



INTEGRATED NDC X SDG INSIGHTS GUATEMALA

This initiative explores the NDC - SDG impact and leverages data, systems and finance analysis to pinpoint policy accelerators tailored to national context and sustainable development vision.



OBJECTIVES

This initiative explores the NDC-SDG connections by leveraging data, systems and finance analysis to pinpoint policy accelerators tailored to national context and a sustainable development vision.

A ROBUST CASE FOR NDC 3.0



Backed by national data and AI-driven tools, to pinpoint where key investments through NDCs can drive progress across national development priorities.

ALIGN POLICY PATHWAYS



Build coherence and common ground to help decision-makers maximize positive outcomes across climate and development goals.

ACT WITH CONFIDENCE

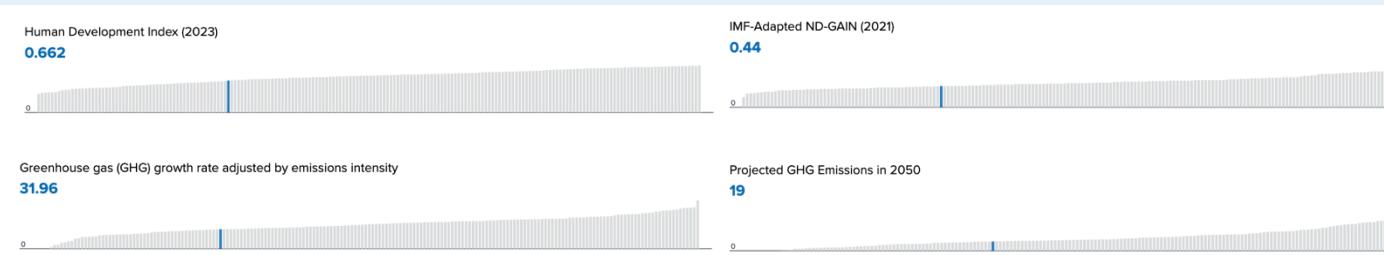


Tailored recommendations on integrated policy approaches, investment strategies, and finance opportunities to implement national strategies that align climate actions with development goals.

HOW TO READ THIS REPORT

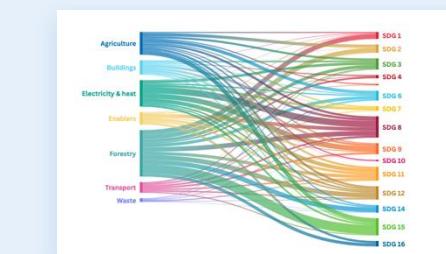
1

NDC x SDG Moment: human progress within planetary boundaries is the next development frontier. This section provides a snapshot of key climate and human development data.



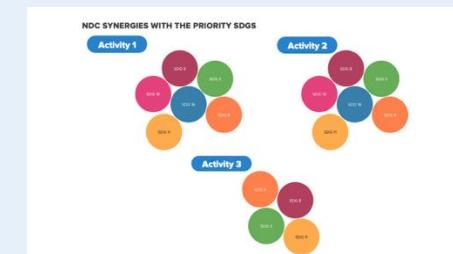
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NDC x SDG Alignment: maps climate commitments and national development priorities using custom machine learning tool that draws from an SDG vocabulary of 100k terms.



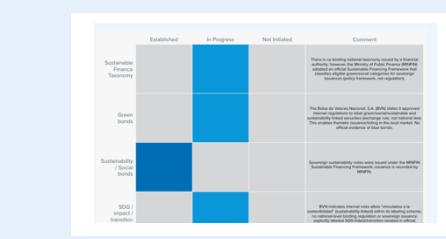
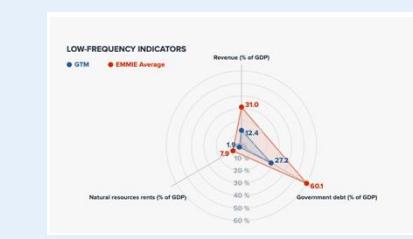
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NDC x SDG Interlinkages: identifies national-level actions through enhanced NDCs that accelerate SDG achievement and advances a robust development case.



4

Finance & Stimulus: charts fiscal constraints and stimulus opportunities to ensure climate and development policy choices can be advanced with greatest impact.



NDC x SDG Moment

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- 04 Finance & Stimulus



CLIMATE & DEVELOPMENT MOMENT:

As part of their NDC Guatemala has set a target of reducing emissions by

11.2%

Human activities are causing significant climate change with severe environmental and socio-economic consequences. Integrating climate action for emissions reduction and enhanced resilience into development strategies can **advance human development and provide multiple co-benefits**.

All countries are navigating through a period of profound global uncertainty and shrinking development space that is affecting the landscape of global growth. The vulnerability of debt is at its highest level in decades in many developing economies, coinciding with a period when donors are making substantial cuts to aid flows. With these global challenges, it's important to leverage finance and resources nationally to drive development priorities.

Guatemala is in the medium human development category (of 137th of 193) and the country's IMF Adapted ND-GAIN index indicates vulnerability to climate disruptions and some challenges to leveraging investments to adaptation actions. With a score of 19/100 for projected emissions levels in 2050, Guatemala is making progress in reducing its emissions. Guatemala's projected Biodiversity Intactness Index indicates a high potential impact on biodiversity in 2050 under high climate forcing scenarios.

Guatemala, the largest economy in Central America by nominal GDP, has demonstrated notable macroeconomic resilience over recent years, maintaining stable growth despite global headwinds. For 2025, real GDP growth is projected at 3.5–4.0% (IMF: 3.8%), primarily driven by robust domestic consumption and remittances — which accounted for over 21% of GDP in 2023 and remain a critical pillar of household demand. However, the K'atun 2032 Development Plan acknowledges that this growth has not significantly reduced poverty or inequality, challenges that persist: over 59% of the population lives in poverty, and labor informality affects more than 70% of workers. Stable growth is expected to continue into 2025, though structural constraints — including pervasive labor informality and underinvestment in infrastructure — continue to hinder more inclusive and equitable development.

Human Development

Human Development Index (2023)

0.662



Climate Impact and Adaptation

INFORM Climate Change Risk Index

● Historical (2022) ● RCP 4.5 SSP 1 (2050) ● RCP 8.5 SSP 3 (2050)

5.1

5.5

5.8

IMF-Adapted ND-GAIN (2021)

0.44



Mitigation

Greenhouse gas (GHG) growth rate adjusted by emissions intensity

31.96

Projected GHG Emissions in 2050

19



Biodiversity

Biodiversity Intactness Index

● Historical (2014) ● RCP 2.6 SSP 1 (2050) ● RCP 7.0 SSP 3 (2050)

0.48

0.6

0.61

Sources European Commission 2023 (INFORM Climate Change Risk Index), IMF 2022 (IMF-Adapted ND-GAIN Index); Environmental Performance Index 2024 (GHG growth rate adjusted by emissions intensity & Projected Emissions in 2050); Helen Phillips; Adriana De Palma; Ricardo E Gonzalez; Sara Contu et al. 2021 (Biodiversity Intactness Index).

NDC x SDG Alignment

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NDC x SDG Alignment

Goal Level

These visuals are generated by analyzing the NDCs and National Development Plans **through the SDG framework at goal level**. This analysis shows the most prominent SDGs in each of the two national strategies on climate and development. This approach helps to **identify areas of common action and potential synergies across national climate and development priorities**.

NATIONALLY DETERMINED CONTRIBUTION



Note: Based on Updated Nationally Determined Contribution (2022)

NATIONAL DEVELOPMENT PLAN(S)



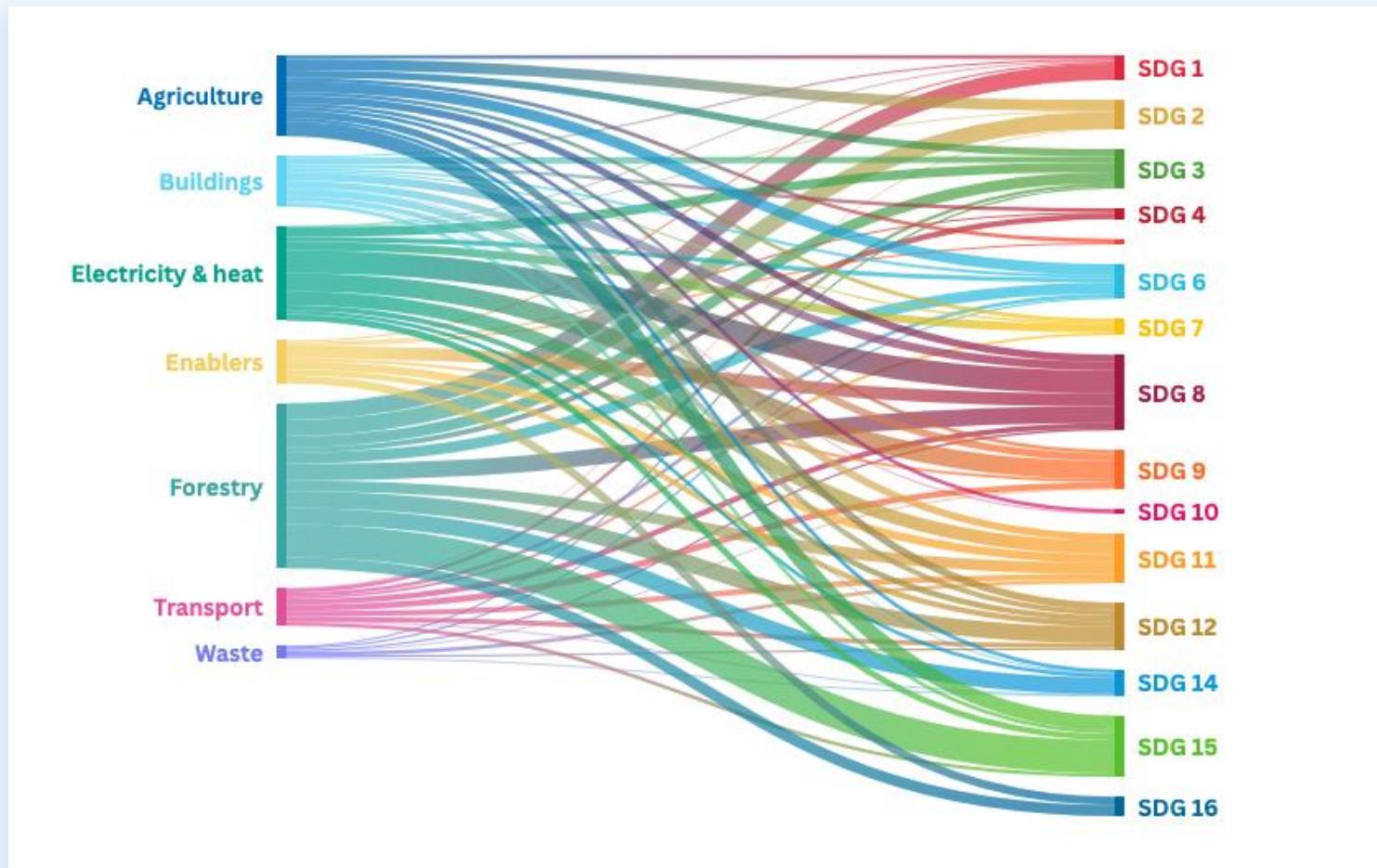
Note: Based on National Development Plan K'atun Our Guatemala 2032

NDC X SDG ALIGNMENT

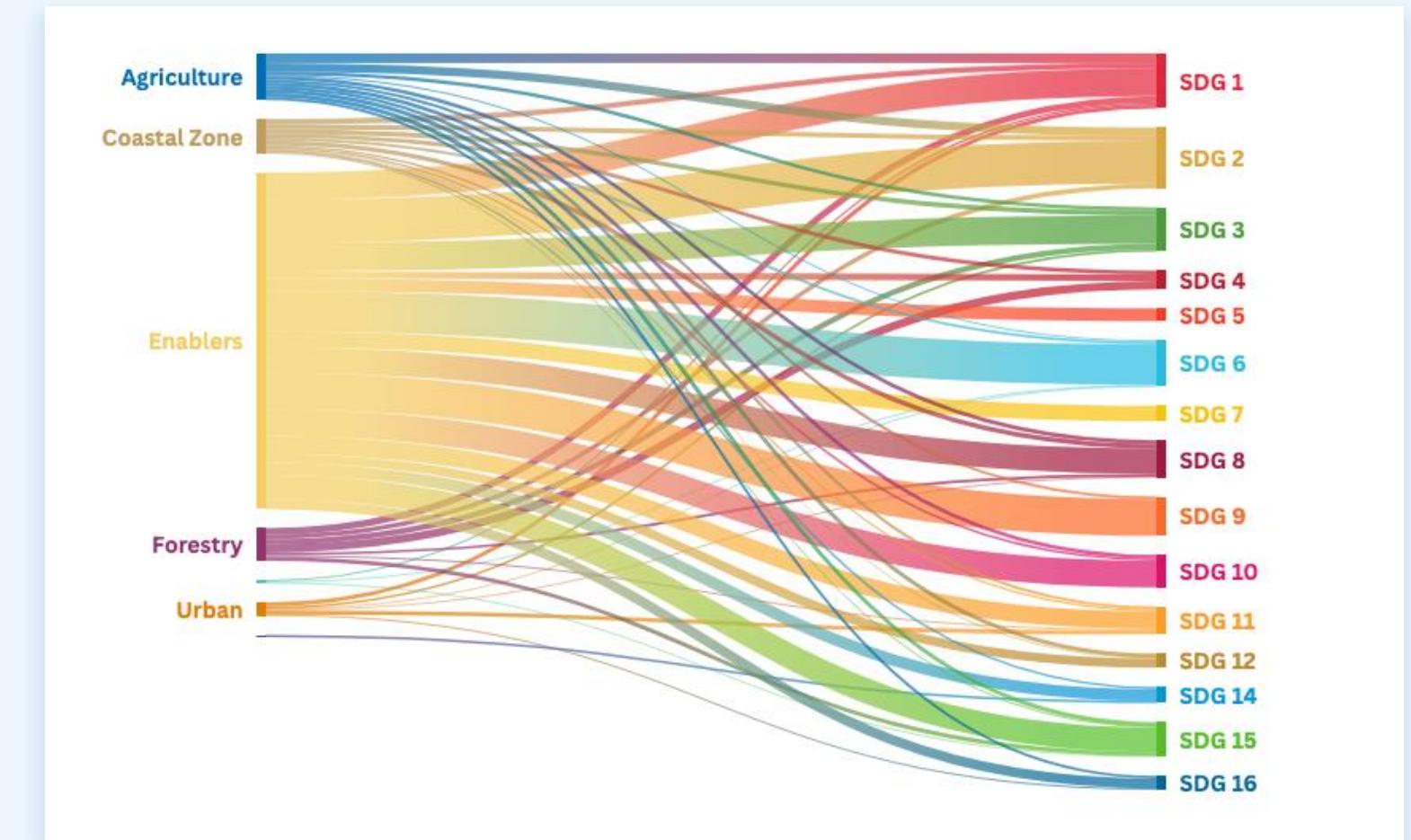
Target Level

These visuals are generated by analyzing NDC actions through a custom-built AI tool and categorized using the SCAN tool to surface relevant SDG synergies at the target level. This analysis provides a target level alignment of climate actions (mitigation and adaptation) with impact the SDGs for Guatemala.

MITIGATION NDCs



ADAPTATION NDCs



For additional information on the NDC-SDG mapping, please visit: https://ambitiontoaction.net/scan_tool/

NDC X SDG ALIGNMENT

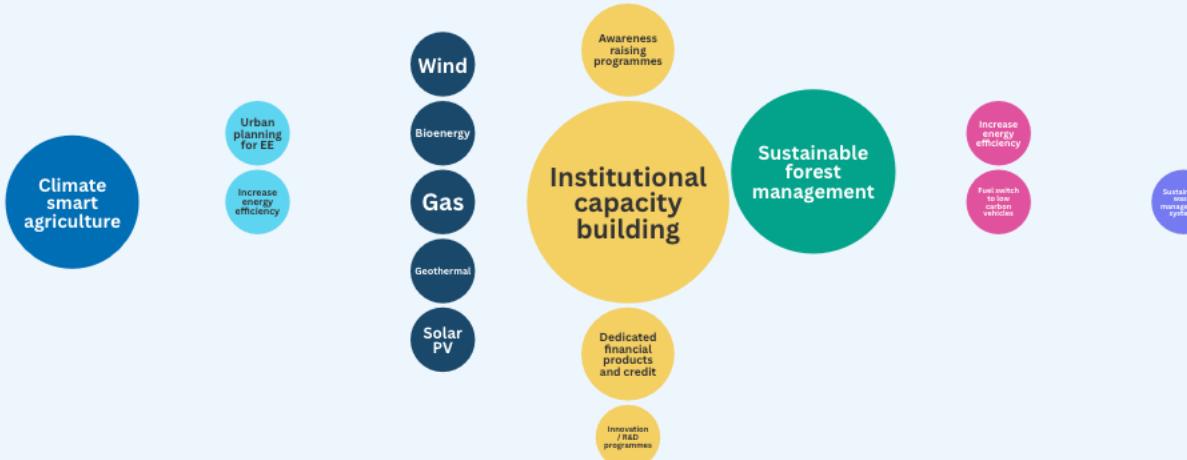
Action Level

This visual unpacks the NDC categories into the specific actions committed in Guatemala. The size of the bubbles reflects the number of NDC actions identified under each category, to identify NDC x SDG accelerators with precision.

Guatemala's NDC includes actions in these sectors:

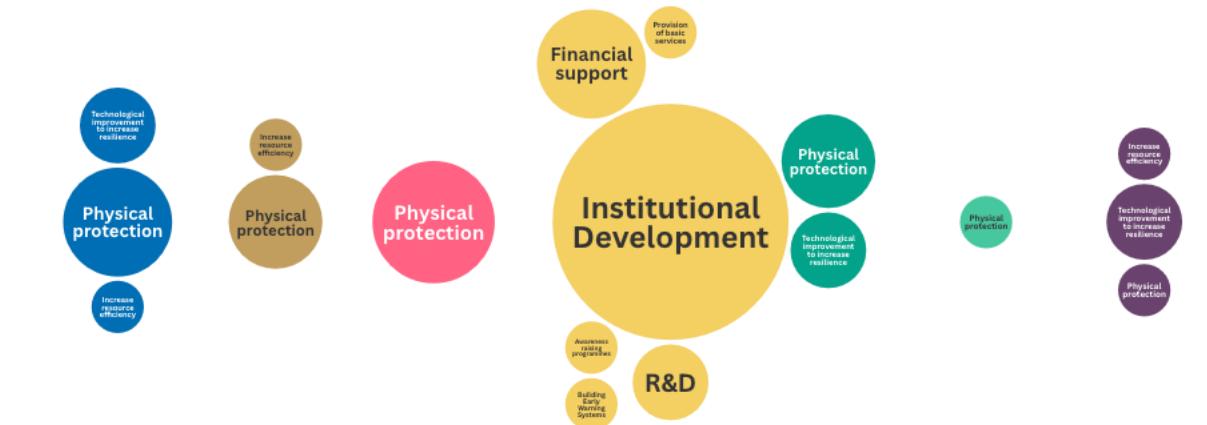
Mitigation

■ Agriculture ■ Buildings ■ Electricity & heat ■ Enablers ■ Forestry ■ Transport ■ Waste →



Adaptation

■ Agriculture ■ Coastal Zone ■ Ecosystem management ■ Enablers ■ Forestry ■ Health ■ Urban →



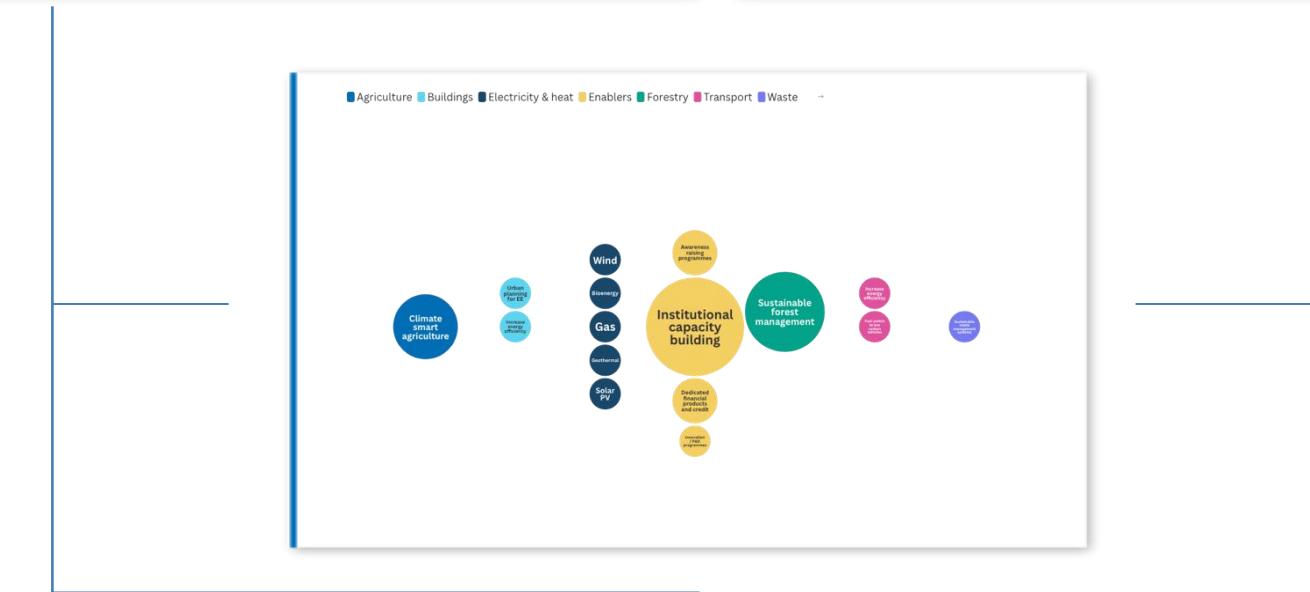
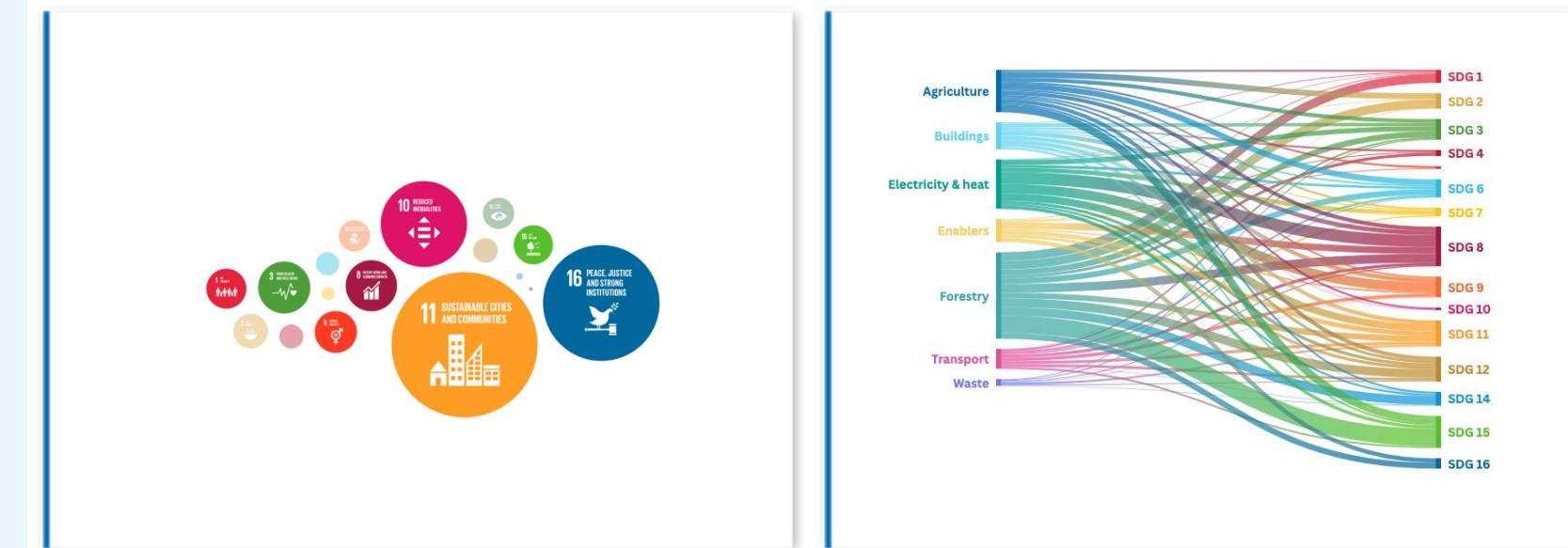
NDC x SDG INTERLINKAGES

Overview

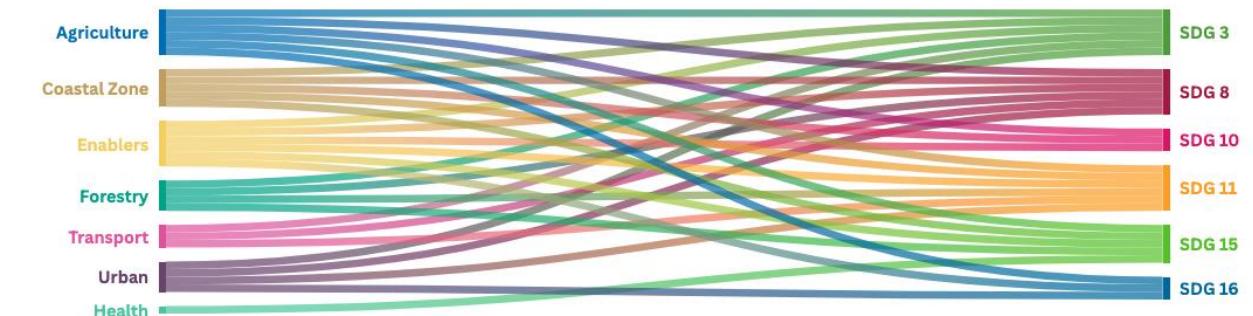
NDC-SDG interlinkages reveal how climate actions can impact SDG progress. Understanding these interactions can help the Guatemala achieve the 2030 Agenda while fulfilling its climate ambitions and navigating trade-offs.

Building from the NDC actions and SDG priorities, the following integrated SDG pathways are identified as critical to achieve Guatemala's development outcomes:

- **SDG Target 8.3** Promote policies to support job creation and growing enterprises
- **SDG Target 11.1** Safe and Affordable Housing
- **SDG Target 11.2** Affordable and sustainable transport systems
- **SDG Target 15.2** End deforestation and restore degraded forests



ACCELERATION PATHWAYS



NDC X SDG Interlinkages

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DEVELOPMENT BREAKTHROUGH

Objective

Institutionalize long-term, climate-resilient development planning as a permanent State function to ensure policy continuity, fiscal coherence, and effective delivery of the NDC and SDGs.

Overview

Guatemala's main development constraint is not the lack of strategies, but fragmented institutions, short political cycles, and weak integration between planning, budgeting, and territorial implementation. This Development Breakthrough strengthens the national planning architecture—building on SEGEPLAN—to align climate, development, and public investment under a shared long-term vision.

Proposed Breakthrough Actions

1. Establish a Permanent National Development and Climate Planning Council with legal anchoring
2. Integrate NDC and SDG targets into fiscal frameworks, sectoral plans, and multi-year budgeting
3. Embed climate and institutional performance indicators into public financial management systems
4. Strengthen subnational planning and territorial coordination for climate-resilient investment
5. Develop a public transparency and results dashboard to track progress and build trust

INTERLINKAGES

SDG 8.3

Promote policies to support job creation and growing enterprises

Creating protected areas with community participation and a productive focus stimulates local value chains (ecotourism, guiding, services) and formalizes enterprises. Ecosystem-based fisheries management stabilizes supply, improves quality, and opens markets, raising productivity and decent employment among small artisanal businesses. Sustainable cattle ranching for 600 producers boosts productivity and resilience, lowers costs and income volatility, and energizes rural services (inputs, technical assistance, finance), promoting investment and entrepreneurial growth.

These activities can also boost other SDG targets: protected areas with community participation advance 15.1 (conserve terrestrial and freshwater ecosystems), 8.9 (sustainable tourism and local value chains), and 5.5 (women's full participation in decision-making). Ecosystem-based fisheries management supports 14.4 (sustainable fish stocks), 2.3 (higher productivity and incomes for small-scale producers), and 8.5 (full and productive employment). Sustainable cattle ranching strengthens 2.4 (sustainable food production), 15.3 (land restoration and reduced degradation), and 12.2 (sustainable natural-resource management).

SDG 8.3—by formalizing and growing micro, small and medium size enterprises (MSMEs), expanding access to finance, and incentivizing innovation—catalyzes investment in clean technologies, raising the share of renewables (7.2) through distributed solar, efficient motors, and mini-grids adopted by firms. It advances sanitation and hygiene (6.2) as viable business models emerge for fecal-sludge management, decentralized treatment, and hygiene services, especially in underserved areas. It boosts smallholder productivity and incomes (2.3) by enabling agri-MSMEs to access credit, inputs, cold chains, and digital advisory tools, strengthening value-chain links and accelerating uptake of climate-smart, yield-enhancing practices.

Priority NDC Activities

Activity 1

Sustainable cattle ranching

Activity 2

Studies and creation of new protected areas with a livelihoods focus

Activity 3

Ecosystem-based fisheries management

Activity 1



Activity 2



Activity 3



INTERLINKAGES

SDG 11.1

Safe and affordable housing

The implementation of water plans will strengthen water and sanitation, improve continuity, quality, drainage, and resilience; reducing outages, disease, and costs, and facilitating investments in networks and treatment. The guide and indices across 38 watersheds it as important goal as well. They will establish standards and monitoring, prioritize investments, correct service shortcomings, and ensure safe, continuous water, targeting subsidies to informal settlements. Landfill methane capture professionalizes waste management, reduces risks, and supplies electricity, improving the affordability of the energy supply.

Water plans can impact SDG targets 6.1 (universal access to safe drinking water), 6.2 (adequate sanitation and hygiene), and 6.5 (integrated water resources management). The guide and indices across 38 watersheds can contribute to 6.3 (improve water quality), 6.4 (water-use efficiency and sustainability), and 11.5 (reduce the impact of water-related disasters). Landfill methane capture for power generation can advance 7.1 (affordable, reliable energy), 7.2 (renewables), and 12.5 (waste reduction and valorisation).

SDG 11.1—securing adequate, safe, affordable housing and basic services—reinforces 13.1 by reducing disaster vulnerability through resilient construction, drainage, and reliable utilities that lower heat-, flood-, and disease-related risks. It supports 15.1 by curbing habitat degradation: planned settlements, sanitation, and solid-waste management cut runoff, deforestation, and pollution in terrestrial and freshwater ecosystems. It advances 8.5 by enabling decent, productive employment: stable housing, water, energy, and transport improve health, time use, and labor participation, while upgrades create local, formal jobs.

Priority NDC Activities

Activity 1

Water management with participation of municipal water and sanitation offices

Activity 2

Monitoring of water quality and flow in all river basins

Activity 3

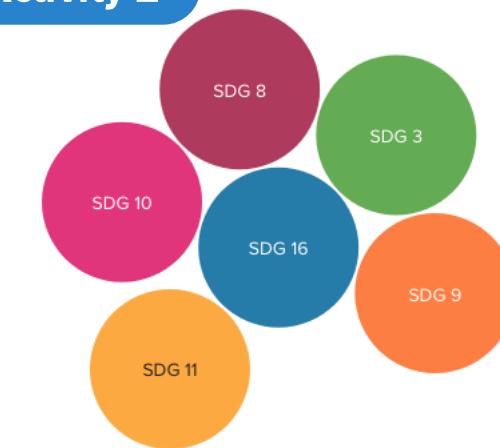
Methane capture at the Guatemala City landfill for power generation

NDC SYNERGIES WITH THE PRIORITY SDGS

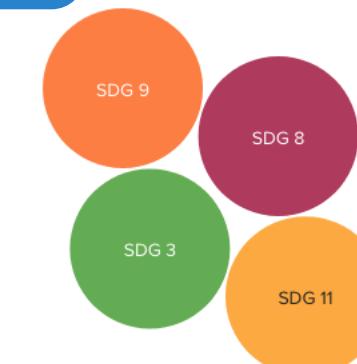
Activity 1



Activity 2



Activity 3



INTERLINKAGES

SDG 11.2

Affordable and sustainable transport systems

Fleet renewal embeds modern safety standards, increases efficiency, lowers costs, and reduces breakdowns, improving affordability and service continuity. A 10% ethanol blend decarbonizes the system without requiring technological changes, maintains coverage, stabilizes supply and costs, and improves air quality for vulnerable users. Establishing the necessary transport-support infrastructure expands coverage, lowers travel time and cost

Fleet renewal supports 3.6 (road safety via advanced standards and technologies), 8.4 (resource efficiency and productivity), and 9.1 (reliable transport infrastructure). A 10% ethanol blend contributes to 7.1 (more affordable, stable energy), 12.2 (sustainable resource use through alternative fuels), and 11.6 (reducing cities' environmental impact by improving air quality). Supporting transport infrastructure advances SDGs 7.2, 9.1, 3.9, 11.6, and 8.5 by enabling cleaner energy, resilient networks, healthier air, jobs.

Advancing SDG 11.2—safe, affordable, accessible, sustainable transport—helps deliver SDG 13.2 by embedding low-emission mobility, transit electrification, and public-transport expansion into national climate and urban policies. It supports SDG 10.1 by lowering travel costs and travel times for the bottom 40%, widening access to jobs, education, and markets, which boosts inclusive income growth. It advances SDG 3.8 by improving physical access to clinics and essential services, enhancing road safety, and reducing pollution exposure—lowering disease burden and strengthening universal health coverage.

Priority NDC Activities

Activity 1

Substitution of gasoline with advanced ethanol

Activity 2

Establishment of the infrastructure for the necessary functioning of sustainable mobility

Activity 3

Renewal of the vehicle fleet with higher-efficiency vehicles

NDC SYNERGIES WITH THE PRIORITY SDGS

Activity 1



Activity 2



Activity 3



INTERLINKAGES

SDG 15.2

End deforestation and restore degraded forests

Conservation, protection, and sustainable forest management curb deforestation by strengthening management plans and fire control, reducing degradation and maintaining forest cover. Establishing forest plantations increases reforestation/afforestation, supplies legal timber, and eases pressure on natural forests. Restoring degraded areas recovers soils and ecological functions, improves biodiversity, increases forest stocks and resilience, and contributes to sustainably managing forests while restoring and expanding overall forest cover.

Conservation and sustainable forest management protect habitats and biodiversity (15.1), safeguard riparian forests and wetlands that regulate water flows (6.6), and reduce disaster risks by stabilizing soils and lowering wildfire and flood incidence (1.5). Responsible forest plantations create formal jobs and raise productivity in forest value chains (8.2), ensure a traceable, efficient timber supply (12.2), and promote industrial and technological modernization (9.2). Restoring degraded areas reverses land loss (15.3), improves soils and agricultural resilience (2.4), and reduces erosion and sediments, enhancing water quality (6.3).

SDG 15.2 catalyses SDG 9.5 by stimulating forest science, silvicultural R&D, genetic improvement, monitoring technologies (e.g., remote sensing/MRV), and process innovation in wood-based industries. It advances SDG 16.3 as legality verification, tenure clarification, and enforcement against illegal logging embed rule-of-law practices, transparent permitting, and accessible grievance mechanisms. It supports SDG 10.2 by empowering community and Indigenous forestry, expanding equitable access to forest assets, finance, and value chains, and creating decent rural jobs—together promoting social, economic, and political inclusion for groups historically marginalized in land and resource governance.

Priority NDC Activities

Activity 1

Conservation, protection, and sustainable management of forests

Activity 2

Establishment of forest plantations

Activity 3

Restoration of degraded areas

NDC SYNERGIES WITH THE PRIORITY SDGS

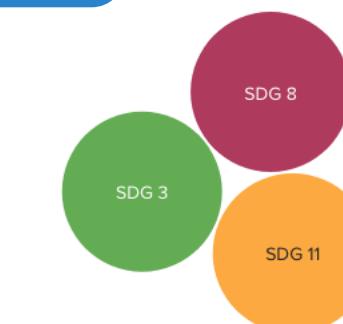
Activity 1



Activity 2



Activity 3



Finance & Stimulus

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FINANCE & STIMULUS

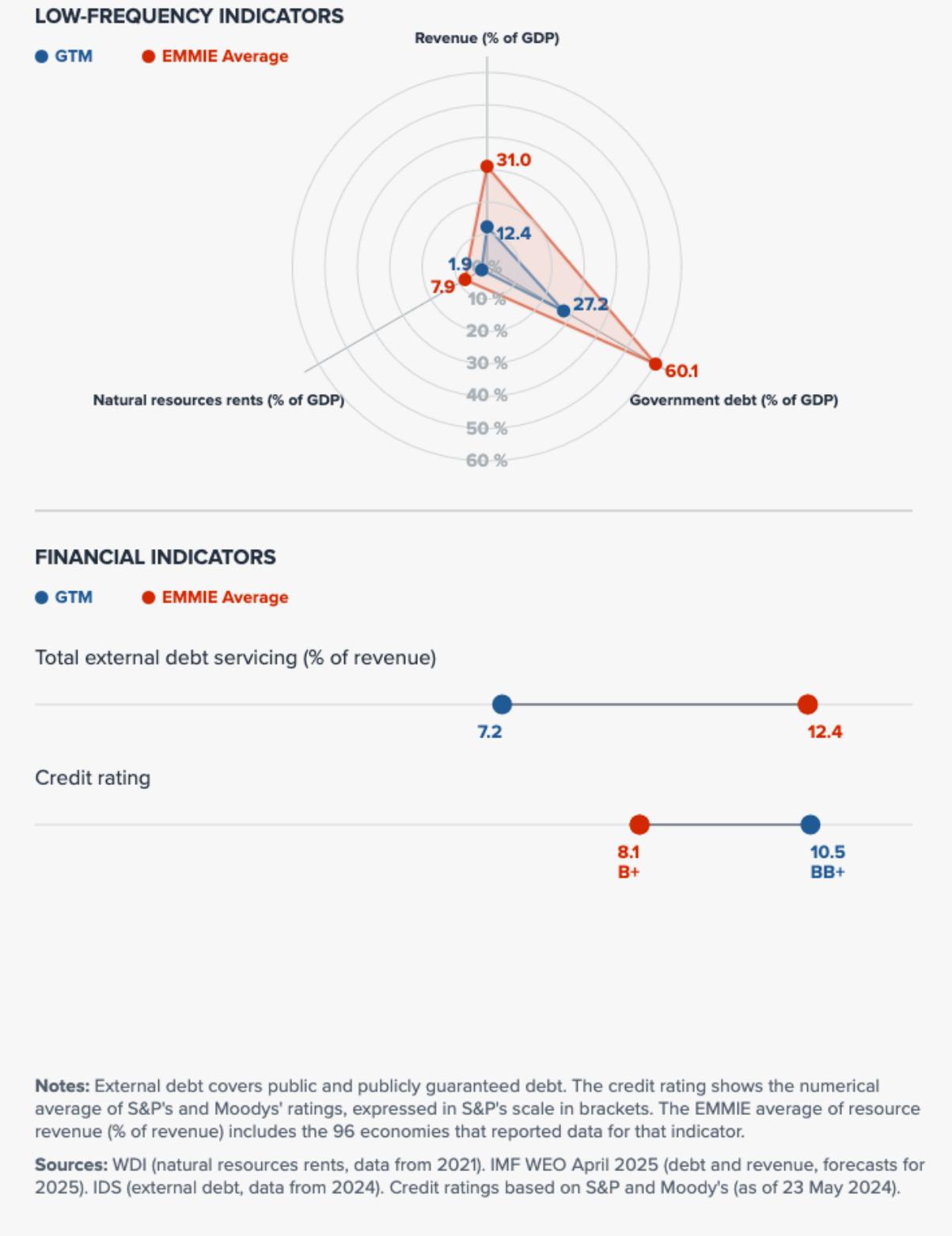
Many countries are facing reduced fiscal space, high debt levels, rising interest rates and downgrades on credit ratings. Fiscal and financial constraints tend to slow or even reverse SDG progress.

The radar diagram shows low frequency data points linked to government revenue, debt and natural resources rents as a proportion of GDP. The financial indicator graphs show external debt servicing relative to revenue and the country's latest Debt Sustainability Assessment (DSA) risk rating.

Guatemala's gross government debt is expected at 27.2% of GDP in 2025, which is 32.9 percentage points (pp) below the emerging market and middle-income economies (EMMIE) average of 60.1%. The country is expected to collect 12.4% of GDP in revenue this year, thus 18.6 pp less than EMMIE average of 31%.

Guatemala's external debt servicing this year is expected to reach 7.2% of revenue, which is 5.2 pp below the EMMIE average of 12.4%. The country's credit rating is assessed as 'speculative', and hence above the EMMIE average of 'highly speculative'.

Guatemala's fiscal and financial situation is characterized by macroeconomic stability, anchored in a long-standing fixed exchange rate regime and a resilient, well-regulated banking system. However, a chronically low tax-to-GDP ratio, among the lowest in Latin America, severely constrains the State's ability to invest in infrastructure and social services, despite modest improvements in fiscal discipline. The economy is heavily dependent on remittances, which exceed 20% of GDP, rendering it particularly vulnerable to external shocks such as U.S. economic cycles or shifts in migration policy.



PUBLIC FINANCE

Financing needs

SDGs: Over 8.6 billion USD per annum in capital investment required to reach growth targets necessary for achieving SDGs (DFA 2021)

NDC: Estimated 29.6 billion USD total by 2030

- 8.6 billion USD for mitigation
- 21 billion USD for adaptation

Financing strategy

Guatemala's climate financing strategy combines the Sustainable Financing Framework (MINFIN, 2024) to issue bonds with the Environmental Fiscal Strategy guiding fiscal policy. The Climate Change Framework Law (Decree 7-2013) created the National Climate Change Fund (FONCC), regulated in 2022, to finance mitigation, adaptation and risk management. In 2024 the government issued sustainability notes aligned to the framework. Together, these instruments mobilize capital and ensure governance, transparency, and reporting of outcomes.

Expenditures & budgets

In 2013 the Fondo Nacional de Cambio Climático was created and regulated by Governmental Agreement 109-2022. Its objective is to finance plans, programs, and projects for risk management, vulnerability reduction, adaptation and mitigation, and capacity building. In 2025 it received an allocation of US\$6.53 million.

Debt instruments

Guatemala issued a US\$800 million sustainable sovereign bond in 2024, maturing 2037, under its Sustainable Financing Framework, allocating proceeds to climate mitigation, adaptation, and social objectives, with clear reporting commitments.

International climate finance

- GCF: Over 113.2 million total to date
- GEF: Approx. 47 million total for climate change to date
- CIF: Approx. 15.4 million total to date
- World Bank: 430 million total to date
- Germany: 11.6 million in debt swap

PRIVATE FINANCE & ECONOMY

Policy & Regulatory Measures:

	Established	In Progress	Not Initiated	Comment
Sustainable Finance Taxonomy				There is no binding national taxonomy issued by a financial authority; however, the Ministry of Public Finance (MINFIN) adopted an official Sustainable Financing Framework that classifies eligible green/social categories for sovereign issuances (policy framework, not regulation).
Green bonds				The Bolsa de Valores Nacional, S.A. (BVN) states it approved internal regulations to label green/social/sustainable and sustainability-linked securities (exchange rule, not national law). This enables thematic issuance/listing in the local market. No official evidence of blue bonds.
Sustainability / Social bonds				Sovereign sustainability notes were issued under the MINFIN Sustainable Financing Framework; issuance is recorded by MINFIN.
SDG / impact / transition bonds				BVN indicates internal rules allow "vinculados a la sostenibilidad" (sustainability-linked) within its labeling scheme; no national-level binding regulation or sovereign issuance explicitly labeled SDG-linked/transition located in official records.
ESG / Corporate reporting				
SDG Impact /IMM				

Innovative Instruments:

- Green bond to finance a renewable energy portfolio (mitigation).
- Sustainable bond program.
- Banco Promerica Guatemala — Sustainability-linked bond, 30-May-2024: bond with performance-linked incentives to fund green/social projects.
- BVN (Bolsa de Valores Nacional) — Market rule, Mar-2022: internal normative enabling green/social/sustainable and sustainability-linked labels for private bonds.

International Investment:

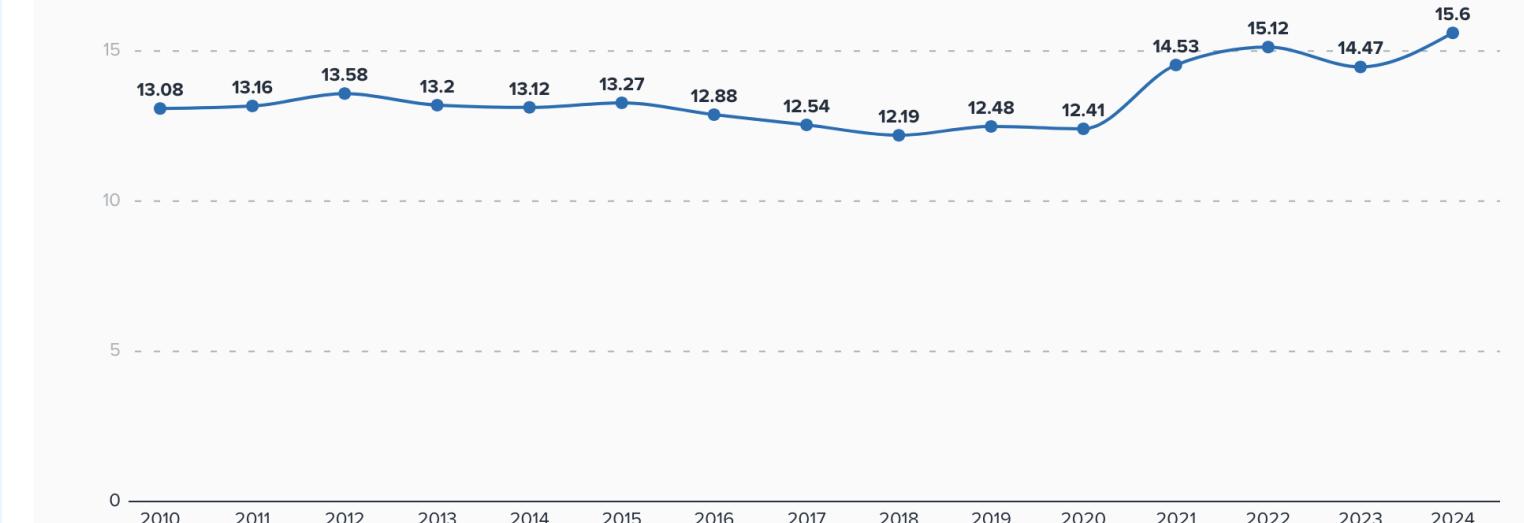
- CMI Energía — Green bond (Rule 144A/Reg S), 2021: US\$700M to finance a renewable energy portfolio (mitigation).
- BAC Guatemala — Sustainable bond program, 2023–2024: up to US\$140M (initial US\$70M) to expand green/social lending.

Domestic Investment:

The chart shows Guatemala's private investment as a share of GDP falling from about 17–18% in the early 2000s to roughly 16% by 2008, then dropping sharply near 13% around 2009. Through the 2010s it hovers in a lower band (\approx 12.5–13.5%), slipping to a trough near 12% by 2018–2019. Beginning in 2020–2021, the ratio rebounds rising above 14.5% in 2022 and reaching a little over 15% in 2024. Overall, the series depicts a long decline after 2008 followed by a notable post-2020 recovery.

Private Investment as a percentage of GDP

Gross outlays for fixed assets by the private sector. Excludes inventories and financial investments.



Source: World Bank. Private Investments as Percentage of GDP

METHODOLOGY



NDC X SDG MOMENT

Methodology

Assesses challenges and opportunities in national growth trajectories with insights on environmental sustainability.

Data Sources

- UNDP 2024 (Human Development Index)
- European Commission 2023 (INFORM Climate Change Risk Index),
- IMF 2022 (IMF-Adapted ND-GAIN Index);
- Environmental Performance Index 2024 (GHG growth rate adjusted by emissions intensity & Projected Emissions in 2050);
- Helen Phillips; Adriana De Palma; Ricardo E Gonzalez; Sara Contu *et al.* 2021 (Biodiversity Intactness Index).



ALIGNMENT & INTERLINKAGES

Methodology

NDC activities from Guatemala's NDC submission are extracted. These are mapped with Mitigation or Adaptation Actions defined by SCAN-Tool initiative, which finds interlinkages between these Actions and the SDGs. Accordingly, synergies and trade-offs between NDC activities and the SDGs are identified.

Data Source

NDC activities data are from NDC-SDG Connections ([Connecting climate action to the Sustainable Development Goals | NDC-SDG Connections \(idos-research.de\)](#)); Mitigation or Adaptation Actions are defined by SCAN-Tool ([Scan tool - Ambition To Action](#)).



FINANCE & STIMULUS

Methodology

Provides an overview of the financing options for NDC implementation.

Data Source

- The 2025 Public Budget Law of Guatemala
- Descripción del proceso y costeo del plan de acción nacional de cambio climático y estimación de la brecha financiera, 2018
- <https://www.adaptation-fund.org/>
- <https://www.cif.org/>
- <https://www.greenclimate.fund/>
- https://scorecard.worldbank.org/en/data/indicator_detail/NE_GDI_FPRV_ZS?orgCode=ALL&refarea_type=REGION&refareacode=ACW&age=T&disability=T&sex=T
- <https://sdgfit.imf.org/>
- <https://sdgprivatefinance.undp.org/resources/news/sdg-investor-maps-latin-america-investment-opportunity-insights>
- <https://www.thegef.org/who-we-are/funding>