructure and tangible cultural heritage.

2) MITIGATION. This component emphasizes the following sectors:

    a. Transport sector: the promotion of clean transportation programs and the development and implementation of the National Electric Mobility Strategy;
    b. Power generation: through actions that increase the participation of clean energy in the national electric network;
    c. Residential and commercial: optimize energy consumption in housing and businesses, plus promote best practices in constructions and renovations;
    d. Oil and gas: optimization of the processes of the refining and processing systems;
    e. Industry: encompassing the entire production system to promote a circular economy;
    f. Agriculture and livestock: best agricultural and conservation practices, the promotion of agroforestry and agroecological systems, the reduction of agricultural fires and the promotion of bio-digester technologies to treat livestock residues;
    g. Waste: disposal, reuse, recycling, composting, and bio digestion (i. e. biogas from WWTPs);
    h. Land use, Land use change and forestry: ecological restoration projects that will allow the recovery of unused and degraded soils.

Figure 7: Baseline and GHG Reduction Goals by Sector (INECC, 2020)

Sector	2013	2020	2025	2030
	MtCO$_2$e			
Transport	174	201	225	250
Power generation	149	166	174	186
Industry	124	149	173	199
Agriculture and livestock	98	106	114	122
Oil and gas	73	70	93	101
Waste	44	50	52	56
Residential y commercial	26	26	27	28
Land-use change and forestry (LUCF) (emission)	21	36	42	49
Total gross emissions	**709**	**804**	**902**	**991**
LUCF (absorption))	-169	-163	-161	-158

Gender inclusion. The National Development Plan (2019-24) mainstreams gender equality and women's empowerment in all its areas. Other key policies in place include the National Gender Equality Policy which is focused on advancing substantive equality in the country. The institutionalization of gender equality and the empowerment of women is demonstrated through various programs and increased public resources earmarked for gender equality e.g., Mexico's National Institute of Women (INMUJERES)[18] has rolled out an ambitious programme[19] comprised of 3 objectives:

1. Coordinate and promote the implementation of the National Policy on Equality between Women and Men to contribute to the well-being, justice and a life free of violence for women and girls;
2. Guide and strengthen public and private work to achieve substantive equality between women and men; and
3. Promote cultural changes that favour the full exercise of women's rights and their leadership as protagonists of development and key actors in the transformation of the country.

2030 Agenda: Mexico has embraced the sustainable development agenda of the United Nations and, since 2014, collaborates with the United Nations Development Programme (UNDP) in the monitoring of social development indicators related to 11 of the 17 Millennium Development Goals (MDG), mainly those related to the reduction of extreme poverty, primary education, women empowerment and equity, and maternity health. The current GoM integrated a Sustainable Development Goals Information System (SIODS), a tool jointly developed by the Coordination of the National Digital Strategy of the Presidency of the Republic and the National Institute of Statistics and Geography (INEGI) and makes it available to users Information on progress in the follow-up of the 2030 Agenda for Sustainable Development.

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[18] INMUJERES's main purpose is to promote government actions to prevent discrimination, create equal opportunity, and foster conditions that facilitate equal participation of women in the social, economic, and political realm.

[19] https://www.gob.mx/cms/uploads/attachment/file/558433/PI-inmujeres-pnd.pdf

3. Programmatic Solutions and Intended Results

## 3.1 Overview of the programmatic solutions and summary of rationale

Between June and October 2020, GGGI conducted a consultation process among key Mexico stakeholders. The aim was to gather diverse visions around the country's most pressing challenges, opportunities, plus prioritize sectoral approaches where GGGI is best positioned to make impactful contributions. The consultation process was two-fold: high-level dialogues with SHCP, SEMARNAT, the Secretariat for Foreign Affairs (SRE), plus a structured survey sent to a broader list of stakeholders from the Federal and subnational governments, academia, cooperation agencies, embassies and the private sector. This exercise was instrumental to identify those programmatic solutions where GGGI is catalytic and has built track record already, plus identify emergent areas for support.

The survey was close to gender balanced (men 53%, women 47%). A fifth (21%) of the respondents represented the Federal government, closely followed by local government representatives (19%), international cooperation agencies and embassies (18%) plus civil society and non-profit organizations (CSOs/NGOs; 15%).

The survey allowed GGGI to elicit from the respondents which of GGGI's Global Operative Priorities and Programmatic Solutions are more relevant to the country and where the office of GGGI in Mexico is better placed to provide catalytic support to federal and local stakeholders. Respondents were asked to match GGGI's mandate, trajectory and strategic position with Mexico's most pressing challenges, opportunities and priorities. When asked to prioritize the relevance of GGGI's GOPs in the Mexican context, the top responses were *GOP1: Catalyse and accelerate access to climate finance and green investments*, followed by *GOP2. Support the strengthening of policies, regulatory frameworks and institutional capacity to achieve green growth outcomes* and GOP4 *Make cities sustainable, liveable and resilient through green jobs, services and infrastructure innovations.* Analogously, the consultation elicited the following ranking of GGGI Programmatic Solutions when inquiring on their relevance to stakeholders, shown in detail in Figure 8 below:

Figure 8. Survey results, match of GGGI's role with Mexico's pressing challenges
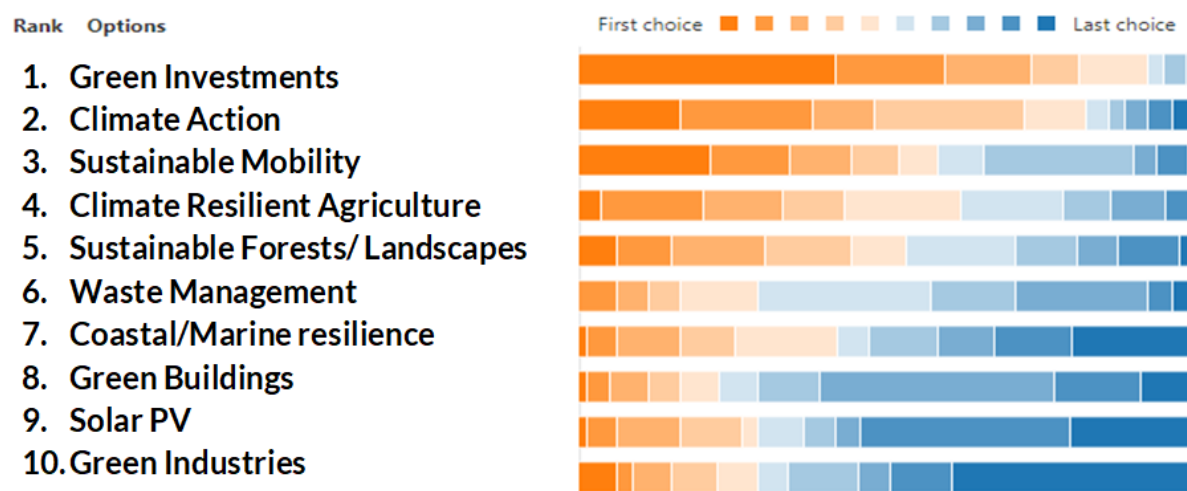
In all, the most relevant findings of the consultation process are summarized below:

- GGGI's current strategic approach is validated (*Green Investments* and *Climate Action*). In particular the relevance of Green Investments for consulted stakeholders is clear with 40% of respondents identifying it as the most relevant and over 70% as one of the top three relevant PS. A close second in terms of top preference is Climate Action. This could be understood as a recognition of GGGI's track record in these solutions throughout recent years fostering institutional capacities (i.e., GCF Readiness Programme; support to CNBV; subnational green growth and post-covid-19 recovery efforts), plus a validation to consolidate these solutions further.
- There is a call to deepen support for the **structuring of bankable projects** and for the **design, finance and implementation of green projects**. Consultations yielded a strong desire for moving towards implementation and for supporting the development of local projects. This mandate bodes well with the identified importance of transport to achieve NDC national targets and the need for support for the development of sustainable transport solutions.
- There is an opportunity to leverage integrated landscape and marine approaches in the country (i.e., *Climate Resilient Agriculture, Sustainable Forests/Landscapes and Coastal/Marine Resilience)*. Consulted stakeholders value GGGI's approach plus welcome regional knowledge transfer and organic linkages among land/marine interventions. GGGI Mexico is well poised to leverage expertise from other GGGI programmes in the region and elsewhere (such as Colombia and Indonesia) where there is a clear track record of impactful interventions and link it with current work in GGGI Mexico helping to mobilise climate finance.

- Stakeholders see different priority needs for the country with all GGGI's Programmatic Solutions viewed as relevant by a significant number of consulted parties. While a clear majority of consulted parties view *Green Investments*, *Climate Action* and *Sustainable Mobility* as the top priorities (with one of the three PS selected as the top priority by 80% of respondents), there is also significant demand for GGGI's PS support and GGGI should remain open to support emerging opportunities in these PS.

3.2 Programmatic Solutions, Strategic Outcomes, and Intermediate Outcomes

PS1 Green Investments. Through this solution, GGGI aims to support the strengthening of institutional capacities to increase both flows, sustainability and greater democratization of access to inclusive[20] climate finance. To this end, GGGI will partner with federal (SHCP, public development banks and regulators) and subnational entities to foster innovative national financial mechanisms (including but not limiting to climate sectoral facilities, trust funds, thematic bonds); enhance capacity development through knowledge exchange and foster strong inter-institutional governance. ; This involvement will yield the development of 20 technical advisory documents, green investment proposals and high-quality concept notes accruing to US$650 million (in total), ultimately enhancing access to global funds (i.e. GCF). to generate.

PS2 Climate Action. Through the provision of technical assistance to national and local counterparts to mainstream their climate agendas (plus enabling conditions) to ultimately

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[20] Actions on gender issues observing the principles of intergenerational equity, attention to local communities and Indigenous peoples,

environmental justice, respect for human rights, democratic governance, transparency and citizen participation.

increase overall climate ambition. Specific avenues for this are the development of 20 policy advisory documents in the form of green growth strategies and subnational recovery plans; analysis of potential socio-economic co-benefits (i.e., green jobs); design and operationalization of MRV systems to estimate GHG emissions; launching sectoral initiatives (e.g., circular economy, green entrepreneurship), plus the provision of 10 capacity building and other knowledge exchanges. To this end, GGGI will work jointly with SEMARNAT, INECC, relevant secretariats (in an *ad hoc* manner) plus local/subnational authorities to shift focus towards finance (mobilizing US$50 million for investments) and implementation.

PS4 Sustainable Forests/Landscapes. To ensure a sustainable circular bioeconomy which secures healthy natural systems, GGGI will foster wellbeing creation practices using a sustainable land use approach, replacing deforestation with regeneration and harnessing the AFOLU sector as an engine for green jobs, greener recovery plus enhanced gender inclusion. As agriculture, water and forests are relevant to the landscape solution, GGGI aims to collaborate with relevant stakeholders (SEMARNAT, the National Forestry Commission/CONAFOR, the National Water Commission/CONAGUA, and the Secretariat for Agriculture and Rural Development/SADER) plus local-level public, private and non-state actors. Through consultations, GGGI will elicit entry points for regenerative interventions conducive to increasing overall resilience and sustainability of AFOLU value chains (exploring sustainable silvopasture, timber and palm oil practices) and results-based payments, which will in turn lead to greater economic opportunities derived from activities of conservation and restoration of natural resources.

PS6 Waste Management. Through this PS, GGGI aims to provide comprehensive solutions away from linear and towards circular approaches to waste. In this new paradigm, economic outputs are recycled, reused, repaired, repurposed, and waste itself is significantly reduced, lessening environmental and social impacts of final disposal and finding opportunities for GHG abatement and soil restoration. Different and diverse waste streams are considered in this PS, with the development of biogas from organic solid waste and wastewater from municipal, agricultural and industrial sources being a prime example of this approach. Namely, GGGI will consult SEMARNAT, INECC and local authorities to elicit maximizing waste-to-resource investment entry points (in the form of concept notes, PPPs, thematic bonds or trust funds) in the waste value chain to fund relevant, low-carbon solutions (e.g., biogas production facilities for wholesale food markets and mid-sized cities; e-waste management; agricultural producers; etc) which are aligned to NDC targets plus foster green jobs and increase women's access to sustainable services and economic opportunities in this sector.

PS7 Sustainable Mobility/Transport. Within this PS, GGGI will support relevant stakeholders to accelerate the transition to a more inclusive and less-carbon intensive mobility, as it is key to achieve Mexico's NDCs. This will be accomplished through support to fund key initiatives to mainstream electric transport from virtually accredited GCF Direct Access Entities BANOBRAS (PROTRAM) and NAFIN (electric cab fleet), plus ad hoc support to relevant initiatives by the Secretariats of Economy and Communications and Transport / SCT. In parallel, GGGI will leverage the Zero Emission Bur Rapid Development Accelerator (ZEBRA) partnership, along other organizations ((i.e., P4G, ICCT, C40, WRI) to accelerate the adoption of electric buses in cities. Lastly, GGGI aims to accelerate private sector participation to advance public transport electrification and the development of integrated transport systems in Mexico, through the structuring of the blended finance.

To facilitate a better understanding of causal linkages and pathways among GGGI's programmatic solutions, intermediate outcomes[21] and strategic outcomes[22] in Mexico, the impact pathway diagram in the next page (Annex 1) provides a visual summary of the CPF:

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[21] Intermediate outcomes are broadly covered in GGGI's 2030 Strategy: (i) strengthened national, sub-national, and local green growth policy planning, financing, and institutional frameworks; (ii) increased green investment flows; and (iii) improved multi-directional knowledge sharing and learning between countries on green growth

[22] *Ibid*. Strategic Outcomes: SO1 Green House Gas (GHG) emission reduction; SO2 Creation of green jobs, SO3 Increased access to sustainable services such as clean affordable energy, sustainable public transport, improved sanitation and sustainable waste management; SO4 Improved air quality, SO5 Adequate supply of ecosystem services and SO6 Enhanced adaptation to climate change

Programmatic Solution	Strategic Outcome[23]	Intermediate Outcome[24]
PS1 Green Investments		IO1: Strengthened national, sub-national, and local green growth policy planning, financing, and institutional frameworks • 20x policy outcomes (technical reports, policies)20x policy outcomes (technical reports, policies) IO2: Increased green investment flows • $650M USD (in total) mobilized
PS2 Climate Action		IO1: Strengthened national, sub-national, and local green growth policy planning, financing, and institutional frameworks • 20x policy outcomes (technical reports, policies) IO2: Increased green investment flows • $50M USD mobilized IO3: Improved multidirectional knowledge sharing and learning between countries on green growth • 10x capacity development events of Mexico's NDA, DAEs/EEs and subnational counterparts
PS4 Sustainable Landscapes[25]	SO1: GHG emission reduction (attributed): • 30,000,000 tons CO2e SO2: Green jobs generated by project: • 5,000 people (attributed) SO5: Supply of ecosystem services ensured: • 18ha (estimated; attributed) SO6: Enhanced adaptation to climate change: • 90,000 people benefited (attributed) and 360,000 (contributed)	IO2: Increased green investment flows • 3x projects mobilize $30M USD in total (i.e. GCF concept notes/REDD/SAP; donor) IO3: Improved multidirectional knowledge sharing and learning between countries on green growth • 3x sectoral knowledge exchange (i.e., Colombia – Mexico forestry roundtable targeting MRV/accounting, finance, value chain approach)
PS6 Waste Management[26]	SO1: GHG emission reduction (attributed): • 1,000,000 tons CO2e SO2: Green jobs generated by project: • 20,000 people (attributed) O3: Increased access to sustainable services • 1.5M people (attributed) O6: Enhanced adaptation to climate change (attributed): • 1.5M people benefited (contributed)	IO2: Increased green investment flows • $300M USD Investment project on waste management/waste-to-energy.
PS7 Sustainable Mobility[27]	SO1: GHG emission reduction (attributed) • 6,400,000 tons CO2e SO3: Improved access to sustainable services: • 2.88M people O4: Improved air quality N/A	IO1: Strengthened national, sub-national, and local green growth policy planning, financing, and institutional frameworks • 2x Policy recommendations, advisory documents and technical support to finance and implement an electric public transport program (e-PROTRAM) IO2: Increased green investment flows • 1 National project Facility (e-PROTRAM) + 3 projects (ZEBRA) mobilize $250M USD

[23] Strategic Outcomes (SO): 1) GHG emissions reduction; 2) Creation of green jobs; 3) Increased access to sustainable services; 4) Improved air quality; 5) Adequate supply of ecosystem services; 6) Enhanced adaptation to climate change

[24] Intermediate Outcomes (IO): 1) strengthened national, sub-national, and local green growth policy planning, financing, and institutional frameworks; 2) increased green investment flows; and 3) improved multidirectional knowledge sharing and learning between countries on green growth.
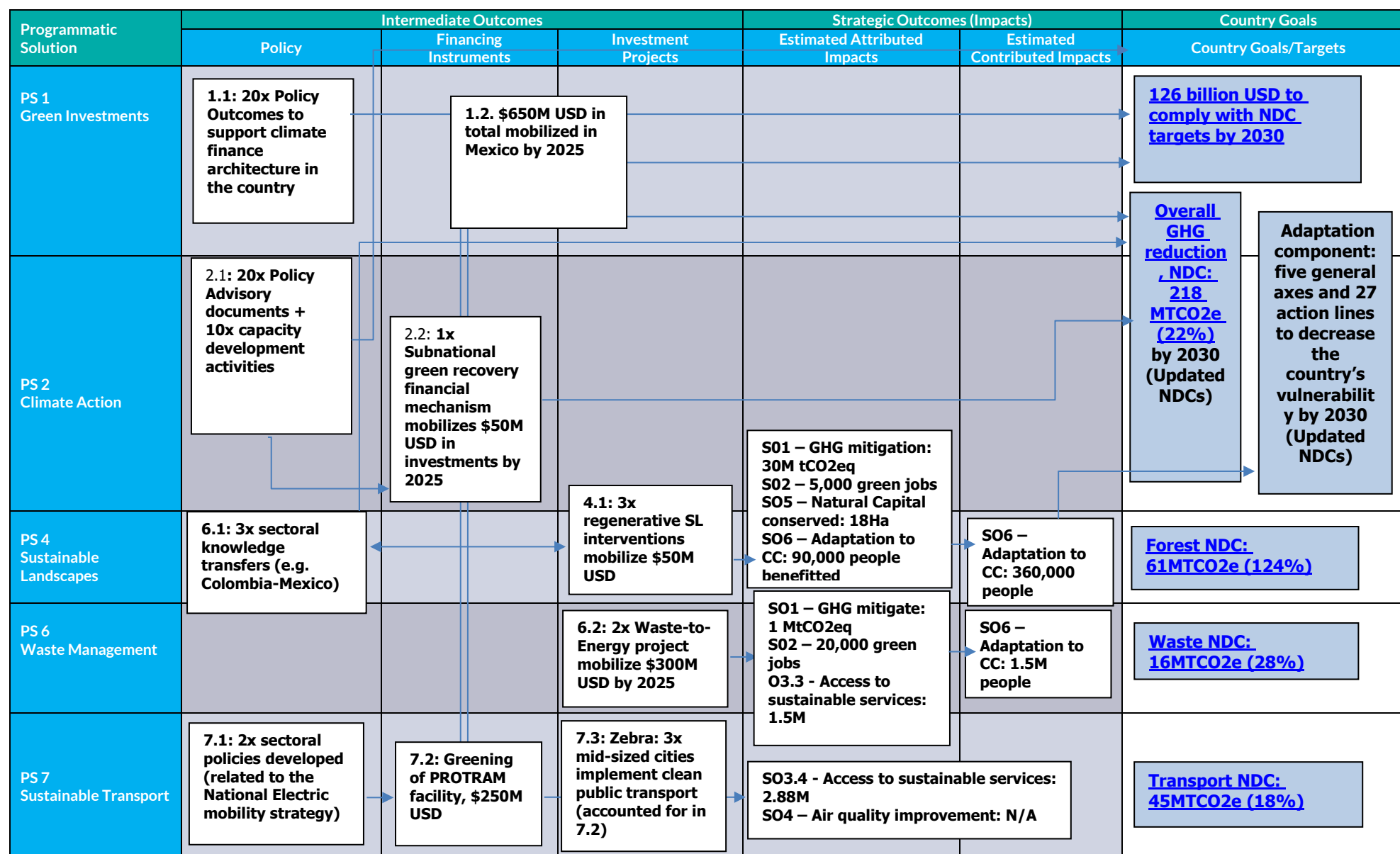
[25] Assumption: Inputs considered from a relevant sectoral initiative (Yucatán GCF Concept Note) are accurate

[26] Assumption: Inputs considered from a relevant sectoral initiative (Hermosillo biogas facility feasibility) are accurate

[27] Assumption: Inputs from a relevant initiative (PROTRAM GCF Concept Note) are accurate

Annex 1: Impact Pathway Diagram

Programmatic Solution	Intermediate Outcomes			Strategic Outcomes (Impacts)		Country Goals
	Policy	Financing Instruments	Investment Projects	Estimated Attributed Impacts	Estimated Contributed Impacts	Country Goals/Targets
PS 1 Green Investments	1.1: 20x Policy Outcomes to support climate finance architecture in the country	1.2: $650M USD in total mobilized in Mexico by 2025				126 billion USD to comply with NDC targets by 2030
PS 2 Climate Action	2.1: 20x Policy Advisory documents + 10x capacity development activities	2.2: 1x Subnational green recovery financial mechanism mobilizes $50M USD in investments by 2025	4.1: 3x regenerative SL interventions mobilize $50M USD	S01 – GHG mitigation: 30M tCO2eq S02 – 5,000 green jobs SO5 – Natural Capital conserved: 18Ha SO6 – Adaptation to CC: 90,000 people benefitted	SO6 – Adaptation to CC: 360,000 people	Overall GHG reduction, NDC: 218 MTCO2e (22%) by 2030 (Updated NDCs) / Adaptation component: five general axes and 27 action lines to decrease the country's vulnerability by 2030 (Updated NDCs)
PS 4 Sustainable Landscapes	6.1: 3x sectoral knowledge transfers (e.g. Colombia-Mexico)					Forest NDC: 61MTCO2e (124%)
PS 6 Waste Management			6.2: 2x Waste-to-Energy project mobilize $300M USD by 2025	SO1 – GHG mitigate: 1 MtCO2eq S02 – 20,000 green jobs O3.3 - Access to sustainable services: 1.5M	SO6 – Adaptation to CC: 1.5M people	Waste NDC: 16MTCO2e (28%)
PS 7 Sustainable Transport	7.1: 2x sectoral policies developed (related to the National Electric mobility strategy)	7.2: Greening of PROTRAM facility, $250M USD	7.3: Zebra: 3x mid-sized cities implement clean public transport (accounted for in 7.2)	SO3.4 - Access to sustainable services: 2.88M SO4 – Air quality improvement: N/A		Transport NDC: 45MTCO2e (18%)

GGGI