

ASSESSMENT

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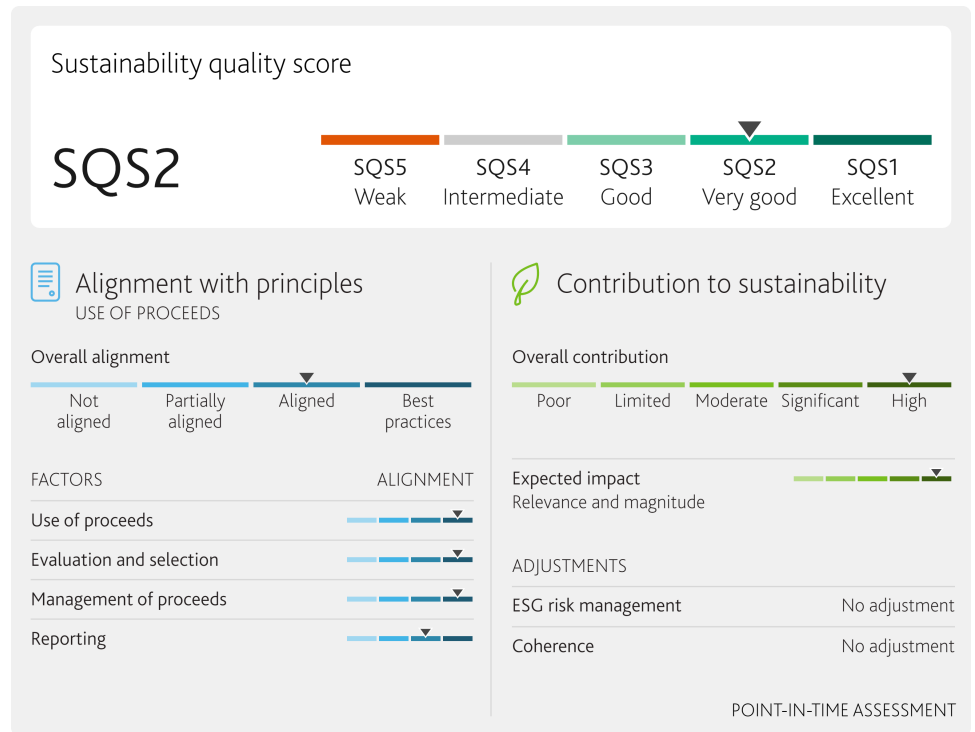
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Government of Guatemala

Second Party Opinion – Sustainable Financing Framework Assigned SQS2 Sustainability Quality Score

Summary

We have assigned an SQS2 sustainability quality score (very good) to the Government of Guatemala's sustainable financing framework dated July 2024. The issuer has established a use-of-proceeds framework with the aim of financing projects across seven eligible green categories and four eligible social categories. The framework is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles (GBP) 2021 (with June 2022 Appendix 1) and Social Bond Principles (SBP) 2023, as well as the Green Loan Principles (GLP) 2023 and Social Loan Principles (SLP) 2023 of the Loan Market Association, Asia Pacific Loan Market Association and Loan Syndications & Trading Association (LMA/APLMA/LSTA). The framework demonstrates a high contribution to sustainability.



Scope

We have provided a second party opinion (SPO) on the sustainability credentials of Guatemala's sustainable financing framework dated July 2024, including the framework's alignment with the ICMA's GBP 2021 (with June 2022 Appendix 1) and SBP 2023, and the GLP 2023 and SLP 2023 of the LMA/APLMA/LSTA. Under its framework and acting through the Ministry of Public Finance (MINFIN), Guatemala plans to issue use-of-proceeds sustainable finance instruments (SFIs), which are described in the framework, to finance projects across seven green categories and four social categories, as outlined in Appendix 2 of this report.

Our assessment is based on the last updated version of the framework received on 22 July 2024, and our opinion reflects our point-in-time assessment¹ of the details contained in this version of the framework, as well as other public and non-public information provided by the government.

We produced this SPO based on our [Framework to Provide Second Party Opinions on Sustainable Debt](#), published in October 2022.

Issuer profile

Guatemala is located in Central America and has both Pacific and Atlantic coastlines. In 2023, the country had an estimated population of around 19 million, being the most populated country in Central America. In addition, Guatemala has the largest economy in Central America, with a nominal GDP of \$104 billion in 2023.

Guatemala's exposure to environmental risks is based on its exposure to climate change risks from recurring droughts and hurricanes, which can deplete agricultural production and harm exports. Its exposure to social risk stems from long-standing levels of poverty, economic inequality and social exclusion. Guatemala is characterized by high levels of poverty, limited educational outcomes and lack of sufficient access to basic services and housing. However, previously high crime levels are declining.

Strengths

- » Social categories established in the framework are highly relevant and will support the reduction of substantial social gaps identified in the country
- » Transparent and structured evaluation and selection process, including a solid environmental, social and governance (ESG) risk management procedure
- » Proceeds allocation period of 24 months or less is in line with market best practice

Challenges

- » While allocation indicators will be externally verified, there is no external verification of the environmental and social indicators
- » No commitment to report on potential controversies that may be associated with financed projects
- » Some project categories do not exclusively employ best-in-class technologies or approaches

Alignment with principles

Guatemala's sustainable financing framework is aligned with the four core components of the ICMA's GBP 2021 (with June 2022 Appendix 1) and SBP 2023, and the GLP 2023 and SLP 2023 of the LMA/APLMA/LSTA:

- | | | |
|--|---|---|
| <input checked="" type="checkbox"/> Green Bond Principles (GBP) | <input checked="" type="checkbox"/> Social Bond Principles (SBP) | <input checked="" type="checkbox"/> Green Loan Principles (GLP) |
| <input checked="" type="checkbox"/> Social Loan Principles (SLP) | <input type="checkbox"/> Sustainability-Linked Bond Principles (SLBP) | <input type="checkbox"/> Sustainability Linked Loan Principles (SLLP) |

Use of proceeds



Clarity of the eligible categories – BEST PRACTICES

The government has clearly defined and communicated the nature of the expenditures, location, and eligibility and exclusion criteria for all project categories. Eligible project expenditures include subsidies, operating expenditures, capital spending on tangible and intangible assets, and capital transfers to public or private entities. The government has also clearly articulated relevant target populations for the eligible social projects. All eligible projects will be located in Guatemala. The government has clearly defined eligibility and exclusion criteria for each of its eligible categories while including relevant technical thresholds and country policies and regulations.

Clarity of the environmental or social objectives – BEST PRACTICES

The government has clearly defined the relevant environmental and social objectives associated with all 11 eligible categories to be financed. The framework directly references the United Nations' (UN) Sustainable Development Goals (SDGs) in articulating the objectives of the eligible categories.

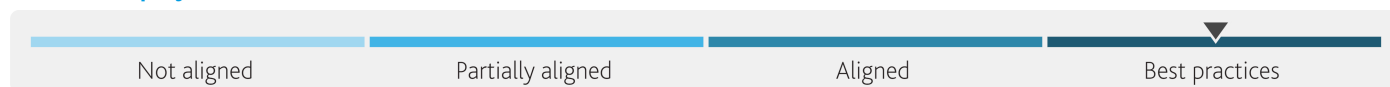
Clarity of the expected benefits – BEST PRACTICES

The government has identified relevant and measurable expected environmental and social benefits for all 11 eligible categories. The government commits to report on measurable and quantifiable impact metrics for all eligible categories in its ongoing reporting. It has also committed to disclose the estimated share of refinancing to investors before each issuance. The government has committed to an eligible lookback period of 36 months for operating expenditures and no time limit for capital expenditures. Nevertheless, the government has communicated that it will disclose to investors the lookback period before each issuance for capital expenditures where feasible.

Best practices identified - use of proceeds

- » Eligibility criteria are clearly defined for all project categories
- » Objectives set are defined, relevant and coherent for all project categories
- » Relevant benefits are identified for all project categories
- » Benefits are measurable and quantified for most projects, either ex-ante with clear baselines or with a commitment to do so in future reporting
- » Commitment to transparently disclose the share of proceeds used for refinancing where feasible
- » Commitment to transparently communicate the associated lookback period(s) where feasible

Process for project evaluation and selection



Transparency and quality of process for defining eligible projects – BEST PRACTICES

The government has established a clear, structured process for evaluating and selecting eligible projects. Roles and responsibilities are clearly defined by the MINFIN and include relevant internal expertise and support, which is formalized in the framework. The MINFIN will be responsible for monitoring continued compliance on an annual basis and commits to reallocated funds for projects that no longer comply with eligibility criteria. The MINFIN commits to document all decision-making communication with the relevant state agencies.

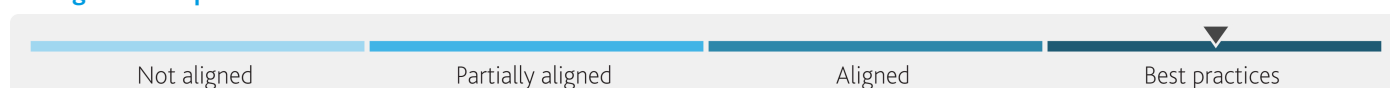
Environmental and social risk mitigation process – BEST PRACTICES

Guatemala has established a comprehensive environmental and social risk mitigation process, including the monitoring of project performance and the identification and management of environmental and social risks. The process, including managing and monitoring potential risks, is included in detail in internal documentation and includes passive and preventive measures. The government commits to identifying potential environmental and social risks through its public investment evaluation process, which all eligible projects must undergo.

Best practices identified - process for project evaluation and selection

- » The roles and responsibilities for project evaluation and selection are clearly defined and include relevant expertise
- » There is evidence of continuity in the selection and evaluation process through the life of the financial instrument(s), including compliance verification and procedures to undertake mitigating actions when needed
- » The process for project evaluation and selection is traceable
- » Material environmental and social risks for most project categories are identified
- » Presence of corrective measures to address environmental and social risks across projects
- » ESG controversies are monitored

Management of proceeds



Allocation and tracking of proceeds – BEST PRACTICES

The government has defined a clear process for the management and allocation of proceeds in its publicly available framework. Net proceeds will be placed in the general treasury of the Republic of Guatemala. The MINFIN will monitor the proceeds to avoid the duplication of project allocation and will periodically track the net proceeds at least annually to match the allocations to eligible projects. The government intends to allocate funds within a period of two calendar years following each issuance under the framework.

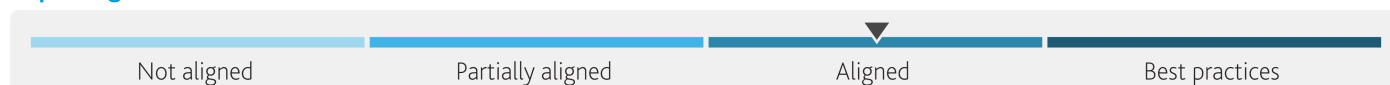
Management of unallocated proceeds – BEST PRACTICES

As disclosed in the framework, temporarily unallocated proceeds will be held in cash or cash equivalent accounts within the general treasury, according to national debt management policies. In the case of postponement, cancellation or divestment from a project, the government commits to reallocate funds within 12 months.

Best practices identified - management of proceeds

- » Broad disclosure of a clearly articulated and comprehensive management of proceeds policy to external stakeholders; bondholders or lenders at a minimum
- » Short allocation period, for example typically less than 24 months
- » Commitment to reallocate proceeds to projects that are compliant with the framework

Reporting



Transparency of reporting – ALIGNED

The government has committed to provide annual allocation and impact reporting on the SFIs issued under the framework until the full allocation of any SFI and on a timely basis in case of material developments. The annual reports will be provided on an aggregated portfolio basis and will be published on the website of the Ministry of Public Finance.

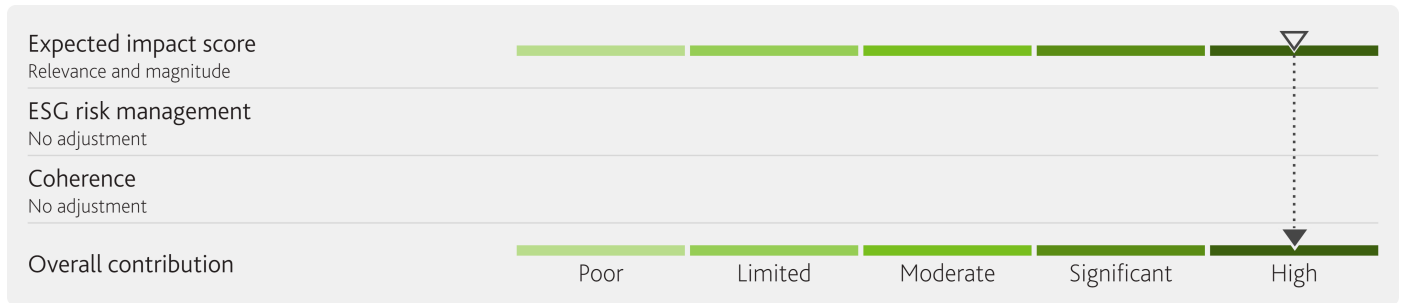
The government has identified and disclosed in its framework relevant environmental and social reporting indicators for each eligible category. The methodology and assumptions used to report on environmental and social impacts will be available in the annual post-issuance reports. Reporting will be performed at least at the eligible project category level and will cover information related to the allocation amounts and the expected environmental and social benefits of the eligible projects. Nevertheless, the government has not committed to report potential controversies that may be related to projects financed. The government commits to engage an external independent verification of its proceeds allocation reporting at the instrument level once funds have been fully allocated. Nevertheless, impact indicators will not be externally verified.

Best practices identified - reporting

- » Reporting on allocation of proceeds and benefits done at least at eligible category level
- » Exhaustive allocation reporting – balance or % of unallocated funds, types of temporary investments (e.g. cash or cash equivalent) and share of financing vs re-financing
- » Clear and relevant indicators to report on the expected environmental/social impact of all the projects, where feasible, or eligible categories
- » Disclosure of reporting methodology and calculation assumptions to bondholders or lenders at a minimum
- » Independent audit of the tracking and allocation of funds at least until full allocation and in case of material changes

Contribution to sustainability

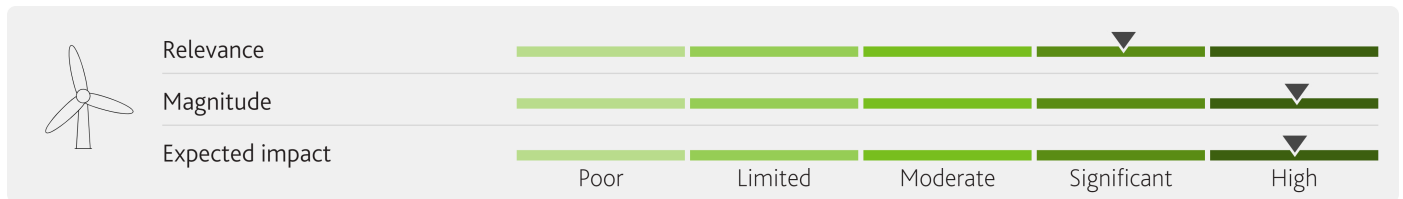
The framework demonstrates a high overall contribution to sustainability.



Expected impact

The expected impact of the eligible projects on environmental and social objectives is high. Based on information provided by the government, we expect proceeds from forthcoming issuances to represent a higher proportion for the sustainable management of natural resources and land use, food security and sustainable food systems, and access to essential services categories. Therefore, we have assigned a higher weight to those categories in our assessment of the overall framework's contribution to sustainability. A detailed assessment by eligible category is provided below.

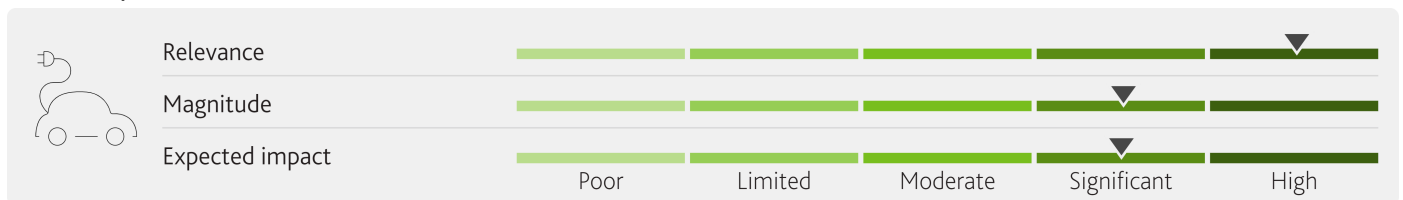
Renewable energy



The relevance of this category is significant because it reflects the importance of greenhouse gas (GHG) emissions reduction in the energy sector. However, this sector is not the biggest source of emissions for the country. According to the country's 2021 nationally determined contribution (NDC),² GHG emissions associated with electricity generation were about 8.4% of the country's total emissions in that year. In 2021, renewable energy sources accounted for 70.5% of Guatemala's electricity production,³ while coal and oil-based power constituted the remaining 29.5%. This indicates a potential for further expansion of renewables to replace these higher-emitting energy sources. Accordingly, the country has prioritized the expansion of renewable energy sources in its 2017-2032 national energy plan.⁴

The magnitude of the eligible category is high, reflecting the projects' use of the best available technologies and adherence to stringent technical emissions thresholds. Eligible projects include electricity transmission and distribution infrastructure, and electricity production from solar, wind and hydropower. Wind and solar energy must meet international standards, with an emissions intensity threshold of below 100 grams carbon dioxide equivalent per kilowatt-hour (gCO₂e/kWh). Hydropower requirements are also in line with international standards and include managing environmental externalities inherent to hydropower projects through strict emissions thresholds and by requiring projects to adhere to adaptation and resilience criteria.

Clean transportation

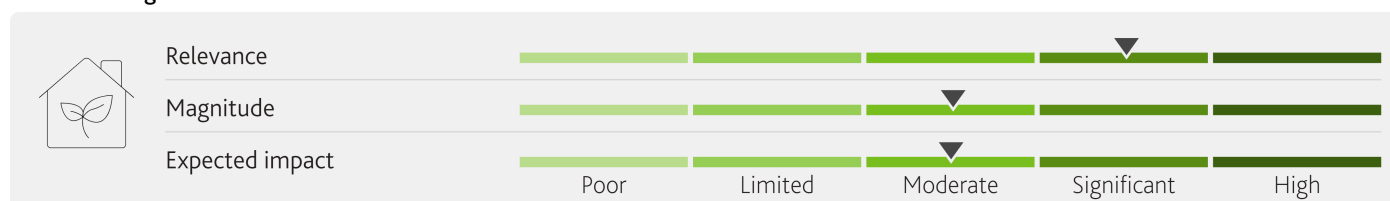


This category is highly relevant to emissions reduction in Guatemala, given its share of emissions in the country. According to Guatemala's NDC, the transportation sector, which was responsible for 15.7% of the country's emissions in 2018,⁵ was the largest

contributor within the country's energy assessment. As part of the country's mitigation plans established in its NDC, it aims to lower emissions in land transportation through the promotion of electric vehicles (EVs) and the substitution of fossil fuels with biofuels.

The magnitude is significant, given that the category will combine financing for the best available technology related to zero tailpipe emissions, as well as hybrid technology. Eligible investments include EVs such as trains and buses, vehicles fueled by green hydrogen and rail improvements to promote mass transit, which are likely to reduce the current carbon footprint of land transportation significantly, in accordance with the country's NDC plan. Although hybrid technology is eligible, the criteria are in line with international standards requirements, including the criterion to limit the transport of fossil fuels to 25% of total cargo. Although the country has communicated that there are no plans to finance hybrid technologies in the inaugural issuance, the category still includes eligible technologies partially fueled by fossil fuels.

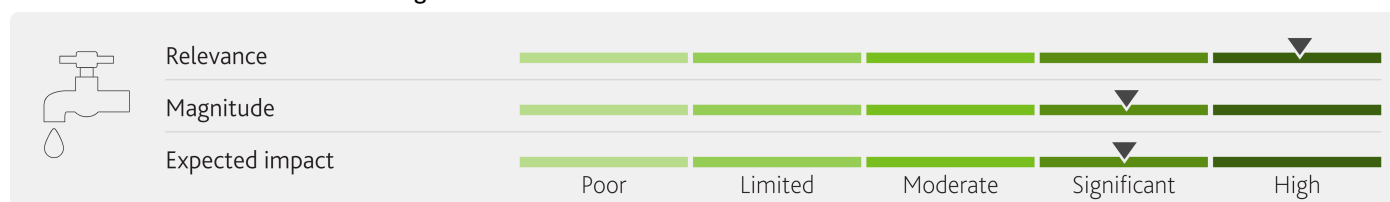
Green buildings



The relevance of projects in the green buildings category is significant. This is because green buildings are a substantial source of GHG emissions, although not the largest source in the country context. Although the country's NDC does not mention the performance of or plans for the building sector in terms of GHG emissions, the sector was responsible for an estimated 10.9% of GHG emissions in 2020.⁶ Projects will address a significantly relevant environmental challenge in the country, especially because there is room for improvement in energy efficiency and because of the share of the energy mix powered by fossil fuels.

The projects have a moderate magnitude. Projects financed under this category will cover new construction and retrofits of existing buildings, the latter of which are likely to achieve a 30% reduction in the buildings' energy consumption compared to baseline. Eligible projects will obtain internationally recognized certifications for buildings, including Leadership in Energy and Environmental Design (LEED) Gold standard or above, Buildings Research Establishment Environmental Assessment Methodology (BREEAM) Excellent standard or above and Sustainable Building Certification (CES) Outstanding. Although positive overall, not all buildings will be certified to the highest market standards and there is no minimum energy efficiency performance established nor visibility in embodied carbon. The category also includes new builds, which tend to have greater absolute energy consumption and associated environmental and social risks during the construction process compared with the refurbishment of existing buildings.

Sustainable water and wastewater management

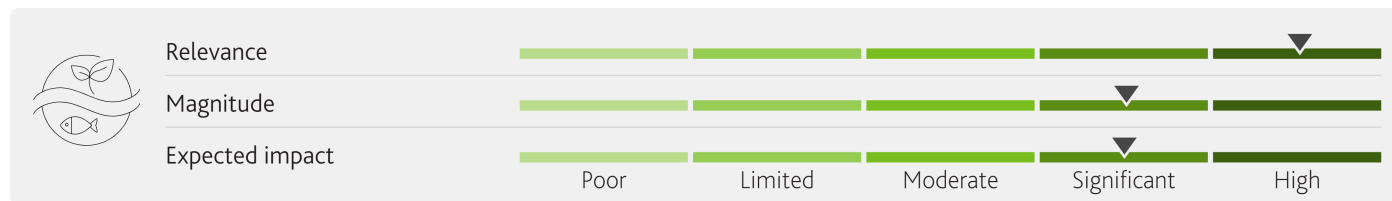


The projects in the sustainable water and wastewater management category are highly relevant given the challenges that Guatemala faces related to water and wastewater management. In Guatemala, challenges persist in the areas of sanitation and wastewater services. Almost one-third of the total population lacked basic access to sanitation services in 2022, with 42% of the rural population also not having access.⁷ On average, 30% of the global rural population lacked access. In addition, pollution in water bodies is a material challenge in Guatemala.⁸

Projects in this category are likely to make a significant contribution by adhering to relevant market standards and addressing the lack of visibility in the performance of wastewater plants in certain aspects. Projects related to water efficiency are in line with the most stringent market standards for water production and distribution. In addition, the category includes the financing of the recuperation and conservation of basins, which are established by the Ministry of Environment and Natural Resources.⁹ The category also involves

wastewater treatment projects that will improve water quality in line with national regulations. However, there are no energy efficiency thresholds for these plants, nor is there visibility into how they will manage GHG emissions from biological treatment.

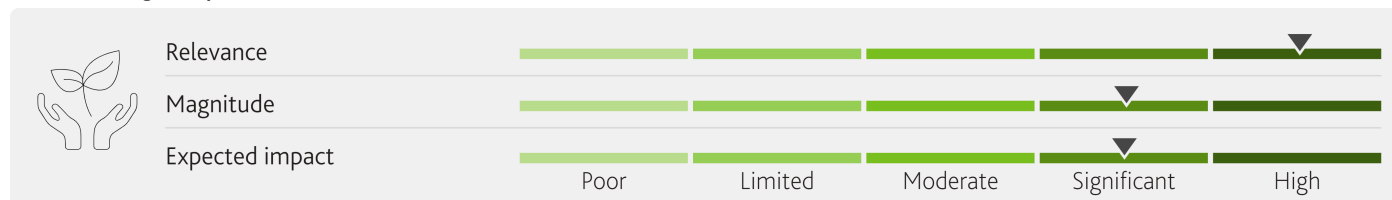
Conservation of terrestrial and aquatic biodiversity



Projects in this category are highly relevant for the protection and restoration of biodiversity and ecosystems in Guatemala because it is one of the most biodiverse places in the world. It is located in the Mesoamerica biodiversity hot spot¹⁰ and 49% of its territory is identified as key biodiversity areas.¹¹ In 2001-2023, Guatemala lost 1.75 million hectares (Mha) of tree cover, which is equivalent to a 23% decrease and equivalent to 830 million tons (Mt) of CO₂ emissions,¹² demonstrating the importance of sustainable forestry practices in the country.

Projects in this category are likely to have a significant impact because of their substantial contribution to the protection and conservation of biodiversity hot spots in Guatemala. The category will promote and develop further research and development related to the protection of biodiversity in the country, enabling the government to respond accordingly to identified needs. The category also includes the promotion of sustainable forestry activities using relevant certifications, which can promote positive externalities associated with afforestation and reforestation, especially when the area reforested was previously degraded.¹³ Although we acknowledge the benefits associated with the promotion of sustainable forestry practices, it is important to note that commercial forestry operations could be subject to risks during forest development and harvesting, including biodiversity and soil pollution risks.

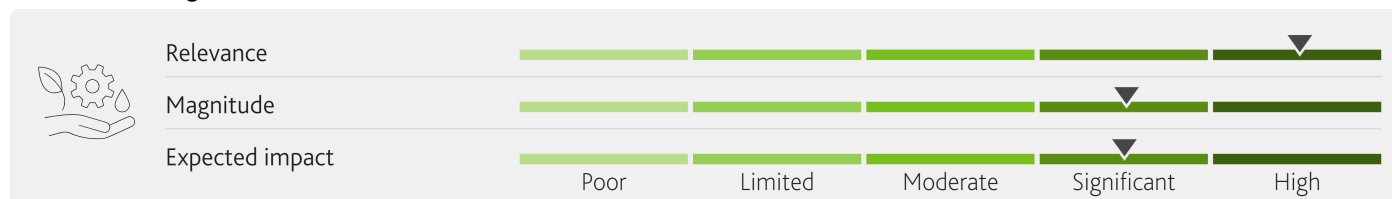
Climate change adaptation



Projects in this category are highly relevant because Guatemala is highly exposed to the risks of climate change, with its poorer populations being particularly vulnerable to climate and weather events. The country ranks ninth globally in terms of climate change risk exposure, according to the World Bank.¹⁴ More than 80% of its GDP and 40% of its population are located in areas at risk to both low-frequency/high-impact events (e.g., hurricanes) and high-frequency/low-impact events (e.g., floods and landslides).

This category will make a significant contribution, given the relevant measures in place to reduce the impact of climate events in the country. The category aims to finance projects related to the identification and characterization of natural disasters that might occur in Guatemala, as well as the monitoring and management of the risks associated with climate changes events. However, because of the lack of details on specific projects to be financed, there is no visibility on whether the most effective approach would always be deployed to address the climate risks identified.

Sustainable management of natural resources and land use

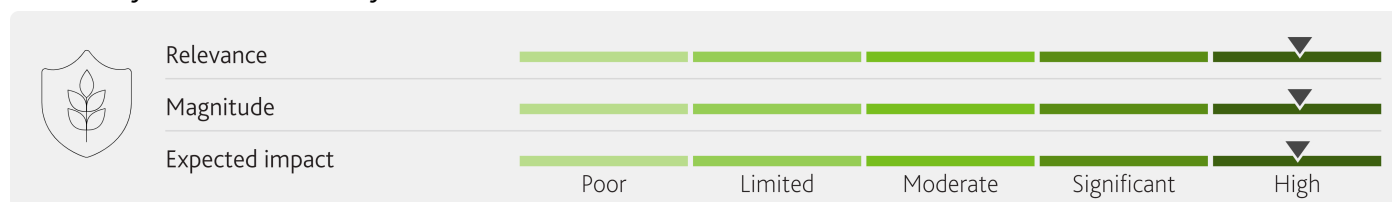


Projects in this category are highly relevant because Guatemala has identified agriculture and food security as one of the six climate adaptation priority sectors in its NDC 2021, with emissions from the agriculture sector accounting for 9.3% of the total emissions in

2018.¹⁵ In addition, the sector is important for the country, having employed 27% of its workforce in 2022¹⁶ and representing about 9.3% of the country's GDP in 2021.¹⁷ Because of the importance of agriculture in the Guatemalan economy, it is necessary to promote sustainable agricultural practices to minimize the potential negative impacts, such as land degradation, deforestation and water pollution.

Projects in this category will have a significant impact because they will follow recognized international standards. For sustainable fisheries and aquaculture, the government expects to achieve Marine Stewardship Council or Aquaculture Stewardship Council certifications, both of which are broadly recognized standards in the sector. Agriculture projects will be focused on agroforestry systems with established forest management plans and include support to promote sustainable agricultural practices, including organic agricultural practices. Nevertheless, there are no certifications included in the eligibility criteria. Livestock farming is eligible under the framework and will follow the national strategy for sustainable cattle ranching with low emissions.¹⁸ Although the strategy aims to reduce emissions intensity in the livestock sector, these projects could still result in an overall increase in GHG emissions. However, the issuer has communicated that it expects a small portion of funding in this category to be directed toward livestock projects.

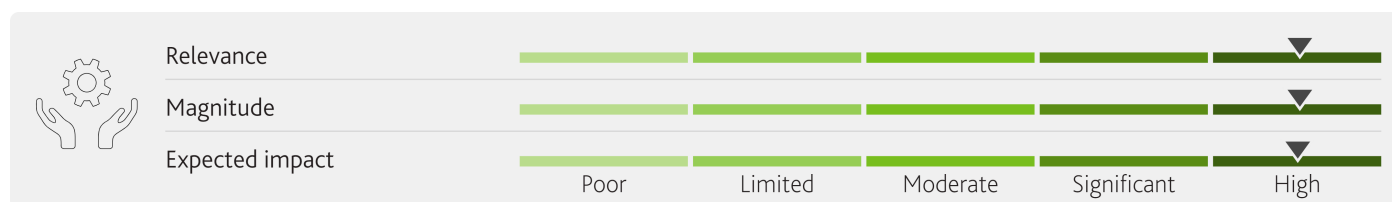
Food security and sustainable food systems



The relevance of this category is high. Guatemala faces very high rates of chronic malnutrition, with about 43.5% of children under five years suffering from stunting.¹⁹ This situation is markedly worse among school-aged children of indigenous origin and those residing in rural areas, where the rate of nutritional deficiency can escalate to 80%.²⁰ The high rate of stunting is a result of poor nutrition during in-utero development and early childhood. This condition could potentially prevent children's brains from reaching full cognitive development and increases their risk of developing diabetes, hypertension and unfavorable maternal reproductive outcomes in adulthood.²¹

We expect the magnitude of this category to be high because of the long-term benefits and the vulnerability of the target population. Nutrition support programs are likely to yield long-term improvements in the quality of life for the vulnerable population, and food subsidies will ensure access, affordability and quality of food services and nutrition. Target populations include those living in poverty or those without sufficient access to food. The projects will follow the guidelines of the Ministry of Education, the Ministry of Public Health and Social Assistance and the Ministry of Social Development.

Access to essential services

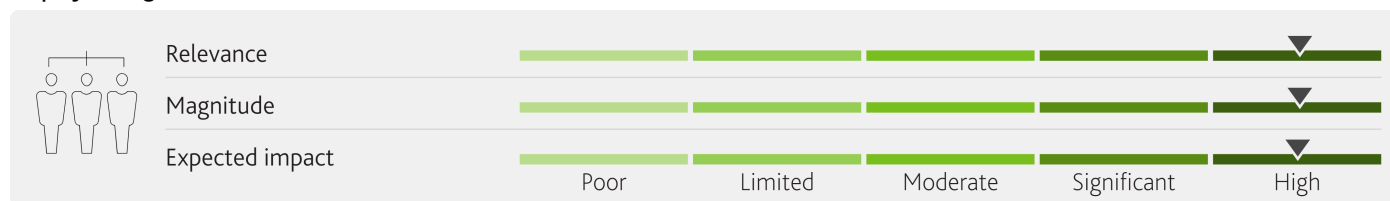


The relevance of this category is high because Guatemala faces substantial challenges related to education and health. Although there has been a decline in the all-cause mortality rate in the country, it still performs below other countries in the region.²² Guatemala also lags regional peers in education. For example, learning poverty is 26.3% higher than the average for Latin America and the Caribbean.²³

The magnitude of this category is high. Investments in this category will be disbursed to improve healthcare and education services for the vulnerable population, including those with a low educational level and those living below the poverty threshold. Investments in healthcare to prevent maternal and infant mortality at birth, as well as to prevent and control HIV and other sexually transmitted diseases, are likely to strengthen Guatemala's healthcare system and provide long-term benefits for the target population. The government has confirmed that out-of-pocket costs for medical treatments are excluded from eligible projects. Eligible education

expenditures are focused on improving the public education system and infrastructure, which is likely to result in positive educational outcomes for current and future generations.

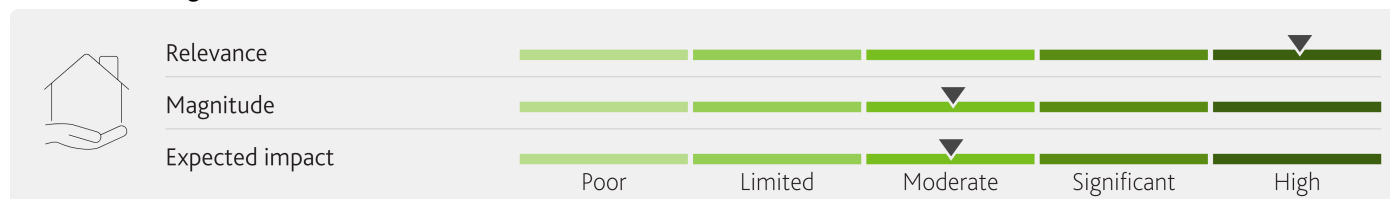
Employment generation



The relevance of this category is high given the challenges the country faces in enhancing the quality of employment. Although the unemployment rate in Guatemala was 3% in 2022,²⁴ it contrasts with the high level of informal employment in the country, which reached about 79% in 2022,²⁵ demonstrating that the country faces material challenges in enhancing the quality of employment in its labor market.

The magnitude of this category is high because the benefits are likely to be long term and the target population is the most vulnerable. Programs in this category involve supporting financial inclusion for microbusinesses, and small and medium-sized enterprises (SMEs). Most of the support is likely to be provided to microbusinesses. In addition, the category includes financing programs that aim to provide new skills and knowledge to the most vulnerable and undereducated, helping to enhance the country's labor market conditions.

Affordable housing



The relevance of this category is high because around 67% of Guatemalan households either lack dwellings or inhabit inadequate ones, with the most common issue faced by these households being low-quality floor construction.²⁶ Roughly 6% of these dwellings have dirt floors, which represents a health risk for children, adults and the elderly because of the potential for harboring insects and pathogens, and triggering respiratory infections.²⁷

The magnitude of the category is moderate. The programs to be financed aim to address the housing deficit in Guatemala, including subsidies to families for the construction, renovation and reduction of mortgage interest rates. Programs supporting construction and renovation will help to alleviate housing deficit quantity and quality. The reduction in interest rates aims to reduce monthly installments for vulnerable families, making mortgages more affordable. Although we acknowledge the benefits related to the programs seeking to reduce mortgage interest rates, the support is only for a portion of the mortgage costs and duration – up to seven years – with no visibility on measures to address potential overindebtedness after that period.

ESG risk management

We have not applied a negative adjustment for ESG risk management to the expected impact score. The Ministry of Environment and Natural Resources establishes that every project, work, industry or activity that can cause deterioration to natural resources and the environment or introduce harmful modifications to the landscape should follow environmental evaluation, control and monitoring systems. Environmental licenses are mandatory for projects of high and medium environmental impact. In addition, government investments follow a guide for formulation and evaluation of public investment projects, which assesses aspects such as whether projects will effectively benefit the underserved population, the potential positive and negative environmental impacts that could materialize and the capacity for climate change adaptation, among others.

Coherence

We have not applied a negative adjustment for coherence to the expected impact score. The eligible categories of the framework are consistent with the government's sustainability strategies, which focus on developing a low-carbon emissions economy and addressing

issues related to the sustainable use of natural resources from an environmental perspective. On the social front, Guatemala aims to create opportunities for its inhabitants through investment in access to basic services and the promotion of employment generation, where relevant gaps have been identified. Although the country seeks to increase the share of energy from natural gas to replace oil- and coal-based energy, these types of projects are not under the scope of this framework.

Appendix 1 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The 11 eligible categories included in Guatemala's framework are likely to contribute to 13 of the UN's SDGs, namely:

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 1: No Poverty	Access to essential services	1.1: Eradicate extreme poverty for all people everywhere, currently measured as people living on less than \$1.25 a day
	Affordable housing	1.3: Implement social protection systems and measures for all, and achieve substantial coverage of the poor and the vulnerable
	Employment generation	1.5: Build the resilience of those in vulnerable situations and reduce exposure to climate-related events and other disasters
GOAL 2: Zero Hunger	Food security and sustainable food systems	2.1: End hunger and ensure access by all people to safe, nutritious and sufficient food all year round 2.2: End all forms of malnutrition and address nutritional needs of children, pregnant and lactating women and older persons
GOAL 3: Good Health and Well-being	Food security and sustainable food systems	3.1: Reduce the global maternal mortality ratio to less than 70 per 100,000 live births 3.2: End preventable deaths of newborns and children under 5 years of age
	Access to essential services	3.3: End the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat other communicable diseases
GOAL 4: Quality Education	Access to essential services	4.7: Ensure all learners acquire the knowledge and skills needed to promote sustainable development 4.A: Build and upgrade education facilities that provide safe and effective learning environments for all
GOAL 6: Clean Water and Sanitation	Sustainable water and wastewater management	6.3: Improve water quality by reducing pollution, eliminating dumping and minimizing hazardous chemicals and materials
		6.4: Increase water-use efficiency across all sectors and ensure sustainable supply of freshwater to reduce water scarcity
GOAL 7: Affordable and Clean Energy	Renewable energy	7.1: Ensure universal access to affordable, reliable and modern energy services 7.2: Increase substantially the share of renewable energy in the global energy mix
		7.A: Enhance international cooperation and promote investment for clean energy infrastructure, research and technology
		7.B: Expand infrastructure and upgrade technology for sustainable energy services to all in emerging markets
		8.3: Promote policies that support productivity, job creation, entrepreneurship, innovation, and encourage the growth of SMEs
GOAL 8: Decent Work and Economic Growth	Employment generation	
GOAL 9: Industry, Innovation and	Clean Transportation	9.4: Upgrade infrastructure and retrofit industries to make them sustainable, with all countries taking action 9.A: Facilitate sustainable infrastructure development in emerging markets through financial and technical support
GOAL 11: Sustainable Cities and Communities	Clean Transportation	11.2: Provide access to safe, affordable, accessible and sustainable transport systems for all
	Green Buildings	11.6: Reduce the adverse per capita environmental impact of cities, with special attention to air quality and waste management
GOAL 12: Responsible Consumption and Production	Sustainable water and wastewater management	11.C: Support least developed countries, including through financial and technical assistance, in building sustainable buildings using local materials
	Environmentally sustainable management of living natural resources and land use	12.2: Achieve the sustainable management and efficient use of natural resources

UN SDG 17 Goals	Eligible Category	SDG Targets
GOAL 13: Climate Action	Climate change adaptation	13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries
	Renewable energy	13.2: Integrate climate change measures into national policies, strategies and planning
	Green Buildings	13.B: Promote mechanisms for raising capacity for effective climate change-related planning and management in least developed countries
GOAL 14: Life Below Water	Terrestrial and aquatic biodiversity conservation	14.2: Sustainably manage and protect marine and coastal ecosystems to avoid significant adverse impacts
GOAL 15: Life on Land	Terrestrial and aquatic biodiversity conservation	15.1: Ensure the conservation and sustainable use of terrestrial and inland freshwater ecosystems and their services
		15.2: Promote the implementation of sustainable management of all types of forests
		15.A: Mobilize and increase financial resources from all sources to conserve and sustainably use biodiversity and ecosystems
		15.B: Mobilize resources to finance sustainable forest management and provide adequate incentives to emerging markets to advance such management

The mapping of the UN's SDGs in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in the issuer's financing framework, as well as resources and guidelines from public institutions, such as the ICMA's SDG Mapping Guidance and the UN's SDG targets and indicators.

Appendix 2 - Summary of eligible categories in Guatemala's framework

Eligible categories	Description	Sustainability objectives	Impact reporting metrics
Renewable Energy	<p>Expenditures related to financing, subsidy, construction, manufacture, installation, expansion, repair, renovation, modernization, improvement, transmission and distribution, purchase, operation, transport, and maintenance of infrastructure and land for the production, transmission, distribution, and storage of the following sources of energy:</p> <ul style="list-style-type: none"> - Solar energy (photovoltaic and CSP); - Wind energy; - Hydropower 	- Climate change mitigation	<ul style="list-style-type: none"> - Annual generation of renewable energy in MWh/GWh (electricity) and GJ/TJ (other energies) connected to the grid - Calculated reduced/avoided annual GHG equivalent emissions in tons of CO2 equivalent - Number of solar/wind parks financed. Length (km) of the supported connection transmission infrastructure - Capacity of the renewable power plant(s) connected to the grid
Clean Transportation	<p>Expenditures related to financing, subsidy, manufacturing, purchase or maintenance, expansion, repair, refurbishment, modernization, improvements, or operation of:</p> <ul style="list-style-type: none"> - Vehicles and trains (including hybrids) - Green hydrogen-powered vehicles - Development or improvement of rail transport to drive the shift from road to rail. <p>Hybrid vehicles and trains with less than 50g of CO2 per passenger-km or 25g of CO2 per ton-km (freight) may be eligible for subsidies until 2025, and from then on they will not be eligible</p>	- Climate change mitigation	<ul style="list-style-type: none"> - CO2 emissions avoided per passenger-km (gCO2e/pas-km) / freight km (gCO2e/tons-km) - Length of tracks built for mass public transport. % of electric fleet (powered by non-fossil fuels) - Renewable energy used (%) to power lines - Number of electric railway stocks (divided by passengers and goods) deployed - Total number of passengers transported per year over the total distance (estimated or actual) - Type of train ticket purchased (full price, reduced rate for seniors, students, low-income households) - Type and weight of cargo transported per year (divided by type of cargo)
Green Buildings	<p>Expenditures related to financing, subsidy, development, purchase, maintenance, expansion, repair, reconditioning and/or rehabilitation of new or existing buildings to achieve real estate efficiency certification of any one of the following certification systems:</p> <ul style="list-style-type: none"> - LEED Gold or above - BREEAM Excellent or above - Climate Bond Initiative (CBI) building criteria, top 15% of the city or respective region's real estate stock - Outstanding Sustainable Building Certification (CES) - Any internationally recognized equivalent green building certification scheme - Rehabilitation of existing buildings achieving a minimum 30% reduction in primary energy demand 	- Climate change mitigation	<ul style="list-style-type: none"> - Location and type of certified Green Buildings - Estimated tons of CO2 avoided per year - Minimum EPC rating (or equivalent local energy efficiency certification) across the entire real estate portfolio by the target date - Energy consumption (kWh/m2 per year)

Eligible categories	Description	Sustainability objectives	Impact reporting metrics
Sustainable water and wastewater management	<p>Expenditures related to financing, subsidy, manufacturing, purchase or maintenance, expansion, repair, refurbishment, upgrade for efficient and sustainable water and wastewater, including:</p> <ul style="list-style-type: none"> - Implementation of a rainwater collection system for use in toilet flushing - Improving solid waste management and water conservation - Water efficiency projects in which the average net energy consumption for extraction and treatment is ≤ 0.5 kWh per cubic meter of water; or the Infrastructure Leakage Index (ILI) decreases to a leakage level < 1.5 - Technologies for monitoring water resources, flood control, weather and atmospheric conditions. 	<ul style="list-style-type: none"> - Sustainable use of water - Pollution prevention and control 	<ul style="list-style-type: none"> - Absolute annual (gross) water consumption before and after the project in m³/a, reduction in water consumption in % - Absolute annual (gross) amount of wastewater treated, reused or avoided before and after the project, in m³/a and e.p./a and in % - Absolute annual (gross) amount of raw/untreated sewage sludge that is treated and disposed of (in tons of dry solids per year and in %) - Absolute annual (gross) amount of sludge that is reused (in tons of dry solids per year and in %) - Number of people with access to clean drinking water (or annual volume of clean drinking water in m³/a supplied for human consumption) through infrastructures that support the sustainable and efficient use of water (when the average consumption per person is consistent with internationally recognized standards for sustainable water use) - Number of people with access to improved sanitation facilities within the project framework - Number of people and/or businesses (for example, companies or farms) benefitting from measures to mitigate consequences of floods and droughts - Area covered by sustainable land and water resource management practices
Terrestrial and aquatic biodiversity conservation	<p>Expenditures related to financing, subsidy, manufacturing, purchase or maintenance, expansion, repair, reconditioning, modernization, improvement of activities aimed at preserving or conserving terrestrial, aquatic and marine biodiversity, natural habitats and landscapes, including:</p> <ul style="list-style-type: none"> - Protection of biodiversity and research and development - Research and development related to environmental protection - Sustainable forest management in which reforestation projects are certified by the Forest Stewardship Council (FSC) or the Program for the Endorsement of Forest Certification (PEFC). 	<ul style="list-style-type: none"> - Protection and restoration of biodiversity and ecosystems 	<ul style="list-style-type: none"> - Maintenance, safeguarding, increase of the protected area/OECM/habitat in km² and in % increase - Absolute number of predefined target organisms and species per km² (larger fauna) or m² (smaller fauna and flora) before and after the project - Changes in the levels of CO₂, nutrients and/or pH of coastal vegetation and coral reefs in % - Maintenance, safeguarding, increase of the natural landscape area (including forests) in km² and in % increase - Increase in area under certified land management in km² or m² and in % (in buffer zones of protected areas) - Improvement in the Reef Health Index (RHI)
Climate change adaptation	<p>Expenditures related to:</p> <ul style="list-style-type: none"> - Adaptation to climate risks and/or prevention of environmental contingencies - Climate observation technology and data systems or infrastructure designed to protect against extreme weather events. 	<ul style="list-style-type: none"> - Climate change adaptation 	<ul style="list-style-type: none"> - Reduction in the costs of repairs due to natural disasters (to all types of infrastructure and assets) - Reduction or avoidance of water loss (in reservoirs, water bodies, natural habitats, etc.) in m³ - Reduction in the number of people evacuated, injured, displaced, economically unproductive due to climate-related hazards - Reduction and avoidance of loss of livestock and/or crops - Decrease in the number of days between a disaster and the related response and recovery

Eligible categories	Description	Sustainability objectives	Impact reporting metrics
Environmentally sustainable management of living natural resources and land use	<p>Expenditures related to Sustainable Agriculture:</p> <ul style="list-style-type: none"> - Agricultural inputs, including seeds and fertilizers for agricultural practices considered eligible - Agriculture under agroforestry system with implemented supporting forest management plan - Low carbon livestock production - Systems and software for tracking, information and management of agricultural data - Drip irrigation systems - Water-efficient irrigation systems compared to existing systems and practices - Subsidies to encourage ecological and climate-friendly practices - Subsidies to promote agricultural practices that increase the soil's carbon storage capacity <p>Expenditures related to Fisheries, aquaculture, and seafood value chain, including:</p> <ul style="list-style-type: none"> - Investments in fisheries to meet, maintain or exceed the Marine Stewardship Council certification standard or equivalent - Investments in aquaculture to meet, maintain or exceed the Aquaculture Stewardship Council certification standard or equivalent - Production, trade or retail sale of seafood with the Marine Stewardship Council's blue label or the Aquaculture Stewardship Council's label - Investments for a Fishery Improvement Project registered with the International Seafood Sustainability Foundation - Traceability systems to ensure the sustainability of operations, facilities and supply chains in the fishing industry. 	<ul style="list-style-type: none"> - Climate change mitigation - Protection and restoration of biodiversity and ecosystems 	<ul style="list-style-type: none"> - Net GHG emissions, GHG intensity (for example, tCO2e/unit of production) or energy intensity (for example, GJ/unit of production) - Increase in the area dedicated to certified organic or sustainable agriculture (ha and % of cultivated area) - Increase in area under management practices aimed at improving the provision of ecosystem services (ha. and percentage of cultivated area) - Agricultural lands covered by new or rehabilitated efficient irrigation, water-efficient crops and/or crop rotation that conserve resources (ha or km²) - Increase in % of certified sustainable fisheries - Increase in % of certified sustainable aquaculture
Food security and sustainable food systems	<p>Expenditures related to subsidies and investments to address and mitigate food insecurity, including certain social and health investments approved by the Ministry of Education, Ministry of Public Health and Social Assistance and the Ministry of Social Development.</p> <p>Target Population:</p> <ul style="list-style-type: none"> - Underserved - People living below the poverty line 	<ul style="list-style-type: none"> - Food security 	<ul style="list-style-type: none"> - Number of people who have been provided access to affordable, safe, nutritious, and sufficient food - Number of free school meals provided to children and adolescents - Number of beneficiaries who received training on healthy eating - Number of transfers made to Guatemalan families who meet the target population criteria - Improvement in the infant mortality rate - Improvement in the rate of chronic malnutrition.

Eligible categories	Description	Sustainability objectives	Impact reporting metrics
Access to essential services	<p>Expenditures related to the purchase, construction, development, operation, renovation, and/or upgrade of affordable basic infrastructure, including:</p> <ul style="list-style-type: none"> - Medical furniture and equipment - Construction materials, educational furniture and equipment - Schools and health centers, their operation, maintenance and repair. - Program for the prevention of maternal and infant mortality at birth; - Program for the prevention and control of STDs and HIV/AIDS; - Provision of other specialized health services (items not assignable to programs/contributions to health institutions); - Free educational services program, which ensures the continuity and operation of public pre-school, primary and secondary education centers <p>Target Population:</p> <ul style="list-style-type: none"> - Underserved - People living below the poverty line - Population with low educational level 	<ul style="list-style-type: none"> - Access to essential services 	<ul style="list-style-type: none"> - Number and type of infrastructure projects built/improved - Refurbishment Services of Public Educational Centers - Number of beneficiaries - Number of patients benefiting from healthcare or medical treatment - Number of hospitals and other health centers built/improved - Number of women who have access to affordable maternal and reproductive health products - Improvement in maternal and infant mortality rates at birth - Improvement in STD and HIV rates - Number of people enrolled in the free education service program - Number of public education centers for preschool, primary and secondary schools receiving support - Number of beneficiaries
Affordable housing	<p>Expenditures related to subsidies and investments that ensure the target population's access to decent and affordable housing</p> <p>Target population:</p> <ul style="list-style-type: none"> - Underserved - People living below the poverty line 	<ul style="list-style-type: none"> - Access to affordable housing 	<ul style="list-style-type: none"> - Number of people who have been provided access to decent and affordable housing - Rate of reduction of people without access to decent and affordable housing - Number of people who have been provided construction materials to improve housing
Employment generation	<p>Expenditures related to:</p> <ul style="list-style-type: none"> - Lifelong learning programs, skills training for employability - Tools to strengthen financial education and consumer protection - Programs and infrastructure to increase financial inclusion of individuals and MSMEs - Employment generation and retention initiatives <p>Target Population:</p> <ul style="list-style-type: none"> - MSMEs - Population with low educational level - Underserved - People living below the poverty line - Unemployed 	<ul style="list-style-type: none"> - Employment generation - Access to financial services 	<ul style="list-style-type: none"> - Proportion of jobs created for the unskilled population - Percentage reduction of the population living below the poverty line, by gender, area, region, and age range - Percentage increase in wage remuneration relative to the total gross added value

Endnotes

- 1 Point-in-time assessment is applicable only on date of assignment or update.
- 2 Gobierno de la Republica de Guatemala, [Contribucion Nacionalmente Determinada 2021](#).
- 3 International Energy Agency, [Guatemala country profile](#).
- 4 Gobierno de la Republica de Guatemala, [Plan nacional de energía 2017 - 2032](#).
- 5 Gobierno de la Republica de Guatemala, [Contribucion Nacionalmente Determinada 2021](#).
- 6 Climate Watch Data, [Historical GHG Emissions - Guatemala](#).
- 7 JMP, [Progress on household drinking water, sanitation and hygiene 2000-2022: special focus on gender](#).
- 8 Aguas Residuales info - [El 95% de los ríos y lagos en Guatemala están contaminados](#).
- 9 Ministerio del Medio Ambiente y Recursos Naturales, [Guia para la elaboracion de planes de manejo, proteccion y conservacion de cuencas, subcuencas y microcuencas de la Republica de Guatemala](#).
- 10 UNEPGRID, [Guatemala country profile](#).
- 11 Key Biodiversity Areas, [Explore data](#).
- 12 Global Forestry Watch, [Guatemala profile](#).
- 13 Ciencia & Investigación Forestal, [Manejo forestal sustentable y biodiversidad](#).
- 14 World Bank - Climate Change Knowledge Portal, [Guatemala Country profile](#).
- 15 Gobierno de la Republica de Guatemala, [Contribucion Nacionalmente Determinada 2021](#).
- 16 World Bank Group - Data, [Employment in agriculture - Guatemala](#).
- 17 World Bank Group - Data, [Agriculture, forestry and fishing value added - Guatemala](#).
- 18 Gobierno de la Republica de Guatemala, [Estrategia Nacional de Ganaderia Bovina Sostenible con Bajas Emisiones](#).
- 19 World Health Organization, [Levels and trends in child malnutrition: UNICEF/WHO/World Bank Group joint child malnutrition estimates: key findings of the 2023 edition](#).
- 20 UNICEF, [Desnutrición en Guatemala](#).
- 21 Acta Biomed 2021, [Early and Long-term Consequences of Nutritional Stunting: From Childhood to Adulthood](#).
- 22 OECD, [Health at a glance - Latin america and the caribbean 2023](#).
- 23 World Bank, [Guatemala learning poverty brief](#).
- 24 Instituto Nacional de Estadísticas de Guatemala, [Principales resultados de la encuesta nacional de empleo e ingresos 2022](#).
- 25 Statista, [Informal unemployment share in Guatemala](#).
- 26 CABI economics, [Status actual del déficit habitacional en Guatemala y la importancia de tenencia de vivienda](#).
- 27 Prensa libre, [No tener casa propia ni dinero para alquilar una ajena, obliga a miles de familias a cohabitar en asentamientos en condiciones de miseria](#).

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