2024

BELIZE'S FIRST BIENNIAL TRANSPARENCY REPORT

To the United Nations Framework Convention on Climate Change

National Climate Change Office

Ministry of Sustainable Development and Climate Change

BELIZE'S FIRST BIENNIAL TRANSPARENCY REPORT TO THE UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE

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Cover photo and individual chapter photos by Sala Jan.

Foreword

Statement from the Hon. Orlando Habet, Minister, Ministry of Sustainable Development and Climate Change

As the Minister of Sustainable Development and Climate Change, I am pleased to present Belize's First Biennial Transparency Report (BTR) to the United Nations Framework Convention on Climate Change. This report marks a significant milestone in our nation's commitment to global climate action and transparency.

Belize, like many Small Island Developing States, stands at the frontline of climate change impacts. Rising sea levels, intensifying storms, and changing weather patterns threaten our coastal communities, vital ecosystems, and key economic sectors. Despite these challenges, we remain resolute in our dedication to the Paris Agreement's goals and to building a resilient, low-carbon future for our people.

This inaugural BTR showcases Belize's progress in implementing our Nationally Determined Contribution (NDC) and highlights our ongoing efforts to reduce greenhouse gas emissions and adapt to climate change impacts. It reflects our whole-of-society approach, incorporating inputs from government agencies, civil society, indigenous communities, and the private sector.

Key achievements outlined in this report include our advances in renewable energy adoption, sustainable forest management, and coastal ecosystem protection. We have also made strides in climate-resilient agriculture and water resource management. However, we acknowledge that significant work remains, particularly in securing adequate climate finance and enhancing our technical capacities.

As we submit this report, we reaffirm Belize's commitment to transparency and accountability in our climate actions. We call upon the international community to recognize the unique vulnerabilities of Small Island Developing States and to provide the support necessary for us to fully implement our climate ambitions.

I extend my gratitude to all who contributed to this report and to our ongoing climate initiatives. Together, we will continue to build a sustainable and resilient Belize for future generations.

Hon. Orlando Habet
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Ministry of Sustainable Development and Climate Change
Belize

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Abbreviations

BNCCC	Belize National Climate Change Committee
BNCCC	Belize National Climate Change Council
BSI	Belize Sugar Industry
BTR	Biennial Transparency Report
CATIE	Centro Agronómico Tropical de Investigación y Enseñanza
CSA	Climate Smart Agriculture
ETF	Enhanced Transparency Framework
FOLU	Forestry and Other Land Use
GCF	Green Climate Fund
GDP	Gross Domestic Product
GHG	Greenhouse Gas Inventory
ICAT	Initiative for Climate Action Transparency
LEDS	Low Emissions Development Strategy
LULUCF	Land Use, Land Use Change and Forestry
MPA	Marine Protected Areas
MPGs	Modalities, Procedures and Guidelines
MOU	Memorandum of Understanding
MRV	Monitoring, Reporting and Verification
MSDCC	Ministry of Sustainable Development and Climate Change
NAP	National Adaptation Plan
NCCO	National Climate Change Office
NCCPSMP	National Climate Change Policy, Strategy and Master Plan
NDC	Nationally Determined Contribution
NIR	National Inventory Report
PA	Paris Agreement
PACT	Protected Areas Conservation Trust
REDD+	Reducing Emissions from Deforestation and Forest Degradation in Developing Countries

SIB	Statistical Institute of Belize
SIRDI	Sugar Industry Research and Development Institute
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WRI	World Resources Institute

NATIONAL CIRCUMSTANCES

National Circumstances

Geographic Profile

Belize is located on the eastern coast of Central America, bordered by Mexico to the north, Guatemala to the west and south, and the Caribbean Sea to the east. Belize's unique location and characteristics makes it a member of both the Central American and the Caribbean community. It spans an area of approximately 22,966 square kilometres. The mainland is approximately 290 km in length and 110 km in width. Belize's coastline stretches for over 386 kilometres and is home to the world's second-largest barrier reef, a UNESCO World Heritage Site since 1996 (UNESCO.). *Figure 1* below shows Belize's geographic location.

Figure 1 Political Map of Belize showing geographic location (source: Forest Department)

The country is divided into six districts: Corozal, Orange Walk, Belize, Cayo, Stann Creek, and Toledo. Its geographic features include diverse ecosystems such as coastal areas, mangroves, wetlands, tropical rainforests, and mountainous regions. Belize also includes hundreds of islands, known locally as cayes, which contribute to the country's rich biodiversity and its marine-based economy.

Belize's topography ranges from low-lying coastal plains, in the north, to the Maya Mountains, in the south-central part of the country. The elevation varies between sea level and the highest point at Doyle's Delight, which stands at 1,124 meters in the Maya Mountain range. Major rivers such as the Belize River, New River, and Sibun River traverse the landscape, playing critical roles in both human activity and natural ecosystems.

Ecological Profile

Belize boasts a remarkable array of ecosystems, making it one of the most biologically diverse nations in Central America. Belize has a 63% forest cover (Forest Sector Summary Report, 2024), with approximately

35.8% within the National Protected Areas System (NPAS) (NBSAP, 2016). The country's ecosystems include tropical rainforests, mangrove swamps, coastal savannas, pine forests, and coral reefs. These ecosystems harbour rich biodiversity, supporting various species of flora and fauna, many of which are endemic to the region.

Belize is home to over 4,000 species of vascular plants and more than 500 species of birds, mammals, reptiles, and amphibians. Iconic species such as the jaguar, tapir, howler monkey, and toucan highlight the country's rich wildlife. Its marine ecosystem is equally diverse, with the Belize Barrier Reef System, a UNESCO World Heritage site, supporting a wide variety of coral species, fish, marine invertebrates and threatened marine species.

These ecosystems contribute to Belize's economy, particularly through tourism and fisheries, while also playing a crucial role in regulating the climate, purifying water, and preventing soil erosion. However, rapid population growth, urbanization, agricultural expansion, and climate change pose significant threats to these ecological systems.

Climate Profile

Belize's tropical climate is heavily influenced by its geographic location on the Caribbean coast, between 15º 45' and 18º 30' N. The country experiences two distinct seasons: a rainy season from June to November and a dry season from December to May. The low-lying coastal areas in the north and mountainous southern regions create significant climatic variation across the country, with the southern areas receiving more rainfall than the north. Mean annual rainfall ranges from sixty inches in the north to 160 inches in the south (National Meteorological Service of Belize [NMS], n.d.). Rainfall begins in May in the southern regions, advancing northwards by early June. The wettest month in the southern regions is July, while the central regions experience two peaks in rainfall in June and September.

The main synoptic features that drive rainfall are tropical waves, storms, and hurricanes that travel westward across the Caribbean during the rainy season. These systems are most active between September and October, although the frequency varies from year to year. Tropical waves are most frequent in June and July, and their activity, whether strong or weak, contributes significantly to rainfall (NMS, n.d.). Cold fronts from North America impact Belize between October and April, bringing cooler temperatures and increased precipitation during the dry season, with cold fronts arriving every 10 days on average, peaking in December and January (NMS, n.d.).

During the dry season, which runs from November to May, rainfall decreases gradually, with April being the driest month. The dry season is characterized by two distinct phases: a cooler period from November to February, influenced by cold fronts, and a warm, dry period from March to May. During the warm phase, high-pressure systems in the Atlantic create stable conditions with persistent winds.

Belize is highly vulnerable to climate change, with rising temperatures, changing rainfall patterns, and extreme weather events posing increasing risks. According to Belize's National Climate Change Policy, Strategy, and Master Plan (2021), air surface temperatures are projected to rise significantly by the end of the century. Under the optimistic RCP2.6 scenario, the maximum temperature is expected to increase by 2°C, while in a more pessimistic RCP4.5 scenario, the temperature could rise by as much as 8°C. Mean temperatures are also expected to rise, increasing by 0.7°C under the RCP2.6 scenario (Martin-Ortega, et al, 2021). These temperature changes will likely exacerbate extreme heat events and cold spells, leading to more frequent and severe climate extremes.

Precipitation patterns are expected to shift, with a decrease in mean annual rainfall across much of the country, although rainfall may increase in certain localized areas, particularly near the southern mountainous regions. This reduction in rainfall will increase the risk of prolonged droughts, especially in

northern and central regions, while the frequency of torrential rain during the wet season is expected to rise, leading to more frequent flooding events.

Belize's coastal regions are particularly susceptible to the effects of climate change, particularly sea-level rise. The National Climate Change Policy, Strategy and Master Plan (NCCPSMP) projects a rise in sea levels of up to 103.9 cm under the RCP6.0 scenario by the end of the century. This rise poses significant risks to coastal communities, critical infrastructure, and ecosystems, especially mangroves and coral reefs, which serve as natural barriers against storm surges. Erosion and saltwater intrusion into freshwater supplies will become more prominent as sea levels rise, threatening both agricultural productivity and human settlements.

In addition to rising sea levels, Belize's marine environment will be affected by increasing sea surface temperatures. Projections suggest that sea surface temperatures will rise by over 1°C in the next 50 years, contributing to more frequent coral bleaching events. Ocean acidification, driven by increased carbon dioxide levels in the atmosphere, will also affect Belize's coral reefs and marine biodiversity. Acidified waters dissolve the calcium carbonate structures that form coral reefs and shellfish, weakening marine ecosystems that are crucial for biodiversity, fisheries, and coastal protection.

The combined effects of rising temperatures, changing rainfall patterns, sea-level rise, and ocean acidification will have profound impacts on Belize's natural environment, economic sectors, and communities. Agriculture, fisheries, and tourism—key drivers of Belize's economy—will face increasing challenges from these climate risks.

Population Profile

According to the 2022 Population and Housing Census, Belize's total household population was 397,483, a 23.3% increase from 2010 (*Table 1*). The population remains gender-balanced, with 50.8% females and 49.2% males. Children under the age of 14 comprised 27.6% of the population, while the working-age group (14 years and older) accounted for 72.4%. The national median age increased from 21 in 2010 to 25 years in 2022, reflecting a slight gradual aging of the population (SIB, 2022).

Belize's ethnic composition remains diverse, with 51.7% identifying as Mestizo/Hispanic/Latino, followed by Creole (25.2%), Maya (9.8%), and Garifuna (4%). The remainder comprises other smaller ethnic groups, such as East Indian. Urban areas accounted for 42.2% of the population, while rural areas accounted for 57.8%. Households saw improvements in living conditions, with the average household size decreasing from 4.0 in 2010 to 3.6 in 2022. Ownership of homes increased, with 67.8% of households owning their dwellings, and access to utilities, such as electricity, public water, and internet, saw significant improvements (SIB, 2022).

Table 1 Belize's total household population 2010 vs 2022 (Source: Statistical Institute of Belize. 2022 Population and Housing Census)

National			
2010	**2022**	**Absolute change**	**Growth Rate**
322,424	397,483	75,060	23.3%

Table 2 Population by District 2010 vs 2022 (Source: Statistical Institute of Belize. 2022 Population and Housing Census)

Population by District	2010	2022
Orange Walk	45,936	54,152
Corozal	41,060	45,310
Cayo	75,034	99,105
Belize	95,287	113,630
Toledo	30,783	37,124
Stann Creek	34,324	48,162

Economic Profile

According to the Statistical Institute of Belize, the Gross Domestic Product (GDP) by activity at constant prices was 5123.47.1 BZ million in 2023. Belize has experienced a steady increase over the past 5 years with a 12.4% increase observed when compared to 2019. *Table 3* below shows the GDP by year for 2019 to 2023.

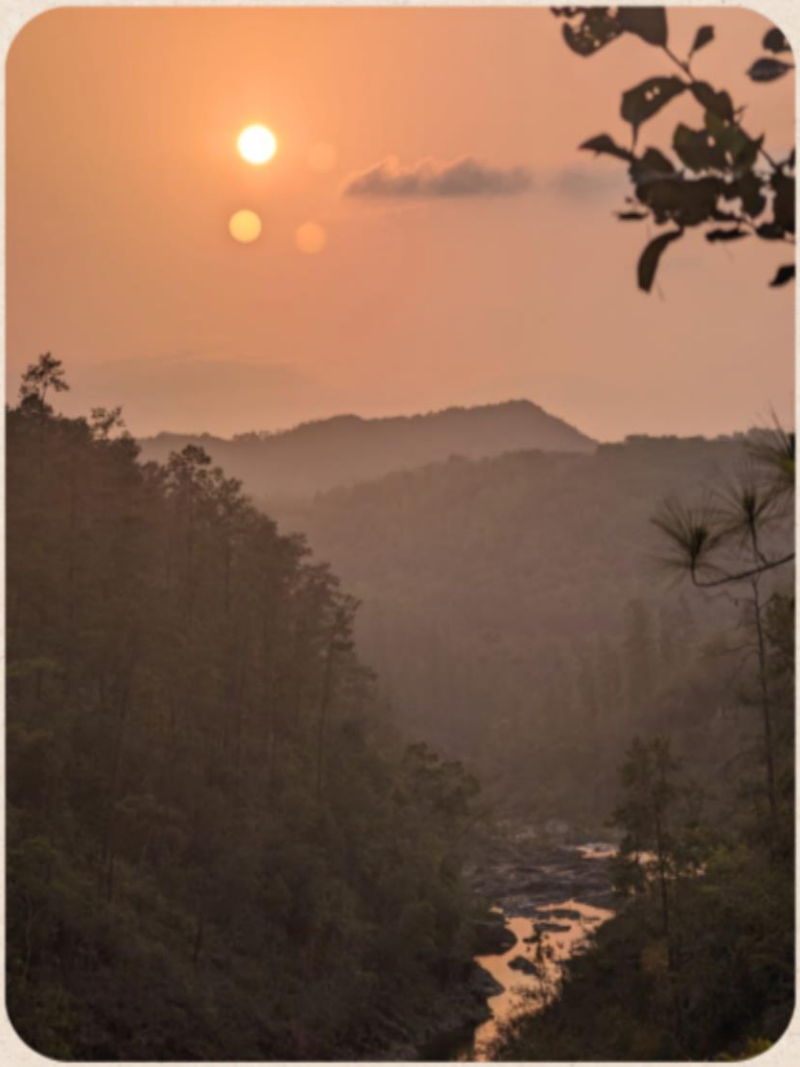
The economy profile is categorized into three industries: (1) Primary Industries, (2) Secondary Industries and (3) Tertiary Industries. Primary industries are made up of agriculture, forestry and fishing, and mining industries, secondary industries consist of manufacturing, electricity, water supply and construction while the tertiary industry, the largest of the three industries, has contributions from wholesale and retail trade, transportation, accommodation and food service activities, financial and insurance activities, real estate activities, and several other services activities.

The increase in GDP for the year 2023 can be attributed to strong performances in the tertiary sector industries. A decrease was observed within the primary sector due largely to the impacts of unfavourable weather conditions on the agricultural industries (SBI, 2023). This in turn impacted the secondary industries, specifically manufacturing, due to the reduced production levels across major agricultural industries. Some specific examples include low sugarcane harvest resulting in a constrained sugar output and a decrease in citrus concentrate production. The increase in the tertiary industry was attributed to increases within the accommodation and food services sector.

Table 3 GDP by activity at constant prices by 2019 – 2023 (Source: Statistical Institute of Belize, Annual GDP Activity Constant Prices Base 2014 Dollar Value)

GDP by Activity at Constant Prices; 2019 – 2023	
Year	**Millions of Belize Dollars**
2019	4556.6
2020	3923.1
2021	4619.3
2022	5065.2
2023	5123.4

GREENHOUSE GAS INVENTORY



Greenhouse Gas Inventory

Belize submitted its Fifth Greenhouse Gas Inventory as a stand-alone report along with its First Biennial Transparency Report which is stipulated as an option in paragraph 12 of the modalities, procedures and guidelines or MPGs (decision 18/CMA.1). Paragraph 91 of the MPGs, states that each Party that submits a stand-alone national inventory report shall provide a summary of its GHG emissions and removals. This information shall be provided for those reporting years corresponding to the Party's most recent national inventory report, in a tabular format. Therefore, this information can be found in chapter 3 "Information necessary to track progress made in implementing and achieving its NDC under Article 4 of the Paris Agreement".

Belize's National Greenhouse Gas Inventory Report (NIR) was developed simultaneously as this Biennial Transparency Report to be included for its submission in December 2024. It covers emissions and removals from 1994 to 2022. Given that the NIR was developed independently as its own report, its executive summary is included in this BTR below. The full NIR can be accessed on the UNFCCC website.

Executive Summary from the National Inventory Report:

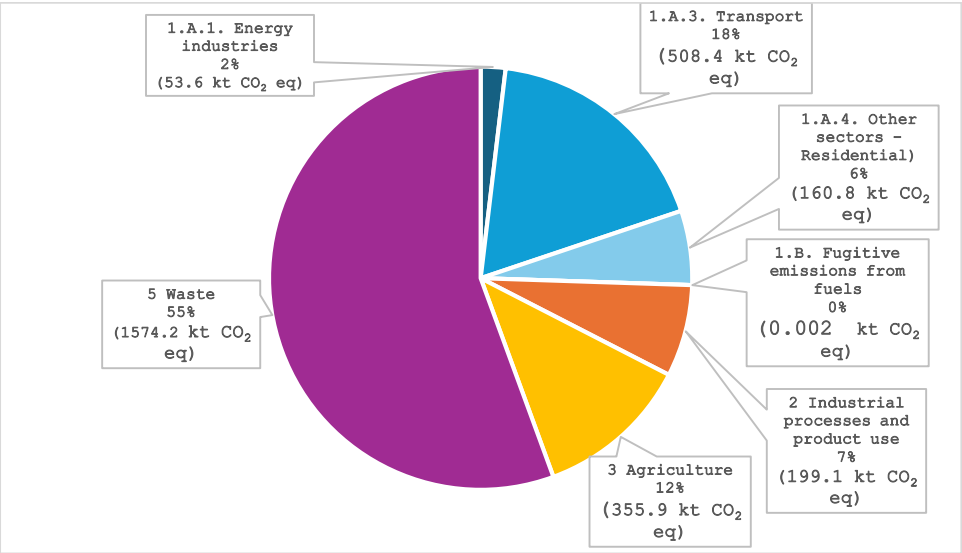
Key Points

Belize's greenhouse gas inventory demonstrates the country's unique position as a net carbon sink, while highlighting growing emission challenges in specific sectors. The ***country's net GHG emissions and removals (including LULUCF)*** were **-2231.16 kt CO2 eq in 2022**, showcasing its vital role in global carbon sequestration. Despite Belize's relatively small global emissions footprint, the country remains committed to reducing emissions in alignment with the Paris Agreement's temperature goals.

The sectoral breakdown reveals important trends (*Figure 2*):

- Energy sector (26% of emissions): Growing transportation and tourism activities are driving increased emissions.
- Waste sector (55% of emissions): Improved data capture and population growth have led to better understanding of this sector's impact.
- LULUCF sector: Demonstrates exceptional carbon sink capacity with -5063.15 kt CO2 eq removals.
- Agriculture sector: (12% of emissions): Growing livestock and rice cultivation activities generate most emissions.
- IPPU sector: (7% of emissions): Small scale industry contributing the least to overall emissions.

Figure 2 Breakdown of Belize's Emissions by Sector (2022)



Background information on GHG inventories and climate change

Belize's National Greenhouse Gas Inventory Report (NIR) is part of its first Biennial Transparency Report (BTR) to be submitted in December 2024, covering emissions and removals from 1994 to 2022. This inventory was prepared by the National Climate Change Office (NCCO) in collaboration with technical experts from various sectors.

Belize, located in Central America and bordered by Mexico, Guatemala, and the Caribbean Sea, experiences unique climate impacts, including active hurricane seasons, wildfires, prolonged rainy periods, and rising sea levels. Despite Belize's vulnerability, the country maintains its focus on national environmental protection and global environmental stewardship having been engaged in international climate action since 1992 after its accession to the United Nations Framework Convention on Climate Change (UNFCCC). Followed by subsequent ratification of the Kyoto Protocol in 2013 and the Paris Agreement in 2016.

The NCCO, operating under the Ministry of Sustainable Development and Climate Change, coordinates national climate initiatives and reporting obligations to ensure strong governmental support and partnerships for impactful climate action.

Overview of National GHG Emissions and Removals (1994- 2022)
The country maintains its status as a net carbon sink, with total net emissions of **-2231.16 kt CO2 eq in 2022**.

Figure 3 illustrates a steady increase in emissions from 2006 to 2019, followed by a decline in 2020 due to the pandemic. A further reduction in emissions is seen between 2021 and 2022, but sectoral emissions remain consistent with some fluctuations.

The **Energy sector** emissions are primarily driven by growing transportation and energy production demands. **The Industrial Processes and Product Use (IPPU) sector**, although the smallest, shows steady growth attributed to the expanding tourism industry and rising demand for refrigeration and air conditioning systems.

The **agriculture sector** has demonstrated consistent growth in emissions led by livestock emissions from enteric fermentation. The **waste sector** has shown substantial increases over the time series driven by population rise and improved accounting of domestic and industrial wastewater emissions. Finally, The **Land Use, Land Use Change and Forestry (LULUCF) sector** reports a significant net removal of -5063.15 kt CO2 eq in 2022, highlighting Belize's forest management and great carbon sink potential.

Throughout the time series, natural events have also significantly influenced emission patterns. In 2011(see Figure 3), large-scale wildfire outbreaks increased country emissions substantially to 10,457,484.37 tCO2eq. Similarly, Hurricane Earl in 2016 generated additional emissions of 114,062.03 tCO2eq through forest damage and increased fuel loads on the forest floor.

Methane (CH4) has emerged as the dominant greenhouse gas (led by high waste sector emissions), accounting for 67% of emissions (1898.33 kt CO2 eq) in 2022, while carbon dioxide (CO2) represents 25% (702.89 kt CO2 eq) of total emissions (primarily resulting from the energy sector). Nitrous oxide (N2O) and hydrofluorocarbons (HFCs) form the remainder.

This comprehensive analysis demonstrates Belize's commitment and achievements in managing its greenhouse gas emissions and identifies areas for further improvement to uphold its NDCs.

Figure 3 Belize's inventory: total GHGs by sector (kt CO2 eq), 1994-2022

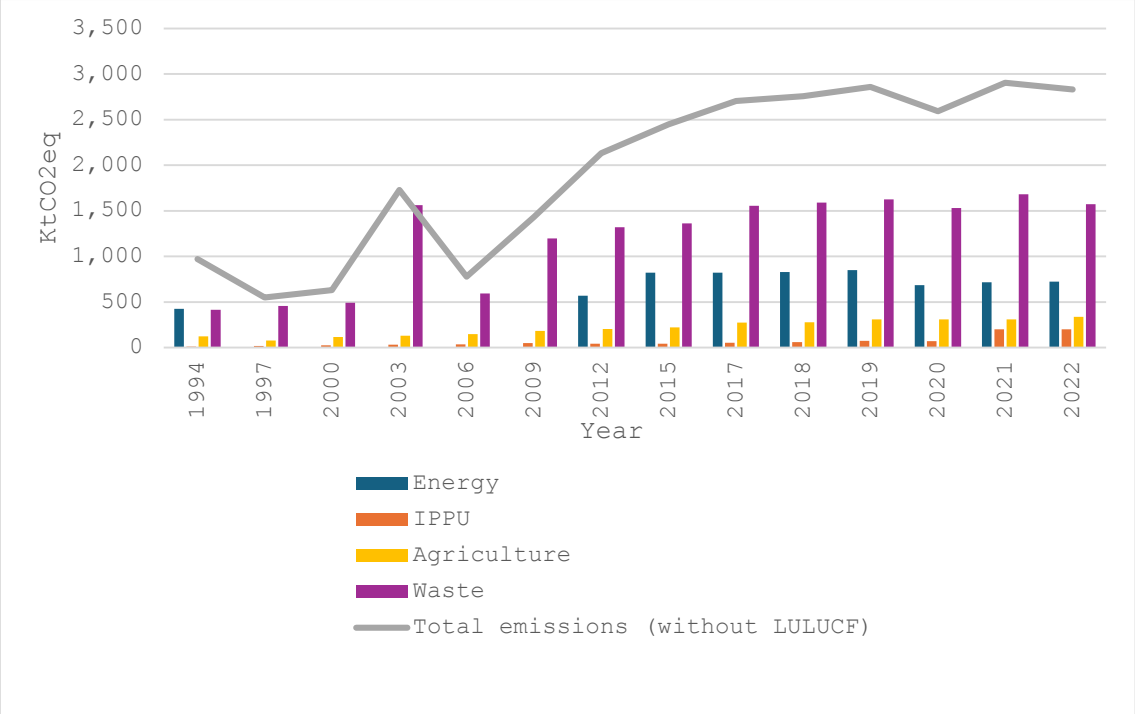
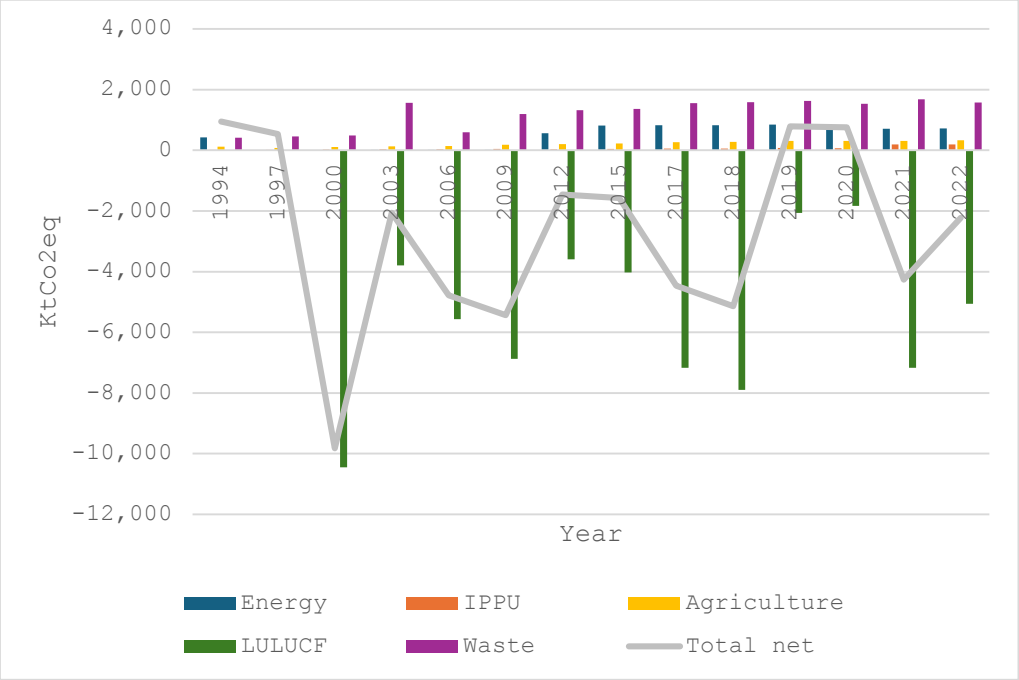


Figure 4 Figure showing Belize's inventory: total net GHG by sector (kt CO2 eq), 1994 -2022



Key Category Analysis

The key category analysis highlights the most significant sources of GHG emissions and removals, focusing on both their current levels and trends over time.

This assessment was conducted using both trend assessment for 2022 and level assessment for the period 2012-2022, following Approach 1 as outlined in the IPCC guidelines. *Table 4* presents the key categories.

Table 4 Key categories in 2022

IPCC category code	IPCC Category	Greenhouse gas	KC according to Level and/or Trend
3.B.1.a	Forest land Remaining Forest land	CO2	L, T
3.B.2.b	Land Converted to Cropland	CO2	L, T
3.B.3.b	Land Converted to Grassland	CO2	L, T
4.D	Wastewater Treatment and Discharge	CH4	L, T
3.B.5.b	Land Converted to Settlements	CO2	L, T
1.A.3.b	Road Transportation - Liquid Fuels	CO2	L
3.A.1	Enteric Fermentation	CH4	L, T
2.F.1	Refrigeration and Air Conditioning	HFCs, PFCs	T

By identifying and analyzing these key categories, Belize can prioritize actions to improve data quality, enhance mitigation strategies, and effectively manage its GHG inventory.

Inventory Improvements

Belize continues to identify areas to enhance its data quality and reporting accuracy. An Inventory Improvement Plan was drafted to address both ongoing issues from previous reports and new challenges that have been identified, with specific timelines and responsibilities assigned to relevant agencies with priority levels. Key areas for improvements include:

1. Addressing data gaps
2. Improving data consistency
3. Enhancing data collection and standardize protocols
4. Increasing technical capacity
5. Establishing a centralized database

A detailed summary of improvements can be found in Section 8.4 of the National Inventory Document.

Information Necessary to Track Progress Made in Implementing and Achieving the NDC

Information Necessary to Track Progress made in Implementing and Achieving the NDC

National circumstances and institutional arrangements

The first section of the BTR document (on page 14) contains a narrative of Belize's national circumstances. Details on the institutional arrangements and mandates, sectoral representation, data flows and relevant actor participation specifically for NDC implementation and tracking of progress in alignment with UNFCCC guidance[1,2] are shared here.

The National Climate Change Office (NCCO), under the Ministry of Sustainable Development and Climate Change, is the entity responsible for overall coordination, monitoring and mainstreaming for all international obligations under the UNFCCC and Paris Agreement, including the NDC[3]. The NCCO's responsibilities are guided by the National Climate Change Policy, Strategy and Master Plan which outlines its national responsibilities. These include the engagement and coordination with sector leads and stakeholders to collectively monitor, implement and track targets set out in the country's climate change policies and plans. No additional legal instruments or mandates exist currently to further outline responsibilities across Belize's institutions involved in climate change actions. However, Belize also has a National Climate Change Committee for which the NCCO is the secretariat. The committee is responsible to review and approve climate change related documents for submission and acceptance by Belize's cabinet.

Technical assistance received from the Initiative for Climate Action Transparency (ICAT) and the Nationally Determined Contribution Partnership (NDC Partnership) through UNDP's Climate Promise Initiative between 2020 and 2022 allowed the country to establish the foundation of the institutional arrangements now in place for tracking progress on the implementation and achievement of its NDC.[4] Current institutional arrangements for that purpose involve coordination under the NCCO of several key ministries and agencies responsible for sectoral contributions to both mitigation and adaptation actions (*Figure 5*). These arrangements were developed for data and information reporting and sharing within and between the institutions for climate change actions. Reporting roles and responsibilities between the relevant institutions were also defined through that ICAT project. In theory[5], the country has set up a multi-organizational structure where several institutions or organizations have agreed to share these responsibilities via standardized memorandums of understanding (MOUs) and terms of reference (TORs). In addition to the MOUs and TORs, Belize set up a series of sectoral working groups where a combination of government institutions and public, private and research institutions collaborate regularly and report on mitigation and adaptation actions. In practice, the number of MOUs to track and monitor climate change is limited and most data sharing is done *ad hoc* via informal verbal agreements and 1:1 collaboration with the

[1] UNFCCC. 2020. Handbook on institutional arrangements to support MRV/transparency of climate action and support. Consultative Group of Experts. United Nations Framework Convention on Climate Change Secretariat. 63 p.

[2] UNFCCC. 2018. Decision 18/CMA.1 Modalities, procedures, and guidelines for the transparency framework for action and support referred to in Article 13 of the Paris Agreement. United Nations Framework Convention on Climate Change. 35 p. Available at: https://unfccc.int/resource/tet/0/00mpg.pdf.

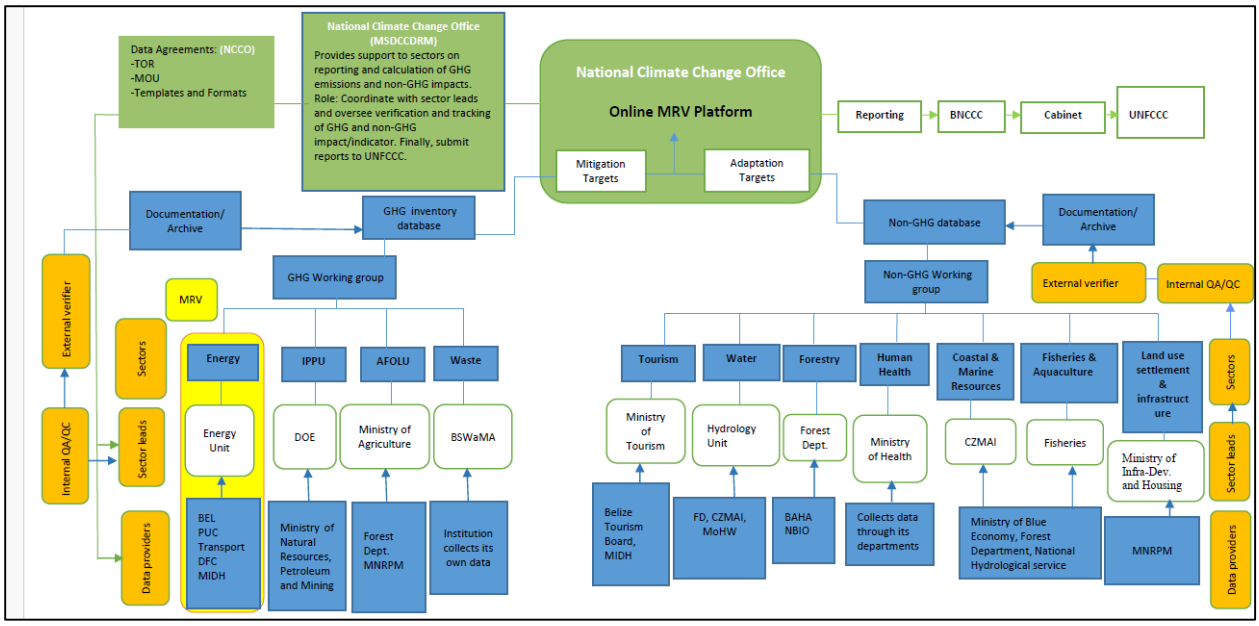
[3] Belize's NDC MRV system is described in detail under section "**DESCRIPTION OF BELIZE'S NATIONALLY DETERMINED CONTRIBUTION UNDER ARTICLE 4 OF THE PARIS AGREEMENT, INCLUDING** updates" below.

[4] A second phase of ICAT assistance is ongoing and spans 2023 through 2025. NDC Partnership continues to provide technical and financial assistance through its partnerships.

[5] Alvarez, JP; Salazar, K; Sosa, I. 2022 Report on formalised reporting protocols between institutions, reporting templates, and an appointment of MRV platform. Deliverable #5. Technical Report. Initiative for Climate Action Transparency (ICAT). National Climate Change Office of Belize (NCCO). 51 p.

NCCO[4]. A Climate Change Bill currently under development, and potentially set to be passed in 2025, will include institutional mandates meant to clarify and facilitate these and other institutional arrangements.

Figure 5 Institutional arrangements for Belize's MRV system to track progress towards its Nationally Determined Contribution (NDC), 2024.



Under the current arrangement, focal points (i.e., "sector leads;" the responsible ministry) were identified within each sector. These institutions ensure that NDC actions are aligned with their respective sectoral action plans, prioritizing a cohesive approach toward national climate goals. As such, they are the most robust choice for leading MRV efforts within their sectoral scope. They thus have the responsibility for tracking NDC actions of their respective sectors by coordinating with their key sector agencies and data providers, conducting analysis of information collected, and drafting summary reports that can then be used by the NCCO. Additional primary actors involved in this process include the Department of Environment, the Forest Department, the Ministry of Agriculture, Food Security, and Enterprise, among others (*Table 5*).

Table 5 Sector leads and key agencies responsible for implementation and tracking progress towards mitigation and adaptation targets in Belize's Nationally Determined Contributions (NDC), 2024.

Contribution to NDC Mitigation Targets		
Sector	**Sector Lead**	**Key Sector Agencies**
FOLU	Ministry of Sustainable Development and Climate Change	• The Belize Forest Department
Agriculture	Ministry of Agriculture, Food Security, and Enterprise	• Agriculture Department
Energy	Ministry of Public Utilities, Energy, Logistics, and E-Governance	• Belize Energy Unit • Belize Electricity Limited • Public Utilities Commission
Transport	Ministry of Transport	• Transport Department
Waste	Ministry of Sustainable Development and Climate Change	• The Belize Solid Waste Authority Management
Contribution to NDC Adaptation Targets		

Coastal zone and Marine Resources	Ministry of Sustainable Development and Climate Change	• Coastal Zone Management Authority and Institute
Agriculture	Ministry of Agriculture, Food Security, and Enterprise	• Agriculture Department
Fisheries and aquaculture	Ministry of Blue Economy and Civil Aviation	• Belize Fisheries Department
Human Health	Ministry of Health and Wellness	• Department of Public Health
Tourism	Ministry of Tourism and Diaspora Relations	• Sustainable Tourism Program
Forestry and Biodiversity	Ministry of Sustainable Development and Climate Change	• Forest Department • Belize National Biodiversity Office
Land use, Human Settlements, and Infrastructure	Ministry of Infrastructure Development and Housing	• Project Execution Unit
Water resources	Ministry of Natural Resources	• National Hydrological Service • National Meteorological Service

Description of Belize's nationally determined contribution under Article 4 of the Paris Agreement, including updates

As a small nation with a minimal contribution to global GHG emissions, Belize remains resolute in its commitment to the UNFCCC and fully endorses the Paris Agreement's aim of limiting global temperature increases to 1.5 °C. Belize first submitted its Intended Nationally Determined Contribution (iNDC) in 2015, setting mitigation targets to help curb global warming below 1.5 °C above pre-industrial levels, while focusing on adaptation measures to strengthen resilience in critical systems and safeguard vulnerable populations. Building on this foundation, Belize submitted its first *updated* NDC (NDC2) in 2021[6], reflecting a higher level of ambition and a more data-driven approach. Presented ahead of COP26, NDC2 targets a 50% improvement over the original iNDC goals, using projections based on Belize's fourth Greenhouse Gas (GHG) inventory, which includes emissions data up to 2017. NDC2 also integrates results from the GHG inventory for the Forestry and Other Land Use (FOLU); considers national capacities and circumstances, the availability of technological advancements; engaged important stakeholders such as vulnerable populations, civil society and project owners, and a technical committee of sector leads; and includes a gender and vulnerable group scoring analysis.

Belize's current NDC has an economy-wide[7] avoided emissions target of 5,647 $KtCO_2e$ between 2021 and 2030 (*Table 6*). According to this target, emissions would peak at 1,080 $KtCO_2e$ in avoided emissions in 2030. In addition, the country has set sectoral targets that also include building resilience and adapting to the negative impacts of climate change in key economic sectors and systems (see section on "*Adaptation targets in the NDC*" below).

[6] Government of Belize. 2021. Belize's Nationally Determined Contributions. 45 p.
[7] "Economy-wide" under Belize's NDC2 refers to four key sectors: energy, forestry, agriculture, and waste.

Table 6 Description of Belize's 2021 updated nationally determined contribution (NDC) under Article 4 of the Paris Agreement

NDC Item	***Description***
Indicator descriptor	Number of $KtCO_2eq$ emissions avoided per year as compared to a baseline BAU projection
Relation to NDC	This indicator measures progress towards the overall mitigation target in the NDC.
Target(s) and description, including target type(s), as applicable	Economy wide target that states "to avoid a cumulative emissions total of 5,647 $KtCO_2e$ between 2021 and 2030 (peaking at 1,080 $KtCO_2e$ in avoided emissions in 2030)."
Target year(s) or period(s), and whether they are single-year or multi-year target(s), as applicable	*Target year:* 2030
Reference point(s), level(s), baseline(s), base year(s) or starting point(s), and their respective value(s), as applicable	*Reference point/base year:* 2017 (since 4th GHG inventory was used) *Starting point:* 2021 *Baseline:* emissions in 2017 (-5871.54 Gg CO_2e)
Time frame(s) and/or periods for implementation, as applicable	2021 to 2030
Scope and coverage, including, as relevant, sectors, categories, activities, sources and sinks, pools, and gases, as applicable	*Mitigation sectors:* energy, forestry, agriculture, waste *Gases:* Carbon dioxide, methane, nitrous oxide
Intention to use cooperative approaches that involve the use of ITMOs under Article 6 towards NDCs under Article 4 of the Paris Agreement, as applicable	Yes, a Climate Change and Carbon Markets Initiative Bill currently under development would facilitate the sale of carbon credits. The bill will potentially be approved in 2025 and thereafter the appropriate regulations will be developed to facilitate its implementation. In addition, the NDC mentions "an action related to exploring carbon markets for blue carbon" under Article 6 of the Paris Agreement. Associated potential financing options would be used "to support mangrove protection and restoration" and would include "multilateral and bilateral funds, insurance products, debt-for-nature swaps, private investment, blue carbon credits and bonds, and other innovative conservation financing mechanisms." No progress is reported on this action as it was considered conditional on financial support and technical assistance.

Any updates or clarifications of previously reported information, as applicable	Belize first submitted its iNDC in 2017 and updated it (NCD2) in 2021. This is the first time a BTR is submitted and reporting on this indicator, so no updates are available.

Mitigation targets in the NDC

Belize's updated and enhanced NDC (NDC2) outlines seven mitigation targets (*Table 7*) and ten adaptation targets (*Table 8*), setting a clear path toward national and global climate goals by 2030. The mitigation targets specifically address the primary sources of greenhouse gas emissions in Belize, which are concentrated in the Energy, Agriculture, Forestry, and Other Land Use (AFOLU), Waste, and Transport sectors (*Table 7*). Each target is designed to mitigate emissions and to foster sustainable practices that contribute to Belize's long-term environmental and economic goals. Context linked to these targets is provided by sector in the sections below.

Table 7 Mitigation targets included in Belize's 2021 Nationally Determined Contributions (NDC) under Article 4 of the Paris Agreement, by key sectors

Target #	NDC Mitigation Targets
Forestry and Land Use (FOLU)	
1	Reduce GHG emissions and increase GHG removals related to land use change totalling 2,053 $KtCO_2e$ cumulative over the period from 2021 to 2030.
2	Enhance the capacity of the country's mangrove and seagrass ecosystems to function as a carbon sink by 2030, through increased protection of mangroves and by removing a cumulative total of 381 $KtCO_2e$ between 2021 and 2030 through mangrove restoration.
Agriculture	
3	Reduce methane emissions from livestock by 10% by 2030 and avoid emissions of at least 4.5 $KtCO_2e$ related to agriculturally driven land use change by 2025.
Energy	
4	Avoid emissions from the power sector equivalent to 19 $KtCO_2e$ per year through system and consumption efficiency measures amounting to at least 100 GWh/year by 2030.
5	Avoid 44 $KtCO_2e$ in the national electricity supply by 2030 through the introduction of expanded capacity from renewable energy sources.
6	Avoid 117 $KtCO_2e$/year from the transport sector by 2030 through a 15% reduction in conventional transportation fuel use by 2030 and achieve 15% efficiency per passenger- and tonne-kilometre through appropriate policies and investments.
Waste	
7	Improve waste management processes to avoid emissions of up to 18 $KtCO_2e$ per year by 2030, in line with the national waste management strategy.

Forestry and Land Use (FOLU) Sector

Belize's forest ecosystems are vital GHG sinks, but rapid urban, rural, and agricultural expansion is causing significant deforestation and forest degradation, including damage to protected areas' buffer zones. To combat this, Belize's forestry commitments include seven conditional actions. These include completing Belize's REDD+ strategy and prioritizing reforestation and restoration by expanding protected areas and restoring degraded forests. Efforts to reduce deforestation and forest degradation, to enhance fire control, and to improve logging practices are also being conducted within and outside protected areas and degraded

forested areas. Key initiatives being implemented focus on sustainable forest management, especially in indigenous and local communities, and promoting agroforestry to integrate sustainable land-use practices. These actions aim to enhance stewardship of community and Indigenous lands, preserving their role as essential carbon sinks. Belize is also assessing the potential to reduce emissions related to fuelwood collection and use and exploring new financing options to support forest protection and restoration.

As a key innovation, blue carbon ecosystems are included as a priority in Belize's NDC2, with seven actions conditional on receiving technical assistance and financial support. These actions include doubling the area of mangroves under protection, restoring 4000 ha by 2030, and halting and reversing net mangrove loss by 2025, in alignment with the Mangrove Breakthrough's targets[8]. Belize will also assess the ecosystem services provided by seagrasses and the feasibility of including them together with mangroves in the national GHG inventory by 2025. This information would allow Belize to explore financing options under Article 6 of the Paris Agreement, "including bilateral funds, insurance products, debt-for-nature swaps, private investment, blue carbon credits and bonds, and other innovative conservation financing mechanisms". Results of these exercises will be reported in BTR2.

Agriculture Sector

Belize's agricultural system represents a blend of traditional *milpa farming* techniques[9] with more modern, mechanized production methods. Agriculture and food processing play a critical role in Belize's economy, contributing between 10-13 % of GDP and employing 6-10 % of the national labour force, according to the National Strategy for Agroprocessing and Food Production (2019)[10]. Additionally, the sector is a key driver of Belize's trade, accounting for more than 80 % of the country's exports. Despite its vital importance, the sector faces mounting challenges, particularly from climate change and natural disasters, which threaten long-term productivity and food security. In response, Belize's agricultural sector is committed to conditionally achieving seven ambitious sustainability targets, including reducing methane emissions from livestock and restoring degraded agricultural lands. Central to these efforts are key initiatives focused on promoting sustainable agriculture and land management practices in 80,000 hectares of agricultural landscape, restoring 200 hectares of arable sugar land in Northern Belize, and promoting reduction of agricultural GHG emission through altering crop cultivation methods.

Energy Sector

Belize's energy sector presents significant opportunities for reducing greenhouse gas (GHG) emissions. The country has set ambitious goals to decrease emissions through renewable energy and energy efficiency initiatives. Contributions from the energy sector focus on expanding renewable energy within its energy framework while gradually decreasing reliance on electricity imports from Mexico. Key actions include achieving 75% gross generation of electricity from renewable energy sources, reducing emissions through compressed natural gas conversions, installing utility-scale solar power, and implementing sustainable energy policies. Key initiatives in this sector also include the development of an electricity expansion plan that aims to reduce the carbon intensity of the national grid, providing more accurate estimates of CO_2e reductions and displacing fossil fuel-based electricity. The actions under the energy section are classified

[8] https://www.mangrovealliance.org/news/the-mangrove-breakthrough/

[9] A "milpa" is a small-scale traditional Maya subsistence farming system of shifting cultivation. By allowing areas to regenerate, creating a mosaic of forest succession stages and crop diversity, and providing major food sources and livelihoods for Maya milpa farmers. Source: Drexler, K. A. (2020). Government extension, agroecology, and sustainable food systems in Belize milpa farming communities: A socio-ecological systems approach. Journal of Agriculture, Food Systems, and Community Development, 9(3),85–97. https://doi.org/10.5304/jafscd.2020.093.001

[10] Government of Belize. 2019. National Strategy for Agro-Processing and Food Production for Small Entrepreneurs in Belize, with the Central Farm Agro-Processing Unit as a Fundamental Support Framework. 78 p. Available at: https://www.agriculture.gov.bz/wp-content/uploads/2020/11/Draft-National-Agro-Strat-for-Belize-cleared.pdf

as partially conditional, as the country already has ongoing plans for significant investments to achieve a substantial renewable energy share by 2030.

Within the energy sector, transport demand is projected to grow by 70% to 80% between 2017 and 2035 according to projections from the Comprehensive National Transportation Master Plan (2018)[11]. However, the country faces considerable challenges due to underdeveloped infrastructure in roads, ports, and aviation. Belize is committed to enhancing fuel efficiency and adopting cleaner technologies in the transport sector. The key initiatives in this sector aim to capitalize on this by developing a long-term policy for electric vehicle (EV) adoption, starting with a pilot project in the largest city to assess EV feasibility, paving the way for nationwide implementation. This transition, coupled with infrastructure improvements, will boost transport efficiency, and strengthen the sector's resilience to climate change impacts. Actions under the transport sector are classified as partially conditional as they depend on factors such as financing from the Mitigation Action facility and other financial support options to purchase and deploy efficient buses. Additionally, there is a conditional requirement for technical assistance to establish an effective policy framework for electric and hybrid vehicles.

Waste Sector

Belize has made notable progress in tackling solid waste management issues. Nonetheless, significant challenges persist, particularly in rural areas where waste collection infrastructure is inadequate, leading to prevalent practices such as open burning. This method exacerbates air pollution and emits harmful toxins and GHGs, thereby contributing to global warming. Currently, the nation generates over 200,000 tons of solid waste annually, which includes approximately 100,000 tons of Municipal Solid Waste (MSW), 350-450 tons of hazardous waste, and an unknown amount of construction and demolition (C&D) waste. Recovery and recycling of MSW are conducted on a limited scale, primarily targeting easily sortable materials, such as paper, cardboard, plastics, and metals.

The waste sector's commitments are unconditional and encompass several key initiatives aimed at enhancing waste management practices and promoting environmental sustainability. These include closing all municipal dumps and ending open burning of waste by 2025. This can be achieved by the ongoing expansion of regular municipal services to all households and commercial premises. These actions will be supported by a legal and policy framework for the sustainable management of solid waste in the country.

Adaptation targets in the NDC

Belize's NDC outlines an ambitious climate adaptation and resilience strategy across key vulnerable sectors: coastal zone and marine resources, agriculture, fisheries and aquaculture, human health, tourism, forestry and biodiversity, land use, human settlements and infrastructure, as well as water resources, all of which are critical support systems increasingly strained by climate variability (*Table 8*). Each sectoral target is accompanied by actionable measures tailored to achieve specific outcomes. Combined, these ensure the delivery of a holistic strategy to enhance the nation's adaptive capacity and protect both the environment and its citizens from the impacts of climate change.

[11] Government of Belize. 2018. Comprehensive National Transportation Master Plan. Office of the Prime Minister. 550 p. Available at: https://edc.gov.bz/wp-content/uploads/2020/12/5.-CNTMP-Final-Report-April-201807220714.pdf

Table 8 Adaptation targets included in Belize's 2021 Nationally Determined Contributions (NDC) under Article 4 of the Paris Agreement, by key sectors

Coastal Zone and Marine Resources	
1	Increase resilience to climate impacts for coastal communities and habitats by managing further development of the coastline to reverse net coastal habitat and land loss by 2025
2	Strengthen the resilience of coastal communities by developing an early warning system for storm surges by 2025
Agriculture	
3	Reduce post-harvest losses through the implementation of the National Adaptation Strategy to Address Climate Change in the Agricultural Sector to increase the adaptive capacity of the agricultural sector
4	Develop and implement an enhanced early warning system for drought and extreme weather events to support farmers in planning for and responding to the impacts of climate change by 2025
Fisheries and aquaculture	
5	Build capacity in fisheries and aquaculture sector through research, diversification and retraining to support livelihoods while protecting coastal ecosystems
Human health	
6	Build adaptive capacity in the health sector by assessing vulnerability and investing in capacity to respond to climate-related threats
Tourism	
7	Increase the adaptive capacity of tourism sector through the development of climate resilient planning frameworks and infrastructure
Forestry and biodiversity	
8	Implement protection targets of the National Biodiversity Strategy Action Plan including increased effectiveness of the National Protected Areas System by 2024
Land use, human settlements and infrastructure	
9	Protect communities from damage caused by flooding and sea level rise through implementation of the Land Use Policy and supporting green and grey infrastructure
Water resources	
10	Enhance the protection of water catchment (including groundwater resources) areas and make improvements to the management and maintenance of existing water supply systems through implementation of the National Water Sector Adaptation Strategy and Action Plan

In the coastal and marine sectors, Belize's mangroves and coral reef ecosystems, play a critical role in protecting communities from the impacts of rising sea levels, storms, and coastal erosion. Efforts focus on safeguarding these ecosystems not only for protection but also to enhance carbon sequestration through the preservation and restoration of mangrove forests. These (and other) mitigation co-benefits resulting from adaptation actions are reported under the "*Mitigation policies and measures related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement*" section below.

The promotion of Climate-Smart Agriculture (CSA) practices is crucial to building resilience against droughts and floods. These include the use of drought-resistant crops, improved water management techniques, and sustainable farming methods that enhance soil health and productivity. The fisheries and aquaculture sectors are prioritizing sustainable practices by strengthening Marine Protected Areas (MPAs) and utilizing data-driven management systems. These efforts ensure the long-term protection of marine biodiversity, fisheries, and fish stocks, which are vital for food security and livelihoods.

The forestry sector is enhancing the management of protected areas to conserve biodiversity and ecosystems. These ecosystems provide essential services like pollination, water purification, and climate regulation, all vital for human well-being and key economic sectors previously stated such as agriculture and tourism. Belize is committed to aligning climate and biodiversity goals through international frameworks like the Convention on Biological Diversity (CBD) and the Paris Agreement. By integrating these objectives, Belize ensures that climate solutions also protect biodiversity, fostering a sustainable balance between conservation and development. The health sector, which is indirectly linked to forestry and the environment, is focusing on enhancing its infrastructure and disease control measures to mitigate the adverse effects of climate change, such as heat stress and the spread of vector-borne diseases. Similarly, tourism, a key economic driver for Belize, is highly vulnerable to climate impacts. To build resilience, adaptation and sustainability strategies are being integrated into tourism planning frameworks to face climate risks.

While Belize is making significant strides in building national climate resilience, many of these initiatives are conditional, requiring additional technical expertise and financing. However, the water sector stands as an exception, as the protection of water catchments is being implemented unconditionally under the National Water Sector Adaptation Strategy and Action Plan. This sector is employing integrated water resource management strategies to secure water availability, particularly for agricultural and domestic use. Early warning systems are also being developed to better prepare communities for extreme weather events, such as storms, floods, and droughts.

Through these cross-sectoral actions, Belize is advancing toward a more resilient future, ensuring that its people, economy, and environment can thrive despite the growing challenges posed by climate change.

Financing the NDC

Belize's *exceptional*[5] vulnerability and exposure to natural disasters and climate change due to its low-lying coastal nature and geographic location makes it a priority for receiving financing support for implementing climate actions and delivering onto its ambitious NDC targets. The total cost of implementing Belize's NDC is estimated at USD$1.7 billion, with a current gap of USD$1.4 billion and an additional USD$7 million needed to conduct feasibility studies for all prioritized actions[12].

A climate finance strategy for 2021-2025 (currently under review with a 2035 timeline) was developed and is being implemented to support the country's climate actions and progress on its NDC[13]. The climate finance strategy consists of an integrated matrix approach with vertical (tiers) and horizontal (sectoral) levels of integration. It covers eight key elements including meeting national climate change and NDC priorities through futuristic and inclusive climate investments; coherence and synergies across national and international policies, climate action and sustainable development; capacity building through integrated national, regional, and multilateral collaborations, and tracking of climate finance. Support for the implementation of NDC is primarily provided through a combination of projects and technical assistance. Progress made in financing the NDC is reported in the next section.

To supplement these financing options, the "Climate Change and Carbon Market Initiatives Bill," was introduced in the House of Representatives in October 2023 and has completed national stakeholder consultations. This legislation is designed to provide a robust financial mechanism framework for the quantification and verification of carbon emission reductions, enabling the sale of carbon credits on international markets. Although still undecided by the country, participating in Article 6 can potentially generate finance streams that can be used in part to further fund NDC-related actions that can directly

[12] Government of Belize. 2021. Belize's Updated Nationally Determined Contribution. 48 p.
[13] Commonwealth Secretariat. 2021. National Climate Finance Strategy of Belize 2021–2026. UK. 39 p. Available at: https://production-new-commonwealth-files.s3.eu-west-2.amazonaws.com/migrated/inline/Climate_Finance_Strategy_of_Belize_UPDF.pdf

benefit local communities. An example of such mechanism might be blue carbon market access (or, more broadly, finance mechanisms that include multilateral and bilateral funds, among others) that will promote mangrove protection and restoration and secure more resilient livelihoods for local coastal communities.

Information necessary to track progress made in implementing and achieving the nationally determined contribution under Article 4 of the Paris Agreement

Belize's NDC2 targets are estimated to avoid 5,647 $KtCO_2e$ cumulative emissions between 2021 and 2030 (peaking at 1,080 $KtCO_2e$ in avoided emissions in 2030). The key sector targets contributing to this include: a 63% increase in GHG removals related to the AFOLU sector and an increase to 75% of renewable electricity generation. Progress towards this target is described in this section, after the status of the country's NDC MRV and indicator systems is discussed below.

Belize's climate change and NDC MRV system

Belize joined the NDC Partnership[14] in 2018 after submitting its first NDC to the UNFCCC in 2015. Focal Points were designated from the National Climate Change Office under the Ministry of Sustainable Development and Climate Change, and from the Climate Finance Unit under the Ministry of Economic Development. Belize requested assistance from the Partnership to enhance its NDC by developing an Implementation Plan and a Finance Strategy. A major component of the requested assistance was related to the development of and MRV system for the country's NDC MRV[15]. In addition, the country currently receives support from the Partnership to measure and monitor non-mitigation impacts from the NDC.

Belize's national monitoring, reporting and verification (MRV) system, including an online MRV platform for tracking climate change data and NDC progress[16] is under development with support from the Initiative for Climate Action Transparency (ICAT) and will be fully operational and able to provide reporting information by BTR2. As part of its institutional arrangements, Belize decided that all relevant sectors should use common reporting tables (CRTs) for electronic reporting of national GHG inventory data[17] as the basis for collecting relevant data. Despite this decision, NDC mitigation targets are not yet aligned with the national GHG inventory process and exact reporting data remain elusive (as described later in this section).

Together with GHG data, Belize's MRV platform also integrates non-GHG impacts using a customized version of the *NAMA SD Tool*[18]. The UNDP originally designed this tool to allow for tracking of sustainable development (SD) goals as NAMAs are implemented. The tool allows for the selection of sectoral indicators under five "dimensions": environment, social, growth and development, economic and institutional. Through the ICAT support, different components such as a set of non-GHG indicators,

[14] https://ndcpartnership.org/country/blz

[15] Belize's technical assistance request to the NDC Partnership was addressed by five key partners: Rocky Mountain Institute, the Commonwealth Secretariat, the Climate Technology Centre & Network (CTCN), the UNFCCC Regional Collaboration Centre in St. George's, and the International Renewable Energy Agency.

[16] Alvarez, JP; Salazar, K; Sosa, I. 2022 Report on formalised reporting protocols between institutions, reporting templates, and an appointment of MRV platform. Deliverable #5. Technical Report. Initiative for Climate Action Transparency (ICAT). National Climate Change Office of Belize (NCCO). 51 p.

[17] Common reporting tables (CRTs) are provided and fully described by UNFCCC Decision 5 CMA/3.

[18] The tool is available for download at: https://www4.unfccc.int/sites/PublicNAMA/_layouts/UN/FCCC/NAMA/Download.aspx?ListName=NAMA&Id=160&FileName=NAMA_SD_Tool_Updated_Lao%20PDR.xlsm

institutional arrangements, and an online platform are under development and will be fully reported by BTR2.

Progress in developing an NDC indicator set

Belize has undergone a series of exercises to identify and build a coherent set of indicators to track progress towards its NDC, as reported by Alvarez et al (2020)[19]. In that first report 25 mitigation indicators were proposed, in addition to analysing whether national policies were aligned with NDC targets. In a later report (Alvarez et al. 2021)[20], non-GHG indicators[21] were identified through a series of consultations among relevant stakeholders. Later in 2021 (Alvarez et al. 2021a)[22] Belize implemented a study to 1) identify MRV practices within institutions responsible for collecting indicator data, 2) identify indicators with data availability and their frequency and quality, 3) identify gaps between what is required and what is being monitored, and 4) identify the appropriate institutions to fill those gaps. In that study, 21 GHG and 85 non-GHG indicators were identified. Reports from 2022 and 2023 (Dal Maso et al. 2022[23] & Salazar 2023[24], respectively) offer further work on indicators for the agroforestry/agriculture and transport sections. Belize is currently working on refining a set of 192 potential or preliminary indicators to track progress towards its NDC.

Despite these efforts, it has been challenging for the Party to finalize the exercise for selecting the proper indicators linked to the NDC's 11 sectors and 16 targets. Several conceptual and practical or operational reasons contribute to explaining this limitation. The first conceptual challenge in defining indicators is that sectoral targets and actions may not be clearly defined[19], which makes identifying indicators challenging. Second, the current indicator set does not seem to clearly respond to results chains linked to the actions. In addition, some actions are reported through a bottom-up approach while others are not linked directly or indirectly to changes in GHG emissions dynamics.

Operationally, sectors may not have clarity or capacity to measure or collect data on actions that may yield climate mitigation and adaptation benefits, which leads to gaps in data. Also, despite some advances in this area, the country is still building a centralized data hub that would facilitate data collection, aggregation, and reporting over time. In addition, weak institutional arrangements preclude the provision of relevant data in a timely fashion so even if a fully operational platform were in place, lack of data would still preclude adequate reporting.

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[19] Alvarez, JP; Salazar, K.; Sosa, I. 2020. Defining the Information Necessary to Track Progress Made in Implementing and Achieving Belize's Nationally Determined Contributions (NDC). Deliverable #2. Initiative for Climate Action Transparency (ICAT). 27 p

[20] Alvarez, JP; Salazar, K.; Sosa, I. 2021. Report on Non-GHG Impacts and Progress Indicators to be Tracked and Integrated into the National MRV System. Initiative for Climate Action Transparency (ICAT)

[21] Non-GHG impacts (also termed "co-benefits") can be defined as the changes in economic, social, and environmental impacts due to mitigation actions and policies (Initiative for Climate Action Transparency 2020).

[22] Alvarez, JP; Salazar, K.; Sosa, I. 2021a. Report on gaps in data and Information, and Appropriate Institutions to Monitor identified Missing Impact and Progress Indicators. Deliverable #4 Initiative for Climate Action Transparency (ICAT). 64 p.

[23] Dal Maso, M; Alvarez, JP; Salazar, K.; Sosa, I. 2022. Report on policy and BAU scenario for GHG, sustainable development and transformational change impacts, and MRV of policy. Deliverable 6. Initiative for Climate Action Transparency (ICAT). 59 p.

[24] Salazar, K. 2023. Sector-level MRV system for the agriculture sector. Deliverable #2. Initiative for Climate Action Transparency (ICAT). National Climate Change Office, Ministry of Sustainable Development, Climate Change and Disaster Risk Management. 24p.

Most recently, Salazar and Canu (2023)[25] prioritized three indicators for the *agriculture* [AFOLU] sector and two for the energy sector because these more closely represent the renewed and enhanced ambition contained in Belize's NDC2. Tracking progress using this focused approach and minimum set of indicators is a reasonable proposal. Several considerations would need to be made before said proposal is made official: other than their consistency with national ambition, they need to be relevant for key sectors and sustain their relevance over time, easy and cost-effective to collect and report on, and useful for present and future decision-making as historical emissions continue to evolve. In synthesis, without a solid conceptual design of a national NDC indicator system, the country will continue to face considerable challenges to report any progress. Belize will thus seek the necessary technical assistance from regional and international platforms to further develop its NDC indicator system and report on it completely by BTR2.

Tracking of NDC indicators

As pointed out in a previous section, limitations in institutional arrangements, voids in previous technical support which limit Belize's national MRV capacity and the lack of a cohesive cross-sectoral theory of change and results chain supporting this set of indicators explain an absence of necessary data[26] needed for full reporting of progress towards NDC2. Until a final set of indicators is agreed upon and fully implemented, the Party will otherwise be unable to finalize a functioning and useful MRV platform and, thus, to properly report on NDC progress. Notably, there are some targets for which no known progress has been made (*Table 9*). These indicators either lacked the necessary financial or technical support or did not align with the sector's priorities, making them ineligible for immediate action. As a part of the current NDC enhancement process, gaps in support are being identified through sectoral consultations. If a sector determines that an indicator is not a high priority, it may be excluded from the Implementation Plan, which will complement NDC 3.0, scheduled for submission in March 2025. Indicators that track funding and are not prioritized by sectors may also be omitted or modified.

As described in previous sections, institutional arrangements are in place to track progress in Belize's sectoral NDC mitigation efforts. To supplement those, several institutions (e.g., the Forest Department, Energy Unit with support from IRENA for the energy sector) have their own tools to track progress on specific actions. These tools are mostly custom databases (in Excel) which may or may not be fully aligned or useful as NDC metrics. This implies that despite considerable effort dedicated by the NCCO to coordinate among relevant actors to request, gather, and synthesize information and data useful for NDC reporting, significant gaps remain.

For this BTR, the aggregate indicator for the NDC's overarching target is shared (*Table 6*) and, albeit not a complete exercise, information on key project-based activities is used to approximate progress in climate change actions under the NDC (*Table 10* through *Table 18*). Since Belize does not participate in ITMOs, no information on them is tracked or available yet. Gender-disaggregated data are also currently unavailable and the Party will require considerable additional capacities and support to achieve this level of detail in their future BTR reports.

Despite exhaustive efforts from national authorities, there is limited or no information available on all the specific projects that feed into the broader NDC Actions, so reporting on progress towards the NDC for BTR1 (sections below on mitigation and adaptation actions) represents the best available effort from the Party at this time. As new legal frameworks under discussion facilitate stronger and more transparent institutional arrangements, support requested is disbursed to execute key projects, and greater capacities to support implementation and subsequent reporting are achieved, Belize will be able progressively able to report fully on NDC progress by BTR2 and BTR3.

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[25] Salazar, K.; Canu, FA. 2023. Synthesis report of outcomes of Phase 1, lessons learned and relation to Phase 2. Deliverable #1. Initiative for Climate Action Transparency (ICAT). 22 p.

[26] In addition to the simple practical reason that reporting progress via 192 CTF tables is an unrealistic task.

Table 9 Indicators defined in Belize's NDC Implementation Plan which have not received the necessary support to allow for implementation, 2024.

Performance Indicators
• 1.3.1 Just Transition Advisory Group established by 2021 • 1.3.2 Number of annual meetings of JTAG by 2025 • 2.3.1 Biosafety policy to protect biological integrity updated and implemented by 2023 • 3.2.3 Assessment of potential emissions reduction related to fuelwood collection and use completed by 2023 • 3.3.2 Implementation of agroforestry practices monitored by 2023 • 5.1.2 National Urban Development Policy developed by 2023 • 6.3.1 Energy sector MRV system developed by 2021 • 8.4.4 Hectares of agricultural lands using biochar by 2025 • 13.1.1 Gap analysis conducted to identify regulatory legal reforms needed to enable development of sustainable solid waste management sector by 2022 • 13.1.3 Regulations required to improve sustainability of waste sector developed by 2025 • 13.3.1 System in place to facilitate solid waste collection and transport in rural villages for final disposal in the mile 24 regional sanitary landfill designed by 2025 • 14.1.4 Impact study of ocean acidification on coastal areas and marine resources complete by 2025 • 17.1.1 Coastal adaptation strategy developed by 2025 • 22.2.5 Adaptation Plan for the Candelaria aquifer in place by 2025

Mitigation actions

Given Belize's limited capacity for tracking NDC progress, which led to the paucity of data described before to directly or indirectly track emissions, a best effort qualitative description of sectoral actions and interventions is included below as a proxy for progress towards achieving sectoral and Belize's economy-wide NDC avoided emissions targets.

Forestry and Land Use (FOLU)

Belize has completed several initiatives and continues to make significant progress in the FOLU sector (*Table 10*), including actions related to coastal blue carbon ecosystems linked to the coastal sector (*Table 16*). The country has established a monitoring system for forests and mangroves aligned with the delivery of its REDD+ Strategy. This system has been updated through 2023 to include the latest forest and mangrove data. The Forest Department monitors sustainable forest management across the country. This monitoring is conducted in collaboration with local communities and Indigenous groups, ensuring inclusivity and sustainability. In addition, 3,497 hectares have been restored in protected areas. Potential model lands have also been identified for restoration; however, the total area is yet to be fully estimated.

Furthermore, to support restoration and conservation efforts, Belize has developed several key documents. For example, the National Landscape Restoration Strategy[27] offers guidance for restoring degraded terrestrial landscapes. For mangrove ecosystems, in turn, the Mangrove Alliance Action Plan[28] provides a strategic framework to enhance their protection and restoration. Finally, the "Climate Change and Carbon Market Initiatives Bill," is currently under review by The Cabinet. This legislation is designed to provide a robust financial mechanism framework for the quantification and verification of carbon emission reductions, enabling the sale of carbon credits on international markets. It will also seek to formalize governance and institutional frameworks to addressing climate change in Belize including establishing the

[27] Forest Department, Ministry of Sustainable Development, Climate Change & Disaster Risk Management (FD-MSDCCRM). 2022. National Landscape Restoration Strategy for Belize 2022-2030. 97p.

[28] Referenced here as part of the Mangrove Alliance Action plan for Belize: https://www.mangrovealliance.org/wp-content/uploads/2022/09/BMA-Action-Plan_Final.pdf

NCCO into a Climate Change Department. Further details on 10 additional actions contained in Belize's NDC2 are provided below under each sectoral target. Because the actions were designed to address mitigation of and adaptation to climate change, some overlap will be evident, but a best effort has been made to distinguish those between this section of this document and the next.

Table 10 Description of mitigation actions in Belize's Forestry and Other Land Use (FOLU) sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Reduce GHG emissions and increase GHG removals related to land use change totalling 2,053 $KtCO_2e$ cumulative over the period 2021 to 2030			
Action	Integrated management of production landscapes to deliver multiple global environmental benefits			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2022 – 2027	Forest Department, Ministry of Sustainable Development and Climate Change	CO_2
Description				
Mainstreaming biodiversity conservation and sustainable land/water management into production landscapes in Belize will be achieved via this project through a multifocal strategy that includes three interrelated outcomes. Together, these will enable an environment that comprises policies, financial mechanisms, and institutional capacities to deliver multiple global environmental benefits (GEBs) through sustainable production and improved value chains for key agricultural and forest products from the Belize River watershed (BRW), as well as knowledge management of the scaling-up of project results. This Global Environment Facility (GEF) investment will reverse fragmentation of forest ecosystems (including the clearance of riparian vegetation), biodiversity loss, and land degradation within production landscapes in the BRW with ecosystem remnants that are highly important in their role as biological corridors. The project will deliver GEBs using a participatory approach that ensures the equal distribution of benefits among men and women, with 1,700 people directly benefiting from the project. This will result in the establishment of 4,500 hectares (ha) of landscape management tools that promote connectivity between key biodiversity areas (KBAs) and forest remnants in production landscapes; 30,500 ha of landscapes under sustainable agriculture with biodiversity benefits; 15,000 ha of landscapes under sustainable land management in production systems; 750 ha of riparian forests and 300 ha of groundwater recharge areas restored in key areas of the BRW; and the stable presence of key indicator species (e.g., jaguar, howler monkeys, white-lipped peccary, and tapir) in forest patches/corridors of the production lands and KBAs. In Belize, efforts are underway to strengthen connectivity and biodiversity conservation within Belize's production landscapes. Plans include implementing 4,500 hectares of Land Management Tools (LMT), such as biological micro-corridors, agroforestry systems, forest enrichment, live fences, windbreaks, and hedges, to enhance linkages between Key Biodiversity Areas (KBAs) and forest remnants. Additionally, 750 hectares of riparian forests are set to be restored in critical areas of the Belize River Watershed (BRW) to support habitat recovery and ecosystem resilience. These actions aim to ensure the stable presence of key indicator species, including jaguars, howler monkeys, white-lipped peccaries, and tapirs, within forest patches and corridors across production landscapes and KBAs. The development of a Riparian Restoration Action Plan is also planned to guide the management and restoration of riparian ecosystems.			
Action	Use of Nature-based Solutions to Increase Resilience to Extreme Climate Events in the Atlantic Region of Central America.			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2022 – 2028	CATIE	CO_2
Description				

This is a regional project being implemented in Honduras, Guatemala, and Belize. For Belize, the project is rehabilitating 500 hectares in the Monkey River basin. Adaptation actions for this project are described in the corresponding section below.

Action	Linking the Central American Landscape			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Regional Program	Delayed	3 years[29]	Forest Department, Ministry of Sustainable Development and Climate Change	CO_2

Description

This project is aimed at facing the challenge that represents, to the 8 member countries of the Central American Integration System (SICA), the fragmentation of their ecosystems and the sustainable management of their great landscapes. In compliance with the Regional Environmental Strategy Framework 2015-2020 (ERAM) the program suggests that the conservation of the region's vast biological richness and natural resources will contribute to the adaptation and mitigation to climate change, providing better life conditions to the 47 million people that live in the region. The biodiversity program aims at the conservation, sustainable management, and restoration of large landscapes where the main ecosystems with great economic, ecological, and cultural value for the region are located. In each of these great landscapes, the protected areas are the core object of biodiversity conservation and the spaces among the protected areas are the intervention sites to achieve connectivity. In Belize, restoration is expected for 150 hectares of priority degraded ecosystems in the Toledo District.

Action	Resilient and Biodiverse Landscapes of Northern Mesoamerica			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2024 – 2028	WCS/FD/MFT, PFB, FCD, MLA, JCS	CO_2

Description

The objective of this project is to reduce poverty and create sustainable economic development for the communities that are living in and depend on ecologically critical landscapes in the Selva Maya (Guatemala and Belize), Moskitia (Honduras) and Trifinio (El Salvador, Guatemala and Honduras) forests, through lasting landscape protection, sustainable management and restoration, safeguarding biodiversity and maintaining and improving the quality of ecosystems. These forests are the largest and most biodiverse in the region and are crucial to the livelihoods of millions of people. However, the region is highly vulnerable to climate change and deforestation, which exacerbates impacts and threatens ecosystems and biodiversity. To conduct this project, WCS is leading a broad multisectoral consortium made up of civil society, local and Indigenous communities, government institutions, the private sector, and research institutions.

In Belize, the project supports the protection and conservation of Selva Maya Forest[30], one of the great forests of the Mesoamerica Landscape. The programme develops interventions to 1) secure land and resource rights, develop forest-based income streams, and implement climate-adapted rural development with proper social safeguards; 2) ensure well-governed conservation areas and targeted protection activities for endangered species; 3) build consensus, multisector collaboration, and policy reforms to incentivize forest protection and strengthen IPLC rights; and 4) implement a monitoring and evaluation framework as a core component to evaluate impact and guide decision-making. Currently, 28 hectares of land in the Selva Maya region of Belize are undergoing active restoration efforts.

[29] No information was available as of this writing to establish starting and ending dates.
[30] https://belize.wcs.org/en-us/News/ID/22974.aspx

Action	Restoring Degraded Lands within Key Areas of the Maya Mountain North Forest Reserve (MMFNR) and Surrounding Buffer Zones			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	Closed in 2023	Forest Department, Ministry of Sustainable Development and Climate Change	CO_2
Description				
The project's aim was to improve the land management within the Maya Mountain North Forest Reserve (MMNFR) through a forest landscape restoration approach, ensuring the increase of productivity for farmers who are conducting sustainable agricultural activities, and the simultaneous improvement of ecosystem functionality and biodiversity through connectivity in key buffer zones adjacent to the reserve. The project's accomplishments include: 1. Restoring 500 hectares of degraded land 2. Setting up agriculture systems with farmers in buffer zones 3. Training farmers in best management practices, soil care, propagation, and restoration techniques 4. Producing 3,500 saplings in a nursery and distributing them to farmers				
Action	Restoration in the Mountain Pine Ridge Forest Reserve			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	1 year[29]	Forest Department, Ministry of Sustainable Development and Climate Change	CO_2
Description				
The project focused on restoring wildfire-affected areas, successfully rehabilitating 6.1 hectares of degraded lands. It revitalized damaged ecosystems, enhanced biodiversity, and bolstered the resilience of this critical region. A key aspect of the initiative was its emphasis on youth engagement and community collaboration, which played a pivotal role in ensuring the long-term sustainability and impact of the restoration efforts.				
Action	Protection of the Natural Resources of the Selva Maya			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	Started in 2017[31]	Forest Department, Ministry of Sustainable Development and Climate Change	CO_2
Description				
The project's objective is to maintain the ecosystem functions and cultural values of the Selva Maya that promote the welfare of its people and provides environmental services of global importance. The main challenge is to protect and conserve the Selva Maya through capacity building of government and non-government stakeholders, and communities, to improve their skills and techniques in protected areas management and sustainable production practices in connectivity areas. The project's expected results are to improve the management effectiveness and connectivity of the Selva Maya protected areas. In addition, coordination between Belize, Guatemala and Mexico will be strengthened for conservation and sustainable management actions for the Selva Maya.				
Action	Belize REDD+ Readiness Preparation Project			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**

[31] No information is available on ending date.

Project	Concluded	2017 – 2021	National Climate Change Office, Ministry of Sustainable Development and Climate Change	CO_2
Description				
The project supported Belize in undertaking Readiness Preparation for REDD+ through a participatory and inclusive approach, enhancing the country's capacity to engage in future carbon payment transactions. Key milestones achieved include the development of Belize's National REDD+ Strategy, a National Forest Monitoring System (NFMS), and a Forest Reference Level (FRL). The project also completed a Strategic Environmental and Social Assessment (SESA), including a Safeguards Information System (SIS) and an Environmental and Social Management Framework (ESMF). Other achievements include a Land Tenure Assessment for Southern Belize, establishment of a Feedback Grievance and Redress Protocol, completion of the 2018 National Land Use Land Use Change Report, creation of Sentinel-2 imagery maps, establishment of a National Forest Inventory using Permanent Sample Plots (PSP), and the development of a Measurement, Verification, and Reporting (MRV) system utilizing tier 1, 2, and 3 data.				

Table 11 Description of mitigation actions for Belize's coastal and marine resources, as part of its Nationally Determined Contributions (NDC) for the Forestry and Other Land Use sector, 2024

Target	Enhance the capacity of the country's mangrove and seagrass ecosystems to act as a carbon sink by 2030, through increased protection of mangroves and by removing a cumulative total of 381 KtCO2e between 2021 and 2030 through mangrove restoration			
Action	Establishing the enabling environment for the development of a Marine Spatial Plan (MSP) through strengthened governance, improved management, and enhanced monitoring of Belize's coastal and marine resources.			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2023 – 2025	Fisheries Department, Ministry of Blue Economy and Civil Aviation and the Belize Coast Guard	CO_2
Description				
This action supports the successful and timely establishment of an enabling environment to develop a Marine Spatial Plan through strengthened governance, improved management, and enhanced enforcement of Belize's coastal and marine resources. To support the monitoring and enforcement and protection of Belize's coastal and marine resources, the Belize Coast Guard (BCG) will increase its operational capabilities through an Unmanned Air System[32].				
Action	Use of Nature-based Solutions to Increase Resilience to Extreme Climate Events in the Atlantic Region of Central America.			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2022 – 2027	Forest Department, Ministry of Sustainable Development and Climate Change, WRI, CATIE	CO_2
Description				
The project's objective is to strengthen resilience in the coastal Atlantic region of Belize, Honduras, and Guatemala to the impacts induced by the intensification of weather extremes induced by climate change. This will be pursued through the promotion of sustainable landscape restoration efforts with an emphasis in poor rural coastal areas in the region. Efforts on coastal restoration align to the Central American Commission on Environment and Development's strategies. As part of this project, 12,000 hectares of mangroves will be planted by 2025. To date, there are no data available on this indicator.				

[32] https://belizefund.bz/projects/enhanced-enforcement-and-protection-of-belizes-marine-resources/

Agriculture

Belize has made significant progress in promoting climate-smart agriculture and developing resilient rural infrastructure, with a primary focus on livestock farms operating on small plots (*Table 12*), through initiatives like the CRESAP Project, in the Orange Walk District. In addition, Belize has established climate-resilient value chains for key agricultural products, including honey and sheep, to enhance the sustainability and productivity of these sectors.

Infrastructure improvements have also been a priority, resulting in the development of several climate-resilient rural assets. These include 6.5 miles of rehabilitated road, a new packaging shed in Nago Bank, and a dredged canal from the Belize River in Valley of Peace to enhance water management and support agricultural activities. The Belize Agricultural Information Management System (BAIMS) has been instrumental in tracking agricultural data, collecting information such as the number of farmers, total land area, farm types, and commodities. Currently, BAIMS reports a total of 16,346 registered farmers and 18,027 farms, spanning a combined area of 643,805.4 acres (260,538.8 hectares). For BTR1, most of the agriculture projects underway are heavily focused on adaptation and thus reported in the next section.

Table 12 Description of mitigation actions in Belize's agriculture sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Reduce methane emissions from livestock by 10% by 2030 and avoid emissions of at least 4.5 KtCO2e16 related to agriculturally driven land use change by 2025			
Action	Integrated management of production landscapes to deliver multiple global environmental benefits			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2019 – 2024	Ministry of Agriculture, Food Security and Enterprise	CO_2
Description				
The aims to enhance cattle producers' capabilities in four specific communities within the Belize River Valley Watershed, enabling them to adopt silvopastoral systems. These systems are designed to increase productivity, reduce emissions, and enhance resilience against climate change impacts. Specifically, by 2025, this project has a target of 30,500 hectares under sustainable agriculture practices with biodiversity benefits and 15,000 hectares in production systems under sustainable land management practices.				
Action	Improving Livestock Sector Productivity and Climate Resilience in Belize			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	2018 – 2021	Belize Livestock Producers' Association	CH_4
Description				
The project aimed to enhance productivity in Belize's livestock sector by promoting pasture intensification, reducing methane emissions, and improving the adaptive capacity of small and medium-sized producers to climate change. As part of this initiative, 10 model farms were selected in collaboration with farmers to develop tailored improvement plans. Of these, eight farms successfully completed the project, including two cattle producers in the Cayo District, three in the Belize District, and two in the Orange Walk District.				

Energy (including transport)

Belize has made significant efforts to advance energy efficiency and sustainable energy generation (*Table 13*). For example, the Energy Efficiency Labelling Scheme, which aims to promote energy-efficient appliances and reduce overall energy consumption, is scheduled to take effect in November 2024. Initially, this will focus on refrigerators and air conditioners, with the program operating on a voluntary basis during its first phase; light bulbs will also form part of the EE labelling scheme. See table *below* for further details. Also, under the European Development Fund-11, selected public buildings have recently benefited from energy audits and the implementation of energy conservation measures that included efficient technology

upgrades to reduce energy consumption. These improvements included replacing outdated air conditioners with inverter models, swapping inefficient lights for LED equivalents, and installing energy monitoring systems to better manage consumption.

Additionally, Belize conducted in 2023 a prefeasibility study assessing the implementation of co-generation infrastructure by utilizing available organic waste streams in the country. Of the ten sites evaluated, two were identified as the most feasible for this initiative: Orange Walk near the Belize Sugar Industry (BSI) facility and San Pedro near the Solid Waste Transfer Station. The feedstock for Site #1 was cattle manure, sugar mill mud, bagasse from the distillery and paddy straw. The total estimated feedstock availability is approximately 668 tons per day, with an estimated electrical power generation of 4.5 MW and thermal power generation of 4.6 MW. In addition, the compost generation will be about 69 tons per day. The feedstock for Site #2 were Sargassum, food waste from hotels and restaurants and organic municipal solid waste from San Pedro and Caye Caulker. The total estimated waste stream availability is approximately 533 tons per day, with an estimated electrical power generation of 2.2 MW and thermal power generation of 2.2 MW.

Lastly, an assessment of flexible energy storage feasibility is being conducted by the Belize Energy Limited as well as the Ministry of Public Utilities, Energy, Logistics and E-Governance with the support of the World Bank, to evaluate options for optimizing energy storage, further supporting Belize's transition to sustainable energy solutions.

Table 13 Description of mitigation actions in Belize's energy sector as part of its Nationally Determined Contributions (NDC), 2024

Target 1	Avoid emissions from the power sector equivalent to 19 KtCO2e per year through system and consumption efficiency measures amounting to at least 100 GWh/year by 2030			
Action	Energy Efficiency Labelling Scheme			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2019 – 2023	Belize Bureau of Standards	CO_2
Description				
Belize is one of four pilot countries for the implementation of the Energy Efficiency Labelling Scheme. This program is envisioned to be implemented through a voluntary Product Registration System in the first phase with mandatory adherence by product importers and retails stores to take effect in 2025. In this regard, participating importers will apply to the Belize Bureau of Standards (BBS) to register specific products and obtain efficiency labels under the program specific to refrigerators, air conditioners and light bulbs (CFLs and LEDs).				
Action	EDF-11 Energy Access Programme			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2021 – 2024 (extended to 2026)	Energy Unit, Lait Up Belize!, BEL	CO_2
Description				
This programme, sponsored by BEL and the European Union, is developing concurrent initiatives in rural Orange Walk and Toledo. In Orange Walk, the villages of Indian Church, San Carlos and San Felipe will be connected to the main grid via line extensions. In Toledo, the villages of San Benito, Jalacte and San Vincente will have hybrid SPV-diesel backup systems installed, totalling 305 kWp of Solar PV between them.				
Action	Corazon Creek SPVS			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**

Project	Ongoing	2023 – 2025	Energy Unit, BEL, Solar Energy Solutions Belize	CO_2
Description				
This project, under development since 2019 and sponsored by BEL and CDW Stiftung, features 66kW of SPV capacity and inverter capacity of 36kW, designed to supply 52 households in Corazon Creek Village, which has been chosen due to being the host of a local high school servicing many other nearby villages.				
Target 2	Avoid 44 $KtCO_2e$ in the national electricity supply by 2030 through the introduction of expanded capacity from renewable energy sources.			
Action	emPOWER Rural Electrification Project			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	2019 – 2021	The Belize Energy Unit, Ministry of Public Utilities, Energy, Logistics and E-Governance	CO_2
Description				
This project's objective was to provide standalone renewable electricity generation to three rural communities: Indian Creek, Golden Stream, and Medina Bank. With a total generation capacity of 403 kW, supported by battery storage and resilient diesel generators as a backup, the initiative is a testament to innovative solutions addressing energy poverty in remote areas.				
Target 3	Avoid 117 KtCO2e/year21 from the transport sector by 2030 through a 15% reduction in conventional transportation fuel use by 2030 and achieve 15% efficiency per passenger- and tonne-kilometre through appropriate policies and investments			
Action	Towards Low Carbon Transport: Piloting e-mobility within Belize's Public Transport System			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2021 – 2025	UNDP	CO_2
Description				
The main objective of the project is to trigger Government of Belize action in creating an enabling environment for the introduction of electric vehicles in the long term. The proposed initiative takes on this recommendation and proposes actions meant to enhance sustainability in e-mobility for low carbon transport. The strategic objective of the project is to facilitate transformation within Belize's Transportation Sector through the enabling of low carbon means of transportation. The ambition is to establish the foundation for further investments in e-mobility as a part of system transformation. Foundational work undertaken through this initiative is expected to contribute to NDC and LEDS implementation, enabling the deployment of 77 hybrid and electric buses by 2030 (17 by 2025) and the avoidance of 117 $KtCO_2e$/year from the transport sector by 2030. As of 2024, only 3 electric buses with another 3 electric buses already brought in country (Q3 of 2024) for inter-city deployment in early 2025. No hybrid buses have been deployed.				

Waste Management

Belize has successfully closed seven dumps, with four remaining in operation (*Table 14*). Efforts are also underway to address organic waste management through an ongoing composting project in collaboration with the Canadian Government. This initiative has distributed 200 hundred composting bins in four municipalities.

Table 14 Description of mitigation actions in Belize's waste management sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Improve waste management processes to avoid emissions of up to 18 KtCO2e per year by 2030, in line with the national waste management strategy			
Action	Solid Waste Management Project II			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2019 – 2025	Solid Waste Management Authority, Ministry of Sustainable Development and Climate Change	NA
Description				
This project aims to improve solid waste management and reduce environmental pollution in Belize's emerging tourism areas. It focuses on building key infrastructure like sanitary landfills, recycling, and composting facilities, and closing open dumpsites, while also strengthening institutional efforts through cost recovery mechanisms, public outreach, and better management of waste streams beyond municipal solid waste. Additionally, it promotes innovation by reducing municipal solid waste generation and encouraging waste separation at the source. To date, seven out of 11 open dumpsites have been closed. The project has been extended for Belize to receive its last disbursement in March 2025.				

Adaptation

As a highly vulnerable small country, Belize is deeply committed to strengthening the resilience of its society and economy against the negative impacts of climate change. Climate change is already having significant impacts on Belize's territory, population, and key economic sectors. The country has sustained droughts, floods, increased coastal erosion and changing precipitation patterns. In the future, these effects will increase, thereby threatening the physical and social infrastructure in Belize. Agricultural yields are sensitive to changes in precipitation, temperature, and extreme weather. Tourism, which accounts for the most income of any sector, is impacted by seal level rise, coral bleaching, and impacts on biodiversity. Critical support systems including water resources, health and energy are also impacted by the increasingly variable climate in the region. Belize also hosts globally significant ecological resources including rainforest, mangrove forests, wetlands and coral reefs which are under threat from a warming world. The tables below, organized by sector of activity, describe progress on actions and interventions included in the country's NDC adaptation targets. It can be observed that there is a lack of adaptation specific targets and actions for the energy sector which plays a foundational role for sustainable development initiatives and has been recently impacted by climate change.

Forestry and Land Use (FOLU)

"Forestry and Land Use (FOLU)" is not a sector described as such in Belize's NDC2 Adaptation section. We report it here (and mainly in the mitigation section *above)* because, despite the clear sectoral mitigation emphasis, Belize has the following FOLU activities where adaptation is the priority (*Table 15*).

Table 15 Description of adaptation actions in Belize's forestry and Land Use (FOLU) sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Reduce GHG emissions and increase GHG removals related to land use change totalling 2,053 $KtCO_2e$.			
Action	Building Community Resilience via Transformative Adaptation			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**

Project	Ongoing	2023 – 2027[33]	Protected Area Trust and Forest Department	CO_2
Description				
The goal of this project is to improve Belize's long-term capacity to protect communities from climate threats posed by drought, unpredictable water availability, floods, and improper wildfire management. The project will strengthen the protection and maintenance of natural resources and ecosystem services, enhance the skills and technical capacities in communities and households to produce goods and services that will expand income generating options, and improve the physical infrastructure in and around vulnerable communities. The project will target Belizean communities, regions and populations affected by climate change and variability or that have been identified and recognized as being at risk to climate events and extreme weather variations. Expected outcomes of the project include the restoration of riparian communities, the establishment of 10 model landscapes, and the enhancement of water quality through targeted restoration efforts.				
Action	REFORES Project - Forest Restoration for Climate Resilience			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2022 – 2027[34]	CATIE/WRI	CO_2
Description				
This is a regional project between Honduras, Guatemala, and Belize. For Belize, this project will strengthen climate resilience and adaptation measures in the Monkey River basin. This includes development of early warning systems to mitigate the impacts of climate-related hazards, such as flooding and erosion, and restoring 500 hectares in the basin. This project's forest restoration and mitigation component is reported in a previous section.				

Coastal Zone and Marine Resources

Belize recognizes that the health and integrity of coastal ecosystems are vital for the health of people and the planet. "Blue carbon," e.g. mangrove and seagrass ecosystems, play many important roles as a nature-based solution to climate change with mitigation, adaptation, and resilience co-benefits (*Table 16***Error! Reference source not found.**). These are a triple-win for Belize by providing a carbon sink, offsetting sea level rise and coastal erosion while expanding habitat for biodiverse resources, and supporting a more resilient tourism and aquaculture industry. Together with coral reefs, they sustain the foundation of the marine tourism economy in Belize. Protection of these vital ecosystems protects the climate, people, and nature.

Table 16 Description of adaptation actions in Belize's coastal zone and marine resources sector as part of its Nationally Determined Contributions (NDC), 2024

Target 1	Increase resilience to climate impacts for coastal communities and habitats by managing further development of the coastline to reverse net coastal habitat and land loss by 2025			
Action	Resilient Reefs Initiative			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2023 – 2024	Great Barrier Reef Foundation, Fisheries Department and Coastal Zone Management Authority and Institute, Ministry of Blue Economy, and Disaster Risk Management	CO_2

[33] https://fifspubprd.azureedge.net/afdocuments/project/14675/Final%20AF%20EDA-PACT%20proposal%20v3.0-clean_September%202023.pdf

[34] https://www.adaptation-fund.org/wp-content/uploads/2022/05/CABEI-Proposal_Guatemala-Honduras-and-Belize_final-with-track-changes-plus-review-and-LOEs.pdf

Description
The Resilient Reefs Initiative (RRI) is a global project partnering across four World Heritage reef sites. The objective of the RRI is to bring together local communities, reef managers and resilience experts to build local capacity and develop novel solutions under a resilience strategy for combating the effects of climate change and other local threats. In 2021, the Coastal Zone Management Authority & Institute (CZMAI) in collaboration with the Fisheries Department and Great Barrier Reef Foundation (GBRF) launched the Resilient Reefs Initiative (RRI) in Belize. Currently Belize is one of four UNESCO World Heritage sites that are participating in the pilot phase of Resilient Reefs. Using a resilience-based management approach, the global Resilient Reefs Initiative supports World Heritage coral reefs and the communities that depend on them to adapt to climate. Actions include projects that diversify livelihood options for reef communities, restore critical reefs, preserve blue carbon habitats, accelerate co-management, and more adaptively manage local fisheries. In Belize, the Initiative in developing three key actions that tackle unique and important resilience challenges: accelerating reef restoration and protection, developing the building blocks for coastal resilience and conservation, and understanding and reducing barriers for coastal communities to develop diverse livelihoods.

Action	Integrated Ridge-to-Reef Management of the Mesoamerican Reef Ecoregion			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	2018 – 2023	Coastal Zone Management Authority and Institute (CZMAI), Ministry of Blue Economy and Disaster Risk Management	NA

Description
The MAR2R project supported regional collaboration for integrated ridge-to-reef management of the world's largest transboundary barrier reef, the Mesoamerican Reef, which spans over 1,000 kilometres of coast and is affected by water from four countries: Belize, Guatemala, Honduras, and Mexico. Some outputs of the project include[35]: • In Belize, the project established a public-private mechanism for monitoring of the Belize River Basin. • In Belize, 15 hectares deforested riversides areas were identified, mangrove nurseries were established, and 2 hectares were reforested in the Orange Walk Town area. • In Belize, Guatemala, and Honduras and Mexico at least 30 private tourism companies and public authorities adopted best practices for the treatment of wastewater.

Action	Enhancing the Resilience of Belize's Coastal Communities to Climate Change Impacts			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2024 – 2029	Coastal Zone Management Authority and Institute (CZMAI), Ministry of Blue Economy and Disaster Risk Management	NA

Description

[35] https://www.sica.int/documentos/logros-proyecto-mar2r_1_133444.html

This project aims to reduce vulnerabilities in coastal areas by improving planning and decision-making to address future climate impacts. It promotes pro-environmental behaviours, enhances resilience, strengthens public-private partnerships for data collection, and improves safety for Belizeans and visitors. The project's components focus on:

1. Improving coastal land use for resilient habitation through a National Housing Policy and Building Codes and strengthening the Integrated Coastal Zone Management Plan.
2. Developing coastal saline intrusion program, a National Beach Erosion Monitoring Program, and building the NMS's capacity for coastal early warning systems.
3. Recovering beach areas lost to coastal erosion in Dangriga and Hopkins, thereby enhancing storm protection and adaptive capacity.
4. Awareness raising, capacity building, and knowledge dissemination, including developing a climate change communication strategy, training on coastal adaptation, and strengthening GIS capabilities.

Target 2	Strengthen the resilience of coastal communities by developing an early warning system for storm surges by 2025			
Action	Implementation of Multi-Hazard and Early Warning System for Belize River Watershed			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Planned	2024 – 2026	National Meteorological Service, Ministry of Blue Economy, and Disaster Risk Management	NA
Description				
Belize's climate data collection capabilities and its capacity to withstand natural hazards will be enhanced through assistance from the Caribbean Development Bank (CDB). This financing will facilitate the implementation of technical assistance to strengthen a multi-hazard forecasting and early warning system for the Belize River watershed. It will support improvements in weather and climate data collection, modelling, and analysis, as well as climate and disaster risk assessments. Additionally, the project will enhance the institutional capacity of key stakeholders, such as the National Meteorological Service (NMS) and the National Emergency Management Office (NEMO), to deliver effective early warning and climate services.				

Agriculture

Given the increased risk for drought and extreme weather events, Belize's adaptation actions in the agricultural sector are grouped under two targets and are geared toward mobilizing finance and infrastructure for Climate Smart Agriculture (CSA), improving crop and livestock management and introducing new drought-tolerant varieties and breeds, adopting soil and water management practices (*Table 17*).

Table 17 Description of adaptation actions in Belize's agriculture sector as part of its Nationally Determined Contributions (NDC), 2024

Target 1	Reduce post-harvest losses through the implementation of the National Adaptation Strategy to Address Climate Change in the Agricultural Sector to increase the adaptive capacity of the agricultural sector			
Action	Building the Adaptive Capacity of Sugarcane Farmers in Northern Belize			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Planned	2024 – 2029	Belize Sugar Industries Ltd. and Sugar Industry Research and Development Institute (SIRDI)	CO_2

Description				
This project aims to enhance the resilience of sugarcane farmers by implementing a seed cane variety programme, strengthening farming, water control, sharing knowledge and expanding the range of sugarcane varieties. Additionally, production operations will be transformed to be more climate-resilient, using planting and production practices that regenerate soils and require fewer inputs to achieve higher yields. Moisture management knowledge and practices, including irrigation and drainage, will be introduced to stabilize production in response to predicted soil moisture variability. Furthermore, the project aims to increase the use of mechanical green cane harvesting, reducing production costs and carbon emissions associated to harvesting. This project targets 200 hectares of sugar land restored to arability by 2025.				
Action	Climate Resilient Sustainable Agriculture Project			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Planned	2024 – 2029	Belize Sugar Industries Ltd and SIRDI	CO_2
Description				
This project will provide support to agricultural producers, with emphasis on individual smallholder farmers transitioning to more commercial production, while also supporting more established commercial farmers and farmer associations that wish to adopt climate-smart practices to improve the sustainability of their enterprises. The project will also strengthen the capacity of selected agricultural institutions to assist farmers in adopting Climate Smart Agriculture (CSA) approaches.				
Action	Resilient Rural Belize (BE-Resilient)[36]			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2018 – 2026	Ministry of Agriculture, Food Security and Enterprise	CO_2
Description				
This project is aimed at minimizing the impacts of climatic and economic events on rural small farmers while supporting sustainable market access for their produce. The programme is targeting (i) poor rural families; (ii) vulnerable rural families; (iii) households with less than 25 acres, engaged in part BME or full-BME farming; and (iv) formal and informal farmer organizations (cooperatives, associations, etc.) with the willingness and potential for improving productivity and farmer market access. The programme is expected to reach a total of 6,000 households or approximately 30,000 persons, from which 24,000 is expected to have strengthened resilience.[36]				
Target 2	Develop and implement an enhanced early warning system for drought and extreme weather events to support farmers in planning for and responding to the impacts of climate change by 2025.			
Action	Enhancing Sugarcane Farmers' Resilience to Natural Hazard Events			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2020 – 2022	Ministry of Agriculture, Food Security, and Enterprise	CO_2
Description				
This project aims to improve the capacity of sugarcane farmers in northern Belize to restore production following the 2019 drought. Under the project, sugarcane farmers in the Orange Walk and Corozal districts received relief certificates to help mitigate the drought's impacts on their crops. Following consultations with the sugarcane farmers' associations and the Sugar Industry Control Board, it was agreed to distribute				

[36] https://med.gov.bz/rrb/

the assistance funds proportionally based on the tonnage of cane delivered during the 2018-19 crop year. The distribution targeted farmers registered in the Belize Agriculture Information Management System as of November 2019. More than 3,600 farmers qualified for assistance, with 60% of the total funds distributed in 2021 and the remaining 40% issued in 2022.

Fisheries and Aquaculture

Belize's fisheries and aquaculture sector seeks to adapt to climate change by increasing its capacity to implement mangrove and fish conservation by diversifying practices, developing alternative livelihoods and expanding the area of Marine Protected Areas (MPAs; Table 18).

Table 18 Description of adaptation actions in Belize's fisheries and aquaculture sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Build capacity in fisheries and aquaculture sector through research, diversification and retraining to support livelihoods while protecting coastal ecosystems.			
Action	National Adaptation Plan for the Coastal Zone and Fisheries Sectors			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	2021 – 2023	Coastal Zone Management Authority and Institute (CZMAI), Ministry of Blue Economy and Disaster Risk Management	NA
Description				
This project aims to increase the resilience of coastal zones and the fisheries sector in Belize by improving climate data collection, monitoring, and dissemination, assessing the impacts of climate change on vulnerable communities, and integrating climate change considerations into relevant policies and plans. Additionally, the project focuses on strengthening communication networks within coastal and fisheries communities for appropriate climate responses.				
Action	Community Engagement of the Coastal Zone and Fisheries sector of Belize through Climate Change and Disaster risk management capacity building			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2024 – 2026	The Ministry of Blue Economy and Disaster Risk Management	NA
Description				
This project aims to mitigate climate risks by enhancing disaster risk management, improving livelihoods, and raising awareness in vulnerable coastal communities. Starting with four pilot communities, the project plans to expand to all 27 coastal fishing communities in Belize. Its three main objectives are: 1. Building capacity for climate change adaptation and disaster risk management through a comprehensive engagement strategy 2. Developing community-specific climate change adaptation (CCA) and disaster risk management (DRM) plans 3. Creating educational resources to improve financial literacy and promote climate-resilient livelihoods for fisherfolk.				

Human Health

Overall, this sector seeks to build its adaptive capacity (*Table 19*) by improving disease control and prevention, implementing early warning systems, investing in health infrastructure and developing awareness on adaptation measures as they relate to health.

Table 19 Belize's human health sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Build adaptive capacity in the health sector by assessing vulnerability and investing in capacity to respond to climate-related threats.			
Action	Strengthening Climate Resilient Health Systems in Belize			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2020 – 2025	Ministry of Health and Wellness	NA
Description				
This project seeks to facilitate access to the human, technical, and financial resources needed to address the impacts of climate change on health. The main expected outcomes include strengthening institutional, political, and technical capacities through the establishment of operational health-climate change committees. The project will generate baseline data, such as country profiles on health and climate change, and a multi-country health vulnerability and adaptation (V&A) assessment, while engaging a whole-of-society approach to integrate health issues into national and regional plans. It will also build a pipeline of projects on health and climate change, providing the capacity to prepare and implement proposals. The initiative will estimate the health sector's carbon footprint, assess health co-benefits, and evaluate avoided economic costs from various emission pathways. Additionally, strategies and proposals for integrating climate and health data systems will be prepared, and national representatives will receive training to enhance technical knowledge and capacity. Communication strategies will also be developed to raise public awareness and encourage outreach on the links between health and climate change.			

Tourism

Tourism in Belize accounts for a considerable portion of its GDP and is being impacted by extreme events because of sea level rise as well as other impacts such as environmental degradation and even loss of biodiversity and erosion of the coastline and damage to the coastal infrastructure. Climate change will threaten the health of Belize's coral reefs and will affect water supplies and physical property, all of which are critical for the sustainability of the sector. The combined effects of reduced tourism demand, loss of infrastructure, loss of beaches and the loss of the barrier reef can result in reduced income of approximately USD$ 24 million per year. In response to these challenges, Belize's adaptation actions for this sector focus on enhancing its adaptive capacity through a wide range of actions (*Table 20*).

Table 20 Description of adaptation actions in Belize's tourism sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Increase the adaptive capacity of tourism sector through the development of climate resilient planning frameworks and infrastructure.			
Action	Sustainable Tourism Program II			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Concluded	2015 – 2022 (renewed and ongoing)[31]	Ministry of Tourism and Diaspora Relations	NA

Description
The Sustainable Tourism Program (STP) is an initiative led by the Ministry of Tourism, with support from the Inter-American Development Bank (IDB) and the Belize Tourism Board (BTB). The current phase, Sustainable Tourism Program II, aims to boost income, revenue, and employment opportunities within the tourism sector. Additionally, the program focuses on promoting disaster and climate resilience, as well as environmental sustainability in tourism destinations. These efforts are designed to enhance governance in the tourism industry while creating an enabling environment that encourages private sector investment in overnight tourism. Through these objectives, the program seeks to ensure the long-term sustainability and growth of Belize's tourism sector.

Forestry and Biodiversity

The conservation and restoration of biodiversity is a pillar for any national adaptation response. Executing Belize's National Biodiversity Strategy Action Plan and strengthening its National Protected Areas System guides the country's actions in this sector (*Table 21*).

Table 21 Description of adaptation actions in Belize's forestry and biodiversity sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Implement protection targets of the National Biodiversity Strategy Action Plan including increased effectiveness of the National Protected Areas System by 2024			
Action	GBF Biodiversity Enabling Support Grant for NBSAPs			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2023 – 2025	National Biodiversity Office	NA
Description				
This project focuses on aligning National Biodiversity Strategies and Action Plans (NBSAPs) with the post-2020 Global Biodiversity Framework through a series of key activities. It begins with a rapid review of existing NBSAPs, updating targets and revising plans to ensure alignment with international biodiversity commitments. The project will also assess current monitoring systems and frameworks, identifying gaps and creating an action plan to strengthen these systems. A rapid review of national policies and institutions will be conducted to develop a whole-of-government approach, with a prioritized action plan for policy coherence and alignment.				

Land use, human settlements, and infrastructure

Belize's condition as a Small Island Developing State (SIDS) is a way to frame the high vulnerability of its human infrastructure to the negative impacts of climate change. Adaptation efforts are now focused on reducing the social vulnerability and damage from seal level rise and weather extremes such as flooding and droughts, especially for local communities and indigenous coastal communities (*Table 22*).

Table 22 Description of adaptation actions in Belize's land use, human settlements, and infrastructure sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Protect communities from damage caused by flooding and sea level rise through implementation of the Land Use Policy and supporting green and grey infrastructure.			
Action	Coastal Highway Upgrading (Sixth Road Project)			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**

Project	Concluded	2019 – 2023	Ministry of Infrastructure, Development, and Housing	NA
Description				
The Coastal Highway is currently considered a distributor or secondary road and provides an alternative link for vehicles travelling between the northern and southern districts. The 59 km gravel road connects the George Price Highway to the Hummingbird Highway. The route of the roadway is mostly low lying and has inadequate drainage. It passes through the Central Belize Jaguar Corridor and the Manatee Forest Reserves, which are protected areas. There are two villages along the corridor, Gales Point Manatee and Mullins River, which are located approximately 1.5 km and 3 km respectively off the Highway. The Coastal Highway Upgrade Project involved the transformation of a 58-kilometer stretch of road to meet American Association of State Highway and Transportation Officials standards, ensuring improved climate resilience and enhanced transportation infrastructure. Key upgrades included the installation of new earthen drains along both sides of the highway, concrete box and pipe culverts, and the application of Double Bituminous Surface Treatment (DBST) for pavement. Safety features included line markings, road studs, traffic signs, crash barriers, bus lay-bys, and traffic calming measures. Additionally, six new bridges were constructed, and four existing bridges rehabilitated, contributing to a more reliable and resilient transportation network.				

Water Resources

Water resources and the lack of availability and quality of water have dire consequences for human persistence, and they are already heavily impacted by the increasingly variable climate in Central America. Planning and preparing for a more uncertain and variable future are at the core of Belize's adaptation actions for this sector (*Table 23*).

Table 23 Description of adaptation actions in Belize's water resources sector as part of its Nationally Determined Contributions (NDC), 2024

Target	Enhance the protection of water catchment (including groundwater resources) areas and make improvements to the management and maintenance of existing water supply systems through implementation of the National Water Sector Adaptation Strategy and Action Plan			
Action	National Adaptation Planning for Integrated Water Resources Management in Belize			
Type of Action	**Status**	**Duration**	**Executing Entity**	**GHG Coverage**
Project	Ongoing	2022 – 2025	National Hydrological Service	NA
Description				
This project supports the capacity and empowerment of the Government of Belize, specifically the National Hydrological Service, to manage Belize's water resources in a changing climate. Indirect beneficiaries of the project are vulnerable groups, women, children, rural, population affected by floods; research and educational institutions; students and researchers; non-governmental organizations; civil society organizations; and the private sector. Overall, this activity is strengthening country knowledge and capacity, as well as institutional governance and capacity to design adaptation solutions for maximum impact and to increase adaptation finance flows. This action will also provide observation, monitoring, and forecasting systems (through a Climate Responsive National Adaptation Plan and Monitoring) for integrated water resources management based on a greater understanding of the dynamics and stressors underlying its availability and links to societal well-being.				

Support implementing Belize's NDC

Support for the implementation of the Nationally Determined Contributions (NDC) is primarily provided through a combination of projects and technical assistance and is led and monitored preferentially by the NDC Partnership and ICAT support. As reflected in the Online NDC Partnership Plan Tool[37], the current consolidated budget for these implementation activities as of December 2024 stands at $554,692,751.09 USD. Despite this substantial amount, a 67% gap in funding and resources remains.

Current financial support committed is allocated across adaptation and mitigation (64.3 and 21.6 % of total, respectively), with only 14 % of the total investment channelled through cross-cutting project-based initiatives (*Figure 6*). These projects supporting NDC implementation (80 projects in total, as of this submission) focus on four categories: policy, strategy & legislation (13 % of total invested); budgeting & investment (79 %) monitoring & evaluation (M&E), and knowledge products (together they make up 4 % of the total investment).

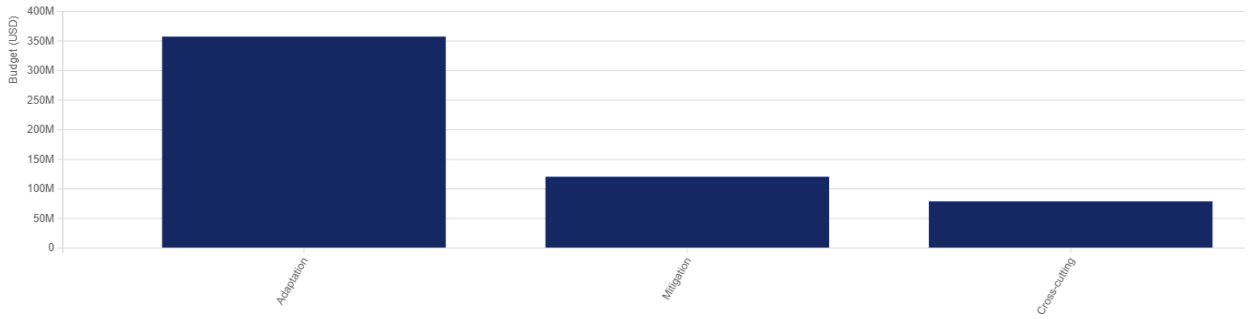


Figure 6 Summary of support allocated to initiatives under Belize's NDC implementation plan in alignment with NDC 2.0 goals and targets, as of December 2024. Source: NDC Partnership Online Tool [37]

The total investment committed for NDC implementation is mainly allocated to cross-cutting sectoral activities (53 %), the energy sector (18.7 %) and the agriculture sector (14 %). The remaining sectors each receive under 5 % of the total investment *(Figure 7*). From the total support committed to Belize, 59 % of the total is funding on-going projects, while 33 % is only in the planning stage. Thus, a clear need for further investment and sector-specific attention, particularly in underfunded areas remains. For example, the waste management sector has received limited attention and investment and only one project has been directed specifically towards it. The fisheries and the transport sector have similarly small numbers of projects (three and two, respectively).

[37] https://ndcpartnershipplans.com/public/view/dcd6e355-98a3-4a14-87b2-733a88c5d877

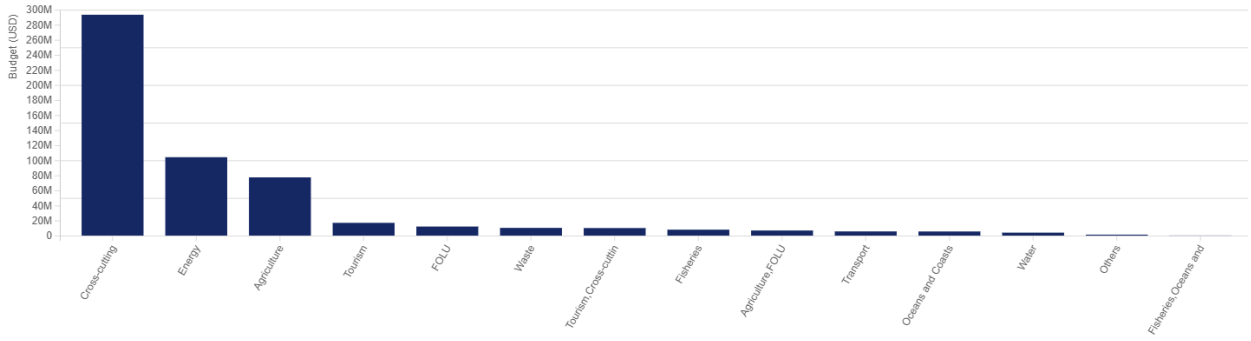


Figure 7 Summary of sectoral support for Belize's NDC initiatives in the form of projects aligned with NDC 2.0 goals and targets, as of December 2024. Source: NDC Partnership Online Tool [37]

Mitigation policies and measures related to implementing and achieving a nationally determined contribution under Article 4 of the Paris Agreement

Belize has made great strides in addressing climate change impacts while continuing to maintain sustainable development and lowering emissions as compatible and complementary guiding principles. Belize's climate action frameworks (i.e., policies, strategies, measures, actions, and plans) cover sector-wide efforts to provide an ambitious and cohesive set of enabling conditions to deliver on mitigation and adaptation targets. Belize's existing or emerging national frameworks cover various key GHG emitting sectors, including agriculture, forestry (including marine resources via blue carbon ecosystems) and energy (including transport), which all together contribute to the implementation of Belize's NDC (*Table 24*).

The country's Low Emissions Development Strategy (LEDS) was completed in 2021 and is Belize's long-term climate change policy document. It defines pathways to achieve low emission development for the country until 2050 and will influence future updates and decisions of the National Climate Change Policy, Strategy and Master Plan (NCCPSMP), and the NDCs. The mitigation options proposed in the LEDS could cut almost 90 % of expected missions by 2050 and support the creation of more than 30,000 jobs. The most significant mitigation of emissions would result from the FOLU sector, followed by transport and agriculture. Specific frameworks for these sectors are described below.

The National Climate Change Policy, Strategy, and Master Plan (NCCPSMP) was updated in 2021 and covers a period of 5 years up to 2025. It is the main overarching national policy related to the Government of Belize's efforts to address climate change mitigation and adaptation. The Master Plan presents a five-year programme to build the capacity of Belize to mitigate GHG emissions and adapt to the challenges of climate change in an inclusive manner in line with long-term, national development goals.

The REDD+ Strategy, adopted in 2018, is considered one of the main initiatives within Belize's NDC. It is geared towards improving Belize's ability to adapt to the adverse impacts of climate change, foster climate resilience, and lower GHG emissions. The National Agroforestry Policy was developed and adopted in 2020 to implement agroforestry practices in Belize as a way of reducing the pressure of existing forests, reducing deforestation and degradation. It thus complements the REDD+ target of increasing forest/tree cover for ecological stability and environmental services, especially in Belize's most vulnerable regions.

Belize's Comprehensive National Transportation Master Plan, completed in 2018, aims to facilitate better sector planning and a more efficient and effective transport of freight and people within Belize, and between Belize and its main trading partners. Expected benefits from the Master Plan include positive impacts on

development of the country's agriculture and tourism sectors, as well as a more socially inclusive, cohesive, and climate change adaptable and resilient Belize.

Another framework included in Belize's NDC, mentioned as an action, is the development of a National Seagrass Policy for Belize. This supports one of the NDC targets to enhance the capacity of the country's seagrass ecosystems to function as a carbon sink by 2030. This policy is under development and is expected to be completed and adopted in 2025. In addition, Climate Change and Carbon Markets Bill is currently under review by the Cabinet and potentially set to be passed in 2025. It will include institutional mandates meant to clarify and facilitate institutional arrangements to facilitate NDC implementation, tracking of progress and reporting. It is designed to provide a robust financial mechanism framework for the quantification and verification of carbon emission reductions, enabling the sale of carbon credits on international markets.

Table 24 Belize's policies and measures, actions and plans related to implementing and achieving an updated nationally determined contribution (NDC2) under Article 4 of the Paris Agreement

Name: Low Emissions Development Strategy (LEDS) **Description:** The LEDS elaborates on three emissions scenarios for Belize for each mitigation sector. Mitigation options proposed in the LEDS could cut almost 90 % of expected emissions by 2050. **Objective:** Belize aims to eliminate most of its gross carbon emissions by 2050 across all sectors of its economy through pathways defined in this LEDS **Type:** Strategy **Status:** Adopted **Sector(s) affected:** all mitigation sectors under the IPCC **Gases affected:** CO_2, CH_4, N_2O **Start year of implementation:** 2021 **Implementing entities:** National Climate Change Office
Name: National Climate Change Policy, Strategy, and Master Plan (NCCPSMP) **Description:** The goal of the National Climate Change Policy is to guide the short, medium, and long-term processes of climate change adaptation and mitigation in accordance with national prospects for sustainable development in addition to regional and international commitments. The policy will further provide guidance to mainstreaming along a low emission development pathway by focusing on the reduction of anthropogenic emissions of greenhouse gases. **Objective:** The general objective of the NCCPSMP is to integrate climate change into national development processes, build resilience to climate change in key sectors and economic activity and to promote capacity building in addition to secure financing for climate change response options. **Type:** Policy **Status:** Adopted **Sector(s) affected:** all mitigation and adaptation sectors **Gases affected:** CO_2, CH_4, N_2O, HFCs **Start year of implementation:** 2021 **Implementing entities:** National Climate Change Office, Ministry of Sustainable Development and Climate Change
Name: REDD+ Strategy **Description:** This document provides a full description of the programs engrained in the National REDD+ Strategy which aim to facilitate emission reduction and carbon sequestration from REDD+ activities. **Objective:** The goal of the REDD+ strategy is to significantly reduce GHG emissions from forests and increase the sequestration of GHGs by forests. This means reducing emissions from deforestation, forest degradation, and sustainable forest management over the next ten years, while enabling carbon stock enhancement, forest conservation, and forest restoration. **Type:** Strategy **Status:** Adopted

Sector(s) affected: AFOLU
Gases affected: CO_2, CH_4, N_2O
Start year of implementation: 2021
Implementing entities: Forest Department

Name: National Agroforestry Policy
Description: A policy developed to mainstream agroforestry development in Belize
Objective: To improve the total productivity, resilience and sustainability of agriculture and forestry through the adoption of AF systems in Belize, to improve the livelihood and wellbeing of present and future generations, with particular attention to the participation of the youth, women, the poor and Indigenous peoples across the country.
Type: Policy
Status: Adopted
Sector(s) affected: Agriculture and Forest
Gases affected: CO_2, CH_4, N_2O
Start year of implementation: 2020
Implementing entities: Forest Department

Name: Comprehensive National Transport Master Plan (CNTMP)
Description: The CNTMP seeks to advance the development goals of Belize through its transport sector. The multimodal CNTMP (land, air, sea, river) should be coherent with institutional, environmental/climate resilience, human and financial resource capacities of Belize. The CNTMP should be developed through a consultative and participatory process.
Objective: To addresses Belize's transport needs in the short, medium, and long terms, and that "facilitates a better sector planning and a more efficient and effective transport of freight and people within Belize, and between Belize and its main trading partners"
Type: Plan
Status: Adopted
Sector(s) affected: Energy and Transport Sector
Gases affected: CO_2, CH_4, N_2O
Start year of implementation: 2018
Implementing entities: Department of Transport

Name: National Seagrass Management Policy
Description: To provide guidance on targets setting, strategies for achieving measurable national and international targets and indicators for improved seagrass management, inclusive of identify/validate scenarios for improved management. of Belize's seagrass space, and in the context of biodiversity and ecosystem protection and connectivity, securing of carbon sink, and climate smart integrative coastal management.
Objective: To support wise stewardship and improved protection of Belize's seagrass ecosystems to continue to attain goods and services such as carbon sink, augmented coastal protection, biodiversity safeguarding, nursey functions, among others.
Type: Policy
Status: Planned
Sector(s) affected: Coastal Zone and Marine Resources
Gases affected: Yet to be determined
Start year of implementation: 2025
Implementing entities: Belize's Coastal Zone Management Authority and the Ministry of Blue Economy (including the Fisheries Department)

Estimates of expected and achieved GHG emission reductions deriving from these policies are not provided in this BTR. Also, information on individual cost by framework is unavailable and the country should be able to report on it by BTR2. As thoroughly explained in previous sections (i.e., "**INFORMATION NECESSARY TO TRACK PROGRESS MADE IN IMPLEMENTING AND ACHIEVING THE NATIONALLY DETERMINED CONTRIBUTION UNDER ARTICLE 4 OF THE PARIS AGREEMENT**"), the country currently lacks the capacity to calculate such estimations and will request assistance to enhance its capacity to report on this progress by BTR2.

Summary of greenhouse gas emissions and removals

Since Belize is submitting its National Inventory Report as a stand-alone report simultaneously with this Biennial Transparency Report, and following paragraph 91 of the MPGs, a summary of the country's GHG emissions and removals is provided below (*Table 25*. Additional information taken from the National Inventory Report is provided in chapter 2 above. The summary below corresponds with the stand-alone inventory report covering from 1994 to 2022.

Table 25 Belize's total national GHG emissions and removals in kt CO2 eq

Sector	*1994*	*1997*	*2000*	*2003*	*2006*	*2009*	*2012*	*2015*	*2017*	*2018*	*2019*	*2020*	*2021*	*2022*
Energy	422.95	0.00	0.00	4.89	2.89	2.68	567.30	820.98	823.13	829.87	849.91	684.21	714.80	722.79
IPPU	8.71	17.77	23.71	31.69	36.10	50.77	40.74	43.54	54.15	61.13	73.92	69.27	198.57	199.08
Agriculture	123.15	77.64	115.47	130.46	147.10	183.36	202.16	222.76	273.72	277.06	309.40	309.40	310.46	335.93
LULUCF	-16.40	-14.68	-10,446.59	-3,787.65	-5,559.91	-6,868.78	-3,591.44	-4,022.56	-7,169.02	-7,893.01	-2,066.56	-1,833.94	-7,169.02	-5,023.47
Waste	414.26	455.67	490.80	1,561.24	592.30	1,198.13	1,321.16	1,361.93	1,554.09	1,589.81	1,625.13	1,530.28	1,682.14	1,574.19
Total net emissions and removals (with LULUCF)	**952.67**	**536.40**	**-9,816.61**	**-2,059.36**	**-4,781.52**	**-5,433.85**	**-1,460.08**	**-1,573.36**	**-4,463.92**	**-5,135.15**	**791.81**	**759.22**	**-4,263.06**	**-2,191.48**
Total emissions (without LULUCF)	**969.07**	**551.07**	**629.97**	**1,728.29**	**778.39**	**1,434.93**	**2,131.36**	**2,449.21**	**2,705.10**	**2,757.86**	**2,858.37**	**2,593.17**	**2,905.96**	**2,831.99**

Projections of greenhouse gas emissions and removals, as applicable

Belize currently lacks the capacity to develop GHG emissions projections for its NDC. The country will thus request support for building the necessary capacities to develop emissions projections and, subsequently, develop those for BTR2. As they are developed and become available, these projections should be aligned with the GHG Inventory and other mechanisms (such as the National REDD+ Strategy and its FREL/FRL) in terms of accounting approaches (including, e.g., methods, general assumptions, tools, uncertainty estimation), sectors included and target years, as per UNFCCC guidance.

Flexibility provisions

The UNFCCC's Decision 18/CMA.1 recognizes in its guiding principles that the ETF needs to provide flexibility to developing countries that need it in the light of their capacities in their implementation of the provisions of Article 13 of the PA. Therefore, least developed country Parties and small island developing states may submit the information referred to in Article 13, paragraphs 7, 8, 9 and 10, of the Paris Agreement at their discretion. Flexibility provisions have been described within the context of the previous sections of this chapter and are reiterated here. The main flexibility provisions for the NDC are related to 1) the Party's capacity to report on NDC progress based on a robust set of indicators and MRV system; 2) the Party's capacity to report on estimates of expected and achieved GHG emission reductions from its PAMs, and 3) the Party's capacity to construct and report projections of GHG emissions and removals aligned between the GHG inventory and the NDC economy-wide and sectoral targets.

It will be necessary for the Party to undergo a robust national exercise to build an indicator dataset to track NDC progress before BTR2 submission. The status of the current dataset, and the multiple disaggregated processes that led to it, places an undue burden for Belize to adequately report on its climate action progress, beyond just the NDC. Belize will prioritize a request technology transfer and support to develop a cohesive national process to identify the most adequate and synthetic indicators to report on climate action and NDC process. This support will be requested and should be delivered in advance of completing the construction and consolidation of the country's online NDC MRV platform to avoid wasting precious time and resources having to otherwise repeat the process with a new set of indicators for BTR2.

In parallel to the previous flexibility provision and the country's request for support, Belize will seek technical assistance to strengthen its capacities to track and report progress on its NDC. Currently, and as evidenced in previous sections, the country is unable to report quantitatively (and even qualitatively in some cases) on a set of NDC indicators (developing such a set is another priority).

There currently is not a complete alignment between sectors, targets, or scenarios between the GHG inventory and the NDC. In addition, the GHG inventory system is not set up to track NDC sectoral targets nor to account for projections. As reporting on emissions and removals is one of the most critical areas in the BTR, the Party expresses its need to apply the necessary flexibility provisions due to its limited capacities and being a SIDS and to move forward to identify any capacity needs in advance of the BTR's technical expert review, especially as they pertain to alignment between the BTR and the GHG inventory across the suite of requirements described in the MPGs (e.g., accounting approaches, sectors included, methods, assumptions, scenarios and projections).

In addition, Belize currently lacks the capacity to develop GHG emissions projections for its NDC. The country will thus request support for building the necessary capacities to develop emissions projections and, subsequently, develop those for BTR2. These projections for the NDC should be aligned with the GHG Inventory and other mechanisms (such as the National REDD+ Strategy and its FREL/FRL) in terms of accounting approaches (including, e.g., methods, general assumptions, tools, uncertainty estimation), sectors included and target years.

Any request for support and technical assistance described in this section in no way precludes the Party's intention or restricts the total amount and types of support sought, to obtain further assistance in other areas related to the implementation of the NDC and other climate ambition and later reporting on its progress.

ADAPTATION INFORMATION

Information related to climate change impacts and adaptation

Institutional Arrangements and Legal Frameworks in relation to Adaptation

As a small-developing country, highly vulnerable to the impacts of climate change, Belize has recognized the need for robust institutional and legal frameworks to support adaptation efforts to increase its resilience to climate change. These frameworks facilitate the planning, implementation, and monitoring of climate adaptation actions at national, regional, and international levels. They also ensure that Belize meets its international commitments, particularly under the Paris Agreement, while addressing the specific vulnerabilities and needs of its people and ecosystems.

Belize's approach to climate change adaptation is coordinated through the National Climate Change Office, in collaboration with a range of institutions working at different levels, from national government ministries to regional and non-government organizations.

Institutional Arrangements

The National Climate Change Office (NCCO)

The **National Climate Change Office (NCCO)** under the Ministry of Sustainable Development and Climate Change is the primary institution responsible for overseeing climate change adaptation in Belize. The NCCO coordinates the development and oversight of key national adaptation strategies, such as National Adaptation Plans (NAP), and ensures that Belize fulfills its international climate commitments, including those under the **Paris Agreement**. Additional responsibilities involve coordinating Belize's external response to various reporting obligations under the UNFCCC, as well as securing or attracting funds to support national climate efforts. The office leads the preparation and submission of major national climate change reports, such as National Communications, Nationally Determined Contributions, National Inventory Reports and Biennial Transparency Reports.

Key functions of the NCCO in relation to adaptation include:

- Developing national policies and strategies related to climate adaptation.
- Coordinating cross-sectoral efforts for adaptation, particularly in priority sectors like agriculture, coastal zones, and water resources.
- Engaging with regional and international bodies, such as the **Alliance of Small Island States (AOSIS)** and the **Caribbean Community Climate Change Centre (CCCCC)**, to leverage expertise, finance, and technology for adaptation.

The Belize National Climate Change Committee (BNCCC)

The **Belize National Climate Change Committee (BNCCC)**, which will become the Belize National Climate Change Council (BNCCC) upon acceptance of the Carbon Bill, is an inter-ministerial body that provides policy guidance and coordination for climate action in Belize. Comprising representatives from various government ministries, civil society, and the private sector, the BNCCC ensures that climate adaptation is mainstreamed across national policies and development plans.

The BNCCC plays a vital role in:

- Reviewing and endorsing adaptation policies and plans before they are submitted for Cabinet approval.
- Facilitating collaboration among ministries, ensuring that sectors such as agriculture, fisheries, tourism, and health integrate adaptation considerations into their operations.
- Monitoring and evaluating adaptation progress and outcomes, particularly in alignment with national and international targets like the NDCs

Government, Non-Government and Local Institutions

In addition to national-level coordination, other government institutions, local governments and other organizations play a pivotal role in adaptation efforts. These institutions, including village councils, non-governmental organizations (NGOs), and community groups, are essential in implementing adaptation measures on the ground, particularly in sectors like agriculture, water management, and disaster risk reduction.

The NCCO also collaborates with local institutions to ensure that adaptation actions are context-specific and address the needs of communities and the different sectors. This decentralized approach ensures that vulnerable populations—such as rural communities, indigenous groups, and coastal villages—have access to climate-resilient solutions.

Legal Framework for Adaptation

Belize's legal framework for adaptation is rooted in a combination of national legislation, international agreements, and sectoral policies. These instruments provide the legal basis for adaptation planning, resource mobilization, and enforcement of climate-related regulations.

National Climate Change Policy, Strategy, and Master Plan (2015-2025)

The **National Climate Change Policy, Strategy, and Master Plan** (NCCPSMP) is Belize's guiding document for addressing climate change. It outlines the country's vision and goals for mitigating climate impacts and adapting to climate-related risks. The Master Plan recognizes adaptation as a national priority and identifies specific sectors that require urgent action, including water resources, agriculture, fisheries, health, and infrastructure. The current edition of the NCCPSMP covers a five-year period and is to be updated every five years, presenting new adaptation actions in relation to Belize's international commitments, national ambitions and any new scientific information and knowledge, especially as it pertains to risks and impacts for adaptation. It contains:

- Established mechanisms for integrating adaptation into national development planning.
- Prioritized investments in climate-resilient infrastructure, particularly in the coastal zone and agriculture.
- Created platforms for stakeholder engagement in adaptation decision-making processes.

Belize's Climate Change and Carbon Market Initiative Bill

Belize's **Climate Change and Carbon Initiative Market Bill is** currently in draft form and set to be finalized in 2025. The Bill represents a pivotal step in establishing a comprehensive legal framework to

guide the nation's response to climate change. This bill integrates climate action into national planning, enhancing Belize's adaptive capacity and resilience.

Key elements of the bill include:

- **Climate Change Governance**: It formalizes climate governance structures, ensuring that climate policies are coordinated across relevant institutions and that responsibilities are clearly delineated including establishing the National Climate Change Office as a Climate Change Department.
- **Carbon Market Framework**: The bill lays the foundation for Belize's participation in domestic and international carbon markets. This opens avenues for generating revenue through emissions trading and carbon credits, particularly from adaptation projects that reduce emissions in sectors such as forestry and agriculture.
- **International Commitments**: The legislation aligns with Belize's commitments under the Paris Agreement, supporting the achievement of its Nationally Determined Contributions (NDCs). It also enhances transparency and accountability in climate action through robust reporting and monitoring mechanisms.

This bill, once enacted, will be instrumental in promoting sustainable development and enabling Belize to leverage climate finance, especially through mechanisms such as carbon trading and markets. It further strengthens the country's adaptive strategies by linking climate governance with financial tools and additional sources of funding that can support adaptation projects.

Climate Change Impacts, Risks, and Vulnerabilities

Current and Projected Climate Trends and Hazards

Climate change poses a significant threat to Belize and the Caribbean, with increasing evidence that the consequences are already being felt across communities and sectors. Current climate trends indicate rising sea surface temperatures, changing precipitation patterns, and more frequent and intense extreme weather events such as hurricanes and tropical storms.

Updated climate models project significant changes for Belize in the near and long term. For instance, the average sea surface temperature along Belize's coastline is expected to increase by 1°C within the next 50 years and by up to 2°C within the next century in some areas (Martin-Ortega, Akkermans, Da Costa, Garcia, 2021). Rising temperatures will lead to more frequent coral bleaching events, weaken marine ecosystems, and alter fish migration patterns, impacting fisheries.

Sea levels are projected to rise between 16 and 21 cm (about 8.27 in) within the next 50 years, contributing to the erosion of beaches and the salinization of surface and groundwater resources (Martin-Ortega et al, 2021). This will exacerbate the vulnerabilities of Belize's low-lying coastal areas, putting critical infrastructure, tourist destinations, and human settlements at risk of inundation.

Belize is also expected to experience a decrease in annual precipitation, with models forecasting a reduction of 3.8% in the next 25 years and up to 11.7% by the end of the century (Martin-Ortega et al, 2021). This reduction will intensify seasonal differences, with longer dry seasons and more severe droughts. Concurrently, the wet season is projected to bring more intense rainfall, leading to urban and rural flooding due to inadequate drainage systems.

Climate Change Projections

Belize's climate is expected to undergo significant changes over the coming decades due to global climate change, as outlined in Belize's National Climate Change Policy, Strategy, and Master Plan (2021). These projections, which explore potential outcomes based on different greenhouse gas emission scenarios, provide a crucial foundation for the country's mitigation and adaptation planning. The following sections detail projections for air surface temperature, rainfall, sea level rise, sea surface temperature, and ocean acidification for the next 100 years as outlined by Martin-Ortega et al for Belize's NCCPSMP.

Air Surface Temperature

Projections for Belize's air surface temperature were modeled using the Representative Concentration Pathways (RCP) 2.6 and 4.5 scenarios. *Table 6* summarizes the expected changes in annual mean air surface temperature over the next 25, 50, 75, and 100 years.

Table 26 Mean Surface Air Temperature Projections in Belize

Model	Parameter	Current (2021)	25 Years	50 Years	75 Years	100 Years
RCP 2.6	Max	24.68ºC	25.16ºC	25.16ºC	25.83ºC	26.42ºC
	Min	19.96ºC	19.96ºC	19.96ºC	19.96ºC	19.96ºC
	Mean	22.92ºC	23.17ºC	23.20ºC	23.40ºC	23.61ºC
RCP 4.5	Max	24.68ºC	25.23ºC	26.11ºC	29.00ºC	32.65ºC
	Min	20.15ºC	20.15ºC	20.15ºC	17.71ºC	14.11ºC
	Mean	22.93ºC	23.23ºC	23.32ºC	23.60ºC	23.92ºC

Under the optimistic scenario (RCP 2.6), the mean surface air temperature will rise gradually, with the maximum temperature increasing by approximately 2°C by the end of the century. The RCP 4.5 scenario, which assumes moderate emissions, suggests more drastic increases, with maximum temperatures reaching up to 32.65°C in 100 years. These changes will lead to more frequent extreme weather events, such as heatwaves and cold spells, with Belize experiencing increasing episodes of both.

Spatial variation in temperature will also occur. In the RCP 2.6 scenario, the coolest areas will remain in the mountainous southern regions, while the hottest temperatures will be concentrated in northwestern Belize. By contrast, in the RCP 4.5 scenario, southern and coastal areas are projected to experience the highest temperatures, especially after 2080.

Rainfall

Projected changes in rainfall patterns across Belize reveal an overall decline in average annual precipitation, particularly in the northern and urbanized areas. However, some areas, especially in the mountainous south, may see slight increases in rainfall.

The major trends include:

- A decrease in the number of rainy days during the wet season but an increase in the intensity of those events, leading to more frequent torrential downpours.
- Little to no impact on dry-season rainfall patterns.
- Expanding dry zones as urbanization and deforestation increase, reducing rainfall accumulation in developed areas.

These changes in rainfall patterns are expected to exacerbate the challenges of water resource management and agriculture, with more frequent periods of drought and severe storms leading to soil erosion and increased flood risks in certain regions.

Sea Level Rise

Sea level rise in Belize is projected using RCP 2.6, 4.5, and 6.0 scenarios, with significant increases anticipated across all models over the next century. *Table 26* provides an overview of sea level rise projections.

Table 26 Sea Level Rise Predictions Over the Next Century in Belize

Model	Current (2021)	25 Years	50 Years	75 Years	100 Years
RCP 2.6	Set level 0	+9.13 cm	+16.40 cm	+25.70 cm	+35.00 cm
RCP 4.5	Set level 0	+9.14 cm	+20.40 cm	+45.10 cm	+91.30 cm
RCP 6.0	Set level 0	+9.14 cm	+21.50 cm	+49.50 cm	+103.90 cm

Under RCP 4.5 and RCP 6.0, sea levels could rise by as much as 91.30 cm (about 3 ft) and 103.90 cm (about 3.41 ft), respectively, by the end of the century, posing a severe threat to Belize's coastal communities, ecosystems, and infrastructure. The current mean sea level rise rate of 3.7 mm per year fits within the RCP 2.6 scenario, but this rate is expected to accelerate, especially under the more pessimistic RCP 4.5 and 6.0 scenarios.

Sea Surface Temperature

Sea surface temperature (SST) in the coastal waters surrounding Belize is expected to rise over the next century, as summarized in *Table 27*.

Table 27 Sea Surface Temperature in Coastal Areas Around Belize Over the Next Century

Current (2021)	25 Years	50 Years	75 Years	100 Years
28.19ºC	28.67ºC	29.20ºC	29.58ºC	30.06ºC

SST is projected to rise by 1°C within the first 50 years and by a further 0.7°C by the end of the century. The highest temperature increases are expected in Chetumal Bay, where temperatures could be 2°C higher than surrounding waters for prolonged periods. These increases in SST will have profound impacts on marine ecosystems, particularly coral reefs, which are extremely sensitive to temperature changes.

Ocean Acidification

Ocean acidification is expected to worsen in Belize's coastal waters over the next century due to rising carbon dioxide (CO2) levels. *Table 28* provides a summary of ocean acidification projections.

Table 28 Ocean Acidification Around Belize Over the Next Century

Parameter	Current (2021)	25 Years	50 Years	75 Years	100 Years
Mean	0	-0.009	-0.020	-0.020	-0.020
Peak	0	-0.032	-0.032	-0.032	-0.032

Ocean acidification will increase by approximately 108% within the next 25 years and 111% by the end of the century, severely affecting marine life, especially coral reefs and cephalopods. As the acidity of the water increases, the ability of marine organisms to form shells and skeletons will be impaired, leading to disruptions in marine biodiversity and ecosystem functioning.

These projections emphasize the need for urgent and comprehensive climate adaptation strategies to safeguard Belize's ecosystems, communities, and economy in the face of escalating climate change impacts.

Observed and Potential Impacts of Climate Change across Sectors

The impacts of climate change are already visible in Belize, particularly across climate-sensitive sectors such as agriculture, water resources, fisheries, and tourism. These sectors depend heavily on natural resources, which are increasingly threatened by rising temperatures, sea level rise, and altered precipitation patterns.

Agriculture and Food Security

Rising temperatures are expected to reduce crop yields, with staple crops such as beans, corn, rice, bananas, and citrus potentially seeing productivity declines of up to 10% due to heat stress and drought conditions. Prolonged heat waves will also alter the distribution of pests and diseases, further threatening crop resilience and reducing food security.

Water Resources

Belize's freshwater availability will be severely impacted by climate change. Increased competition for water resources is expected as drought conditions worsen. Recurring droughts and prolonged dry seasons will affect both agricultural productivity and hydroelectric energy generation, leading to energy shortages during peak demand periods.

Fisheries and Marine Ecosystems

Belize's fisheries are particularly vulnerable to ocean acidification and rising sea temperatures. Ocean acidification, driven by increased CO2 absorption, alters marine ecosystems by lowering the pH of seawater, which weakens coral reefs and disrupts marine biodiversity. Acidified conditions inhibit crustacean growth, which in turn threatens the commercial fish population that depends on these organisms for sustenance.

Coral bleaching, already observed in Belize, is exacerbated by rising sea surface temperatures. Projections suggest that a 1°C increase in water temperature above seasonal maxima could trigger mass bleaching events, while a 2°C increase could lead to widespread coral mortality. These changes reduce the reefs' ability to provide coastal protection from storm surges and diminish their role as critical habitats for marine species.

Coastal Areas

The combined effects of rising sea levels, more intense storms, and higher sea temperatures threaten Belize's coastal communities. Sea level rise is expected to exacerbate beach erosion and inundation, which will endanger human settlements, tourist attractions, and critical infrastructure, especially in low-lying areas. The risk of stronger and more frequent tropical storms further increases the vulnerability of coastal regions to flooding, damage to infrastructure, and loss of life.

Forests and Biodiversity

Belize's forests and biodiversity are particularly vulnerable to the impacts of climate change. Increasing temperatures and shifting rainfall patterns are expected to alter forest ecosystems, affecting species distribution, forest health, and ecosystem services. Prolonged droughts can lead to forest degradation, increasing the risk of wildfires, pest infestations, and diseases that weaken tree resilience. Belize's rich biodiversity, which includes numerous endemic species, is also at risk as habitats are altered or reduced in size, threatening species survival. Changes in temperature and rainfall can shift ecosystems and force species to migrate to more suitable environments, potentially leading to the loss of biodiversity hotspots. Additionally, the destruction of critical habitats like mangroves and wetlands—vital for coastal protection and as nurseries for marine life—could result from sea-level rise and extreme weather events, further diminishing biodiversity and increasing vulnerability to climate change impacts. Protecting forests and ecosystems is crucial for maintaining biodiversity and ensuring that these natural systems continue to provide essential services such as carbon sequestration, water filtration, and coastal protection.

Health and Tourism

Increased temperatures will have wide-reaching social and economic effects, including heat stress-related illnesses and a reduction in tourism activity. Heat stress is likely to disproportionately affect vulnerable populations such as the elderly, children, and those with pre-existing health conditions. The tourism sector, a significant contributor to Belize's economy, is also at risk, as elevated temperatures may reduce visitor comfort and discourage tourism, particularly in key coastal destinations.

Increased precipitation during storms, combined with poor drainage infrastructure, will lead to more frequent flooding. This could disrupt water, electricity, and transport services, and promote the spread of waterborne and vector-borne diseases such as Dengue, Malaria, and Chikungunya.

Economic, Social, and Environmental Vulnerabilities

Belize's high dependence on its natural resources for the economic and social well-being of its people makes the country highly vulnerable to climate change and its impacts. Key sectors, including tourism, agriculture, fisheries, forestry, and water are particularly sensitive to climate variability and extremes. As a small island developing state (SIDS), Belize faces unique challenges in balancing economic development with environmental conservation and resilience-building, while also having limited capacity in terms of financial and human resources to build resilience.

The threat of climate change requires multilateral action from policy makers, technical experts, the private sector, and the public. Solutions must be sought to not only reduce global greenhouse gas emissions and but also to implement effective adaptation measures that safeguard Belize's natural resources and vulnerable populations. Delayed or insufficient adaptation efforts will lead to more severe impacts, threatening Belize's progress toward sustainable development goals. Hence, it is crucial for support to be provided and increased towards adaptation efforts in developing nations, building resilience against imminent climate risks, ensuring economic sustainability, and enhancing national development initiatives.

Adaptation strategies to integrate adaptation into national policies and strategies

National Adaptation Planning Process

Overview of Belize's National Adaptation Plan (NAP) Process

As a Party to the UNFCCC and the Paris Agreement, Belize is committed to implementing robust adaptation planning to address the growing impacts of climate change. National Adaptation Plans (NAPs) serve as a key mechanism for guiding climate action and building resilience across various sectors. Belize is actively developing and implementing sector-specific NAPs with support from international partners like the Green Climate Fund (GCF) and the Caribbean Community Climate Change Centre (CCCCC). Below are the major NAPs currently in development or in draft form:

1. Water Sector NAP, drafted

Project Title: *National Adaptation Planning for Integrated Water Resources Management in Belize* **Funding Source**: Green Climate Fund (GCF); **Implementing Partner:** CCCCC **Leading Entities**: National Hydrological Service (NHS), Ministry of Natural Resources, CCCCC

Belize's water resources are critical for the country's development, yet they are increasingly threatened by climate change, particularly in terms of water availability and quality. This NAP focuses on strengthening the adaptive capacity of water resource management through the following key actions:

- **Climate Impact Assessments**: Analyzing the impacts of climate change and coastal influences on Belize's groundwater resources, a crucial step for managing the country's limited freshwater reserves.
- **Capacity Building**: Enhancing technical skills within the National Hydrological Service to manage water resources through improved observation, monitoring, and forecasting systems.
- **Policy and Institutional Support**: Addressing gaps in data, policy, and institutional frameworks for water resources, especially by considering the needs of vulnerable populations such as women, children, and rural communities.
- **Climate Finance and Adaptation Solutions**: The NAP will link adaptation strategies to climate financing mechanisms, enabling the development of concept notes for priority projects to be submitted to the GCF. These efforts will promote sustainable water use practices while building resilience to water scarcity and climate variability.

2. Coastal Zone and Fisheries NAP, drafted, undergoing updates through additional assessments

Project Title: *Enhancing Adaptation Planning in the Coastal Zone and Fisheries Sector of Belize* **Funding Source**: Green Climate Fund (GCF), **Implementing Partner:** FAO **Leading Entities**: Ministry of Blue Economy

Given Belize's vulnerability as a Small Island Developing State (SIDS), the coastal zone and fisheries sectors are particularly exposed to risks like sea-level rise, storm surges, and rising sea surface temperatures. The Coastal Zone and Fisheries NAP focuses on:

- **Mainstreaming Climate Change**: Incorporating climate resilience into national policies and frameworks for coastal zone and fisheries management.
- **Data Gathering and Monitoring**: Improving the collection and dissemination of climate data related to the marine environment and fisheries. This includes assessing the impacts of climate change on coastal communities and ecosystems.
- **Community Engagement**: Strengthening communication networks among coastal and fisheries communities to enhance local adaptation capacity and response efforts.
- **Building Resilience**: The NAP aims to increase the resilience of coastal and fisheries resources by addressing barriers such as limited capacity, technology, finance, and research.

3. Multi-sectoral National Adaptation Plan (NAP)

Project Title: *Enabling Activities for the Formulation and Implementation of a Multisectoral NAP for Belize*
Funding Source: Green Climate Fund (GCF), **Implementing Partner:** PACT
Leading Entities: National Climate Change Office

The multi-sector NAP aims to provide an integrated adaptation plan that strategically addresses climate change impacts across several critical sectors, including land use, human settlement & infrastructure, tourism, human health, agriculture, and forestry. The main objectives of this NAP include:

- **Synergies Between Sectors**: Creating cross-sectoral linkages that enhance resilience. For example, the plan will address the interdependencies between land use, forestry, and agriculture, which are vital for both economic stability and adaptation.
- **Engagement and Inclusivity**: The NAP will consider the needs of all vulnerable groups, including women, youths, indigenous communities, and rural populations, ensuring their inclusion in adaptation planning and decision-making.
- **Strategic Communication and Capacity Building**: Developing and disseminating materials to build human resource capacities for effective adaptation planning and implementation, while also ensuring knowledge transfer across sectors.
- **Climate Finance and Project Development**: The plan will identify priority adaptation projects, with the development of three concept notes for submission to the GCF, aiming to secure financing for these initiatives.

Key Cross-Cutting Themes

Capacity Building and Knowledge Transfer: Across all NAPs, there is a clear emphasis on developing local expertise and ensuring that stakeholders at all levels—governmental, community, and private sector—are equipped with the knowledge and tools to manage adaptation efforts effectively.

Climate Finance: Recognizing the economic constraints Belize faces as a SIDS, all NAPs are designed to link adaptation strategies with climate finance opportunities, such as the GCF, to secure resources for implementation.

Vulnerable Populations: A major priority of the NAP process is ensuring that the most vulnerable—whether due to geographic location, socio-economic status, or gender—are considered and integrated into adaptation efforts.

Belize's efforts in developing and implementing its National Adaptation Plans demonstrate its commitment to addressing the impacts of climate change despite significant resource challenges. By focusing on water resources, coastal and fisheries sectors, and a multi-sectoral approach, these NAPs aim to safeguard the country's natural resources, build resilience among its most vulnerable communities, and position Belize to meet its international climate obligations under the UNFCCC and the Paris Agreement.

Other information on gender and climate change

As mentioned above, the Government of Belize is making efforts to ensure that the most vulnerable groups are considered and integrated into adaptation efforts, including gender. In 2022, Belize updates its National Gender Policy and developed a National Climate Change Action Plan. The NCCGAP outlines opportunities and recommends strategies for incorporating gender considerations into climate change planning and key sector development processes across governmental, environmental, and social institutions. This plan supports the implementation of gender-responsive actions through the National Adaptation Plans (NAPs) and Nationally Appropriate Mitigation Actions (NAMAs), while integrating gender-related initiatives into

other national policies and frameworks, such as the updated Nationally Determined Contributions (NDC), Low Emission Development Strategy (LEDS), and the updated National Climate Change Policy, Strategy and Master Plan (NCCPSMP).

Below are key areas that the government of Belize has highlighted gender within the strategies and policies:

Gender and Climate Change

1. Integration of Gender Considerations in Climate Action:

- The Government of Belize aims to incorporate gender considerations by improving the collection, analysis, and reporting of gender statistics and disaggregated data through regular national surveys of water resources-related conditions. This will help understand gender participation in the sector and inform decision-makers to address water-related issues more effectively.
- There are efforts to incorporate gender-sensitive research agendas to evaluate the impacts of climate change on the well-being of women, including an analysis of health data and outcomes of related policies.
- Specific actions include promoting women's involvement in decision-making, resource management, and sharing of benefits in the forest sector, recognizing women's roles, and promoting gender-responsive capacity building across sectors such as forestry and fisheries.

2. Gender-Responsive Policies and Programs:

- Gender-responsive awareness and education programs related to water management, including droughts, floods, or other climate-related disasters are being addressed through the National Adaptation Plans and projects such as the Sustainable and Inclusive Belize Program and Enabling Gender Responsive Disaster Recovery, Climate and Environmental Resilience in the Caribbean.
- The government is also focused on developing and delivering a comprehensive Family and Community Health Programme targeted at vulnerable groups such as women, adolescents, older persons, sex workers, victims of gender-based violence, people with disabilities, and people with mental illnesses.

Social Inclusion and Equity

1. Considerations for Vulnerable Populations:

- The Belize National Climate Change Master Plan emphasizes the need for gender-responsive, participatory, and fully transparent approaches in climate change adaptation, mitigation, and capacity-building strategies that consider the needs and challenges of vulnerable groups. Vulnerable groups identified include women, children, older people, indigenous populations, people with disabilities, and those living in poverty.
- The government promotes community-based ecotourism initiatives, employment opportunities for women, youth, and people with disabilities, and provides training to local communities to participate in sustainable tourism segments.

2. Considerations for Youth Engagement:

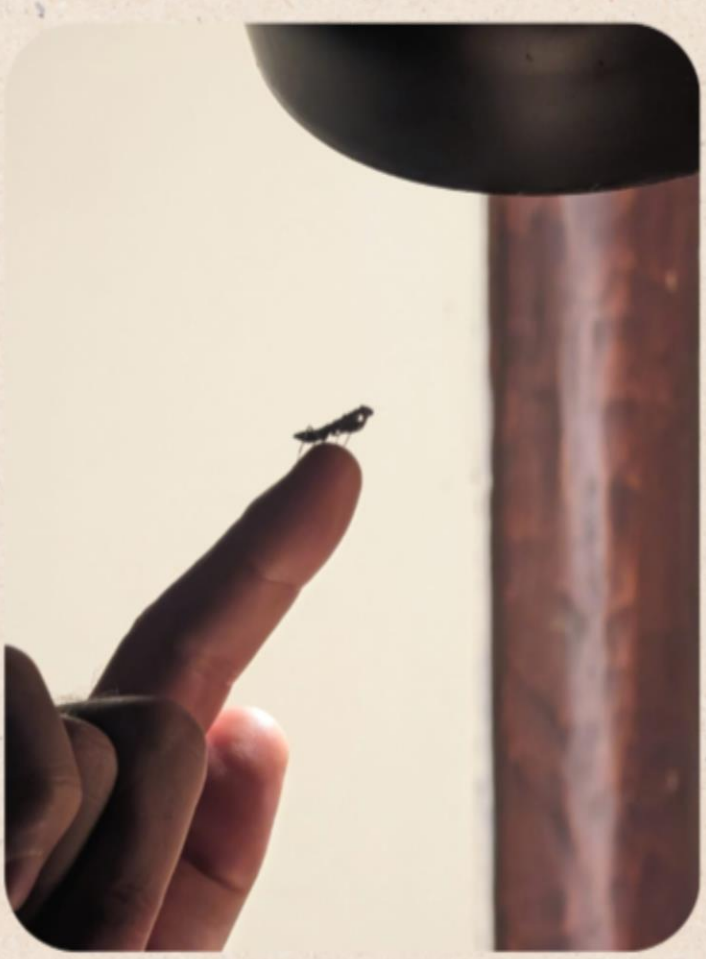
- Youth are identified as a vulnerable group in multiple sectors such as agriculture, tourism, and fisheries. For instance, there are training and education programs specifically targeted at youth in vulnerable fishing communities and indigenous communities to help them transition to alternative forms of employment and income generation.
- The plan also promotes training opportunities for youth in various sectors to build capacity and awareness regarding climate change adaptation and mitigation.

3. Community Engagement and Participatory Approaches:

- The government emphasizes the importance of community-based participatory approaches to empower local communities, especially in managing health and climate resilience. This includes ensuring gender participation and tailoring approaches to the lifestyles and culture of indigenous communities.
- Belize aims to ensure community involvement in all phases of coastal management to incorporate traditional knowledge and practices of indigenous peoples and local communities.

These documents reflect a comprehensive approach to integrating gender considerations, social inclusion, and equity in climate action plans, ensuring that vulnerable populations, including women, youth, and indigenous communities, are actively engaged in decision-making and benefit from capacity-building efforts.

SUPPORT NEEDED AND RECEIVED



Support Needed and Received

National Circumstances and Institutional Arrangements

In Belize, a range of government entities is involved in climate finance activities. The main key actor is the National Climate Change Office (NCCO) established under the Ministry of Sustainable Development and Climate Change (MSDCC) which is the UNFCCC focal point and responsible for tracking the progress of NDC implementation. The NCCO functions as the Secretariat and operational arm of the Belize National Climate Change Committee (BNCCC), which is the leading strategic level entity in Belize for endorsement of major climate change related activities, policy, and plans, and is able to advise the Government of Belize through the Cabinet. It is comprised of representatives across ministries, academia, private sector, and civil society and contains two subcommittees providing technical guidance for decision-making, one of which is the Climate Finance Sub-Committee, which provides oversight of the delivery of climate change financing and other areas of economic expansion.

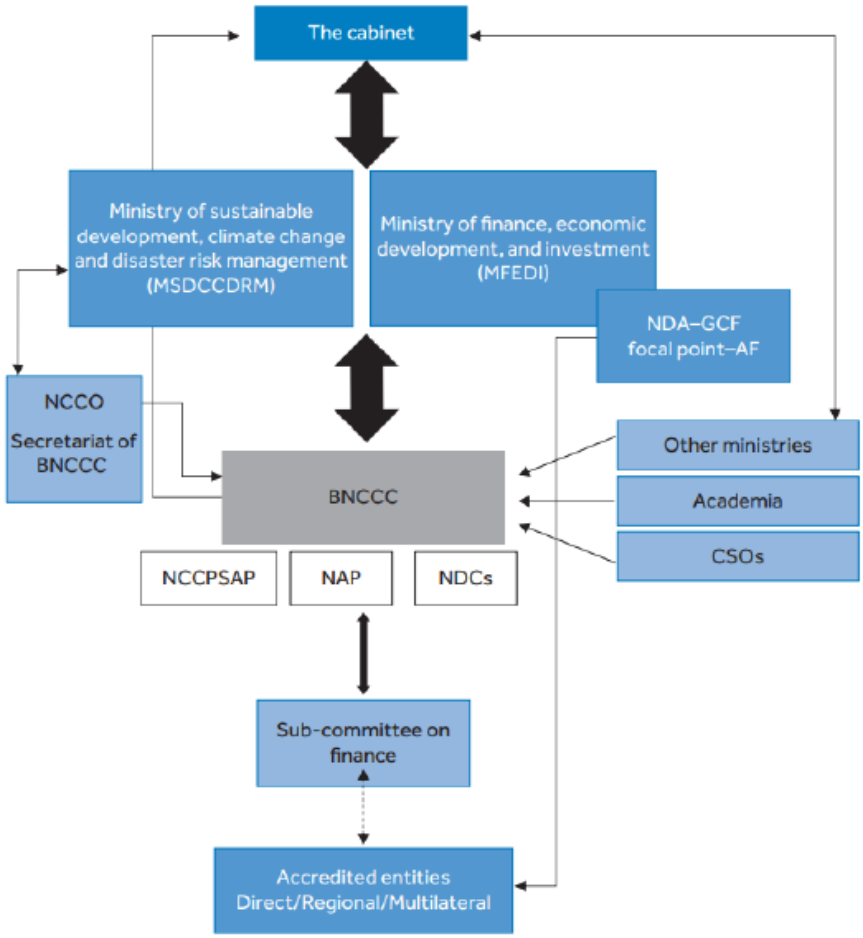
Recently established in 2022, the Climate Finance Unit (CFU), housed within the Ministry of Finance, Economic Development and Investment, is responsible for translating Belize's climate change mitigation, adaptation, preparedness and resilience plans into implementable strategies and projects. Furthermore, the CFU is charged with the operationalisation, monitoring and review of the national climate finance strategy and acts as the knowledge and expert hub for climate finance. In addition, the CFU is tasked with public outreach and coordination between government, project developers and private sector on topics related to climate finance and financing strategy.

Other actors are involved in climate finance in Belize such as other ministries within the government that manages a range of projects across the climate change spectrum. *Figure 8* on the following page depicts the institutional arrangements of Belize for climate change and climate finance priorities.

The Public Sector Investment Program (PSIP) is currently the only system available in Belize to track international finance flows, covering all international donor projects. It is updated on a quarterly basis and currently maintained in an Excel sheet. The Policy Planning Unit (PPU) under the Ministry of Finance, Economic Development and Investment (MFEDI) is the responsible entity that subsequently monitors and reports on the financial and physical progress of ongoing PSIP projects, providing information on, among others, sources and types of financing, financing instruments, sectors attracting investments and constraints faced by implementers, etc, and using this information for reporting to the United Nations Framework Convention on Climate Change (UNFCCC).

The PISP however is not a targeted instrument for climate finance as it comprises all development projects that are being implemented by or on behalf of the Government of Belize, including those executed by state owned entities with development financing backed by sovereign guarantees, and does not capture the share of climate finance of development investments potentially overestimating the contribution.

Figure 8 Institutional Arrangements for climate change and climate finance priorities



In addition to the PISP, Belize has developed a NDC implementation tracking tool which also captures investments from international sources targeted at NDC actions. This tool was implemented with the 2021 NDC updating process. Furthermore, the GCF National Designated Authority (NDA) maintains a separate repository for on GCF finance flows to Belize.

Thus, as there is no database exclusively for climate finance and no climate finance tracking methodologies are applied, Belize engaged with the Initiative for Climate Action Transparency to implement a project called “ICAT for Enhancing National Capacity to Track and Report on Climate Finance”. The project will increase national monitoring capacity of climate finance.

In summary, the National Climate Change Policy, Strategy and the Master Plan will be the overall guiding document for the Government of Belize on climate change based on which the NDC processes will also be implemented. Belize is planning to establish the Climate Finance MRV system (under the ICAT project mentioned above) as an integral part of the Climate Change MRV system. The climate finance MRV system is expected to be synergized with the policy and institutional architecture of the country. It will develop two methodologies to assess climate finance needs and to track climate finance flows, respectively. The current institutional arrangements will be enhanced and formalized to facilitate the implementation of the developed methodologies. The climate finance MRV system is expected to be finalized and integrated into the overall climate change MRV system before the second quarter of 2025.

Information on financial, technology development and transfer and capacity building support needed and received

Belize continues to secure financial aid, technical assistance, and technology transfer from regional and international sources to address climate change impacts and reduce emissions. This chapter highlights finance needs and as well as support received during 2018–2022, based on available data.

Despite progress in integrating climate change considerations into sectoral plans, significant gaps persist, requiring both domestic and international support. Belize's Technology Needs Assessment (2017) outlined barriers to mitigation and adaptation efforts, but no updated needs assessment exists for this period for technology or capacity needs. An updated needs assessment will be conducted for the next Biennial Transparency Report (BTR).

Although Belize receives bilateral and multilateral support, limited national capacity poses challenges for fostering international cooperation. Additional resources are essential for meeting UNFCCC requirements and advancing climate action.

This Biennial Transparency Report identifies Belize's financial, technological, and capacity-building needs, as well as key gaps and barriers. It emphasizes the need for enhanced cooperation, knowledge sharing, and technical expertise to improve the implementation and sustainability of climate strategies while showcasing the support received and areas needing further attention.

Support Needed

As previously reported in Belize's Fourth National Communication, Belize conducted a Technology Needs Assessment (TNA) in 2017 to identify and prioritize technologies and tools aligned with national adaptation, mitigation, and sustainable development goals. Between 2018 and 2022, several studies and assessments have supported national climate planning, identified enabling conditions, and projected climate change impacts. These include the TNA's Barrier Analysis and Enabling Framework, as well as Belize's National Communications. However, these efforts have not fully addressed the country's financial, technical, and capacity-building gaps.

Therefore, there are limitations to the country's ability to accurately determine its overall support needs resulting in this report relying on needs identified by the Climate Finance Unit and information from Belize's NDC. To address this limitation for future reporting, a comprehensive needs assessment will be included in the next Biennial Transparency Reports (BTRs), providing a clearer understanding of Belize's resource requirements and enabling more effective climate action planning.

The estimated cost of implementing the mitigation targets and actions outlined in Belize's NDCs between 2021 and 2030 is approximately USD $1.39 billion. After accounting for committed funding, the remaining funding gap is USD $1.24 billion, which could be further reduced to USD $607 million by factoring in recoverable costs in the energy and waste sectors. For adaptation-related targets and actions, the estimated cost is USD $318 million over the same period, with a funding gap of USD $146 million after considering committed resources.

Table 29 the support needs as identified by the Climate Finance Unit within the Ministry of Economic Development. According to the Climate Finance Landscape report, Belize tracked BZD 454.7 million (USD 227.4 million) in climate finance flows from various sources between 2015 and 2019. This includes BZD

1.2 million (USD 599,209) in climate risk financing investments over the same period. Multilateral Development Banks (MDBs) were the primary providers of climate finance, followed by bilateral donors.

However, over 50% of the tracked climate finance during this period was accessed as loans, with only 36% provided as grants. The remainder came from government counterpart financing. This reliance on loans highlights the need for more grant-based funding to reduce the financial burden on Belize and enhance its capacity to implement climate action.

Table 29 Support Needed identified by the Climate Finance Unit

Need identified	Support needed	Type of support (technology transfer, capacity building, financial support)	How long is support needed?	Finance Required USD
San Pedro Water and Wastewater Treatment Plant	Expand wastewater treatment systems on the larger island. This includes the re-use of wastewater as there is an increase in population on the island. The island is heavily dependent on tourism.	Technology transfer, financial support	5 years	50,000,000
Climate resilient housing	Support to the most vulnerable by introducing climate resilient housing projects	Financial support	5 years	10,000,000
Municipal Climate Resilience in Belize	Support to municipalities that are being impacted by climate change. This will aim to increase adaptive capacity and increase its resiliency through infrastructure programs.	Financial support, Technology transfer	5 years	100,000,000
Support to the Belize National Protected Areas	Support to conservation partners who work along with the government to upscale sustainable activities in the protected areas and introduce technologies such as renewables.	Financial support, capacity building, technology transfer	5 years	10,000,000
GCF- Multi-Year Readiness Program	To build capacity, support agencies seeking accreditation, and increase communications and awareness	Financial support, capacity building	4 years	4,000,000
Cattle Livestock for Environmental Advancement, Resiliency and Sustainability	To support the cattle industry in looking at mitigation actions that can be incorporated for sustainable cattle farming.	Financial support, capacity building, technical assistance support	5 years	50,000,000
Belize E-Mobility & Logistic Transformation	To up-scale the e-mobility pilot in Belize. This will increase the use of e-buses nationally.	Technology transfer, financial support, technical assistance support	5 years	50,000,000
Support to the Citrus and Banana Industry	Build resiliency in these industries to upscale and introduce climate resilient crops and climate smart technologies.	Financial support, technology transfer, technical assistance support	5 years	50,000,000

Support Received

During the 2018–2022 Biennial Transparency Report (BTR) reporting period, Belize demonstrated its steadfast commitment to integrating climate change into national development plans, guided by its international treaty obligations and the benefits of mitigation and adaptation activities. Despite contributing minimally to global greenhouse gas emissions, Belize has actively addressed the adverse effects of climate change, working within the constraints of its limited capacity as a small island developing state.

Substantial funding and technical assistance were mobilized to support climate action implementation, yet challenges remain in comprehensively tracking support received from diverse state and non-state actors. Tools such as the Public Sector Investment Programme have been vital for monitoring this support, although persistent data gaps pose limitations. The Climate Finance Landscape Report, for instance, documented BZD 454.7 million (USD 227.4 million) in climate finance flows between 2015 and 2019, over 50% of which was accessed as loans, underscoring the critical need for increased reliance on grant-based funding. Furthermore, the NDC Implementation Plan Tool indicates that USD 554.7 million has been committed to supporting Belize's climate initiatives as of November 2024.

Despite this progress, Belize faces ongoing challenges, including the need for enhanced capacity building, financial resources, and technology transfer to bolster its climate action efforts. Reports such as the Technology Needs Assessment (TNA) have provided valuable insights into barriers and enabling conditions, yet the absence of a comprehensive needs assessment during this period limits the full quantification of resource requirements. *Table 30* Support Received for 2018 - 2022outlines the support received during 2018–2022, reflecting the country's continued dedication to advancing its climate change agenda while addressing persistent gaps in financial and technical capacities.

Table 30 Support Received for 2018 - 2022

Name of project	Brief Description	Beginning and End Date	Domestic Currency	USD equivalent	Support Entity	Support Areas (mitigation, adaptation, cross-cutting)	Sector	Time span of project
CLIMATE FINANCE UNIT TRACKED PROJECTS								
Resilient Rural Belize (RRB)	The programme aims to increase the economic, social, and environmental resilience of smallholder farmers, thus creating the conditions for farmers to have a sustainable market access for their produce. The programme proposes a comprehensive approach to reduce the exposure to climate and economic shocks by promoting climate-smart agricultural production, investing in climate proof infrastructure, supporting producer associations, and strengthening value chains to reinsert smallholder farmers as reliable, competitive suppliers of domestic produce in Belize.	2019-2026 project extended from 2024 to 2026	$ 40,000,000.00	$ 20,000,000.00	IFAD-GCF-GOB	Adaptation	Agriculture	5 years

Building the Adaptive Capacity of Sugarcane Farmers in Northen Belize (BaC-SuF)	Climate change driven drought and flooding has impacted the sugar industry. The outputs of the project that will lead to the desired scalability includes the following: Development of seed cane nurseries for climate resilient varieties along with transformative systems to ensure that seeds for identified varieties are available to all farmers that need to re-plant their fields since majority of fields depend on one variety of sugarcane. Also, the capacity of contractors will be strengthened to undertake climate resilient replanting activities. The introduction of new technologies and climate smart agronomic practices such as irrigation, mechanical harvesting, and soil regenerative practices.	3-6-2024 to 2030	$ 77,682,600.00	$ 38,841,300.00	GCF-GOB-SA	Adaptation	Agriculture	5 years
Building Community Resilience via Transformative Adaptation (EDA)	To strengthen the protection and maintenance of natural resources and ecosystem services, enhance the skills and technical capacities in communities and households to produce goods and services that will expand income generating options, and improve the physical infrastructure in and around vulnerable communities.	10-13-2023 to 6-30-2028	$ 10,000,000.00	$ 5,000,000.00	Adaptation Fund	Adaptation	Environment & Natural Resource Management	5 years

Enabling Activities for the Formulation and Implementation of a Multisectoral National Adaptation Plan for Belize (Multi-sectoral NAP)	This Readiness will develop tools to assess, plan, and monitor Belize's adaptation priorities to climate changes, while building capacity and knowledge sharing of key stakeholders. Covering the Agriculture, Health, Forestry, Human Health, Tourism and Land Use, Human Settlement & Infrastructure	2-12-2024 to 2028	$ 2,974,060.00	$ 1,487,030.00	GCF	Adaptation	Cross Cutting	4 years
Strengthening technical and institutional capacities of Galen University, BLPA, PACT, BNPAS and the Government of Belize to access Climate Finance	The Goal of this Readiness is to facilitate the coherent integration of climate change adaptation into the public sector, programs, and projects of the country. Strengthened capacities of PACT's human resources/communication system and implementation of the Environmental and Social Mechanism Framework (ESMF) Improved risk categorization and screening of projects/programmes and investments of PACT • Strengthened capacities of BNPAS stakeholders. Improved awareness and implementation of SDG's in Belize • Improved Financial Management and Procurement of BNPAS stakeholders • Developed Assessment	2024 to 2025	$ 1,359,450.00	$ 679,725.00	GCF	Adaptation	Cross Cutting	1 year

	study on climate impacts on livestock value chain • Establishment of an educational program at Galen University to support the advancement of climate change goals/targets in country							
Integrated Flood Management in the Upper Regions of the Belize River Watershed (Project Preparation Facility)	This PPF will investigate the cost benefit of the proposed flood protection measures, possible social and environmental impacts, and the impacts of climate change on flood and flood risk, to inform the development of the full funding proposal. The study will compare scenarios with and without the project under a projection of climate change and against a baseline situation and compare those scenarios to each other to determine the	1-11-2023 to 2025	$ 1,342,442.00	$ 671,221.00	GCF	Adaptation	Disaster Risk Management	2 years

	impact of the project. As a result, support received will be used to conduct the following assessments. Feasibility study inclusive of an Economic/Financial Analysis, Climate Impact Assessment, Engineering Designs, and Detailed Budget Plan. Environmental, Social and Gender Studies. Risk Assessment, Register and Mitigation Plan Identification of project level indicators. Advisory services on legal, financial, tax, regulatory and governance matters, to help structure the investment.							
Building Capacity for Climate Resilient Infrastructure and Sustainable Urban Land Management and Strengthening the Capacity of the Ministry of Economic Development for pre-Accreditation to the Green Climate Fund	This Readiness is a two-tier proposal, (1) building the human resource capacity, policies and structures of the NDA, in its pursuit of seeking accreditation from GCF to become a Direct Access Entity; and (2) develop the strategic framework and institutional capacity of the Belize Association of Planners (BAP) and the Ministry of Infrastructure Development and Housing (MIDH) to guide the country in achieving climate resilient human settlements and infrastructures.	12-12-2022 to 2024	$ 1,996,074.00	$ 998,037.00	CGF	Cross Cutting	Cross Cutting	2 years

Strengthening the Coastal Zone and Fisheries Sector through innovative Solutions	The purpose of this assessment is to support Belize's overall goal of enhancing the country's understanding of climate change impact to better inform its resilience building efforts and intervention to maintain the viability of the coastal based industries to climate proof the livelihoods, well-being, and safety of the stakeholders to the extent possible.	5-2-2024 to 2025	$ 300,000.00	$ 150,000.00	NAP Global Network	Adaptation	Cross Cutting	1 year
Climate and Ocean risk Vulnerability Index (CORVI -Belize)	The Climate and Ocean Risk Vulnerability Initiative (CORVI) assessment for Belize City is Funded by the Taiwan International Cooperation and Development Fund (TaiwanICDF), it is a partnership between the Ministry of Economic Development, the Taiwan Ocean Affairs Council, and the Stimson Center. The Stimson Center has completed or is working on CORVI assessments in 16 coastal cities and island states across the Global South. The CORVI Belize City assessment will provide relative risk scores for nearly 100 risk indicators, covering a wide range of risks related to climate, including	8-1-2023 to 2024 Dec	$ 80,800.00	$ 40,400.00	Taiwan ICDF	Adaptation	Cross Cutting	1 Year

	infrastructure, public health, hurricanes, drought, sea-level rise, population patterns, the informal economy, and much more.							
Enhancing the Resilience of Belize's Coastal Communities to Climate Change Impacts	The project components are: 1. Improving coastal land use for resilient habitation and sectoral activities 2. Coastal Vulnerability Monitoring 3. Coastal Protection and Adaptation response for High-Risk Areas 4. Awareness raising, knowledge dissemination and capacity strengthening	5-15-2024 to 3-31-2029	$ 16,000,000.00	$ 8,000,000.00	Adaptation Fund	Adaptation	Disaster Risk Management	5 years
MED Readiness - Strengthening the Capacity of the Ministry of Economic Development for pre-Accreditation to the Green Climate Fund	The Ministry of Finance, Economic Development, and Investment (MFEDI), in its pursuit to support the building of Belize's resilience, has internally considered and assessed its institutional gaps which prevents the entity from effectively operating in their full capacity as the National Designated Authority (NDA) and as the point of	1-15 -2024 to 5-31-2025	$ 600,000.00	$ 300,000.00	GCF	Cross Cutting	Cross Cutting	1 year

	contact for most international funding institutions and multilateral banks. The main gaps that remain to be addressed to further strengthen the NDA include the following: (i) the lack of adequate internal financial management systems such as procurement and internal auditing policies and guidelines; (ii) the lack of human resources at the administrative level to xx (iii) the need to further strengthen the NDA's ability to communicate to and to engage stakeholders at the sub-national level about climate change; and (iv) the need for stakeholders to have access to a repository of all documents and opportunities available; and (v) [to lodge complaints]							
CARE Project	Programme is focused on improving governance on DRM and climate change adaptation in CDB's BMCs and on strengthening evidence-based planning, decision-making, and financial response of BMCs. It also seeks to strengthen community infrastructure and livelihood resilience to climate change effects and natural hazards.	Feb 2022 to 2027	$ 200,000.00	$ 100,000.00	CDB	Adaptation	Disaster Risk Management/Infrastructure	5 Years

Readiness Support for Strengthening the Private Sector to access Climate Finance	This readiness will strengthen the private sector, specifically MSMEs, to access climate finance. Capacity building will be provided and a call for proposal will be issued to identify 2 beneficiary enterprises.	Jan-2021 to June 2023	$ 595,074.00	$ 297,537.00	GCF	Cross Cutting	Business & Market Development	1 year
National Adaptation Plan for the coastal zone and Fisheries sectors	This Readiness seeks to increase the resilience of the coastal zone and fisheries sector through improved climate data and information gathering, monitoring and dissemination, assessments of impacts of climate change on select communities, mainstreaming of climate change considerations into the relevant plans and policies and strengthening of coastal and fisheries communities and organizations communication network for appropriate climate response. The activities under this readiness will provide important baseline information for building coastal resilience and improving adaptive capacity for fishing communities in the future including the GCF fast track project ideas "Belize coastal vulnerability reduction programme" and	Aug-2021 to April 2023	$ 1,200,000.00	$ 600,000.00	GCF	Adaptation	Cross Cutting	2 years

	"increasing resiliency of the fisheries sector in Belize identified in the country programming framework.							
Global Network NAP-Coastal Assessment (further support for the Fisheries and Coastal Nap)	Further support the fisheries and coastal Nap, with coastal communities' vulnerability and livelihoods assessment and further outreach and capacity development for stakeholders	Aug-2021 to 2022	$ 60,000.00	$ 30,000.00	NAP - Global Network	Adaptation	Cross Cutting	18 months
Enhancing Caribbean Civil Society's Access and Readiness for Climate Finance in Caribbean Region	Enhance civil society's capacity to improve access to climate financing and delivery of climate change adaptation and mitigation in the Caribbean. Readiness support will be used to: Develop mechanisms for CSO engagement and consultation in the Caribbean; Scale up CSO-led climate change solutions;	2020 to 2022	$ 300,000.00	$ 150,000.00	GCF	Cross Cutting	Cross Cutting	2 years

	Strengthen technical and organisational capacity of Caribbean CSOs to access climate finance; and Enhance awareness among civil society/public/private sector to develop Caribbean CSO-led projects							
Enhancing Coherence and Complementarity and Building Climate Resilience in the Caribbean	This readiness initiative builds on previous experiences and processes in national and regional readiness. It will help both in relation to pipeline development and concerning facilitating a systemic approach for tracking climate finance resources , Specifically, the readiness support will be used for: Donor Matrix MRV framework and Electronic Web MRV Platform (open access) developed and tested.1Capacity Building in each participating country with ministries on the MRV platform. Finalize concept note for regional programme.	2021 to March 2023	$ 500,000.00	$ 250,000.00	GCF	Cross Cutting	Cross Cutting	1 Year

Strengthening the foundation for a climate responsive agricultural sector in the Caribbean	The AgREADY project seeks to raise the profile of the agricultural sector in GCF's climate financing prioritization processes by implementing an evidence-based and intersectoral strategy for developing and rebranding Caribbean agriculture as "low-emissions", to enhance market opportunities and attract private sector investments. The project logic is premised on a vision of developing "A Climate responsive agricultural sector in the Caribbean that supports food security, livelihoods and uses natural resources sustainably" by addressing barriers of ineffective mechanisms and engagement with agricultural experts and stakeholders in GCF climate programming processes, policy gaps, and limited or fragmented data/information to inform climate risks planning, programming, and action in the sector	2020 to 2022	$ 280,000.00	$ 140,000.00	GCF	Cross Cutting	Agriculture	2 years

(PPF) Scaling up the deployment of Integrated Utilities Services (IUS) to support energy sector transformation in the Caribbean (Barbados, Belize, Guyana and Jamaica)	CDB will use GCF PPF resources to develop a full funding proposal that will support local businesses, households and other electric utility customers to invest in renewable energy (RE) and energy efficiency (EE) measures such as rooftop solar PV, battery storage, more energy efficient equipment and energy-saving devices. The programme will support these investments by working with/through the Belize Electricity Limited, which will take on an Energy Service Company-type role within the local energy services market.	2021 to 2023	$ 1,757,560.00	$ 878,780.00	GCF	Cross Cutting	Energy	2 years
Readiness to further assist DFC to address gaps for GCF accreditation	The Readiness project provides technical support to strengthen the operational policies of the DFC to enable compliance with GCF accreditation requirements. The project outputs will include the following: Investment Management Policy; Asset and Liability Committee; Environmental and Social Management System; Internal Audit Policy and Procedures	2021 to 2023	$ 997,804.00	$ 498,902.00	GCF	Cross Cutting	Cross Cutting	2 years

(PPF) Transforming Finance to Unlocking Climate Finance for Development Finance Institutions in Belize	The purpose of this project is for the Caribbean Development Bank (CDB) to access funding directly from the GCF and then make it available to the DFIs in the mentioned countries to support MSMES in accessing climate finance.	2022 to 2023	$ 500,000.00	$ 250,000.00	GCF	Cross Cutting	Cross Cutting	2 years
"Enhancing Access for Climate Finance Opportunities, through pre-accreditation support to Belize Social Investment Fund (BSIF) and Ministry of Economic Development (MED) and technical support for Belize National Protected Areas System (BNPAS) Entities, Belize"	This project will provide pre-accreditation support to the Belize Social Investment Fund (BSIF) and the Ministry of Economic Development (MED) and technical support to seek GCF accreditation. In addition, the Belize National Protected Areas System (BNPAS) Entities Belize will receive technical support for project preparation to access climate finance.	2022 to 2024	$ 1,200,000.00	$ 600,000.00	GCF	Cross Cutting	Environment & Natural Resource Management	2 years
Readiness Proposal on Traditional Fire Management for Belize	Traditional Savanna Fire Management Readiness Proposal to facilitate Emissions Reductions in the AFOLU sector in Belize through national	2022 to 2024	$ 800,000.00	$ 400,000.00	GCF	Cross Cutting	Environment & Natural Resource	2 years

	commitments and strategies, has identified the land sector as important to its climate change mitigation and adaptation response. Indeed, Belize identified AFOLU (including forest fires) as an important threat that would be aggravated by climate change. One of the key strategic aims identified was to "ensure the conservation, utilization and sustainable use of forest resources" by properly managing forest fires. Strengthening forest fire management and response and facilitating local level partnerships with communities are also prominent in Belize's strategy						Management	
Integrated Water Resource Management-National Adaptation Plan (NAP)	The National Hydrological Service (NHS) is charge with the responsibility of managing all of Belize's freshwater resources. However, the office faces several constraints for example, the department have only six staff members, the Principal Hydrologist, four technical officers and one clerical support staff. In addition, there are significant data and information gaps, increasing demand for fresh water, outdated regulatory framework, ineffective	2021 to 2023	$ 1,805,874.00	$ 902,937.00	GCF	Adaptation	Environment & Natural Resource Management	2 years

	coordination mechanism, the lack of a strategic planning document and the increasing impacts of climate change on freshwater resources. This Readiness request will support capacitation and empowerment of the National Hydrological Service, to effectively plan and manage Belize's freshwater resources in changing climate.							
PSIP Policy and Planning Unit TRACKED PROJECTS								
Climate Resilient Infrastructure Projects (CRIP)	The project was developed with the intention of enhancing the resiliency of road infrastructure against flood risks and other impacts of climate change; and improving the capacity to respond promptly and effectively in an eligible crisis or emergency, as required	2014 to 2021	$ 60,168,750.00	$ 30,084,375.00	WB loan 30,000,000 & GOB funds 84,375	Adaptation	Infrastructure	Originally 5 years but covid pandemic altered project
Climate Vulnerability Reduction Project	Intervention targeting reduced climate vulnerabilities in the tourism sector and flood control measures for Belize City. Program aims are to improve Belize's governance for disaster risk management and climate change adaptation.	May 2018 to May 2022	$ 20,000,000.00	$ 10,000,000.00	IDB (LOAN)	Adaptation	Disaster Risk Management/Infrastructure	4 years

Water Utility Climate Risk and Vulnerability Assessment	Climate Risk and Vulnerability Assessment for 3 BWSL systems and formulation of an accompanying adaptation plan and capacity enhancement of the Belize water service limited in conducting CRVAs	2018 to 2020	$ 336,000.00	$ 168,000.00	CDB loan 134,000 & GOB funds 34,000	Adaptation	Environment & Natural Resource Management	2 years
Enhancing sugarcane farmers resilience to Natural hazard Events	implement a drought recovery scheme to facilitate the provision, through a special designed voucher program of inputs to farmers in northern Belize impacted by 2019 drought as well as technical assistance to some 1200 farmers in climate smart agriculture and general sugarcane agronomy.	July 2020 to Dec-2021	$ 2,377,200.00	$ 1,188,600.00	CDB loan 1,013,000 & GOB funds 175,300	Adaptation	Agriculture	2 years
Belize Seaweed Mariculture Project	To improve fisheries productivity for traditional fishers and support employment of fishers, women and other persons in fishing communities that are being displaced by climate change impact	July 2019 to Jul 2021	$ 542,700.00	$ 271,350.00	CCPF 208,500 Grant & GOB funds 39,000 and TNC 23,850	Adaptation	Poverty & Social Protection	2 years
Building the capacity of GOB to address the challenges of migration and climate change in vulnerable coastal communities	To improve management of internal migration in the context of climate change through enhanced evidence, developed capacities and policy planning	March 2021 to Nov 2021	$ 400,000.00	200,000	IOM	Adaptation	Poverty & Social Protection	8 months

Climate Smarting coastal management and marine protected areas in Mesoamerican region (Smart coasts project)	Regional project aimed at mainstreaming smart practices in marine protected areas management and coastal development policies, with a view to improve adaptive capacity of coastal communities	Oct-2018 to March -2023	$ 540,032.00	$ 270,016.00	IKI	Adaptation	Environment & Natural Resource Management	5 years
Enabling gender responsive Disaster Recovery, climate and environmental resilience in the Caribbean (EnGenDer)	Improve gender responsive climate and disaster resilience including for women and girls and key vulnerable populations and future generations: primary sectors are agriculture, water and coastal communities	April 2021 to Feb 2023	$ 2,265,478.00	$ 1,132,739.00	GAC,FCDO and UN WOMEN (GRANT)	Adaptation	Cross Cutting	2 years
Building climate change resilience and social integration of displaced people in settlements in western Belize	To Support displaced persons in migrant settlements to become productive members of the communities and participating in furthering their common resilience, socio- economic growth and sustainable development thereby preventing further displacement	Jan 2022 to Jan 2024	$ 2,300,000.00	$ 1,150,000.00	EU	Adaptation	Poverty & Social Protection	2 years
			$ 251,461,898.00	**$ 125,730,949.00**				

Capacity Building Received

Strengthening national capacity is critical under the framework of the Paris Agreement, as Belize seeks to balance intensified efforts to reduce emissions with the growing need to enhance resilience against the adverse impacts of climate change. As the country progresses toward meeting its climate commitments, robust capacity-building efforts are essential to equip stakeholders with the knowledge, skills, and tools required for effective implementation of mitigation and adaptation strategies.

The period 2018–2022 has seen Belize engaged in several capacity-building initiatives, nationally, regionally and internationally, addressing key areas to support national climate action. These initiatives reflect the country's ongoing commitment to creating an enabling environment for climate governance and fostering collaboration among public, private, and civil society actors.

Table 31 provide a detailed overview of capacity-building activities undertaken across various sectors during this period, highlighting progress made. These efforts aim to bridge existing gaps in technical expertise, institutional strengthening, and stakeholder engagement, all of which are vital for advancing climate resilience and achieving long-term sustainability under the Paris Agreement.

Table 31 Capacity Building Activities

Capacity Building Activity	Period	Source of support
Online training - Summer Academy	2023	Caribbean Cooperative MRV Hub
Intro to GIS using ArcGIS Pro training	2023	CITO
Online training on Imagery in Action	2023	ESRI Training Team-Massive Open Online Course
Training on Belize climate finance Concept Note development	2023	Commonwealth
Flood Forecasting training/ myDewetra (Flood – proofs modelling system)	2023	Caribbean Community Climate Change Centre
Capacity building training on the GACMO tool	2023	ICAT/UNEP-CCC
Nationally Determined Contribution (NDC) tracking training	2023	ICAT/UNEP-CCC
Webinar on uncertainty analysis in National Greenhouse Gas Inventory (NGHGI) for developing countries	2023	UNFCCC
NDC partnership climate change knowledge portal training	2023	NDC Partnership
Webinar: Planning and Development of Countries' First BTR in the Anglophone Caribbean Transparency Network	2024	CBIT-GSP
Hands on Training on the ICAT Transport Climate Action Data Tool (TRACAD)	2024	ICAT
Nature based solutions for Adaptation: Working with nature to adapt to a changing climate training program	2024	CAPA initiative

Updating Belize's mangrove cover data using earth observation data workshop	2024	Forest Department
Workshop on GHGI and reporting under the ETF	2024	Under the ICAT project and support from CBIT-GSP
Virtual workshop for the Solar City simulator	2024	IRENA
In-person Workshop on QA/QC procedures in the preparation of GHG Inventories in the ETF of the Paris Agreement with a follow up webinar	2024	Regional Climate Action Transparency Hub in Central America
In-person Workshop on Peer Review of BTR and NDC monitoring and indicators under the ETF of the Paris Agreement with a follow up webinar	2024	Regional Climate Action Transparency Hub in Central America
In-person workshop on the preparation of inventories for the Agriculture and LULUCF sectors in the ETF of the Paris Agreement with a follow up webinar	2024	Regional Climate Action Transparency Hub in Central America
In-person Hands-on-Training Workshop on Transitioning to the Enhanced Transparency Framework	2022	Caribbean Cooperative MRV Hub/UNFCCC
Training Webinar on the ETF in the context of the Paris Agreement and its implementation	2024	Regional Climate Action Transparency Hub in Central America
The MRV Hub Modelling & Projections Programme Virtual LEAP Training Course	2022	Caribbean Cooperative MRV Hub/GHGMI
Biennial Transparency Report (BTR) Workplan Workshop	2023	Caribbean Cooperative MRV Hub/PATPA
Climate Youth Negotiators Programme – Fundamental Cohort	2023	Climate Youth Negotiators Programme/Youth Negotiators Academy
Tracking Progress of Mitigation Commitments of NDCs and ETF Dialogue	2023	CBIT/PATPA
Facilitated E-learning Course on Climate Transparency and the Enhanced Transparency Framework	2024	ICAT, UNFCCC, CBIT-GSP, UNEP-CCC, UNSSC
Convening of the Local 2030 Islands Network's Data for Climate Resilience and the Sustainable and Regenerative Tourism Communities of Practice	2024	Local2030 Islands Network
CGE Regional Hands-on Training Workshop on "Preparation of the Biennial Transparency Reports"	2024	Consultative Group of Experts & UNFCCC
Climate Youth Negotiators Programme-Advanced Cohort	2024	CYNP/YNA
Our people our Climate workshop on visualizing climate change for impact	2023	UNEP
Initiative for Climate Action Transparency Agriculture Guide Webinar	2023	ICAT

CGE Regional Workshop for the LAC Region		UNFCCC CGE
Sharing best practices on the establishment of online MRV systems	2023	CBIT-GSP, GEF, UNEP-CCC
Climate Finance: Tracking climate change-related support needed and received (virtual)	2024	CBIT-GSP
Gender Approach to Climate Action (virtual)	2024	UN Women
Webinar: Pathway for NDC 3.0 for the Caribbean region countries	2024	UNFCCC: RCC
Global BTR Dialogue (in-person)	2024	Partnership on Transparency in the Paris Agreement (PATPA)

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Climate Finance Strategy

Climate Finance Landscape

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