Belize's Third Nationally Determined Contribution

NDC 3.0

June, 2025

Photo by Louis Peña

Foreword

As Minister responsible for Sustainable Development, Climate Change, and Solid Waste Management, I am honoured to present Belize's Third Nationally Determined Contribution (NDC 3.0) under the Paris Agreement. This document marks a pivotal step in our nation's ongoing journey to confront the existential threat of climate change, while advancing our vision for a resilient, inclusive, and sustainable Belize.

Belize, as a Small Island Developing State, stands at the frontline of climate vulnerability. Our communities, ecosystems, and economy are increasingly exposed to the impacts of rising sea levels, intensifying storms, shifting rainfall patterns, and biodiversity loss. Despite contributing minimally to global greenhouse gas emissions, we bear a disproportionate share of climate risks. Yet, we remain steadfast in our commitment to global climate action and to leading by example among similarly vulnerable nations.

The NDC 3.0 builds on our previous commitments, reflecting enhanced ambition, updated data, and the lessons learned through inclusive, transparent, and participatory processes. It sets forth strengthened mitigation and adaptation targets for 2030 and introduces new targets for 2035, aligning our medium-term actions with Belize's Long-Term

Low-Emissions Development Strategy (LT-LEDS) and our goal of achieving net-zero emissions by 2050.

Our NDC 3.0 outlines concrete, sector-specific actions to reduce cumulative greenhouse gas emissions while increasing carbon sequestration potential and strengthening adaptive capacities across energy, waste, agriculture, forestry, and land use. We are committed to scaling up renewable energy, promoting electric mobility, advancing climate-smart agriculture, enhancing waste management, and safeguarding our rich biodiversity and coastal resources. These efforts are underpinned by a strong focus on gender equality, social inclusion, and the empowerment of vulnerable groups.

This NDC is the result of broad-based consultations, engaging stakeholders from government, civil society, the private sector, indigenous communities, and youth. Our

approach ensures that climate action is not only ambitious but also equitable, inclusive, and responsive to the needs and aspirations of all Belizeans.

We recognize that realizing the targets set out in this NDC will require significant financial, technical, and human resources. While we have taken important steps with our own resources and through the support of partners, much of our ambition remains conditional upon access to international climate finance, technology transfer, and capacity building. We therefore call on the global community to match our ambition with the solidarity and support that is urgently needed.

As we move forward, the Government of Belize reaffirms its unwavering commitment to the Paris Agreement, the Sustainable Development Goals, and to safeguarding the future of our people and natural heritage. We invite all Belizeans, partners, and friends of Belize to join us in this collective endeavour to build a climate-resilient, low-carbon, and prosperous future for generations to come.

Hon. Orlando Habet
Minister of Sustainable Development, Climate Change, and Solid Waste Management
Government of Belize

Acknowledgments

Belize's Third Nationally Determined Contribution (NDC 3.0) was prepared under the guidance of the National Climate Change Office (NCCO), within the Ministry of Sustainable Development, Climate Change, and Solid Waste Management and in collaboration with ministerial sectoral level experts and heads of department prior approval from Cabinet for final endorsement.

The support for the development of Belize's NDC 3.0 was made possible through the NDC-TEC project, aimed at supporting the Implementation of NDCs in the Caribbean – transforming the transport and energy sectors towards a low-carbon and climate-resilient future, and the AMBITION project, aimed at accelerating climate action by supporting countries in developing their NDCs for 2035 with evidence-based targets and ambitions consistent with the Paris Agreement 1.5°C pathway. Both projects are funded by the German Government's International Climate Initiative (IKI) and coordinated by Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH. These projects are supporting CARICOM Member States in enhancing the ambition of their NDCs, with NDC TEC focusing only on electricity and transport, while AMBITION on other relevant mitigation and adaptation sectors.

The Government of Belize acknowledges its key technical partner, Climate Analytics, for their support in the review and completion of its NDC 3.0. The support from the NDC Partnership, through its network of members, technical assistance, and the embedded facilitator within the NCCO, are also acknowledged, working alongside the Chief Climate Change Officer and team, and the broad group of stakeholders – both public and private - who actively participated in the consultations.

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CLIMATE ANALYTICS

MINISTRY OF SUSTAINABLE DEVELOPMENT, CLIMATE CHANGE & SOLID WASTE MANAGEMENT

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Multiple authors - Acknowledged under each photo.

AUTHORS AND CONTRIBUTORS (ALPHABETICAL ORDER):

AUTHORS:

Mr. Sisir Bhandari, Climate Analytics – Co-Author Costing and Financial Gap Analysis

Dr. Robert Brecha, Climate Analytics – Co-Author LEAP Modelling and Analysis

Ms. Mavis Durowaa Mainu, Climate Analytics –Co-Autor Gender Equality, Disability and Social Inclusion

Mr. Rodrigo Narvaez Rojas, Climate Analytics – Leading Author

Ms. Arunima Sircar, Climate Analytics – Co-Author Adaptation

Mr. Diego Torralva Becerra, Climate Analytics – Leading Author

COLLABORATORS:

Ms. Nazima Abidova, Climate Analytics – Reviewer

Mr. Paolo Cozzi, Climate Analytics – Reviewer

Dr. Jan Sindt, Climate Analytics - Reviewer

Mrs. Edalmi Pinelo, Chief Climate Change Officer, National Climate Change Office, Ministry of Sustainable Development, Climate Change and Solid Waste Management – Coordinator, reviewer and collaborator

Ms. Ide Sosa, Project Manager/NDC 3.0 Coordinator, National Climate Change Office, Ministry of Sustainable Development, Climate Change and Solid Waste Management – Coordinator, reviewer and collaborator

Ms. Ashanti Mckoy, NDC Facilitator and Implementation Coordinator, NDC Partnership – Reviewer and collaborator

Executive Summary

Belize remains dedicated to increasing its greenhouse gas (GHG) emission reduction targets while strengthening adaptive capacities and addressing vulnerabilities across key sectors. Building upon its updated Nationally Determined Contribution (NDC) in 2021 and developed through an inclusive process involving multiple of stakeholders, policymakers, and experts. This NDC 3.0 is more ambitious in terms of the quantified avoided emission targets within the Energy, Waste, and Agriculture, Forestry, and Other Land Use (AFOLU) sectors. Overall, the NDC 3.0 aims to avoid cumulative GHG emissions of 6,234 $kTonCO_2e$ by 2035 when compared against a business-as-usual (BAU) scenario, an increase from the 5,647 $kTonCO_2e$ of cumulative avoided emissions targeted by 2030 in the previous NDC[1].

Within the Energy sector, which covers electricity and transport, the combined cumulative emission avoidance target for the NDC 3.0 is set at 453 and 1,103 $kTCO_2e$ by 2030 and 2035 respectively, compared to 2020 BAU levels. For this, Belize plans to install 100 MW of utility-scale solar power and 20 MW of onshore wind power by 2035, supported by increasing the adoption target of electric vehicles to 10% and 25% in private and public transport, respectively. In the Waste sector, cumulative emission avoidance amounting to 8.5 $kTCO_2e$ * 21 $kTCO_2e$ by 2030 and 2035 respectively, while the AFOLU sector is expected to increase its cumulative carbon sequestration potential from 2,555 $kTCO_2e$ in 2030 to 5,110 $kTCO_2e$ in 2035 from 2020 BAU levels. These targets are conditional upon access to sufficient financial, technical and human capacity support. Upon securing the necessary climate finance, Belize intends to advance, among other interventions, its climate-smart agriculture and sustainable land management.

Preliminary estimates suggest total capital expenditure of about 1.55 billion USD over the coming decade, which are divided into an estimated 609 million USD for the Energy and Waste sectors, 412 million USD for the AFOLU sector, and 534 million USD for other adaptation efforts. Belize remains committed to achieving net-zero emissions by 2050, where it has laid out a Long-Term Low-Emissions Development

[1] Noting that the reference year baseline used in the avoided emission calculation in the previous NDC and the 3.0 are different, but still being compared for reference purposes

Strategy (LT-LEDS). By bridging short-term goals and long-term ambitions, NDC 3.0 positions Belize to enhance cross-sectoral coordination and maintain momentum toward its 2050 net-zero objective.

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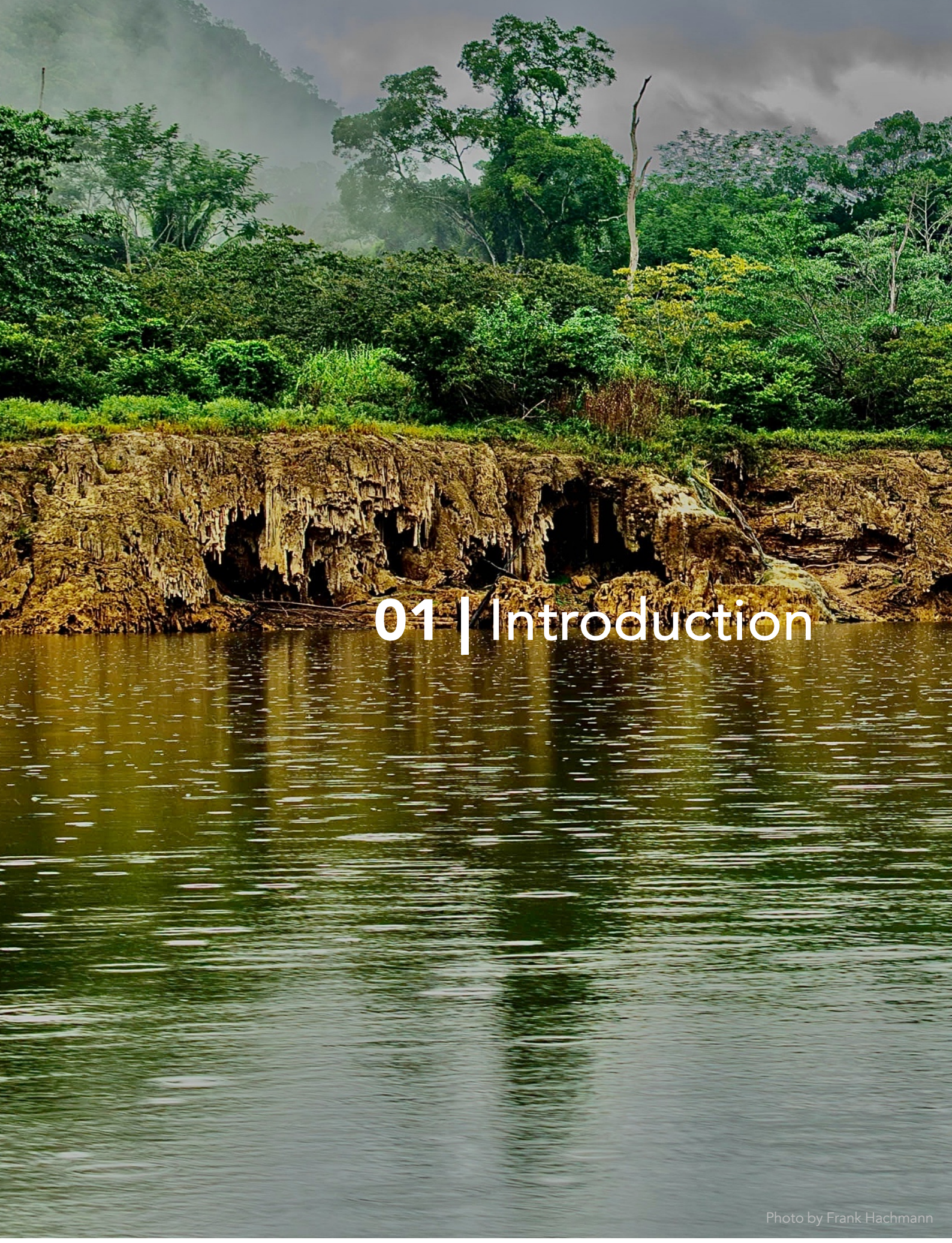


01 | Introduction

Photo by Frank Hachmann

Belize's Nationally Determined Contribution (NDC) 3.0 represents a key step forward in the nation's commitment to addressing climate change under the Paris Agreement. As a Small Island Developing State (SIDS), Belize faces deep vulnerabilities to slow-onset and extreme weather events, including sea level rise, coastal erosion, biodiversity loss, and increased frequency of floods and hurricanes. These challenges threaten Belize's national resources, natural ecosystems, and the settlements and livelihoods of all Belizeans, with the need for ambitious and integrated climate action.

The NDC 3.0 builds on Belize's updated NDC submitted in 2021, with enhanced and new commitments supported by more recent data and following an inclusive development process. It reflects the synergies between national climate ambitions and existing frameworks, such as the Growth and Sustainable Development Strategy (GSDS) (GOB, 2016a), the updated National Climate Change Policy, Strategy and Master Plan (NCCPSAP) (GOB, 2021a), and Horizon 2030 (GOB, 2011). These strategies provide a comprehensive blueprint for sustainable development, integrating climate resilience into economic and social planning.

The NDC 3.0 updates Belize's previous climate commitments with enhanced targets for 2030 and an expansion of the climate ambition with new targets for 2035. The NDC 3.0 is aligned with the Belize Long-Term Low-Emissions Development Strategy (LT-LEDS), which has already been adopted, and sets out pathways for achieving net-zero emissions around 2050, while fostering economic growth and resilience. The NDC 3.0 serves as an essential medium-term bridge, ensuring that immediate actions align with Belize's long-term vision. This approach harmonises efforts to reduce greenhouse gas emissions, build adaptive capacity, and address vulnerabilities across

sectors such as energy including transport, forestry, agriculture, and waste.

Recognizing the importance of synergising climate action with national priorities, the NDC 3.0 aligns its targets with Belize's economic development goals, emphasizing sustainable energy, nature-based solutions, and climate-smart technologies. These actions not only support the implementation of the Paris Agreement but also contribute to the achievement of Belize's Sustainable Development Goals (SDGs).

The NDC 3.0 development process was rooted in inclusivity and transparency, engaging stakeholders from diverse backgrounds, including indigenous communities, vulnerable populations, and sectoral leads. By adopting a gender-sensitive and community-driven approach, Belize ensures that its climate strategies promote equity, inclusiveness, and sustainable outcomes.

Belize's NDC 3.0 underscores the nation's ambition to lead by example among SIDS, showcasing how innovative approaches, coupled with international support for financing, capacity building, and technology transfer, can drive transformative change. As a complement to the LT-LEDS and national policies, the NDC 3.0 sets Belize on a clear trajectory toward a sustainable and resilient future, demonstrating its unwavering commitment to global climate action.

02 | National Context

Photo by Nareen Chan

Belize, a Small Island Developing State (SIDS) located in Central America, is bordered to the north by Mexico, to the west and south by Guatemala, and to the east by the Caribbean Sea. Covering an area of roughly 22,966 square kilometres, the country exhibits a diverse landscape ranging from low-lying coastal plains and expansive mangrove swamps to the mountainous terrain of the Maya Mountains. In addition to its mainland, Belize encompasses over 1,060 cayes, which alongside its extensive coastline of approximately 386 kilometres, contribute to its rich marine biodiversity and provide a foundation for the nation's fisheries and tourism sectors.

Belize's tropical climate is influenced by its geographic location on the Caribbean coast. Experiencing two different seasons: rainy from June to November and dry from December to May. Given the mountainous range, there are significant climate variations with on average higher rainfall in the southern areas when compared with the northern ones. Given its geographical location, Belize is highly vulnerable to the adverse impacts of climate change.

With a population of approximately 441, 387 (as of March 29, 2025), Belize exhibits a diverse demographic composition comprising multiple ethnic groups and cultures. Approximately 15.8% of the population identify as Maya, 50% as Mestizo, 6.1% as Garifuna, and around 4.6% as Creole, among other communities that include Mennonites, East Indians, and Chinese (SIB, 2022). Despite its relatively small size and population, the country boasts a rich cultural heritage and diversity of ecosystems, including the world's second-largest barrier reef, tropical rainforests, wetlands and extensive coastal mangroves and mountainous regions. Belize is divided into six districts: Corozal, Orange Walk, Belize, Cayo, Stann Creek and Toledo.

Economically, Belize is classified as an upper middle-income country (WB, 2023). with a service-oriented economy that accounts for approximately 70% of its output, largely driven by tourism, financial services, and trade (IMF, 2024). The nation has experienced moderate GDP growth in recent years, although challenges such as a high debt-to-GDP ratio and the economic disruptions caused by the COVID-19 pandemic have underscored its vulnerability. A significant portion of the population lives in poverty—estimates from 2024 indicate that about 22% of Belizeans were living under multidimensional poverty

(SIB, 2024). These economic challenges are compounded by the country's limited domestic capacity to generate public revenue, with a debt-to-GDP ratio of over 60%, and the heavy reliance on imported goods and services (IMF, 2025).

2.1 Climate Change in Belize

Despite its limited contribution to global greenhouse gas (GHG) emissions, Belize remains committed to global climate action. The country has a long-standing history of environmental stewardship and international cooperation, underscored by its ratification of the Paris Agreement in 2016 and active participation in the High Ambition Coalition. These commitments reflect Belize's dedication to transitioning toward a low-carbon, climate-resilient future while addressing pressing socio-economic vulnerabilities.

There are significant threats in terms of climate change and its impacts in Belize, such as rising temperatures, changing rainfall patterns, sea level rise and increased frequency and severity of extreme weather events, threatening Belize's environment, economy, and population. The country is among the most vulnerable globally to natural disasters and climate-related shocks, incurring annual losses equivalent to 4% of GDP due to weather-related events (GOB, 2015b).

Precipitation patterns are expected to shift, with a decrease in mean annual rainfall across much of the country, although rainfall may increase in certain localised 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 (GOB, 2024a).

Currently, the projected sea level rise by the end of the century is expected to be up to 103.9 cm. 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 (GOB, 2024a).

In addition, increasing levels of carbon dioxide levels in the atmosphere will drive ocean acidification, affecting Belize's coral reefs and marine biodiversity, with further impacts on the Belizean population, whose livelihoods depend on the tourism, fisheries or aquaculture sectors (GOB, 2024a).

The impacts of climate change disproportionately affect Belize's most vulnerable populations, including indigenous communities, low-income households, and women. Addressing these challenges requires urgent and coordinated action across all sectors, accompanied by significant amounts of climate finance needed.

2.2 Greenhouse Gas Emissions

Belize net carbon emissions act as a net carbon sink, given the contributions from the Agriculture, Forestry and Other Land-Use sector. However, the energy-sector GHG emissions climbed from 538 in 2012 to 850 kTonCO_2e in 2019 and have remained somewhat stable at similar levels since then. The Industrial Processes and Product Use (IPPU) sectoral emissions have also been steadily increasing from 31 to around 200 kTonCO_2e, reflecting expanding industrial activity. The Waste sector exhibits a smaller but notable rise, going from 23 in 2012 to 56 in 2022. AFOLU exhibits net GHG removals across the observed interval, however, the carbon sink has been decreasing over time from -7,771 in 2012 to -4,687 in 2022, suggesting that there are increasing pressures on land and forest resources nationally, but with still many opportunities for the AFOLU sector to maintain and enhance its carbon sequestration potential, which could potentially be achieved through improved forest management and stewardship.

Table 1 – Belize Greenhouse gas inventory data[2](in $kTCO_2e$)

Units: $kTCO_2e$	2012	2015	2017	2019	2022
Energy	538.1	781.8	786.4	850.0	722.8
Industrial Processes and Product Use (IPPU)	31.4	42.5	43.7	164.3	199.1
Agriculture, Forestry and Other Land-Use (AFOLU)	-7,771.4	-6,104.3	-6,683.7	-8,512.2	-4687.5
Waste	22.7	19.9	26.8	27.8	56.22[3]
International Bunkers	40.4	40.2	71.9	54.4	73.3
Total without FOLU	**832.2**	**1,107.5**	**1,194.7**	**1092.3**	**995.1**
Total with FOLU	**-7,179.1**	**-5,260.1**	**-5,286.9**	**-7,419.9**	**-3,692.4**

Source: (GOB, 2020a, 2022a, 2024b)

2.3 National Policy and Strategy Framework

Belize's climate response is deeply integrated into its broader development and national growth strategies and policies, reflecting synergies between environmental sustainability and socio-economic progress. Key policy and strategy frameworks include:

- **Growth and Sustainable Development Strategy (GSDS) 2016-2019:** This medium-term development framework emphasises economic growth, poverty reduction, and sustainable development, with the

[2] Years – Source; 2012,2015 and 2017 – GHG Inventory 2020; 2019 – 4th National Comm.; 2022 – National Inventory 2024
[3] Final value still being revised

ultimate goal "To improve the quality of life for all Belizeans, living now and in the future." Climate resilience and environmental stewardship are some of the central pillars of the GSDS. Given that the period for implementation has ended for the GSDS, the Medium-Term Development Strategy 2022-2026 has been adopted as the guiding development plan for Belize (GOB, 2016a).

- Horizon 2030: This was Belize's first long-term national development framework, which outlines two pillars under seven thematic areas, some of which include building a resilient economy and caring for the natural environment. Horizon 2030 envisions a Belize where communities are better prepared for climate risks, acknowledging the vulnerability of, for example, coastal areas, which are some of the most impacted by climate change, by incorporating environmental sustainability into development planning and aiming to address other environmental-related issues through, for example promoting sustainable energy for all (GOB, 2011).

- National Climate Change Policy, Strategy and Master Plan (NCCPSMP): The NCCPSMP 2021-2025 is the update to Belize's first national policy framework for climate change, which only covered the period from 2015 to 2020. Serving as Belize's guiding climate policy document, the NCCPSAP prioritizes climate adaptation and mitigation across fourteen (14) key sectors such as forestry, energy, water, and agriculture, among others. Its final aim is 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 (GOB, 2014, 2021a).

- Belize Long-Term Low-Emissions Development Strategy (LT-LEDS): The LT-LEDS, developed shortly after the submission of the updated NDC 2.0 in 2021, examines the long-term mitigation potential in various sectors and scenarios, aiming at reduction ranging between 45% to 86% by 2050 from the emission levels compared to a Business-as-Usual pathway. By following the most ambitious scenario, Belize's emissions would be close to net-zero by 2050 (GOB, 2021b).

- **National Adaptation Plan (NAP)**: Belize National Adaptation Plan process is a work in progress. Some sectoral NAPs have already been adopted, such as the National Adaptation Strategy for the Water (CCCCC, 2009) and Agriculture (GOB, 2015a) sectors, however, these sectoral NAPs were outdated and there is an ongoing process to update them, with the NAP for the Coastal Zone and Fisheries sector, as well as one for an Integrated Water Resources Management NAP, which is in the final stages before adoption (Cashman, 2024; GOB, 2023b). Additional efforts include a multisectoral NAP, currently under development, which will focus on critical sectors such as land-use, human settlements and infrastructure, tourism, human health, agriculture and forestry. This would be the main foundation through which it is expected that the adaptation ambition of the country will be achieved (GOB, 2024a).

- **Loss and Damage (L&D) Framework**: The L&D Framework for Belize is currently under development and will aim to identify main priority areas in terms of L&D, as well as quantify some of the irremediable losses arising from climate change and its impacts. The NDC 3.0 includes some recommended areas for examination, which could alleviate some of the effects from L&D by carrying out interventions in a variety of sectors.

- **Other Sectoral Policies**: Belize has also adopted sector-specific strategies, including inter alia: the National Energy Policy Framework (GOB, 2023a), the National Transport Master Plan (GOB, 2018), the National Sustainable Tourism Master Plan Update (University of Melbourne, 2023), the National Agroforestry Policy (CTCN, 2020), National Landscape Restoration Strategy (GOB, 2022b), and the Integrated Coastal Zone Management Plan which is currently being updated (CZMAI, 2016) and with ongoing work to update the National Biodiversity Strategy and Action Plan (NBSAP), among continuous updates to policies and strategies in the works. These policies highlight Belize's commitment to integrating climate resilience into all aspects of national planning, to encompass many different aspects of climate change mitigation, adaptation, resilience building and other relevant areas of sustainable development.

Belize's NDC 3.0 reflects the country's alignment with its climate commitments through these strategic frameworks, to start paving the way towards a net-zero pathway, by also aiming to align short- and medium-term actions that contribute to the country's long-term vision, by leveraging synergies with the national policy framework that could enhance socio-economic and environmental benefits wherever possible. The country's approach aims also to begin to pay more focus on Gender Equality, Disability and Social Inclusion (GEDSI) implications, the very close interlinkage with sustainability planning and implementation, and by emphasising the urgent need for increased international support to achieve its ambitious climate goals, given the vulnerable position under which Belize is currently facing the effects of climate change.

03 | NDC Development Process

Photo by Frank Hachmann

The development of Belize's NDC 3.0 reflects a comprehensive, structured, inclusive, and engaging approach aimed at enhancing ambition, transparency, and ownership. Supported by key initiatives such as the NDC-TEC and AMBITION projects, the process emphasised robust stakeholder engagement, Gender Equality, Disability and Social Inclusion (GEDSI), ensuring that the updated NDC aligns with national priorities and global climate ambition.

3.1 Stakeholder Engagement Process

The stakeholder engagement process for Belize's NDC 3.0 was both comprehensive and inclusive, encompassing four in-country missions, virtual stakeholder consultations, and a national NDC launch event and validation sessions. This approach aimed to ensure that the voices of diverse stakeholders were heard and that the resulting NDC reflects the collective vision of Belize's government, civil society, private sector, and vulnerable communities. A more detailed description of the process and the stakeholders that participated can be found in Appendix B – Stakeholder Consultation Process.

3.2 LEAP Modelling

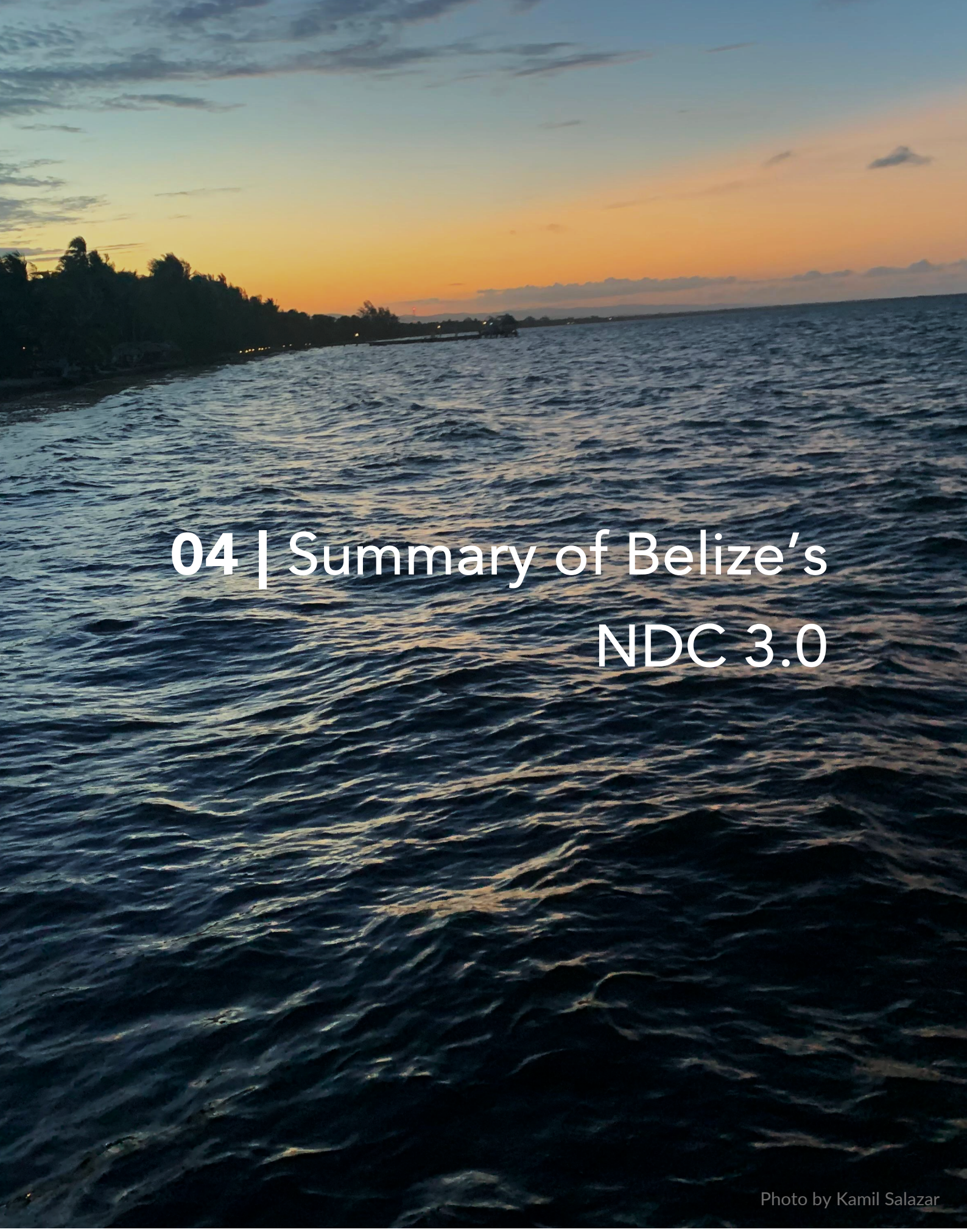
Belize's NDC 3.0 electricity and transport mitigation targets and corresponding avoided emissions were modelled using the Low-Emission Analysis Platform (LEAP), a software tool widely used for energy policy and climate change mitigation analysis. The main premise behind LEAP is that energy demands, as supplied to the tool by the modeler based on historical data and future projections, are then satisfied based on input energy supplies. The software is able to model a variety of scenarios with the aim of comparing potential sets of mitigation interventions. LEAP is a flexible and convenient means of recording and organizing input data and output results, but it depends strongly on the availability of data and (local, stakeholder) expert input to develop the relevant scenarios (SEI, 2024).

The LEAP modelling for Belize includes a Business-As-Usual (BAU) scenario to set the baseline against which the NDC 3.0 interventions will be compared. The

NDC 3.0 scenario includes interventions related to both the electricity, transport and land-use NDC related targets and actions. Additional scenarios were examined that include interventions related to Belize's LT-LEDS, to understand whether the NDC targets align with the ambition pledged in the LT-LEDS; however, here only the BAU and the NDC 3.0 scenario are shown for electricity, transport and AFOLU.

While the LEAP analysis captures core mitigation interventions in the energy and transport sectors, Belize's NDC 3.0 includes a broader set of mitigation measures that were not modelled due to a lack of sufficient data, quantified indicators, or clear baselines. These include actions in the waste and AFOLU sectors, such as solid waste diversion, composting and bio-digestion, sustainable crop and livestock management practices, and blue carbon conservation. Although these measures were excluded from the LEAP model, they are expected to contribute significantly to Belize's overall mitigation ambition, mainly through emissions reductions and removals not yet fully quantified.

Furthermore, the NDC 3.0 incorporates a wide range of adaptation measures across sectors, such as sustainable land and water management, climate-resilient agriculture, coastal ecosystem restoration, and infrastructure resilience, that, while primarily designed to reduce vulnerability and build resilience, may also yield co-benefits for mitigation. Additionally, several cross-cutting actions, including capacity building, gender-responsive planning, MRV system enhancement, and climate governance reforms, are not modelled in LEAP but are critical for enabling and sustaining both mitigation and adaptation outcomes over the long term.



04 | Summary of Belize's NDC 3.0

Photo by Kamil Salazar

Belize is committed to supporting the Paris Agreement's primary goal of restricting global warming to 1.5° Celsius above pre-industrial levels. This dedication was demonstrated when Belize submitted its initial Nationally Determined Contribution (NDC) in April 2016, followed by its updated NDC in 2021, and now the NDC 3.0 in 2025.

This NDC 3.0 further strengthens Belize's 2030 targets and sets new targets for 2035 for both reducing emissions and adapting to climate change. Belize's NDC 3.0 brings the country closer to a pathway that follows the trajectory outlined in the country's Long-Term Low Emission Development Strategy (LT-LEDS). Belize's LT-LEDS represents the extended vision through 2050 for achieving a low-carbon and sustainable development pathway.

Belize's NDC 3.0 encompasses a diversity of sectoral targets and actions, which are separated into mitigation, adaptation and cross-cutting sectors.

In total, the amount of committed avoided emissions and enhancement of carbon sinks adds up to 6.2 MTon CO_2e as seen in Table 2 below. The individual contributions include the avoided emissions under energy (for both electricity and transport sub-sectors), waste, and the enhancement of the carbon sequestration potential of the Agriculture, Forestry and Other-Land Use sector.

Table 2 - Summary of quantified mitigation targets Belize's NDC 3.0 (in cumulative kTonCO_2e)

Units: cumulative kTCO₂e	Sub-sectors	2030	2035
Energy	Electricity	326	791
	Transport	127	312
Waste	Waste	8.5	21
AFOLU	Agriculture, Forestry and Other Land-Use	2,555	5,110
Total		3,017	6,234

The adaptation sectors include a variety of targets and interventions relevant for enhancing the resiliency and adaptability of the sectors. Accompanying the adaptation actions and interventions, there are additional gender, equity and social inclusion (GEDSI), as well as loss and damage (L&D) considerations to have a more holistic perspective on climate change, its impacts and the intersectionality of the different dimensions involved in creating an inclusive and sustainable development for all Belizeans.

05 | Mitigation Targets and Actions

Photo by Frank Hachmann

Belize's mitigation targets aim to reduce nationwide emissions through a specific amount of cumulative avoided emissions for the IPCC energy sector including both electricity and transport, and the IPCC waste sector. This is noting that there is an additional mitigation contribution from the IPCC Agriculture Forestry and Other Land-Use (AFOLU) sector, which can be found under the cross-cutting targets and actions in chapter 6 below.

Additionally, the accompanying actions and targets for the mitigation sectors aim to enhance the country's energy security and efficiency, improve the mobility options and reduce waste pollution-related emissions.

5.1 Electricity

The energy sector in Belize comprises both electricity generation and transport, as well as energy end-use in homes, commercial applications and industry, and remains one of the largest contributors to Belize's national greenhouse gas (GHG) emissions. Belize is committed to reducing its GHG emissions in the energy sector, putting more emphasis on quantified mitigation targets for its NDC 3.0. Its objective is to transition to a low-carbon energy system while building resilience and energy security.

As shown in Table 3 *below, the mitigation targets for electricity generation include scaling up the share of renewable energy (RE) production in the nation's electricity generation mix to 75% and 80% from domestic sources by 2030 and 2035, respectively*, with a focus on solar and wind installations. Belize aims to drastically expand its utility-scale solar PV capacity, while promoting and incentivising decentralised rooftop solar PV systems, mainly focusing on commercial buildings. *There are also plans and a target related to reducing transmission and distribution losses to no more than 10% by 2030 and a target to reduce the overall energy intensity of the sector through energy efficiency improvements.* The column named "Cond." shows what targets or actions are conditional ("C") or unconditional ("U") to international support, while the SDG column shows the related Sustainable Development Goals applicable to each target or action.

To achieve these ambitious targets, Belize's NDC 3.0 sets a combination of soft (regulatory and policy) and hard (technology installation) measures. In the case of electricity generation, technology-specific capacity targets for solar and wind technologies are defined, reaching 45 MW and 100 MW for solar in 2030 and 2035 and 20MW of wind by 2035, alongside the installation of additional battery storage capacity to lower some of the issues related to the intermittency of RE resources. There are also activities aimed at increasing the adoption of rooftop solar PV and solar water heating systems in commercial and residential buildings. In terms of the supporting soft measures, policy development, regulatory enhancement, technical assistance, and capacity-building interventions are prioritised to create an enabling environment for such ambitious targets, while ensuring institutional readiness to support the low-carbon transition. Some examples of soft measures include examining incentive mechanisms for a rapid adoption of rooftop solar PV and water heating systems, or enhancing the Monitoring, Reporting and Verification (MRV) systems to have a better sense of baseline data and to continuously track progress on the NDC key performance indicators. Together, these measures form the basis of Belize's strategy for a cleaner, more efficient, and resilient electricity sector, helping the country slowly but safely get in the way of net-zero emissions, following its long-term climate commitments, such as the LT-LEDS, which has already been adopted.

Table 3 - Electricity mitigation targets and actions

NDC 3.0 Mitigation Targets and Actions – Electricity					
	Description	2030	2035	Cond.[4]	SDG
Targets	1. Avoid emissions from the electricity sector (cumulative avoided emissions from 2020 levels)	326 $ktCO_2e$	791 ktCO2e	C	7 13

[4] Conditionality

	2. Increase renewable energy generation in the electricity mix[5]	75%	80%	C	7 13
	3. Reduce transmission & distribution losses (% total system losses)	10%	10%	C	7 13
	4. Reduce energy intensity through energy efficiency measures in public and private buildings and for appliances from 2020 levels	10%	15%	C	7 13
Actions	Description	2030	2035	Cond.	SDG
	Install utility-scale solar power (total installed capacity)	45 MW	100 MW	U	7 13
	Install onshore wind power capacity (total installed capacity)	0 MW	20 MW	C	7 13
	Install battery storage capacity (total installed capacity)	40 MW	80 MW	U/C	7 13
	Adoption of rooftop solar PV systems in urban public, commercial and residential buildings (total installed capacity)	10 MW	20 MW	C	7 13
	Solar water heating penetration within the	10%	20%	C	7

[5] Only considering domestic production excluding imports

	commercial and residential sectors (cumulative percentage share)				13
	Enforce energy efficiency standards and labelling schemes in all the national territory by 2026			C	7 12 13
	Adopt interconnection policy framework for integration of distributed RE by 2026 and implement it by 2028			C	7 9
	Perform energy audits in all public buildings by 2028			C	7 12 13
	Examine opportunities for a centralised MRV system which can help determine a baseline for energy intensity by 2028			C	7 13
	Develop financial schemes and support for the installation of rooftop solar PV systems and EE interventions in commercial and residential buildings by 2028			C	7 13
	Capacity building for enterprises and small businesses dealing with RE and EE with 2 campaigns by 2030 and 4 by 2035 (cumulative total no. of campaigns)			C	7 8 9
	Explore the feasibility for additional RE capacity from wind, hydro and biomass by 2030			C	7 13 15

The relative reductions in emissions for the electricity sub-sector modelled with LEAP are shown in Figure 1. The scenario with proposed NDC targets results in

significant reductions in emissions with respect to the BAU scenario (starting from a base year of 2020) The cumulative quantitative avoided emissions are estimated at 326 and 791 kTonneCO2e by 2030 and 2035 respectively.

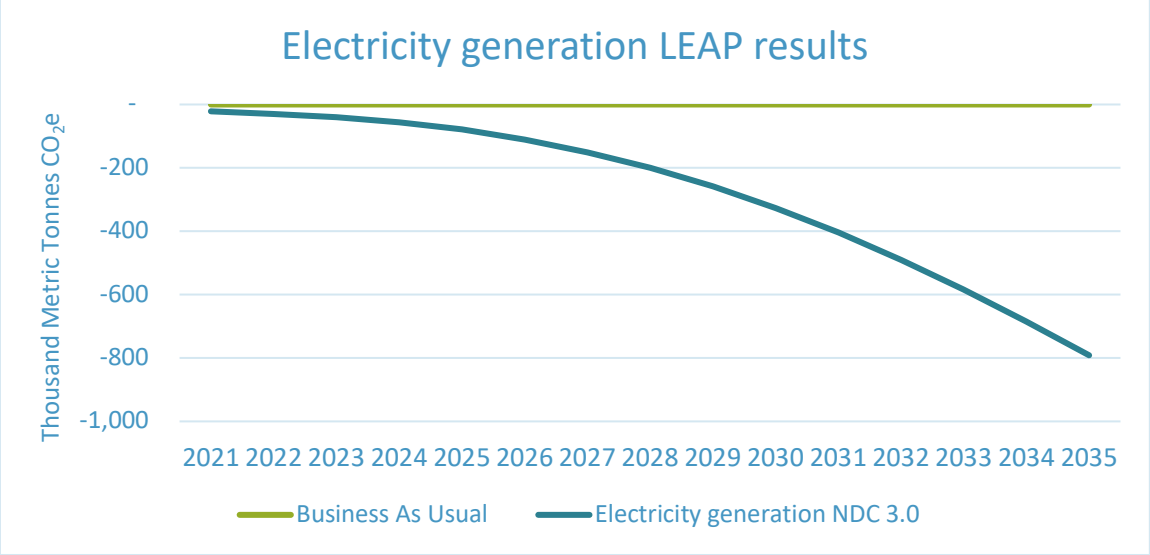


Figure 1 – Electricity sector avoided emissions vs. BAU ($kTCO_2e$)

5.2 Transport

The transport sub-sector is the largest contributor to GHG emissions in Belize. The NDC 3.0 specifies targets to improve energy efficiency and increase uptake of low-carbon technologies. Compared to the previous NDC, NDC 3.0 enhances electric vehicle (EV) penetration in both public and private fleets while aiming to increase energy efficiency in the transport sub-sector overall. The targets include a cumulative reduction of 127 $ktCO_2eq$ by 2030 and 312 by 2035, with respect to the BAU emissions from 2020 levels. The emissions avoidance will be achieved by increasing electric vehicle penetration to 10% and 25% in the public vehicle fleet, scaling up the new EVs sold to 5% and 10% of the private vehicle fleet, and an increasing energy efficiency by 15% and 20% by 2030 and 2035 respectively. The efficiency targets imply that vehicle fleet fuel consumption efficiency improves at about 3% per year until 2030 and a further 1% per year until 2035, by importing more efficient vehicles and more hybrid electric vehicles and by slowly integrating low-carbon blended fuels. The greatest efficiency

improvements and emissions reductions arise from the switch over time to electric vehicles.

The supporting activities for the transport sector targets include adapting the policy framework by including considerations for energy policies and strategies to accommodate the increased adoption and demand exerted by EVs to the national electricity grid for readiness planning and energy efficiency improvements, by revising and implementing an updated National Transport Masterplan to incentivise and accelerate the adoption of electric transportation modes and also improving the supporting charging and road infrastructure. Other actions include a more thorough analysis to identify energy intensity reduction opportunities in the transport sector for increased adoption of EVs or standardisation of low-carbon blends for internal combustion engine (ICE) vehicles, along with the possibility of implementing restrictions on the import of older, less efficient vehicles. Additionally, setting up a comprehensive MRV system where data is collected and analysed to better determine baseline conditions and develop improved predictions for future sectoral scenarios.

Finally, Belize is placing special emphasis on exploring strategies to mitigate emissions from the maritime transport sector, which is vital for the country's overall trade, tourism and other economic activities and development. A Maritime Sector Baseline Assessment Report was developed, which recommends examining potential interventions that would improve fuel efficiency of maritime vessels, reduce emissions from port infrastructure, and foster the incursion of cleaner technologies such as electrifying some of the port operations (IMO-Norway, 2024). The NDC includes one action related to maritime transportation with the expectation that a pilot project will be implemented towards the end of the NDC 3.0 implementation phase.

Table 4 - Transport mitigation targets and actions

NDC 3.0 Mitigation Targets and Actions - Transport					
	Description	**2030**	**2035**	**Cond**	**SDG**
Targets	1. Avoid emissions from the transport sector (cumulative avoided emissions from 2020 levels)	127 $ktCO_2e$	312 $ktCO_2e$	C	13 11
	2. Electric vehicle penetration in the public vehicle fleet (percentage from total)	10%	25%	C	7 11 13
	3. Electric vehicle sales in the private vehicle fleet (percentage from total)	5%	10%	C	7 12 13
	4. Increase energy use efficiency in the transport sector per passenger-km and tonne-km (cumulative percentage from total fleet energy use)	15%	20%	C	7 9 13
Actions	Description	2030	2035	Cond.	SDG
	Operationalise electric buses in the public transport system (no. of bus units)	77	100	U / C	7 11 13
	Explore opportunities for increasing energy efficiency of the transport fleet through emissions testing and emissions-based incentives and low-carbon blends by 2028			C	7 12 13
	Revise the National Transport Master Plan to include considerations for E-mobility, modal shifts, formalise incentive schemes, and upgrade key infrastructure in urban and rural areas by 2028 with an outlined implementation plan up to 2035			C	9 11 13
	Develop a feasibility analysis for electric vehicles in the public and transport fleet, examine trade-offs and impacts to the electricity grid from increased EVs adoption, and develop appropriate incentive mechanisms for both public and transport vehicle fleets by 2028			C	7 9 13
	Implement the Integrated Transport Information System as specified in the National Transport Master Plan to enhance data collection systems and determine a baseline for the whole transport sector by 2030			C	9 13
	Examine opportunities for expanding public transportation options in tourism areas to reduce fuel consumption by 2028			C	11 12 13

	Examine opportunities to reduce emissions from maritime transportation with a feasibility analysis by 2030 and the implementation of a pilot project by 2035	C	9 13 14

In Figure 2 the results of the LEAP modelling for the transport sub-sector are shown for overall emissions from the transport sector. A comparison is made of cumulative avoided emissions with respect to the BAU scenario. Quantitatively, the cumulative differences are -127 ktCO2 in 2030 and -312 ktCO2 in 2035.

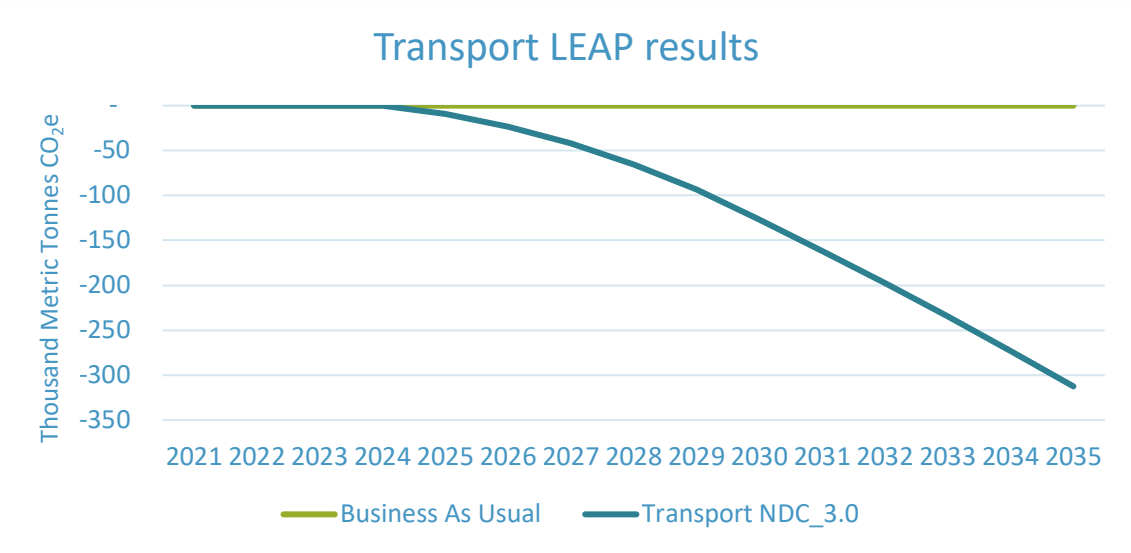


Figure 2 - Transport sector avoided emissions vs. BAU ($kTCO_2e$)

5.3 Waste

The waste sector poses a significant challenge and has many opportunities for the overall quantified avoided emission contribution of Belize. Many of the interventions here presented require very specific technical support given the limitations Belize currently faces, which is why all activities are conditional on international support. Under the NDC 3.0, Belize has focused on improving waste management coverage for urban and rural areas and increasing recycling share at source. The foundations of the waste sector interventions will be set by developing a comprehensive Waste Management Masterplan by 2032 with detailed guidance on specific measures and an implementation plan by 2040 to

improve both solid and water waste management in Belize, with improved MRV systems, enhanced recycling initiatives and supporting soft measures.

One of the main challenges in the waste sector in Belize is the lack of a consolidated data management system, which would ease the process of establishing a sectoral baseline and subsequently track progress on the climate commitments and project contributions undertaken in the sector. Given these limitations, much of the efforts will first aim to establish the required framework and human capacity to better manage the data collection and analysis, and to track progress on key sectoral performance indicators. The setting up of such a system will be detailed in a sectoral masterplan.

Belize is committed to the development and adoption of a legal and policy framework on a circular economy, waste reduction, and enhancement of reuse and recycling in all sectors, by 2030. Other commitments include improved enforcement for ending open waste burning, one of the main contributors to the sectoral emissions. Capacity building is also part of these objectives, and there are plans to conduct national campaigns on recycling and waste management between 2025 and 2030 to increase public engagement and awareness and enhance institutional readiness.

Additionally, potential options will be mapped by 2028, with the aim of limiting emissions from solid waste in key sectors such as health, tourism, industrial, and agricultural activities while also keeping in mind wastewater improvement opportunities.

Belize is committed to creating a more sustainable waste sector overall. The progress made given the international support provided to date has been acknowledged, but additional support will be required to close a financing gap of around USD 53 million in the sector.

Table 5 -Waste mitigation targets and actions

NDC 3.0 Mitigation Targets and Actions – Waste					
	Description	**2030**	**2035**	**Cond.**	**SDG**
Targets	1. Avoid emissions from the waste sector (cumulative avoided emissions from 2020 levels)	8.5 kTonCO_2e	21 kTonCO2e	C	11 13
	Description	2030	2035	Cond	SDG
	Increase share of recycling by separation at source (% from total recyclable waste)	5%	10%	C	12 13
	Increase share of flared methane emissions at the national sanitary landfill (% from total methane emissions)	10%	15%	C	13
Actions	Increase waste management coverage[6] in both urban and rural areas for efficient waste management and to seek to reduce the amount of open waste burning, establish a baseline and target coverage for 2035 by 2030.			C	11 12
	Develop a waste management masterplan targeting improved efficiency, recycling and data collection by 2032 and implement it by 2040			C	11 12 13
	Develop and adopt a legal and policy circular economy framework by 2030			C	9 12
	Develop and enforce a legislation for ending open burning waste by 2030			C	3 11 13
	Conduct 3 capacity building campaigns for recycling and waste management by 2030 and 6 by 2035			C	12 17
	Examine opportunities for waste electricity generation by 2030			C	7 12 13

[6] Includes collection, transfer, disposal, and treatment/recycling.

	Examine opportunities for reducing emissions from solid waste from other sectors including health, tourism, industrial and agricultural residues by 2028	C	12 13
	Examine opportunities for reducing emissions from wastewater by 2030	C	6 12 13

5.4 Mitigation Costs

Belize's mitigation costs were estimated for the period 2021-2035 by using different assumptions depending on the sectoral estimates. The costs presented here are just preliminary and might in some cases be underestimated, contingent upon further research and a proper financial needs examination. As seen below in Table 6, the estimated preliminary mitigation total costs amount to around 610 million USD. The preliminary estimated of the still required financial gap in terms of how much has been procured versus how much is still missing is around 75% from the total costs by 2035. For further information on the assumptions used in the costing, please refer to Appendix A - Costing assumptions and sources.

Table 6 - Mitigation sector costs and financing gap (in million USD)

Mitigation Sector Costs (MUSD)	Total costs by 2035	Funding procured	Funding gap	Funding gap (% from total)
Electricity	411	136	275	67%
Transport	134	7	127	95%
Waste	64	11	53	83%
Total	**609**	**154**	**455**	**75%**

06 | Cross-cutting Sectors Targets and Actions - AFOLU

Photo by Kamil Salazar

Within Belize's NDC 3.0, the Agriculture, Forestry and Other Land Use (AFOLU) sectors are considered crosscutting in nature, given their contribution by acting as net carbon sink while providing far-reaching benefits. Those sectors interact with other socioeconomic and natural areas, such as energy use, biodiversity, food security, and rural livelihoods. Their sustainable management is paramount to providing holistic climate resilience and adaptation. In summary, the sector contributes in one way or another to mitigate and adapt to climate change and its effects.

The agriculture sub-sector includes both targets and interventions regarding better management of agricultural land for crops, promotion of agrosilvopastoral and rotational grazing (Voisin) systems, but also considerations for improving livestock management and the promotion and adoption of Climate-Smart Agricultural solutions with capacity building and appropriate incentive mechanisms to support farmers.

The Forestry and Other Land-Use (FOLU) sub-sector represents a considerable carbon sink in the country, contributing to carbon sequestration and many adaptation co-benefits from maintaining stable environmental conditions for biodiversity to thrive. Given this remarkable importance, the FOLU sector includes targets and actions that align with Belize's REDD+ Strategy, aiming to reduce deforestation and forest degradation through sustainable management practices and programmes while supporting the communities and groups whose livelihoods depend on forestry activities.

6.1 AFOLU in the NDC

Table 7 shows the targets and actions for the AFOLU sector, which include cumulatively increasing the GHG removals or carbon sink potential from the whole AFOLU sector to 2,555 Gg CO2eq by 2030 and 5,110 Gg CO_2eq by 2035 from a baseline level of 2020.

The relative reductions in emissions for the electricity sub-sector modelled with LEAP are shown in Figure 3. The scenario with proposed NDC targets results in significant reductions in emissions with respect to the BAU scenario (starting

from a base year of 2020) The cumulative quantitative avoided emissions are estimated at 2,555 and 3,110 kTonCO_2e by 2030 and 2035 respectively.

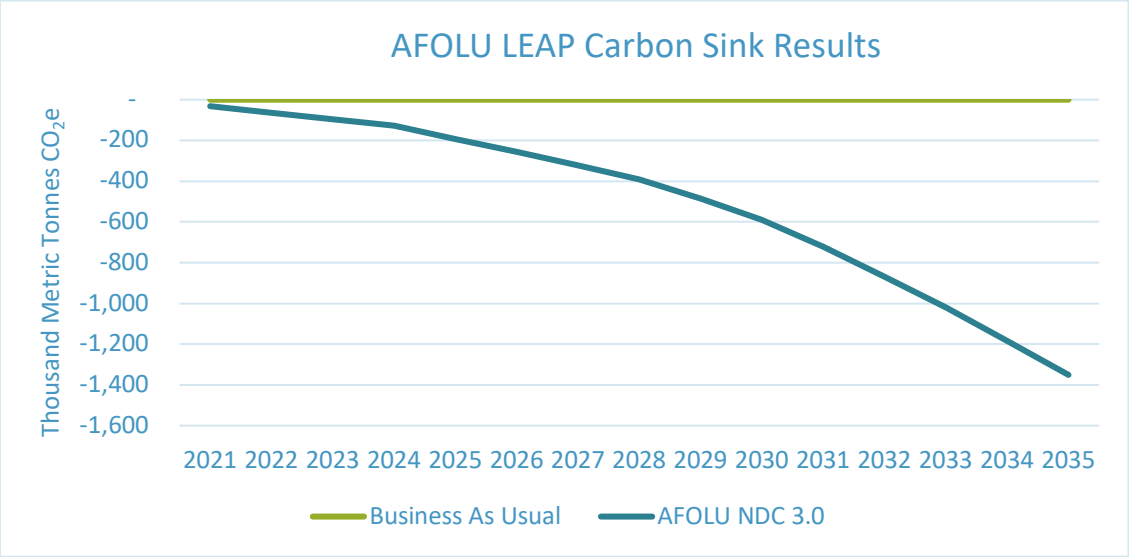


Figure 3 - AFOLU LEAP carbon sink potential results (in kTonCO_2e)

Specific actions for the FOLU sub-sector include reducing deforestation rates in general within protected and non-protected areas. Other actions include specific activities for restoration and reforestation of publicly owned forest land areas and diverse ecosystems, including riparian forests, mangroves, and peatlands.

Belize is also committed to examining opportunities for expanding and improving existing privately owned conservation areas by engaging and creating partnerships and combining efforts with private landowners and local communities, thus helping to strengthen the protection of privately owned lands with high carbon sequestration and co-benefits potential, as for example mangroves, for which Belize has already committed to restore and conserve most of its publicly owned areas. For this, Belize will support the implementation and enforcement of the 2018 Forests Protection of Mangroves Regulations, with plans to create a dedicated Mangrove Unit within the Forest Department by 2030 that is well-equipped in terms of technical and human capacity for fully adopting and implementing the Belize Mangrove Alliance Action Plan.

Given the high contribution of forest wildfires to forest degradation in Belize, the country has committed to developing and implementing a programme for Integrated Fire Management, which will be developed by 2035, aiming to

mitigate wildfire risks however possible and improve forest fire management. Additionally, Belize will keep pursuing opportunities to participate under Article 6 of the Paris Agreement by 2030 for cooperation in carbon market mechanisms.

Belize aims to complete and validate a National Peatland Map and implement preliminary carbon assessments by 2026. Subsequently, high-biodiversity, high-carbon peatland areas for protection will be mapped by 2028. By 2032, incentive mechanisms for the protection of these key areas will also be put in place.

By 2030, the Forest Department aims to establish a centralised monitoring and reporting system that integrates forestry, biodiversity, and agriculture, to have a single clearing house where all data from these sectors is collected and analysed, and which keeps track of progress under the NDC commitments and other international reporting requirements, be it carbon markets or similar mechanisms. This shows Belize's commitment to maintaining healthy forest ecosystems and sustainable land use, given its critical contribution to the ecological, economic and social dimensions.

Table 7 -Agriculture, Forestry and Other Land-Use (AFOLU) cross-cutting targets and actions

NDC 3.0 Mitigation Targets and Actions – Agriculture, Forestry and Other Land-Use (AFOLU)						
	Description	2030	2035	Cond.	Focus	SDG
Targets	1. Enhance the carbon sequestration potential from the AFOLU sector (cumulative from 2020)	-2,555 kTonCO_2e	-5,110 kTonCO_2e	C	AFOLU	12 13 14 15
Actions	Description	2030	2035	Cond.	Focus	SDG
	Expand land area under sustainable land management	75,000 ha	90,000 ha	C	AFOLU	12 13

	(cumulative no. of hectares)					
	Improve agronomic practices on arable sugar land in Northern Belize (no. of hectares)	5,000 ha	10,000 ha	C		13 15
	Increase penetration of Climate-Smart and Sustainable Agriculture solutions (CSSA) within Belizean farms. (penetration %) (e.g. irrigation, solar energy, water extraction and water retention ponds)	15%	25%	C		2 13
	Implement restoration of degraded grasslands (cumulative no. of hectares)	5,000 ha	6,250 ha	C		2 13 15
	Promote silvopasture land-use and Voisin systems on non-degraded grasslands (cumulative no. of hectares)	5,000 ha	7,500 ha	C		13 15
	Increase agrosilvopastoral land-use systems converted from croplands (no. of hectares)	4,500 ha	6,500 ha	C		
	Reduce emissions from livestock management from 2020 levels by	10%	15%	C		

	Reduce deforestation rates in protected areas by (cumulative reduction from 2020 levels)	0.05%	0.6%	C	FOLU	
	Reduce deforestation rates in non-protected areas by (cumulative reduction from 2020 levels)	0.1%	0.2%	C		
	Reforestation of forest land area including riparian forests (cumulative no. of hectares)	6,000 ha	10,000 ha	C		
	Restoration of degraded forest land area (cumulative no. of hectares)	8,000 ha	15,000 ha	C		
	Restoration of mangroves in public land (cumulative no. of hectares)	2,000 ha	2,500 ha	C		13 14 15
	Increase protected areas of mangroves (cumulative no. of hectares)	6,000 ha	8,000 ha	C		
	Examine opportunities to support and incentivise the adoption of CSSA practices and technologies by 2028			C	Ag	13 17
	Capacity building for CSSA with 3 trainings by 2030 and 6 by 2035 (cumulative no. of trainings)			C	Ag	4 13 17
	Establish a dedicated climate change and water management unit within the Ministry of Agriculture, Food Security, and Enterprise (MAFSE) by 2030 with human capacity of at least six (6) technical officers by 2035			C	Ag	6 13 15

	Capacity building for agrosilvopastoral systems integration with 3 trainings by 2030 and 6 by 2035 (cumulative no. of trainings)	C	AFOLU	4 14 17
	Design agrosilvopastoral, drought-resistant, diversification, intercropping, and water harvesting programmes country-wide by 2030 and implement them by 2035	C		6 13 15
	Conduct vulnerability assessments to determine crops and species highly susceptible to pests and diseases incidence, which are influenced by climate change impacts by 2030	C		3 13 15
	Develop a framework for climate change and sustainable water management in the agriculture sector by 2030 and enforce it by 2035	C		6 13
	Explore opportunities for improvement of existing and establishment of new public conservation areas, partnerships with landlords of privately owned mangroves, and local communities.	C	FOLU	15 17
	Implement and enforce the 2018 Forests Regulations related to protection of mangroves and create a dedicated Mangrove Unit within the Forest Department with sufficient human and technical capacity by 2030	U/C		14 15
	Revise and adopt the Belize Mangrove Alliance Action Plan, which includes considerations for mangrove values and sustainable development in vulnerable coastal areas and cayes by 2030 and implement it by 2040	C		13 14 15
	Adopt and implement the Belize National Mangrove Restoration Action Plan by 2026	C		13 14 16
	Implement a Programme for Integrated Fire Management to reduce emissions from wildfires in nationally managed forests by 2035	C		13 15
	Examine opportunities for participation under the Paris Agreement Article 6 by 2030	C		13 17
	Finalise a National Peatland Map and initial carbon assessment by 2026 and identify potential peatland conservation areas, with a focus on biodiversity and high carbon storage and sequestration hotspots by 2028	U/C		13 15
	Ensure effective conservation of key peatland areas with high carbon sequestration and biodiversity potential through appropriate incentive mechanisms by 2032	C		13 15 17
	Examine opportunities for incentivising sustainable forest management practices for landowners and to disincentivise illegal land clearing by 2030	C		15

	Establish a centralised monitoring and reporting system which integrates forestry, biodiversity and agriculture within the Forest Department by 2030	C		13 15 17

6.2 Cross-cutting Costs

The cross-cutting costs for Belize's NDC follow the same logic as with both mitigation and adaptation, considering them as just very preliminary and which need further examination and refinement before actual project implementation. The identified total costs for the AFOLU sector is estimated at around 410 million USD by 2035, and the financing gap is estimated at 93% from the total costs, which would be the amount still remaining to procure financial resources. For a more detailed information on the assumptions used for the estimation of the costs, please refer to Appendix A – Costing assumptions and sources.

Table 8 - AFOLU sector total costs and financing gap (in million USD)

AFOLU Sector Costs (MUSD)	Total costs by 2035	Funding procured	Funding gap	Funding gap (% from total)
Agriculture	81.2	16.9	64.3	80%
Forestry	331.2	9.7	321.4	97%
Total	**412.4**	**26.7**	**385.7**	**93%**

07 | Adaptation Targets and Actions

Photo by Frank Hachmann

Key priority sectors identified in the 2014 Integrated Vulnerability and Adaptation Assessment included coastal development, water, agriculture, tourism, human health, and fisheries (GOB, 2014). Belize is most vulnerable to sea level rise, changes in weather patterns resulting in the increasing frequency, intensity and duration of storms, flooding, increases in sea surface temperature, ocean acidification, coral bleaching, droughts, and wildfires. As a nation, Belize is also highly dependent on its natural resources and the services it provides. As a result, climate adaptation is an integral part of the country's climate action efforts to ensure resilience, climate-proofing and the sustainable use and management of its resources.

Belize's National Communication (2022) identifies the main barriers to climate change adaptation as being the lack of human and financial resources, lack of awareness surrounding climate change, limited collaboration amongst stakeholders, and a lack of political will to integrate climate change adaptation into planning and implementation. As a result, Belize's NDC 3.0 offers the unique opportunity to make concerted efforts to address and tackle as many of these barriers in adaptation planning and implementation to work towards increasing socioeconomic and climate resilience and ensuring sustainable management of all its resources.

The adaptation targets and actions are described in the following tables for the following sectors: coastal zone and marine environments, fisheries, aquaculture, human health, tourism, human settlements & infrastructure, water, and biodiversity. The targets and actions presented here aim to enhance the resilience and adaptive capacity of each sector, while providing opportunities for growth and just livelihoods for all Belizeans.

7.1 Coastal Zones and Marine Environments

Belize's coastal zone has complex and dynamical marine ecosystems that support innumerable ecological processes and marine life, but also provide key services that are directly linked to approximately 30% of the country's GDP

(CZMAI, 2016). Belize's coastal zone is assumed to be all mainland up to 4km from the coastline, and all marine territory up to 80km from the coastline. The primary hazards faced by this sector are ocean acidification and warming, sea-level rise, coastal erosion, and the increase of storm frequency and intensity (GOB, 2022a).

The targets and actions for coastal zones and marine environments follow the ambition set in national policies and strategies including the Sectoral Adaptation Plan. Belize's Integrated Coastal Zone Management Plan 2016 highlights the importance of conservation and protection, and sustainable management for ecosystem services. The National Adaptation Plan for the Coastal Zone and Fisheries Sector of Belize (2024-2034) also raises the need to strengthen and enhance climate action for a resilient and sustainable blue economy (GOB, 2023b). As a result, the NDC incorporates these key elements to ensure the sustainable use of coastal resources by balancing conservation principles with the economic and social needs of the country. The targets and actions also reflect the commitments made under the blue bond transaction which was contracted by Belize in 2021.

Table 9 - Coastal zone and marine environment adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Coastal Zones and Marine Environments			
Targets	**Description**	**Cond.**	**SDG**
	1. Expand biodiversity protection zones to 30% by 2030 (% from Belize's ocean)	**U**	**11 13**
	2. Increase resilience of coastal zone habitats by implementing the measures in the national adaptation plan by 2035	**C**	**11 13 14 15**
Actions	Description	Cond	SDG
	Implement the revised Integrated Coastal Zone Management Plan 2025and enforce the updated CZM Act by 2035	U	14 13
	Implement the Belize Sustainable Ocean Plan, which includes the Marine Spatial Plan by 2030	C	

	Apply for at least three marine protected areas to be listed as IUCN Green List Areas by 2027	C	14 15
	Examine opportunities for ecosystem-based adaptation in marine areas for reducing climate change related risks by 2028	C	13 14 15
	Develop a National Sectoral Adaptation Plan for coral reefs by 2026, and implement it by 2035, which includes assessing restoration potential, a monitoring and evaluation framework and climate-responsive adaptive management strategies.	C	14 13
	Implement the Resilient Bold Belize (Project Finance for Permanence) conservation plan by 2026 with the key milestones met by 2035	U	13 14 15
	Conduct an assessment of the impacts of ocean acidification on Belize's coastal habitats and marine resources by 2030 and establish a monitoring program for ocean acidification in Belize by 2035	C	13 14
	Establish a monitoring programme for water quality in Belize's marine and coastal areas by 2035	C	6 13 14
	Explore national seagrass sequestration potential by 2026.	C	13
	Develop and adopt the National Seagrass Management Policy by 2026 to include a monitoring and evaluation framework, climate responsive, adaptive management strategies, protection of seagrass areas and which explores feasibility of seagrass restoration.	C	14 15
	Develop a National Seagrass Sectoral Adaptation Plan by 2035 with a 10-year implementation timeframe	C	
	Establish a public informational clearing house on ecosystem health and human use activities within the coastal zone to share information to support responsible planning in coastal areas by 2030.	C	14 16 17

7.2 Fisheries

Fisheries, although showing a continued decline in overall GDP contribution, continues to be a very important sector when measured from the perspective of providing livelihoods to key vulnerable groups, being a significant contributor to food security, and a contributor to the demands from the tourism sector.

Given the nature of the fisheries sector as outlined in the NAP for the sector, the targets and actions outlined here heavily emphasises the need for ecosystem-based adaptation, improved management, and enhanced governance, and supporting the growth of the blue economy. Additionally, they support the

National Fisheries Policy, Strategy and Action Plan (NFPSAP) through adaptive management and its ecosystem approach (GOB, 2020b). It also aligns to the policy priority areas of NFPSAP on the conservation and management of fish and ecosystems (in order to build resilience to climate change), fisheries research, blue economy, capacity building, development of the sector and fisheries governance.

Table 10 - Fisheries adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Fisheries			
Targets	Description	Cond.	SDG
	Increase resilience of the fisheries sector by implementing the measures in the National Adaptation Plan by 2035	**C**	**11 13 14 15**
Actions	Description	Cond.	SDG
	Develop specific sustainable fishery management plans for the sector by 2030, (Finfish, Queen Conch, and Spiny Lobster).	C	14
	Develop and implement the Inland Fisheries Management Plan by 2035, which includes stock assessments, habitat restoration, community-based management programmes, investment strategies for research and active monitoring of replenishment zones	C	14
	Develop a Marine Fisheries Management Plan by 2030, which includes interventions for investment in research, monitoring, and effective management of replenishment zones, and implement it by 2035	C	14
	Build capacity for the fisheries sector on sustainable practices with 2 training and awareness campaigns by 2030 and 4 by 2035 (e.g. limits to catching, sustainable fishing gear, responsible feed sourcing)	C	14
	Support the full implementation and enforcement of the 2020's Fisheries Resources Act by 2032	U	14
	Revise the 2020 National Fisheries Policy, Strategy and Action Plan (NFPSAP) by 2030	C	14
	Finalise the National Fisheries Enforcement Strategy (FNES) by 2026 and enhance the enforcement unit to develop new activities under the FNES, for its implementation by 2032.	U / C	14 16
	Enforce the mariculture regulations with a dedicates unit within the Ministry of Agriculture and Food Security, and Enterprise by 2030	U / C	2 14

	Establish a Centralised Fisheries Enforcement and Conservation Monitoring Centre by 2032	C	14
	Develop specific sustainable fishery management plans for the sector by 2030, (Finfish, Queen Conch, and Spiny Lobster).	C	12 14
	Develop and implement the Inland Fisheries Management Plan by 2035, which includes stock assessments, habitat restoration, community-based management programmes, investment strategies for research and active monitoring of replenishment zones	C	13 14 15

7.3 Aquaculture

Formally having begun in 1982 with the development of 4 ha area of experimental ponds, the aquaculture sector has grown significantly in Belize. Vulnerability assessments of the sector reveal that Belize has one of the most vulnerable aquaculture sectors within the Americas. The primary climate change drivers that affect aquaculture production are the loss of land and mangrove areas due to sea-level rise, and the impacts from hurricanes and extreme weather events (GCF, 2021). Additionally, the stratification of pond water due to higher inland water temperatures is also leading to impacts on the sector. It is noted however that their vulnerability comes not just from the direct impacts of climate change, but as a function of geography and changes in water quality parameters affecting availability of broodstocks for hatchery production (UNDP, 2009). The targets and actions for the aquaculture sector thus support the need for improved management, as well as capacity building within the sector.

Table 11 - Aquaculture adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions –Aquaculture			
Targets	Description	Cond.	SDG
	Develop an Aquaculture Management Plan or Strategy by 2030, to improve the value chain of aquaculture products, establish sustainable aquaculture practices and guidelines for designated areas	C	2 12 14

	Description	Cond.	SDG
Actions	Develop an Aquaculture and Mariculture Management plan by 2030, which includes interventions for investment, monitoring responsible feed sourcing and integrated multi-thropic aquaculture and recirculation of nutrients, and implement it by 2035	C	2 9 12 14
	Build capacity for the aquaculture sector with 2 training and awareness campaigns by 2030 and 4 by 2035	C	12 14 17

7.4 Human Health

It is known that increasing temperatures, rising sea levels, changes in precipitation patters and extreme weather events lead to an increase in health risks. The direct effects of heat waves, floods and storms all create more conducive environments for the spread of certain vector-borne diseases and make the human body more susceptible to illnesses. It is not just the direct impacts on human health, but also the role of resilient infrastructure and healthcare facilities that become even more pertinent. As a result, the NDC outlines targets and actions that support the National Climate Change Policy Strategy and Action Plan in its goals to adopt practices and technologies to reduce the exposure and health impacts and improve the physical infrastructure of health institutions and their capacity (GOB, 2021a).

Table 12 - Human health adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Human Health			
Targets	Description	Cond.	SDG
	Increase resilience of the human health sector by implementing the measures in the national adaptation plan by 2035	**C**	**11 13 14 15**
Actions	Description	Cond	SDG
	Develop a health infrastructure masterplan focused on strengthening climate resilience and durability, utilising prior vulnerability assessments by 2030 and its implementation up to 2040	C	3
	Retrofit key hospitals and clinics to be resilient to extreme-weather events by 2035	C	3
	Update and include risks identified in the STAR 2023 report in the Emergency All-Hazard Plan (EAP) for the health sector which provides for creating a reserve of health supplies and food by 2030 and implementing it by 2035	C	3
	Build the capacity of community members and leaders on environmental and climate change-related diseases and impacts on human health with the integration of climate change in the Field Epidemiology Training Program (FETP) by 2030	C	3 6 13
	Enhance the testing and treatment of drinking water sources in regions vulnerable to droughts by 2030.	C	3 6 15

7.5 Tourism

The tourism sector in Belize accounts for the most income of any sector in the country. Yet, it is highly vulnerable primarily to sea level rise, coral bleaching and biodiversity impacts. This is because most of the tourist assets are located within the narrow coastal belt. While to some extent, it is perceived that tourism has a detrimental impact on the very environmental resources that it is dependent on, this close connection highlights the vulnerability and climate-sensitivity. As a

result, it is a key sector in Belize that needs considerations when climate-proofing and embedding climate resilience.

Belize already developed and updated its National Tourism Master Plan (University of Melbourne, 2023), and has different initiatives ongoing in the sector, one of such is the Climate Compatible Tourism Project, which is exploring adaptation options and highlights for the Belize Tourism Industry to continue its expansion, with climate resilience needs to be embedded within the growth of the sector. This involves ensuring adequate vulnerability assessments and the mainstreaming of climate change broadly, especially with the private sector stakeholders (WWF, 2014). To this end, the NDC targets and actions builds on prior work done in the sector and provides a key insight into the framework necessary to have an adaptive and resilient tourism sector in Belize.

Table 13 - Tourism adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Tourism			
Targets	Description	Cond.	SDG
	1. Increase resilience of the tourism sector by implementing the measures in the national adaptation plan by 2035	C	8 13
	2. Enhance the adaptive capacity of the Tourism Sector by implementing the National Sustainable Tourism Master Plan by 2030	U/C	8 13
Actions	Description	Cond.	SDG
	Develop vulnerability assessments for key tourism areas, including assessment of vulnerable coastal zones, as specified in the National Adaptation Planning process and Tourism Master Plan by 2028	C	11 13 14
	Integrate tourism private sector in coastal zone management and restoration efforts including activities for monitoring of water quality and ecosystem services by 2030	C	6 14 17
	Develop a National Remediation Plan for environmental impacts from the tourism sector by 2030 and implement it by 2035	C	12 13
	Build capacity of tourism private sector on sustainable tourism practices with 2 capacity-building campaigns by 2030 and 4 by 2035 (cumulative total no. of campaigns)	C	12
	Examine opportunities for low-emission technologies in the tourism sector by 2030 and develop and implement 3 pilot projects by 2035	C	9 13

	Develop, adopt, and promote sustainable tourism standards by 2030	C	8 12
	Complete a national assessment on vulnerable coastal tourism areas by 2030.	C	11 13 14

7.6 Human Settlements and Infrastructure

Climate change is having significant impacts on human settlements, particularly in coastal areas. The rising frequency and intensity of storm surges are contributing to more frequent flooding, which threatens to disrupt or even destroy these communities. Additionally, the increasing severity of climate-related disasters is expected to cause substantial damage to critical infrastructure. In light of these challenges, it is crucial to develop housing and settlement practices that support climate change adaptation, as well as to implement climate-proofing strategies for critical infrastructure, ensuring that both are resilient to the ongoing and future impacts of climate change.

To enhance resilience and adaptability of the sector, the first step to tackle the issues previously raised, would be developing and enforcing a housing policy, which also targets vulnerable settlements. Equally important is the development and implementation of a resilience infrastructure plan for flooding and hurricane protection nationwide, to safeguard key infrastructure and services, and limit disruptions during and after extreme weather events. Other areas included in the NDC are examining opportunities for upgrading or constructing new grey, green, and blue infrastructure and developing at least one project concept to diversify adaptive approaches, ensuring that both natural and engineered defenses reinforce each other enhancing community resilience. Additionally, Belize is currently working on updating its National Land-Use Policy with considerations to guide the use and development of land according to its suitability and functionality and to facilitate a holistic approach to integrated land use and development planning.

Table 14 - Human settlements & infrastructure adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Human Settlements &Infrastructure			
Targets	Description	Cond.	SDG
	Increase resilience of the human settlements and infrastructure sector by implementing the measures in the national adaptation plan by 2035	C	9 11 13
	Develop and implement a National Land Use Policy which addresses vulnerabilities of human settlements and infrastructure by 2035	C	11 13 15
Actions	Description	Cond	SDG
	Develop and enforce a housing policy, which also targets vulnerable human settlements by 2035	C	8 9 13 15
	Enforce the land-use policy targeting climate-proofing of public buildings by 2035	U	8 9 11 15
	Develop a disaster risk response plan for vulnerable settlements to sea level rise and saltwater intrusion by 2030	C	9 11
	Develop a resilience infrastructure plan for flooding and hurricane infrastructure nationwide by 2030 and implement it by 2035	C	9 11
	Examine opportunities for upgrade or construction of grey, green and blue-infrastructure and develop one project concept by 2030	C	8 9 11
	Develop a centralised and automated multi-hazard National Early Warning system for all climate related disasters risk reduction by 2030	C	6 11 13

7.7 Water Resources

Belize, due to its geographic location, substantial forest cover, and the presence of 18 distinct water catchment areas, is generally considered to have a sufficient freshwater supply. However, similar to other natural resource sectors, several anthropogenic factors—such as increased demand from the expanding

agricultural, industrial, and tourism sectors, population growth, and the associated water pollution and degradation of watersheds—are placing significant pressure on the sustainability of this resource. In addition, the potential impacts of climate change are expected to exacerbate the global hydrological cycle, which will significantly affect water availability and distribution.

The targets and associated actions in this NDC are aligned with the National Adaptation Strategy for Addressing Climate Change in the Water Sector (CCCCC, 2009) and the Integrated Water Resources Management National Adaptation Plan (IWRMNAP) (Cashman, 2024). The primary focus of these strategies is on water monitoring and the implementation of water resource management practices to ensure effective conservation of water resources, water security and the institutional arrangements needed, with much emphasis on Gender, Equality, and Social Inclusion (GEDSI) issues related to water resources.

Additional areas targeted in the NDC include, inter alia: developing a National Sanitation and Water Strategy for water management in rural areas, developing a comprehensive water resource inventory to evaluate create a database of available resources, keep track of their water quality and availability, and develop specific watershed management plans in critical watershed. These actions are aimed at enhancing the adaptation and resilience of the sector in a more cohesive manner.

Table 15 - Water resources adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Water Resources					
Targets	Description			Cond.	SDG
	1. Increase resilience of the water sector by implementing the measures in the national adaptation plan by 2035			C	6 11 13
Action	Description	2030	2035	Cond.	SDG

	Enhance water security by expanding water supply to rural areas (% of rural water supply coverage)	20%	30%	C	1 6 1 3
	Implement the National Integrated Water Resources Act (NIWRA) by 2026			U	6 13 16
	Develop a National Water Resources Sectoral Action Plan (NWRSAP) aligned with the NIWRA by 2030 and implement it by 2035			C	6 13
	Build capacity on water-resources and watershed conservation with 2 training and awareness-raising campaigns by 2030 and 4 by 2035 (cumulative total no. of campaigns)			C	6 12 17
	Develop a National Sanitation and Water Strategy for water management in rural areas by 2030 and enforce it by 2033			C	6 10
	Enhance water quality in coastal areas by creating a dedicated task force by 2030			C	6 13 14
	Establish a dedicated watershed conservation unit which manages the related processes within the Ministry of Natural Resources by 2030			C	6 13 15
	Develop two (2) watershed management plans for two major watersheds that will include water quality, nutrient loading, and garbage disposal by 2029			C	6 12 13
	Develop a comprehensive Water inventory including a robust monitoring, report and update framework for the country covering all known water sources and sectors using water by 2030			C	6 17
	Examine opportunities for upscaling the pilot programme to improve wastewater treatment systems with support from financing institutions by 2030			C	6 9 17
	Implement the plans for the groundwater network by 2032 and develop plans for other regions across the country by 2035			C	6 13

7.8 Biodiversity

Belize is a key biodiversity hotspot in the Mesoamerican region. With a wealth of biodiversity and natural capital, it not only supports the nation's economy today, but is also a key part of the national identity. The country is home to a total of 118 globally threatened species of which nine are Critically Endangered, 32 are Endangered and 77 are Vulnerable (IUCN, 2016).

Belize's National Biodiversity Strategy and Action Plan (NBSAP) (2016-2020) is based on Belize's commitment to conservation and sustainable development of the nation's biological diversity. Its five goals include: Mainstreaming, Reducing Pressures, Protection, Benefits and Implementation. In line with the NBSAP, the NDC's target and actions below aim to protect and enhance the natural environment for the conservation and sustainable use of biological diversity (GOB, 2016b). Currently the NBSAP is being updated to cover a period of 10 years starting 2025, which reflects new developments in terms of biodiversity protection, and to streamline private sector into the conservation, restoration and adaptation of biodiversity rich ecosystems and services.

Table 16 - Biodiversity adaptation targets and actions

NDC 3.0 Adaptation Targets and Actions – Biodiversity			
	Description	**Cond.**	**SDG**
Targets	**1. Increase resilience of the water sector by implementing the measures in the national adaptation plan by 2035**	**C**	**6 13**
	2. Develop an integrated monitoring system which encompasses biodiversity holistically by 2030	**C**	**12 15**
Actions	Description	Cond.	SDG
	Examine opportunities for enhancement of biodiversity protection, genetic diversification and issues related to invasive species by 2030	C	13 15
	Integrate biodiversity indicators within the FOLU and coastal zone management, and tourism sectors by 2030	C	14 15
	Explore opportunities for the establishment of a nursery for varietal species, including those that are indigenous by 2028	C	13 15
	Examine financing mechanisms for the resilience and recovery of biodiversity climate change impacts by 2030	C	
	Conduct vulnerability assessments to determine areas and species in danger to climate change and its impacts by 2030	C	
	Conduct a gap assessment for the implementation of the National Biodiversity Sectoral Adaptation Plan which includes regulatory considerations for private companies and institutions by 2030	C	

7.9 Adaptation costs

Belize's adaptation costs follow the same considerations as for mitigation, such as being preliminary estimates and should be further refined before actual project implementation. The total adaptation costs were estimated at 530 million USD, as shown in Table 17. The approximate financial gap is around 90% from the total costs, which would mean that amount is still needed to implement the NDC 3.0 targets and actions for the adaptation sectors in Belize. For further information on the assumptions used, please refer to Appendix A – Costing assumptions and sources.

Table 17 - Adaptation cost and financing gap (in million USD)

Adaptation Sector Costs (MUSD)	Total costs by 2035	Funding procured	Funding gap	Funding gap (% from total)
Coastal Zones and Marine Environments	39.9	31.4	8.4	21%
Fisheries	62.5	0	62.5	100%
Aquaculture	2.9	0	2.9	100%
Human Health	71.4	7.2	64.1	90%
Tourism	264.4	0	264.4	100%
Human Settlements and Infrastructure	50.8	3.1	47.7	94%
Water Resources	40.3	12.1	28.1	70%
Biodiversity	2.1	0.1	2.0	96%
Total	**534.4**	**54.1**	**480.3**	**90%**

08 | Gender Equality, Disability and Social Inclusion

Photo by Alex Milian

Engagement with women, youth, indigenous communities and other socially marginalised groups was central to the NDC 2.0 development process. NDC 2.0 also committed to the inclusion of a gender analysis in the country's long-term strategy. This new NDC goes a step further by committing to specific actions and targets that ensure that climate action in Belize not only addresses the differentiated needs of socially marginalised and vulnerable groups; but also ensures that these groups are empowered to contribute to achieving NDC targets. Gender, equality, disability and social inclusion (GEDSI) is used here to refer to those groups that experience a higher risk of poverty and social exclusion. These include women and girls, youth, children, elderly, indigenous populations, the poor, migrants, the LGTBQ+ community, and people with disabilities (PWD).

There is a strong political commitment and will to increase gender equality in Belize. The overarching policy driving gender action in Belize is the National Gender Policy 2024 -2030. One of the guiding principles of the policy is to move gender issues to the mainstream in all national policies, regulations and programmes. Furthermore, the National Policy for Older Persons, 2002 provides protection, care, residential services to older persons and secures their participation in national development. Other key national and sectoral policies, strategies and plans on climate change have included GEDSI considerations. Belize developed its first National Climate Change Gender Action Plan (NCCGAP) 2022 – 2027 which provides guidance to all stakeholders of the climate change sector on how to mainstream gender in their policies and programmes. The National Climate Change Policy, Strategy and Action Plan 2014 has gender equity and non-discriminatory access to opportunities as a guiding principle. The National Agriculture and Food Policy 2015–2030 sets gender specific strategic objectives under the policy`s four strategic pillars. The National Energy Policy 2023 -2040 makes a bold commitment to ensure gender equality in the energy sector. One of the policy objectives is to unlock economic opportunities to unserved communities by creating local employment opportunities, improving livelihoods, reducing pressure on urban migration, and improving opportunities for women and children in the energy sector, the policy actions however do not include GEDSI it is therefore unclear how these gender commitments will be met.

The National Climate Change Policy Strategy and Master Plan (NCCPSMP), 2021-2025 however includes gender and vulnerable groups assessment and actions for each sector. The NCCPSMP details government's plan for climate mitigation and adaptation in key sectors of the economy namely agriculture; land use change, forestry, and biodiversity; fisheries and aquaculture; coastal and

marine resources; water resources; land use, human settlements, and infrastructure; tourism; human health; energy; transportation; waste management; and education. In 2022, a Training Manual was developed to facilitate gender mainstreaming in Climate Change Policies, Strategies, and Programme Development. The capacity of over 30 government and civil society organizations were enhanced to mainstream gender into climate policies and projects. A gender analysis is conducted for the Integrated Water Resources Management, National Adaptation Plan, 2024.

A Multi-sectoral National Adaptation Plan (MNAP) is currently under development. The MNAP will take into consideration the needs of women, youth, men, vulnerable people as well as local and indigenous communities. A Fisheries Gender Analysis has been completed. A fisheries gender analysis and gender strategy and action plan has also been completed to ensure gender mainstreaming in the fisheries sector.

In addition to these strategic national documents, several GEDSI activities have been carried out to promote gender mainstreaming in climate action. A gender focal point to the United Nations Framework Convention on Climate Change (UNFCCC) was appointed in 2023. In the same year 30% of Party delegates to subsidiary body meetings and Conference of Parties (COPs) were women; this percentage increased to 40% in 2024. A youth forum has been organised every year since 2002 to gather youth perspectives for COPs. The Resilient Rural Belize Programme has a target to have at least 40% of the programme beneficiaries as women and 20% as youth. Finally, the Climate Resilient and Sustainable Agriculture Project, a project aimed at promoting the adoption of climate-smart agricultural approaches, aims to have 30% of the 3,700 target beneficiaries as women.

The key institutions that drive GEDSI action in Belize are Ministry of Human Development, Family and Indigenous People`s Affairs; National Women´s Commission; Family Support and Gender Affairs Department; Department of Human Services; National Commission for Families and Children; National Council on Older Persons: and the Ministry of Youth, Sports and Transport.

Consultation with GEDSI stakeholders for this NDC shed light on the unique and disproportionate impact of climate change on women and other socially marginalised groups. It also shed light on their unique positions and knowledge as key contributors to climate action. Women in Belize occupy key positions, for example, women comprise almost half of all Supreme Court Judges (44%) and account for majority of the Magistrate Court Judges (72%); additionally, all Registrars are women. Women own a majority (59%) of the businesses that are

members of the Belize Chamber of Commerce and Industry. GEDSI actions and targets of this NDC are outlined under three subsections below, namely cross-cutting actions, adaptation actions and mitigation actions.

Table 18 details the proposed actions related to GEDSI accompanying the broader sectoral targets and actions, aimed at enhancing considerations of gender equality, and inclusion and engagement for vulnerable groups including indigenous communities, ageing population and youth into the broader sectoral planning process for cross-cutting, mitigation and adaptation related sectors.

Table 18 - Cross-cutting, mitigation and adaptation GEDSI proposed actions

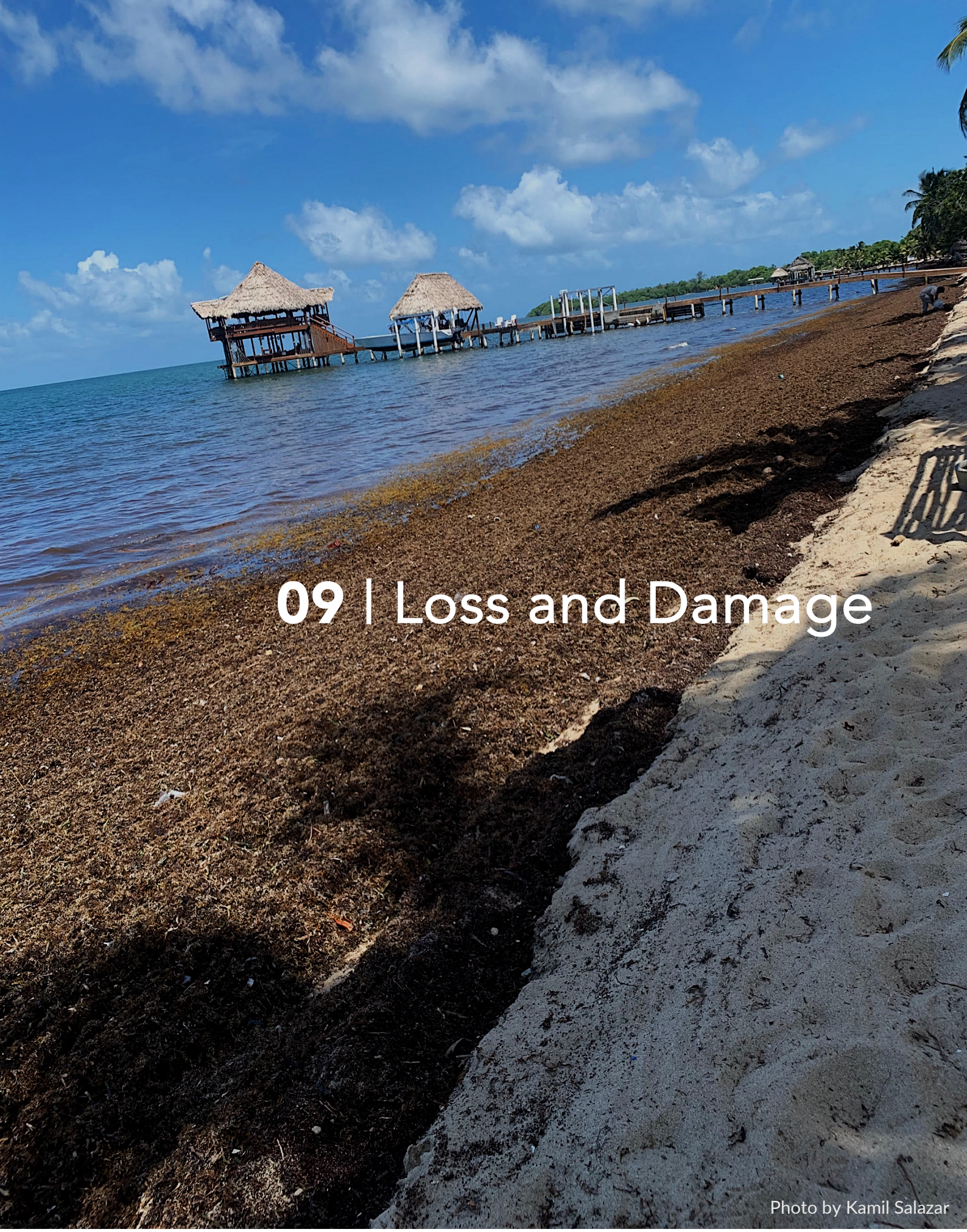
Cross Cutting Actions
• Seek the opportunities and activities of this NDC to develop gender disaggregated data.
• Include the knowledge of women, indigenous peoples, youth, children, PWD, and all other marginalised groups, through inclusive consultative approaches across sectors in the development and implementation of climate policies and programmes as well as in decision making processes.
• Increase women's representation at COPs and subsidiary body meetings by at least 50% by 2027.
• Innovative projects on climate change that contribute to transforming gender relations, designed by and for women, measure impacts on gender gaps and enhancing women's agency and innovations will be explored through the NDC implementation process.
• Build competencies and capacities of communities at local levels to engage in climate change governance and decisions.
• Co-host peer-to-peer training retreats on climate change /GEDSI contexts and practices.
• Co-host peer-to-peer design workshops on climate change/GEDSI indicators, indexes and identify common social indicators per sector.
• Promote awareness and sensitisation of climate change amongst the youth and children.
• In order to ensure inclusive climate governance, mitigation and adaptation measures must institutionalize the representation of indigenous peoples within committees or bodies developed to track the NDC Development Process, as well any monitoring systems within the Forest Department. All climate actions must respect free and prior informed consent (FPIC) principles, with structured consultations at each stage of project design and implementation.

• Enhance access by GEDSI groups to climate finance through targeted programs under the Green Climate Fund and Adaptation Fund.
Mitigation actions
• Design specific incentives for women, indigenous peoples, PWD, low-income groups, rural communities and other marginalised groups who have decreased purchasing power in RE, EV and climate smart agriculture financial schemes.
• Include at least 30% of women, youth and indigenous owned businesses in capacity building activities on RE and EE.
• Consider the mobility patterns of GEDSI groups in feasibility analysis for EV penetration and transport master plan. Feasibility analysis should include options for the use of both digital and non-digital options for accessing public EV buses that would enable access to the elderly, the less educated and other social groups that are not digitally apt.
• Identify existing occupational segregation that may exist within the recycling sector and address barriers that GEDSI groups may face in the sector.
• Set GEDSI quotas for campaigns and capacity building activities on recycling and waste management, agrosilvopastoral systems and climate smart agriculture. Specifically, target waste management campaigns in schools. Capacity building activities should be tailored to address the needs of GEDSI groups and consider opportunities for income generation.
• Mainstream the risks, opportunities, and necessities of women, indigenous communities, youth, PWD, children and the poor in the development and implementation of harmonized sustainable waste management policies and plans. The plans should consider integrating community-based adaptation approaches.
Adaptation actions
• Set GEDSI quotas for capacity building activities, training and awareness campaigns on sustainable practices for fisheries and aquaculture; tourism private sector on sustainable tourism practices; water resources and watershed conservation and climate related diseases and impact on health. Tailor training to their needs.
• Mainstream GEDSI in fisheries regulations and Management Plan.
• Create a gender desk or function in the Inland Fisheries Management Authority. The function will be responsible for ensuring inclusivity (e.g. age, disability etc.) in the work of the Authority.
• Mainstream GEDSI in health infrastructure master plan, resilience infrastructure plan, housing policy, water management policy framework and

disaster risk response plan. Capture the vulnerabilities of the aged, children, PWD to climate change.
• Include GEDSI considerations in vulnerability assessment for key tourism areas. The vulnerability assessment process should include contributions from GEDSI groups.
• Prepare gender assessment to inform GEDSI mainstreaming in National Remediation Plan for environmental impact on the tourism sector. The plan development process should include contributions from GEDSI groups.
• Design financial incentives for the adoption of low emissions technologies by women and other marginalised groups in the tourism sector.
• Ensure equitable access to climate-resilient infrastructure and basic social services by women, PWD, children, youth and indigenous communities to reduce their exposure to sea level rise, saltwater intrusion, flood and other climate hazards.
• Ensure the representation of GEDSI groups in the watershed conservation unit under the Ministry of Natural Resources.
• Collect disaggregated data on risks and needs of children on food security.
• Develop a response plan programme to climate impacts including heatwaves, vector and non-vector borne diseases which considers the special needs of children, elderly and other vulnerable population by 2030.
• Implement area specific adaptation strategies that provide guidance on adapting to impacts of climate change, paying keen attention to indigenous communities.
• Promote and enhance land stewardship practices underway in indigenous communities when implementing policies and policy frameworks for incorporating responsible and climate-sensitive (and water-sensitive) development and land use.

These GEDSI actions, targets and commitments of this NDC aligns with the NCCPSMP and the NCCGAP.

The achievement of some of these targets will depend on the availability of international support. In addition to international support, the government will use GEDSI responsive budgeting to raise finance at the domestic level to implement these targets



09 | Loss and Damage

Photo by Kamil Salazar

Belize recognizes that despite its ambitious mitigation and adaptation efforts across various sectors, the country remains highly vulnerable to the adverse impacts of climate change, and to the unavoidable loss and damage arising from extreme weather and slow-onset events. The expected increased frequency and intensity of extreme weather events, along with other impacts such as sea level rise, coastal erosion, and ecosystem degradation, pose significant threats to livelihoods, infrastructure, and natural resources. In this sense, addressing loss and damage is critical to safeguard any gains made through adaptation and community resilience actions in key sectors such as health, tourism, water resources, and human settlements and infrastructure, as well as in cross-cutting areas like biodiversity conservation and forestry and agriculture.

Belize's approach to loss and damage is grounded in strengthening the country's capacity to anticipate and recover from climate-related shocks while ensuring the protection of the most vulnerable populations and ecosystems. This includes integrating risk reduction, disaster preparedness, and climate-resilient development across sectors, alongside promoting nature-based solutions and enhancing social safety nets. Furthermore, Belize is committed to actively engaging in global dialogues on loss and damage under the UNFCCC and taking part in international loss and damage reduction mechanisms to streamline climate finance for these ambitious efforts, such as operationalisation of financial funding mechanisms and procurement of technical support to assist countries like Belize in addressing the irreversible impacts of climate change.

Belize is currently receiving technical assistance support to develop a National Loss and Damage Framework, to understand better the current policy and development circumstances surrounding L&D in the country, the level of irremediable losses and damages at different levels and examine opportunities to alleviate some of the multisectoral implications of L&D.

The NDC 3.0 recommends the following considerations for loss and damage for each sector, as shown in Table 19 below. It is worth keeping in mind that these considerations are not exclusive in the sense that they try to cover all the potential issues and are only indicative of conditional support from the international community to be implementable. These considerations might be

further refined, reworked, and developed into specific projects or programmes addressing one or many of the issues presented here.

Table 19 - Loss and Damage Proposed Interventions

NDC 3.0 Loss and Damage
Agriculture
• Examine opportunities for wide crop insurance to cover all Belizean farmers. • Integrate risk management plans with early warning systems for droughts.
Forestry and Other Land-Use (FOLU)
• Develop biodiversity corridors to protect species migration. • Develop community-based initiatives and program that builds capacity in community-based fire management and response, and for hazardous fuel reduction using prescribed burns in fire dependent ecosystems • Employ early dry season/late wet season prescribed burns to contribute to carbon sequestration and reduce impacts of severe dry season fires • Draft a new "Forest" or "Wildland" Fire Bill with enhanced provisions incorporating community participation, climate change issues, and alignment with sustainable forest management principles, ensuring that forest fire prevention and management practices contribute to the long-term health and resilience of forests • Expand ecosystem restoration efforts in most degraded areas to enhance and protect biodiversity and ecosystem services • Examine funding opportunities for post-disaster recovery of natural habitats.
Coastal Zones and Marine Environments
• Develop and implement a coastal erosion monitoring programme in all vulnerable and tourism areas. • Examine pilot projects for blue infrastructure and Nature-based Solutions (NbS) in coastal areas for enhanced resilience to flooding and salt intrusion • Develop coastal buffer zones in high-risk protected areas based on previous assessments and ongoing sectoral work. • Examine parametric insurance schemes for communities impacted by sea level rise and flooding. • Develop post-storm repair systems to maintain extreme weather protection benefits of intact coral reefs for coastal communities
Fisheries
• Promote disaster relief planning to assist fishers after natural disasters, and to establish a relief fund for the fisheries sector such as the COAST parametric Insurance or a livelihood protection Insurance policy for fisheries sector and vulnerable fishing communities.

• Evaluate the potential of transforming temporary emergency relief funds into a permanent support mechanism for fisher dependent communities. • Implement vocational training and microenterprise support initiatives that enable fishers to transition into sustainable non-fishing income streams where appropriate.
Aquaculture
• Evaluate the creation of financial instruments for ecosystem and economic recovery for aquaculture and mariculture dependent communities. • Upgrade aquaculture zones to develop climate-resilient green and gray infrastructure • Designate and upgrade specific areas to develop climate-resilient aquaculture zones.
Human Health
• Develop emergency health response plans and training for main hospitals and health centres. • Create community-based health support networks including communication channels, check-in protocols and evaluation protocols for vector and non-vector borne disease prevention • Establish regional partnerships for knowledge and lessons learnt exchange and post-disaster rapid recovery. • Create climate-resilient medical supply reserves for enhanced emergency-response.
Tourism
• Provide disaster preparedness training for tourism private sector. • Develop resilient tourism infrastructure standards • Examine funding opportunities for rapid recovery funds for tourism-dependent communities post-disaster.
Human Settlements and Infrastructure
• Retrofit essential infrastructure in flood-prone areas • Launch housing upgrade programs in high-risk zones. • Build comprehensive disaster protection systems within human settlements and key infrastructure • Mandate resilient building codes in all regions • Establish relocation assistance.

Water Resources
• Expand rainwater harvesting and storage in drought prone areas. • Establish a flood response task force with support from local community members. • Develop project concepts for blue-green infrastructure solutions for enhanced resilience of water resources in urban areas. • Develop saltwater intrusion barriers in high-risk coastal areas.

10 | Sustainable Development Goals and the NDC

Photo by Kamil Salazar

The Sustainable Development Goals (SDGs) are a global set of seventeen (17) goals shown in Figure 4, that were developed by the United Nations Member States, as part of the 2030 Agenda for Sustainable Development. These goals provide a common map to be followed by all countries and people, aiming to attain peace and prosperity in the world through sustainable development for people and the planet.

Implementing an NDC and achieving a certain level of climate ambition could have far reaching implications and contributions to many of the SDGs, and a country can specifically benefit from synergies with NDCs because of broader socioeconomic and environmental co-benefits that match national development priorities and strategies.

Figure 4 - Sustainable Development Goals of the UN (UN, 2015)

Belize's NDC 3.0 identified synergies between the targets, actions and the SDGs. Many of the measures to mitigate or adapt climate change contribute to a certain degree with a multitude of SDGs, as for example dealing with energy access (SDG 7), sustainable cities (SDG 11), clean water and sanitation (SDG 6), health (SDG 3), and the conservation of biodiversity (SDGs 14 and 15), among others.

There are many associated co-benefits from aligning with the vision of the 2030 Agenda for Sustainable Development. Many of these are hidden in plain sight but can be very relevant for improving the livelihoods, ecosystem services and opportunities of a country. The final purpose of achieving the level of ambition as pledged in the NDC 3.0 process is to ultimately promote inclusive, equitable, and sustainable development by integrating considerations and guidance from the SDGs into the planning and implementation of future sectoral actions.

11 | Implementation Considerations

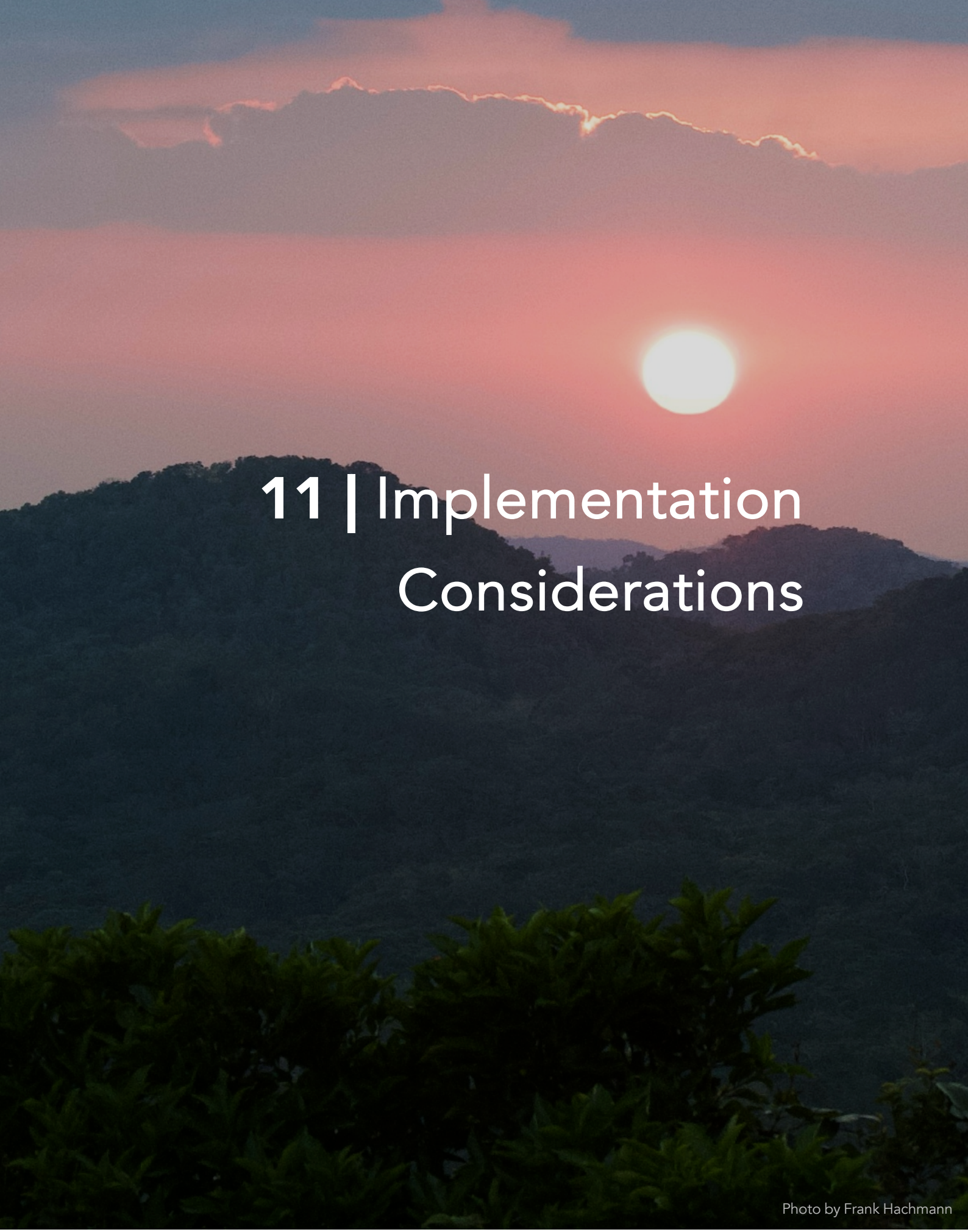


Photo by Frank Hachmann

Belize's NDC 3.0 outlines a mix of both conditional and unconditional commitments, thus acknowledging the significant support needed to fully deliver on its climate ambition. Unconditional actions include those that are already backed by national policies or regulations, with funding either allocated through the national budget or already committed from development partners. Some of these include efforts like scaling up utility-scale solar PV, enforcing currently adopted regulations or policies, such as the Forest Regulations or the Fisheries Resources Act.

Conditional commitments, on the other hand, cover a broader range of high-impact actions that can only be fully realised with international climate finance support. These focus on issues related to technical assistance, capacity building or the implementation costly interventions. The conditionality of the targets and actions committed in Belize's NDC 3.0 include some of the most vulnerable sectors, such as waste management, biodiversity, public health, and climate-resilient infrastructure, where domestic funding falls short and private investment is harder to mobilise given the difficulty in generating profitability. Meeting these needs will require access to climate finance through a multitude of financial mechanisms, such as grants, results-based mechanisms, and opportunities under Article 6 of the Paris Agreement. Additional support will also be key to unlocking public-private partnerships in potential areas with high upfront costs.

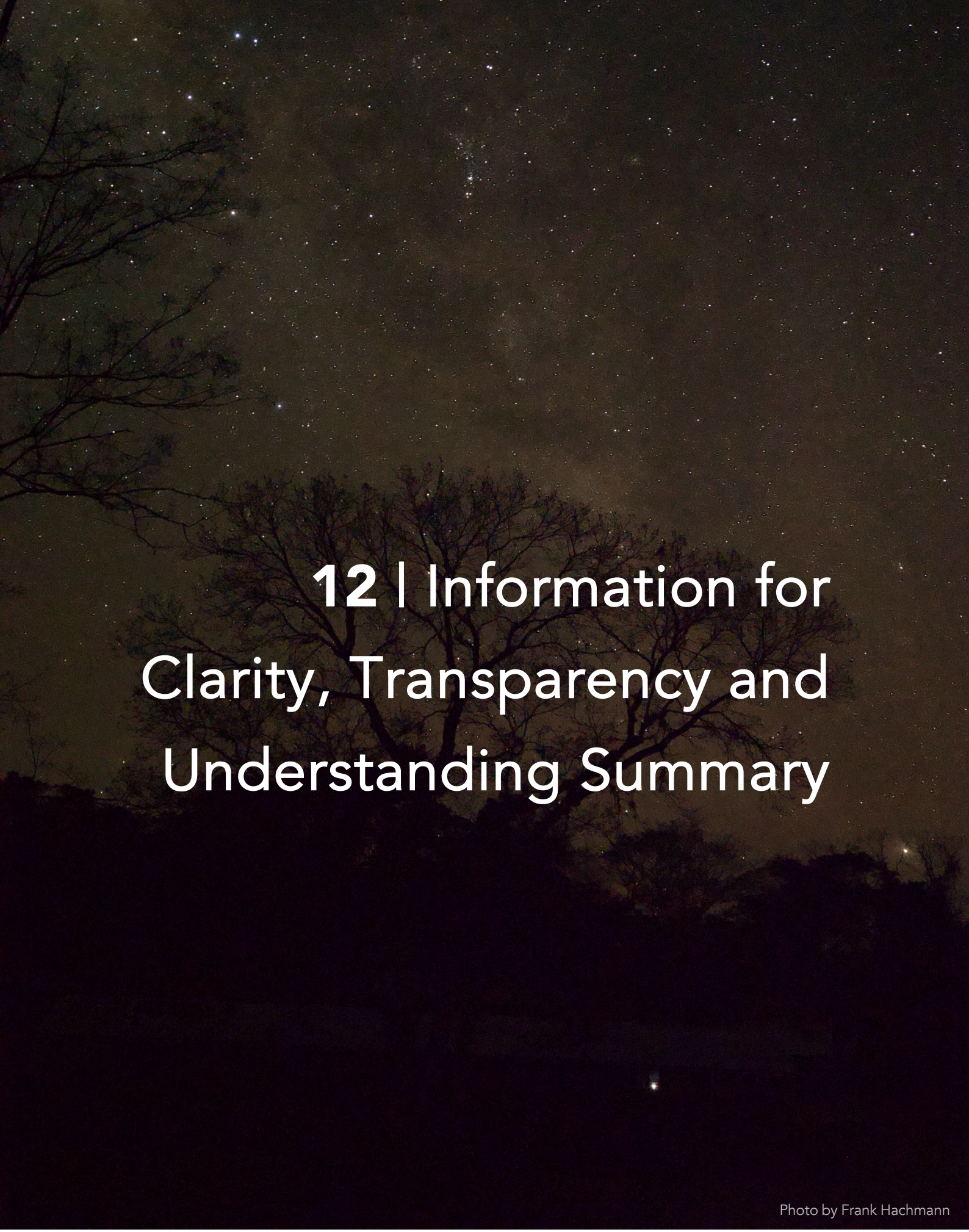
Table 20 - NDC 3.0 total costs and financing gap (in million USD)

Total NDC 3.0 Costs (MUSD)	Total costs by 2035	Funding procured	Funding gap	Funding gap (% from total)
Mitigation	608.7	153.5	455.2	75%
Adaptation	534.4	54.1	480.31	89%
Cross-cutting	412.4	26.7	385.8	94%
Total	1,555.5	234.2	1,321.3	85%

The total costs estimated for the NDC amount to almost 1.6 billion USD with an estimated total financing gap of 85% from the total costs as shown in Table 20 above.

Beyond financing, long-term investment in human and institutional capacity, access to appropriate technologies, and cohesive and centralised monitoring and reporting systems will be vital to achieving the NDC's goals. The Government of Belize remains fully committed to working with regional and international partners to ensure support reaches where it is most needed, thus laying the foundation for an inclusive, equitable, and sustainable future that protects the whole population and the natural environments of Belize.

Finally, to support the effective delivery of the commitments outlined in Belize's NDC 3.0, the accompanying NDC Implementation Plan will be updated to reflect the new NDC additions and changes from the previous iteration. This iteration of the NDC implementation plan will provide a more detailed and structured roadmap for actionable items, including clearly defined outcomes, outputs, and activities aligned with each sectoral target. It will also outline indicative timelines, responsible institutions, milestones, estimated costs and performance indicators, serving as a key tool for coordination, investment planning, and progress tracking. The Implementation Plan will be developed in collaboration with sectoral stakeholders to validate, integrate and reflect their priorities based on their sectoral expertise, while also advocating for ownership and accountability in Belize's climate action implementation.



12 | Information for Clarity, Transparency and Understanding Summary

Photo by Frank Hachmann

Information for Clarity, Transparency and Understanding (ICTU) for Belize's NDC 3.0	
1. Quantified information on the reference point, including, as appropriate, a base year	
a Reference year(s), base year(s), reference period(s) or other starting point(s)	The reference year used in Belize's NDC 3.0 is 2020. Quantified avoided emission calculations were modelled and carried out for different policy measures, but the final NDC targets were taken with respect to a posited Business-As-Usual (BAU) scenario using the 2020 emission levels as the reference. The first scenario year is 2024, with historical data provided up to that year.
b. Quantifiable information on the reference indicators, their values in the reference year(s), base year(s), reference period(s) or other starting point(s), and, as applicable, in the target year	The BAU scenario takes the reference emission levels from 2020 to develop the pathway followed by the mitigation sectors using a set of actions as stated in the complementary target and action tables in each of the subsections for the mitigation and cross-cutting sectors in Belize's NDC 3.0. The avoided emissions and carbon sequestration enhancement were then calculated using the 2020 levels as a cumulative quantified value.
c. For strategies, plans and actions referred to in Article 4, paragraph 6, of the Paris Agreement, or polices and measures as components of nationally determined contributions where paragraph 1(b) above is not applicable, Parties to provide other relevant information	Belize has already developed its Long-Term Low Emissions Development Strategy and Action Plan 2021-2050 to have a guiding framework for net-zero towards mid-century and is currently undergoing the development process for a multisectoral National Adaptation Plan to enhance the country cross-sectoral adaptation ambition.
d. Target relative to the reference indicator, expressed numerically, for example in percentage or amount of reduction	Electricity: Cumulative avoided emissions of 326 and 791 $ktCO_2e$ by 2030 and 2035, respectively, with respect to BAU emissions using 2020 as the base reference year. Transport: Cumulative avoided emissions of 127 and 312 $ktCO_2e$ by 2030 and 2035, respectively, with respect to BAU emissions from 2020 levels.

	AFOLU: Cumulative net carbon sink of 2,555 and 5,110 ktCO₂e by 2030 and 2035 respectively from 2020 levels. **Waste: Cumulative avoided emissions of 8.5 and 21 kTonCO₂e by 2030 and 2035 respectively from 2020 levels.**
e. Information on sources of data used in quantifying the reference point(s)	Main sources of data for establishing the historical baseline of energy consumption (and therefore emissions) in that sector are the annual Energy Balances as published in the Energy Report by the Energy Unit, Ministry of Public Utilities, Energy, Logistics, and E-Governance, Belize, as well as data in the Biennial Transparency Report published in 2024. In the AFOLU Sector, the main sources of data include the previous greenhouse gas inventories from 2020 and 2024, and the Zero-Forest Reference Level from 2022. For the waste and transport sectors main sources of data also include previous greenhouse gas inventories, the National Transport Master Plan and relevant ongoing projects in the country such as the Solid Waste Management Project II. • National Energy Balances - Ministry of Public Utilities, Energy, Logistics, and E-Governance (MPUELE) • Annual Reports – Belize Electricity Limited (BEL) • National Transport Master Plan – Ministry of Youth, Sports, and Transport • Belize Zero Forest Reference Level – Ministry of Sustainable Development, Climate Change, and Solid Waste Management (MSDCCSWM) • Belize Greenhouse Gas Inventory 2020 and National Inventory

	Document 2024 – Government of Belize (GOB). • Belize First Biennial Transparency Report (BTR) 2024 – GOB • Other sector specific policies, plans or strategies with available data (please refer to the specific sectors included in the NDC for more information)
f. Information on the circumstances under which the Party may update the values of the reference indicators	Belize may update the base year data and emissions on the basis of updated accounting methodologies, additional available or revised information.
2. Time frames and/or periods for implementation	
a. Time frame and/or period for implementation, including start and end date, consistent with any further relevant decision adopted by the CMA;	The targets are a continuation and expansion of the efforts listed in the first and second NDC, to meet the targets for 2025, updating or maintaining 2030 targets, and expanding the implementation up to 2035.
b. Whether it is a single-year or multi-year target, as applicable.	Single Year Target for 2035 with interim milestones by 2030
3. Scope and coverage	
a. General description of the target;	Belize's 2035 target is a cumulative avoided emissions amounting to 6.2 MTonCO_2e (including sequestration and avoided emissions) from all the mitigation efforts when compared against a business-as-usual trajectory using 2020 as the baseline year. The mitigation quantified contributions include energy (electricity and transport), AFOLU, and waste.
b. Sectors, gases, categories and pools covered by the nationally determined contribution, including, as applicable, consistent with IPCC guidelines;	Sectors: • Energy: electricity generation and transportation, energy end-use • Agriculture, Forestry and Other Land-Use • Waste Gases: • Carbon Dioxide (CO_2) • Methane (CH_4) • Nitrous Oxide (N_2O)

	A co-benefit of reducing CO_2 emission from the electricity generation and transportation sectors is that there will also be concomitant reductions in emissions in other gases like NMVOCs.
c. How the Party has taken into consideration paragraphs 31(c) and (d) of decision 1/CP.21;	As per paragraph 31(c) and (d) of decision 1/CP.21, Belize has strived for consistency and inclusion of all IPCC sectors and gases in its NDC, however, data is still missing to do so. sectoral data to include Industrial Processes and Product Use (IPPU) is still missing, along with data for including other gases such as fluorinated compounds, ozone and other greenhouse gases.
d. Mitigation co-benefits resulting from Parties' adaptation actions and/or economic diversification plans, including description of specific projects, measures and initiatives of Parties' adaptation actions and/or economic diversification plans.	The actions included in the updated NDC are reflective of Belize's national development plans and will help to deliver the goals of economic development, social support and resource efficiency. The specific co-benefits of each action is represented by the relevant Sustainable Development Goals supported through delivery of the action. These SDGs include: 1, 2, 3, 5, 6, 7, 8, 9, 10, 11, 12 13, 14, 15,17.
4. Planning process	
a. Information on the planning processes that the Party undertook to prepare its NDC and, if available, on the Party's implementation plans, including, as appropriate:	
i. Domestic institutional arrangements, public participation and engagement with local communities and indigenous peoples, in a gender-responsive manner;	Led by the National Climate Change Office (NCCO) and building on lessons learnt from the multi-stakeholder engagement process implemented in 2020 to develop the updated Nationally Determined Contribution (NDC), Belize began the revision process in 2023. Belize has received technical assistance from Climate Analytics (CA) to develop its NDC 3.0. Building on the modelling from the previous NDC using the Low Emissions Analysis Platform (LEAP), including updates to the model made by the

	Energy Unit, updated scenarios were developed to reflect new circumstances and planning. The NCCO, with support from CA, led a series of multi-stakeholder gender-responsive bilateral consultations and interactive workshops, with stakeholders including Government Ministries, private sector, civil society and youth. The feedback received from stakeholders at the various consultation stages was taken into consideration in the target setting, modelling of the energy sectors and the mitigation and adaptation options being considered. Belize's NDC was developed in close collaboration with several heads of department and sectoral experts from a multitude of governmental ministries and agencies, to advocate for alignment with the latest sectoral developments and priorities. The NDC was then endorsed and adopted by Cabinet before submission to the UNFCCC. Belize is however, currently working on strengthening the role of the National Climate Change Committee (NCCC) by streamlining the process for its cross-sectoral involvement through its various representatives, such as the head of the NCCC, the technical and the financial sub-committees.
ii. Contextual matters, including, inter alia, as appropriate:	
a. National circumstances, such as geography, climate, economy, sustainable development and poverty eradication;	**Geography:** Belize is situated on the eastern coast of Central America, bordered to the north by Mexico, to the west and south by Guatemala, and to the east by the Caribbean Sea. Covering an area of roughly 22,966 square kilometres, the country exhibits a diverse landscape ranging from low-lying coastal plains and expansive mangrove swamps to the mountainous terrain of the Maya Mountains. In addition to its mainland,

	Belize encompasses over 1,060 cayes, which, alongside its extensive coastline of approximately 386 kilometres, contribute to its rich marine biodiversity and provide a foundation for the nation's fisheries and tourism sectors. **Climate:** The climate in Belize is predominantly tropical, marked by distinct rainy and dry seasons. The rainy season, which typically spans from June to November, is characterised by heavy rainfall driven by tropical waves, storms, and hurricanes, while the dry season, from December to May, features cooler conditions influenced by cold fronts from North America. This climatic variability not only shapes the country's natural ecosystems but also has significant implications for agriculture and water resource management. Moreover, Belize is increasingly vulnerable to the impacts of climate change, including rising temperatures, more intense rainfall events, and sea level rise, all of which threaten both its natural environment and infrastructure. **Economy:** Economically, Belize is classified as an upper middle-income country with a service-oriented economy that accounts for approximately 70% of its output, largely driven by tourism, financial services, and trade. The nation has experienced moderate GDP growth in recent years, although challenges such as a high debt-to-GDP ratio and the economic disruptions caused by the COVID-19 pandemic have underscored its vulnerability. A significant portion of the population lives in poverty—estimates from 2009 indicate that about 42% of Belizeans were living below the poverty line—highlighting persistent socio-economic disparities. These economic challenges are compounded

	by the country's limited domestic capacity to generate public revenue and the heavy reliance on imported goods and services. **Sustainable development:** Sustainable development in Belize is guided by a comprehensive framework that integrates environmental sustainability with economic and social objectives. Key national strategies, such as the Growth and Sustainable Development Strategy (GSDS), Horizon2030, the Long-Term Low-Emission Strategy, the current process for the development of sectoral National Adaptation Plans (NAPs) and National Sustainable Management Plans in key economic sectors such as tourism and coastal zones align the country's development priorities with its international commitments under the Paris Agreement. These policies prioritise low-emission growth, renewable energy development, and robust climate adaptation measures through an ongoing adaptation process. **Poverty eradication:** Poverty eradication is a central pillar of Belize's sustainable development agenda. Despite being classified as an upper middle-income country, Belize faces significant challenges in reducing poverty and ensuring inclusive growth. Recent assessments indicate that around 26.4% of the population was living in poverty as of 2023. This situation is compounded by vulnerabilities linked to climate change and limited domestic revenue, necessitating integrated policies that address both socio-economic disparities and environmental risks.
b. Best practices and experience related to the preparation of the NDC;	The following are some of the best practices that have been identified during the preparation of Belize's NDC:

	● **Extensive Stakeholder Consultation**: Belize's NDC 3.0 were developed through a nationwide multi-tiered engagement strategy. Stakeholders from government agencies, the private sector, civil society, and academia participated in structured dialogues, bilateral meetings, and thematic workshops, ensuring diverse representation. This inclusivity-built ownership fostered transparency via feedback loops on data and proposals, and enhanced capacity by clarifying climate action's link to local development. Coastal communities, indigenous associations, and women's groups contributed, resulting in more accurate, feasible, and well-supported national commitments. ● **Evidence-based planning:** Belize anchored its NDC process in evidence-based planning, using greenhouse gas inventories, cost-benefit analyses, and scenario modeling for rigorous target-setting. Belize's Updated NDC sets measurable outcomes in critical sectors, including energy, transport, AFOLU, and waste. Such targets are bolstered by detailed sub-actions. ● **Policy Coherence:** Belize's NDC 3.0 were methodically aligned with the long-term vision established in "Horizon 2030: National Development Framework," Belize's Long Term Low-Emission Development Strategy, The National Adaptation Process and the national master plans, ensuring a comprehensive and harmonized approach to climate resilience and sustainable growth ● **Emphasis on Gender Approach and Vulnerable Populations**: Recognising the disproportionate impacts of climate change on women and marginalized groups, Belize incorporated a GEDSI (Gender Equality, Disability, and Social

	Inclusion) approach, undertook targeted consultations with local women's networks and vulnerable local communities, and encouraged the use of disaggregated data. These efforts helped shape policies for inclusive agricultural extension, coastal resource management, and social protection measures. As a result, the Updated NDC outlines concrete steps to reduce gender disparities, from climate-smart farming projects for rural women to dedicated support for indigenous communities
iii. Other contextual aspirations and priorities acknowledged when joining the Paris Agreement;	
c. Specific information applicable to Parties, including regional economic integration organizations and their Member States, that have reached an agreement to act jointly under Article 4, paragraph 2, of the Paris Agreement, including the Parties that agreed to act jointly and the terms of the agreement, in accordance with Article 4, paragraphs 16–18, of the Paris Agreement;	Belize is not part of an agreement to act jointly under Article 4 of the Paris Agreement.
d. How the Party's preparation of its NDC has been informed by the outcomes of the global stocktake, in accordance with Article 4, paragraph 9, of the Paris Agreement;	The first Global Stocktake took place in 2023, calling for a tripling of renewable energy and doubling of energy efficiency. Belize is committed to the implementation, monitoring and evaluation tools to inform the progress on the targets proposed in this NDC and the NAP process, consistent with the GST
e. Each Party with an NDC under Article 4 of the Paris Agreement that consists of adaptation action and/or economic diversification plans resulting in mitigation co-benefits consistent with Article 4, paragraph 7, of the Paris Agreement to submit information on:	
i. How the economic and social consequences of response measures have been considered in developing the NDC;	The effects on vulnerability, resilience, economic transformation and standards of living were considered in developing the revised NDC.
ii. Specific projects, measures and activities to be implemented to contribute to mitigation co-benefits,	Belize's specific projects established in the LT-LEDS, the sectoral NAPs, and the developing framework such as Horizon

including information on adaptation plans that also yield mitigation co-benefits, which may cover, but are not limited to, key sectors, such as energy, resources, water resources, coastal resources, human settlements and urban planning, agriculture and forestry; and economic diversification actions, which may cover, but are not limited to, sectors such as manufacturing and industry, energy and mining, transport and communication, construction, tourism, real estate, agriculture and fisheries.	2030 integrated actions that not only reduce GHG emissions but also enhance resilience to climate change impacts in critical sectors such as energy, water resources, coastal protection, agriculture, forestry, and tourism. The following highlights key projects and measures designed to achieve mitigation co-benefits while also contributing to adaptation objectives and economic diversification: 1. Renewable Energy and Energy Efficiency • **Grid-Scale Solar and Wind Projects:** Expanding the share of renewables in Belize's energy mix through utility-scale solar farms and wind installations. These initiatives reduce reliance on imported fossil fuels, lower emissions from electricity generation, and improve energy security. They also increase resilience by diversifying the national energy supply and ensuring stable electricity during extreme weather events. • **Distributed Renewable Generation:** Offering incentives for rooftop solar photovoltaic (PV) systems on residential, commercial, and public buildings. Such distributed systems reduce GHG emissions while enhancing local energy self-sufficiency, particularly in rural communities vulnerable to storms and grid disruptions. • **Efficient Public Infrastructure:** Retrofitting government facilities and key public institutions (e.g., hospitals, schools) with LED lighting, advanced cooling systems, and energy

	management controls. These interventions not only cut emissions and utility costs but also prolong the lifespan of critical infrastructure facing climate risks. 2. Sustainable Water Resource Management • **Watershed Protection and Restoration:** Implementing upstream reforestation and riparian buffer zones in key watersheds. By stabilizing riverbanks, filtering runoff, and increasing soil moisture retention, these actions reduce sedimentation—improving water quality and mitigating flood risks. Simultaneously, reforestation sequesters carbon, contributing to Belize's net sink objectives. • **Climate-Smart Irrigation Systems:** Promoting drip and sprinkler irrigation technologies that minimize water use and energy consumption. Such systems are especially beneficial in drought-prone regions and help farmers adapt to shifting rainfall patterns. Improved water efficiency also lowers indirect emissions from water pumping and distribution. • **Rainwater Harvesting:** Encouraging the installation of rooftop rainwater harvesting and storage structures for agricultural and domestic use. The stored water ensures greater resilience during dry spells while reducing the

	demand on grid-powered water supply systems, thereby lowering energy consumption and associated emissions. 3. Coastal Zone and Marine Resource Preservation • **Mangrove Conservation and Restoration:** Conserving existing mangrove forests and replanting degraded coastal buffers. Beyond sequestering carbon, mangroves serve as natural barriers against storm surges and sea-level rise, protecting shoreline communities and vital infrastructure. They also sustain fisheries by providing critical habitats for juvenile fish populations. • **Coral Reef Rehabilitation:** Scaling up coral nurseries and reef restoration techniques to foster healthy reef ecosystems. Robust coral reefs absorb wave energy and reduce coastal erosion, while also supporting ecotourism opportunities, such as diving and snorkeling, that promote sustainable local livelihoods. 4. Sustainable Agriculture and Forestry • **Agroforestry and Climate-Smart Crop Practices:** Integrating fruit trees and hardwood species into crop systems, thereby diversifying farmers' income and improving soil health. Agroforestry systems enhance biodiversity, reduce fertilizer demand, and create carbon sinks. Crop rotation, cover cropping, and organic soil amendments protect against soil degradation, limit fertilizer-derived nitrous

	oxide emissions, and increase resilience to erratic weather. • **Reduced Deforestation and Forest Degradation:** Strengthening enforcement in protected areas, launching avoided deforestation initiatives, and promoting community-based sustainable forestry. These activities help maintain Belize's high forest cover, safeguarding carbon stocks and ecosystem services while supporting sustainable timber and non-timber forest product value chains. • **Livestock Emissions Management:** Encouraging pasture rotation, improved fodder, and dietary supplements to reduce enteric fermentation in cattle. Improved livestock waste management techniques—like biogas digesters—convert methane emissions into usable energy, cutting GHGs and enhancing on-farm energy self-sufficiency. 5. Resilient Infrastructure, Urban Planning, and Housing • **Green Building Standards:** Adopting and enforcing climate-resilient building codes that integrate passive cooling, sustainable materials, and water-efficient plumbing. This approach reduces energy-related emissions, lowers vulnerability to heatwaves, and curbs water demand in urban settings. • **Climate-Proofing Transportation:** Planning and designing roads, bridges, and

	transit infrastructure with elevated drainage standards, thus minimizing flood-related disruptions. In parallel, transitioning public transport fleets toward cleaner fuels and electric vehicles reduces local air pollution, cutting carbon emissions while providing a reliable and safe service during adverse weather events. • **Low-Carbon Urban Design**: Encouraging mixed-use neighborhoods that co-locate residential areas, commercial centers, and green spaces. Such approaches reduce vehicle miles traveled and preserve green corridors for urban flood mitigation. 6. Economic Diversification Initiatives • **Sustainable Tourism:** Developing eco-friendly resorts, enforcing sustainable fishing practices, and establishing community-led tourism ventures. These measures enhance the sector's climate resilience by preserving natural attractions (reefs, mangroves, wildlife sanctuaries) and reducing energy and water consumption, thereby cutting the tourism industry's carbon footprint. • **Green Manufacturing and Industry:** Working with local producers to adopt clean production technologies, reuse industrial by-products, and encourage waste-to-energy systems.

	Strengthening environmental standards bolsters competitiveness while reducing overall GHG emissions. • **Agro-Processing and Value-Added Agriculture:** Promoting local agro-industries (e.g., citrus and cacao product manufacturing) that incorporate energy-efficient equipment, renewables, and closed-loop waste management. Such measures stimulate rural economies, preserve farmland, and lower GHG emissions compared to large-scale imported commodity systems. Belize is still in the process of developing additional sectoral NAPs for other priority sectors for adaptation. As the development of the NAPs is a continuous and ongoing process, these might, in the future, include projects with mitigation co-benefits on adaptation actions.
5. Assumptions and methodological approaches, including those for estimating and accounting for anthropogenic greenhouse gas emissions and, as appropriate, removals:	
a. Assumptions and methodological approaches used for accounting for anthropogenic greenhouse gas emissions and removals corresponding to the Party's nationally determined contribution, consistent with decision 1/CP.21, paragraph 31, and accounting guidance adopted by the CMA;	Belize accounts for its anthropogenic GHG emissions and removals using the 2006 Intergovernmental Panel on Climate Change (IPCC) Guidelines for National Greenhouse Gas Inventories (and its 2013 Supplement and 2019 Refinement) as guided by 1/CP.21 paragraph 31 and Article 4, paragraph 13 of the Paris Agreement.
b. Assumptions and methodological approaches used for accounting for the implementation of policies and measures or strategies in the nationally determined contribution;	Please see 5(a) above

c. If applicable, information on how the Party will take into account existing methods and guidance under the Convention to account for anthropogenic emissions and removals, in accordance with Article 4, paragraph 14, of the Paris Agreement, as appropriate;	Please see 5(a) above
d. IPCC methodologies and metrics used for estimating anthropogenic greenhouse gas emissions and removals;	Belize's emissions for CO2, CH4 and N2O are derived using Tier 1 methods of the IPCC 2006 Guidelines for Energy, Waste and Agriculture, while Tiers 2 and 3 were also used for Forest and Other Land-Use, these methodologies were complemented with the IPCC 2013 Supplement and the 2019 Refinement where applicable. Belize used the IPCC 2006 Guidelines, and some 2019 refinements were locally derived for some emission factors to develop its most recent National Inventory for 2024. In this latest inventory, Belize also recalculated emissions from Energy, AFOLU and Waste. • Energy: updated stationary combustion emission factors and better dissagregation of transport sector vehicle classes. • AFOLU: Adoption of updated tier 2 factors for methane and usage of expanded IPCC guidance on land-use classification for better accounting estimates Waste: Application of refined parameters for methane generation and correction factors for landfills and reclassification and recalculation of wastewater emissions dissagregated into industrial and domestic emissions.
e. Sector-, category- or activity-specific assumptions, methodologies and approaches consistent with IPCC guidance, as appropriate, including, as applicable:	

i. Approach to addressing emissions and subsequent removals from natural disturbances on managed lands;	Belize employs a Land Use Assessment application to gather activity data on land-use, coupled with a Moderate Resolution Imaging Spectroradiometer (MODIS) data graph to visualize the presence of fires and a Google Earth Keyhole Markup Language (KML) layer which contains hurricane paths. Compliant with IPCC 2006 Tier 1, 2, and 3 methods.
ii. Approach used to account for emissions and removals from harvested wood products;	Belize tracks logging disturbances from best expert knowledge. Compliant with IPCC 2006 Tier 1 approach.
iii. Approach used to address the effects of age-class structure in forests;	Belize keeps track of age-class structures in forests through its Zero-Forest Reference Level (FRL), which latest revision includes information from 2000 to 2020. Additionally, Belize is committed to "Reduce Emissions from Deforestation and Forest Degradation" as established under its REDD+ strategy.
f. Other assumptions and methodological approaches used for understanding the nationally determined contribution and, if applicable, estimating corresponding emissions and removals, including:	
i. How the reference indicators, baseline(s) and/or reference level(s), including, where applicable, sector-, category- or activity-specific reference levels, are constructed, including, for example, key parameters, assumptions, definitions, methodologies, data sources and models used;	Not applicable. Please see section 5(a-e) for assumptions and methodologies used
ii. For Parties with nationally determined contributions that contain non-greenhouse-gas components, information on assumptions and methodological approaches used in relation to those components, as applicable;	All information on adaptation and loss and damage has been sourced via technical expert consultations throughout the NDC 3.0 development process and relevant sectoral documentation such as national adaptation or sectoral plans, strategies or project-level documentation with refinement from sectoral stakeholder feedback.

iii. For climate forcers included in nationally determined contributions not covered by IPCC guidelines, information on how the climate forcers are estimated;	Not applicable
iv. Further technical information, as necessary;	Not applicable
g. The intention to use voluntary cooperation under Article 6 of the Paris Agreement, if applicable.	Belize is considering the potential role of Article 6 in supporting its NDC climate ambition. Belize may examine options for engaging in national-level market-based mechanisms, such as cap-and-trade and offsetting of carbon-based emissions.
h. The intention to engage in REDD+ initiatives, if applicable.	Belize has already endorsed its REDD+ strategy and is committed to fully implementing and revising it in the future.
6. How the Party considers that its NDC is fair and ambitious in light of its national circumstances	
a. How the Party considers that its NDC is fair and ambitious in the light of its national circumstances;	The Government of Belize is committed and convinced that global mitigation efforts should focus on stabilising global GHG emissions at levels that will limit increases in global average temperatures to well below 1.5°C above pre-industrial levels. Despite the small scale of its emissions, the Government of Belize has decided to pursue an aggressive and ambitious NDC to reduce its emissions by focusing on the Energy (electricity and transport), waste and AFOLU sectors. Belize net GHG emissions currently act as a net sink and are expected to be maintained and enhanced due to the ambitious mitigation actions. Additionally, the Government of Belize has decided to pursue ambitious plans to adapt to the negative effects of climate change.
b. Fairness considerations, including reflecting on equity;	See 6(a) above.
c. How the Party has addressed Article 4, paragraph 3, of the Paris Agreement;	Belize's NDC 3.0, recognise, expand and enhance the country's previous

	mitigation and adaptation commitments established in the previous NDC The NDC 3.0 increases ambition in GHG avoided emission targets in the electricity, transport, waste and AFOLU sectors. The NDC 3.0 enhance adaptation ambition: Belize's NDC 3.0 goes beyond previous commitments by detailing additional sector-specific actions that underscore the country's continuous progress in adaptation. These additional efforts are informed by the National Adaptation Planning Process, updated vulnerability assessments and extensive stakeholder consultations. Belize's NDC 3.0 will be the basis for an Implementation Plan that will contain a structured framework for measuring and communicating adaptation outcomes. This includes new indicators to track resilience-building in vulnerable sectors, incorporation of loss and damage data, and implementation of just transition principles. The framework enables transparent reporting to the UNFCCC, thereby facilitating the Party's adaptation efforts to be recognized under future COP decisions. Acknowledging that climate impacts increasingly outpace traditional adaptation responses, Belize's NDC 3.0 includes a section on loss and damage. By quantifying economic and non-economic losses, the country highlights adaptation gaps and underscores the need for new, more robust approaches—further reinforcing that Belize's adaptation efforts merit global recognition. The NDC 3.0 integrates a Gender Equality, Disability, and Social Inclusion (GEDSI) approach, ensuring that adaptation measures not only reduce

	vulnerability but also advance social equity. This emphasis on inclusive planning and local participation in resilience-building. While Belize is committed to reducing emissions and adapting to climate change through robust national efforts, the success of its NDC targets will require a marked increase in international climate finance flows. Accordingly, Belize envisions implementing its NDC with access to a variety of multilateral and bilateral funding sources—including, but not limited to, the Green Climate Fund (GCF), the Adaptation Fund, the Climate Investment Funds (CIFs) the Global Environment Facility (GEF), and development partners—to leverage and supplement limited domestic resources and technical capacities for combating climate change effectively.
d. How the Party has addressed Article 4, paragraph 4, of the Paris Agreement;	Under Article 4, paragraph 4 of the Paris Agreement, developing country Parties are encouraged to enhance their mitigation efforts and move toward economy-wide emission reduction or limitation targets. In Belize's NDC 3.0, the country explicitly addresses this requirement by committing to **cumulatively avoid GHG emissions by about 3,016.5 $ktCO_2e$ by 2030, and cumulative avoid 6,234 $ktCO_2e$ by 2035 from 2020 Business-As-Usual levels.** The ambition set out in Belize's NDC 3.0 must be viewed in the context of the country's small, open economy and the inherent constraints in natural, financial, technological, and human resources available to implement the necessary emissions-reduction measures. Nonetheless, Belize remains committed to meeting these enhanced targets, recognising that its extensive forest cover serves as a critical carbon sink and an

	invaluable asset in achieving both immediate and long-term climate objectives.
e. How the Party has addressed Article 4, paragraph 6, of the Paris Agreement.	Under Article 4, paragraph 6 of the Paris Agreement, Belize's NDC 3.0 explicitly acknowledges and addresses its special circumstances and heightened vulnerabilities as a Small Island Developing State (SIDS). Given Belize's susceptibility to natural disasters, sea-level rise, and other climate-related shocks, the updated NDC integrates a comprehensive set of strategies and actions specifically attuned to these challenges. Mitigation and adaptation measures—such as coastal habitat restoration, promotion of climate-resilient agriculture, and sustainable fisheries management—have been designed to protect Belize's limited economic base, which depends heavily on tourism and fisheries. Recognizing its small, open economy and constrained financial, technical, and human resources, Belize's NDC 3.0 places additional emphasis on external partnerships and capacity-building initiatives.
7. How the NDC contributes towards achieving the objectives of the Convention as set out in its Article 2	
a. How the NDC contributes towards achieving the objective of the Convention as set out in its Article 2;	Belize's NDC 3.0 contributes to limiting global warming by aiming to keep temperature increases to 1.5°C above pre-industrial levels. Through quantifiable mitigation targets across the energy, transport, AFOLU, and waste sectors, the country's commitments are aligned with the Paris Agreement. These measures underscore Belize's determination to keep the global average temperature to 1.5°C threshold, even though Belize is already a net carbon sink.

	Belize's NDC 3.0 places strong emphasis on resilience by integrating adaptation actions, including coastal habitat restoration, climate-smart agriculture, and enhanced disaster risk management. These measures reduce vulnerability to sea-level rise, hurricanes, and drought, safeguarding essential resources like food and water without jeopardizing agricultural production. As a Small Island Developing State, this approach ensures the NDC aligns with Article 2's call for low-emissions development that does not undermine food security. Recognizing its constrained financial and technical resources, Belize's NDC 3.0 explicitly addresses climate finance by outlining avenues for blended finance, partnerships with international institutions, and participation in voluntary cooperative approaches. Such strategies ensure that funding streams are steered toward sustainable energy, nature-based solutions, and climate-resilient infrastructure, thereby aligning Belize's development pathway with the Paris Agreement's vision of "making finance flows consistent with a pathway towards low GHG emissions and climate-resilient development. Belize upholds the principle of common but differentiated responsibilities and respective capabilities, reflecting its unique challenges as a Small Island Developing State in the NDC 3.0. Belize calls for increased international finance, technology transfer, and capacity-building support to ensure that its ambitious climate targets are effectively realised.
b. How the NDC contributes towards Article 2, paragraph 1(a), and Article 4, paragraph 1, of the Paris Agreement.	Belize's NDC 3.0, establishes mitigation actions that can **potentially reduce GHG emissions approximately 3,016.5 $ktCO_2e$ by 2030 and an additional**

	3,217.5 $ktCO_2e$ from 2030 to 2035, amounting to a total cumulative avoided emissions of 6,234 $ktCO_2e$ by 2035. These measures underscore Belize's determination to keep the global average temperature to 1.5°C threshold, even though Belize is already a net carbon sink. Belize's NDC 3.0 aims for early and sustained reductions in GHG emissions (despite the recognition that developing countries may take longer to peak). As a country that is already a net carbon sink, Belize will further increase its sink potential through enhanced reforestation, sustainable agriculture, and coastal ecosystem conservation measures and decrease its emissions in energy generation, transport, waste and AFOLU. At the same time, Belize's will continue to pursue efforts for poverty reduction integrating climate action with sustainable economic development.

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Appendix A – Costing assumptions and sources

The following contains the assumptions and sources used for the estimation of the costs, financing procured and funding gaps per sector.

General Assumptions

- Total Population - 4,05,000 *(General 1)*[7]
- National Household Count - 1,10,719 *(General 1)*
- Average household size – 3.6 individuals *(General 1)*
- Rural population – 54% *(General, 8)*
- Urban population – 46% *(General, 8)*
- Access to electricity – 98% *(General, 7)*
- Inflation – 3% (rounded and calculated moving average (2019 – 2023), (The *World Bank-WDI, General 7)*
- Population growth rate – 3% *(General 7)*

Note 1: The GEF provides up to USD 175,000 per country for national-level support, covering implementation readiness, assessments of the current legal, policy, and institutional frameworks, as well as processes related to ratification, approval, acceptance, or accession. This amount has been used as an estimated cost for relevant actions classified as soft targets.

Note 2: Project selection prioritized similarity in goals, implementation contexts, objectives, and beneficiaries.

Electricity

- Total Installed Capacity (Electricity): 189.7 MW. *(Electricity, 3)*
- Transmission and Distribution Loss: 12%. *(Electricity, 3)*
- Mean Electricity Rate: $0.402 per kWh. *(Electricity, 2)*
- Capital Expenditure: Capacity × Average Installation Cost (AIC) + Total Distribution Cost. *(Authors Calculations)*
- Charging infrastructure = Capital cost + charger unit costs * capacities *(Authors Calculations)*

[7] From now onwards, for each reference provided, such as "*General 1*" please refer to the first reference provided below under '***Sources and Links'***, where the sub-sections are grouped by sector, and which includes a comprehensive list of references for each sectoral category.

- Capital expenditures for solar, wind, battery storage, and other relevant technologies are sourced from Lazard's LCOE – 2024. *(Electricity 1)*
- Energy efficiency, system efficiency, and transmission and distribution costs are referenced from Belize's NDC Implementation Plan and Belize LCOE. *(Electricity 3, 4)*
- Solar water heating cost estimations are referenced from the World Bank Sustainable Heating Transition study in Europe and Central Asia. *(Electricity 2)*
- Feasibility study and capacity-building cost estimates are based on typical budgeting practices of the Global Environment Facility (GEF) and the World Bank.
- All other references have been used to extract the relevant information regarding energy usage, available data, and associated factors.

TRANSPORT

- EV unit costs (private and public) are sourced from online desk research specific to the Caribbean Region and from information provided by Climate Analytics Caribbean counterparts. *(Author Calculations)*
- EV vehicles = Capital cost + Charging infrastructure cost *(Authors Calculations)*
- Capital costs related to EV targets include assumptions for chargers infrastructure, installation, grid upgrades, vehicle numbers, and charging costs.
- Charging infrastructure and chargers *(Transport 4, 5, 6 7)*
- Data on vehicles, utility rates, and traffic congestion are referenced from the Belize Comprehensive Transportation Master Plan, Total vehicles in Belize – 75,000, Vehicles/Population Ration – 174 vehicles per 1000 people *(Transport 6, 8, 9, 10, 12)*
- All other references have been used to extract the relevant information regarding energy usage, available data, and associated factors. *(Transport 1, 2, 3, 11)*
- The capital cost for EV vehicles in private fleet and infrastructure costs to install charging stations required to accommodate additional 6000 private EV vehicles were considered in calculating the CAPEX costs for electric vehicle penetration in private fleet
- In accordance with Word Bank research, the average amount of consumer subsidy per EV vehicle required to increase EV sales by 10 % is 3000 USD per vehicle. *(Transport 13)*

WASTE

- Cost estimates draw on various waste management projects from the GEF, IDB, and the World Bank. *(Waste 2, 4, 5, 6, 7, 8)*
- Project cost breakdowns are based on rural and urban population compositions, with costs evaluated per household, per individual, and per city, aligned with NDC targets. *(Author Calculations, General 1, Waste 1, 3)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) use a flat rate of $175,000; this figure warrants additional refinement in the future.

Coastal Zone and Marine Environment

- Cost estimates for biodiversity protection zones, integrated coastal zone management, and seagrass adoption are derived from comparable projects by GEF, World Bank, and Belize's NDC 2.0. *(Coastal 1, 2, 3, 4, 5)*
- Costs are adjusted for inflation, expanded project scopes, and overheads; further review is recommended. *(Authors calculations)*
- Information on current costal management practices and projects. *(Coastal 6, 7)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) use a flat rate of $175,000, pending further refinement.

Fisheries

- Cost estimates for fisheries management actions, enabling environments, and management plans are based on comparable GEF and World Bank Projects, adjusted for inflation, scope expansions, and overhead costs. *(Authors calculation, Fisheries 1, 2, 3, 4)*
- Data on fishers and recent development in fisheries sector, Fisheries - 12% of total exports, Fisheries Employment, Primary - 3,000 employees, Indirectly Employed - 17,000 (*Fisheries 5)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) use a flat rate of $175,000, pending further refinement.

Aquaculture

- Cost estimates for Aquaculture and Mariculture Management Plans are based on GEF project benchmarks, adjusted for inflation, expanded scopes, and overhead costs; subject to further review. *(Aquaculture 1)*
- Soft targets (e.g., capacity building, awareness campaigns) use a flat rate of $175,000, pending further refinement.

Health

- Cost estimates for hospital retrofitting is based on GCF and GEF projects, adjusted for inflation and contextual factors such as scope expansion, area coverage, and overheads, subject to further review. (Health 2, 3, 4 5)
- Cost estimates for safe drinking water initiatives. *(Health 1)*
- Urban and rural population composition *(General 8)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) use a flat rate of $175,000, pending further refinement.

Tourism

- Cost estimates for vulnerability assessments and national remediation plans are based on analyses of ongoing Government of Belize tourism sector programs. *(Tourism 1, 3)*
- Cost estimates for implementing the National Sustainable Tourism Master Plan (NSTMP) are derived from the NSTMP's original cost estimation taken for years 2025 to 2030. The cost is not adjusted for inflation. *(Tourism 2)*

- Soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, which will require additional refinement in the future.

Infrastructure

- Cost estimates for actions related to housing policy. *(Infrastructure, 1)*
- Cost estimates for climate-resilient infrastructure and implementation. *(Infrastructure, 2)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, which will require additional refinement in the future.

Water

- Costs per household for safe drinking water initiatives are calculated by assessing urban and rural demographics in Belize, referencing project component costs from IDB *(Water 2)* and World Bank Projects *(Water 1).* This includes wastewater treatment systems, safe drinking water access, and water supply expansion.
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, pending further refinement.

Biodiversity

- Costs for actions related to examining financing mechanisms and adaptation planning are estimated using comparable ongoing GEF and GCF Projects. Adjustments are made for inflation, contextual analysis, scope expansion, area coverage, and overhead costs, with additional refinement recommended. *(Biodiversity 1, 2)*
- Soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, which will require further refinement.

Agriculture

- Total agricultural land – 157732 hectares *(Agriculture 1)*
- Total farmers – 13000 *(ibid)*
- Cost estimations for policy adoption include an analysis of farmer demographics, agricultural types, cultivated areas, sugar cane farmer composition, and current agronomic practices and programs. *(Agriculture, 1, 2, 3)*
- Costs for restoring degraded grasslands, silvopastoral land use, and agro-silvopastoral systems are estimated based on various projects operated by the Government of Belize, World Bank, and GEF, adjusted for inflation, contextual analysis, scope expansion, area coverage, and overheads. Additional refinement is recommended. *(Agriculture 4, 5, 6, 7, 8, 9, 10)*
- Cost estimation for sustainable livestock management. *(Agriculture 12)*
- Cost estimation for resource planning and capacity. (Agriculture 11)
- Relevant soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, pending further refinement.

Forestry

- Cost for reforestation, restoration, and conservation of forests are calculated per hectare analyzing different components of GEF Projects. *(Forestry 3, 4)*
- Cost for restoration of mangroves are calculated per hectare analyzing different components of Smithsonian ERC, GEF and GCF Projects. *(Forestry 2, 5, 6, 7)*
- Cost for conservation of seagrass, and seagrass are calculated per hectare based on cost components from GEF Projects. *(Forestry 8)*
- Improved forest and fire management cost is taken from GEF project. *(Forestry 11)*
- Adjustments are made for inflation, contextual factors, scope expansion, area coverage, and overhead costs, subject to further review. (Forestry 1)
- Relevant soft targets (e.g., capacity building, awareness campaigns, legislative development) currently use a flat rate of $175,000, which will require additional refinement in the future.

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Appendix B – Stakeholder Consultation Process

The process conducted for developing Belize's NDC 3.0 included a comprehensive consultation process, which included multiple sets of bilateral discussions, in-country missions and online events to raise awareness and get buy-in from the stakeholders throughout the NDC development process. The various steps undertaken in terms of stakeholder engagement include:

1. Scoping and Bilateral Discussions (First and second in-country missions):
   The first two in-country missions focused on laying out the groundwork for the NDC development through bilateral discussions with key stakeholders, including government agencies, private sector representatives, and civil society organizations.
   These discussions helped identify priority sectors, challenges, and opportunities for enhanced climate action. Special emphasis was placed on including gender equity considerations and the participation of vulnerable groups, ensuring that the updated NDC was both inclusive and equitable.

2. NDC Launch Event:
   Between the first and second missions, a formal national NDC launch event was conducted to increase awareness of Belize's climate ambition and commitments and reflect on the progress to date on the previous NDC implementation. The process included considerations based on the latest guidance on NDCs 3.0 under the United Nations Framework Convention on Climate Change (UNFCCC) and the global stocktake exercise conducted in 2023. This event was also used as a platform to gather insights on sectoral issues based on focused group discussions.

3. Pre-Validation Mission (Third in-country mission):
   The third in-country mission focused on the pre-validation of the proposed NDC actions. Sectoral stakeholders reviewed specific targets and provided input to refine the commitments based on what they think is feasible and achievable. The process was guided by principles of inclusivity and equity, ensuring that the needs and perspectives of women, indigenous populations, and marginalised communities were fully integrated.

4. Online Pre-Validation:
   Between the third and fourth missions, an online pre-validation exercise allowed stakeholders to review and provide feedback on specific NDC actions. This virtual engagement expanded participation, enabling contributions from those unable to attend in-person consultations.

5. Final Validation Mission (Fourth in-country mission):

The fourth and final in-country mission centred on the validation of the NDC document, including the final targets and accompanying actions. This mission gathered sectoral stakeholders to receive final in-person feedback on Belize's commitments for the NDC 3.0, ensuring alignment with national policies, priorities and opportunity areas.

The following tables includes the various sectoral categories from the stakeholders which engaged in the process, and a list of identified participating agencies and organizations at each step of the engagement process, using the provided categorisation.

LIST OF STAKEHOLDER CATEGORIES

S. N	Sectors
1	International Development
2	Non-Governmental Organizations
3	Private Sector
4	Biodiversity
5	Finance
6	AFOLU
7	Governance
8	Transport
9	Energy
10	Environment
11	Indigenous and Vulnerable Communities
12	Waste
13	Economy
14	Water
15	Climate Change
16	Regional Cooperation
17	Human Settlements
18	Climate Change
19	Education
20	Health
21	Tourism
22	Gender
23	Cross-cutting

IDENTIFIED PARTICIPATING AGENCIES/ORGANIZATIONS

S.N	Stakeholders	Sectors	Scoping Mission	NDC Launch	Engagement Mission 2	Pre-Validation Mission 3	Final Validation
1	GIZ	International Development	Yes	Yes	Yes	Yes	
2	Association of Protected Areas Management Organizations (APAMO)	Non-Governmental Organizations		Yes		Yes	
3	Association of Professional Architects of Belize	Private Sector		Yes			
4	Atlantic Bank	Finance			Yes	Yes	
5	Belize Agricultural Health Authority	AFOLU		Yes		Yes	
6	Belize Association Planners	Non-Governmental Organizations		Yes			
7	Belize Audobon Society	Non-Governmental Organizations				Yes	
8	Belize Bank	Finance			Yes	Yes	
9	Belize Blue Bond and Permanence Unit (BBFP)	Finance					Yes
10	Belize Bureau of Standards	Governance				Yes	
11	Belize Bus Association	Transport		Yes			
12	Belize Cancer Society	Non-Governmental Organizations				Yes	
13	Belize Chamber of Commerce and Industry	Private Sector	Yes	Yes		Yes	
14	Belize Citrus Growers Association	AFOLU				Yes	
15	Belize City Council	Governance		Yes	Yes	Yes	
16	Belize Co-generation Energy Ltd	Energy		Yes			
17	Belize Customs and Excise	Governance				Yes	
18	Belize Electricity Limited	Energy		Yes	Yes	Yes	Yes
19	Belize Foundation for Research & Environmental Education (BFREE)	Environment				Yes	
20	Belize Hotel Association	Private Sector		Yes		Yes	
21	Belize Livestock Producers Association	Private Sector		Yes			
22	Belize Marine Fund	Biodiversity		Yes			

23	Belize National Indigenous Council	Indigenous and Vulnerable Communities		Yes			
24	Belize Port Authority	Transport				Yes	
25	Belize Public Utilities Commission (PUC)	Energy		Yes		Yes	Yes
26	Belize Red Cross	Non-Governmental Organizations		Yes			
27	Belize Social Investment Fund	Finance				Yes	
28	Belize Trade and Investment Development Service	Economy		Yes			
29	Belize Water Services	Water		Yes	Yes		
30	Belize Zoo	Biodiversity				Yes	
31	Belize's Development Finance Corporation (DFC)	Finance		Yes	Yes	Yes	
32	Belmopan City Council	Governance		Yes		Yes	Yes
33	Benque Viejo Town Council	Governance		Yes			
34	Biodiversity Unit	Biodiversity	Yes	Yes			
35	Bull Ridge Company	Private Sector		Yes			
36	Caribbean Agricultural Research and Development Institute	AFOLU		Yes			
37	Caribbean Community Climate Change Centre	Climate Change		Yes			
38	Caribbean Motors	Private Sector			Yes	Yes	
39	Central Bank of Belize	Finance		Yes		Yes	Yes
40	Central Building Authority	Human Settlements		Yes			
41	Citrus Research Institute	AFOLU		Yes			
42	Climate Analytics	International Development	Yes	Yes	Yes	Yes	
43	Climate Finance Unit	Finance	Yes				
44	Coastal Zone Management Authority and Institute (CZMAI)	Environment				Yes	Yes
45	Community Baboon Sanctuary	Biodiversity				Yes	
46	Cornerstone Foundation Belize	Non-Governmental Organizations				Yes	
47	Corozal Sustainable Future Initiative	Biodiversity		Yes			

48	Crocodile Research Coalition	Biodiversity				Yes	
49	DANAUS Consulting	AFOLU		Yes			
50	Dangriga Town Council	Governance		Yes			
51	Department of Cooperatives	Finance		Yes			
52	Department of Environment	Biodiversity		Yes		Yes	
53	Department of Housing and Planning	Human Settlements		Yes			
54	Department of Local Government	Governance	Yes				
55	Disaster Risk Management	Climate Change		Yes			
56	E-volution	Private Sector			Yes	Yes	
57	Economic Development Council	Economy		Yes			
58	Farmer's Light Plant Corporation	AFOLU		Yes		Yes	
59	Belize Fisheries Department	Water	Yes	Yes			Yes
60	Food and Agricultural Organization	International Development		Yes			
61	Belize Forest Department	AFOLU	Yes	Yes	Yes	Yes	Yes
62	Fragments of Hope	Non-Governmental Organizations		Yes			
63	Friends for Conservation and Development	Biodiversity		Yes		Yes	
64	Galen University: Environmental Club	Biodiversity				Yes	Yes
65	GoJoven Belize	Non-Governmental Organizations				Yes	
66	GSR Energy Ltd	Energy		Yes			
67	Help for Progress	Non-Governmental Organizations				Yes	
68	HelpAge Belize	Non-Governmental Organizations		Yes			
69	Holy Redeemer Credit Union	Finance				Yes	
70	Humana	Non-Governmental Organizations		Yes			
71	Hydro Maya	Water		Yes			
72	Hydrology Unit	Climate Change		Yes			

73	Indigenous People's Affairs	Indigenous and Vulnerable Communities		Yes			
74	Inter-American Development Bank (IDB)	International Development				Yes	Yes
75	Inter-American Institute for Cooperation on Agriculture	International Development		Yes			
76	International Renewables Energy Agency	Energy		Yes			
77	ITVET	Education				Yes	
78	Land Activist Farming	AFOLU		Yes			
79	Maya Leaders Alliance	Indigenous and Vulnerable Communities		Yes		Yes	
80	MED: Climate Finance Unit	Climate Change				Yes	
81	Ministry of Agriculture, Food Security, and Enterprise	AFOLU	Yes	Yes	Yes	Yes	Yes
82	Ministry of Blue Economy	Economy	Yes	Yes		Yes	Yes
83	Ministry of Economic Development	Economy		Yes			Yes
84	Ministry of Education, Science and Technology	Education		Yes			
85	Ministry of Finance	Finance		Yes			Yes
86	Ministry of Health and Wellness	Health	Yes	Yes			
87	Ministry of Immigration	Governance				Yes	
88	Ministry of Local Government and Rural Transformation	Governance		Yes			
89	Ministry of Natural Resources	AFOLU		Yes			Yes
90	Ministry of Tourism and Civil Aviation	Tourism	Yes	Yes		Yes	
91	Ministry of Youth, Sports, and Transport	Transport		Yes	Yes	Yes	
92	Ministry of Works	Governance		Yes			
93	Ministry of Youth	Governance		Yes			
94	National Biodiversity Office (NBIO)	Biodiversity				Yes	Yes
95	National Building Authority	Governance				Yes	
96	National Climate Change Office (NCCO)	Climate Change	Yes	Yes	Yes	Yes	Yes
97	National Committee for Families and Children	Human Settlements				Yes	

98	National Council on Ageing	Indigenous and Vulnerable Communities				Yes	
99	National Emergency Management Organization	Governance		Yes			Yes
100	National Garifuna Council	Governance		Yes		Yes	
101	National Hydrological Services	Climate Change		Yes			Yes
102	National Meteorological Service	Climate Change		Yes		Yes	
103	National Women's Commission	Gender		Yes		Yes	
104	Orange Walk Town Council	Governance		Yes			
105	Our Circle Belize	Non-Governmental Organizations				Yes	
106	Pan American Health Organization (PAHO)	Health				Yes	
107	Placencia Village Council	Governance		Yes			
108	Plenty Belize	Non-Governmental Organizations		Yes			
109	Port Authority of Belize	Governance			Yes		
110	Pro solar Limited	Energy				Yes	
111	Programme for Belize	Non-Governmental Organizations		Yes		Yes	
112	Progressive Sugar Cane Producers Association	Private Sector		Yes			
113	Promoting Empowerment Through Awareness for Lesbian Women	Non-Governmental Organizations		Yes			
114	Protected Areas Conservation Trust	Biodiversity		Yes			
115	Punta Gorda Town Council	Governance		Yes			
116	Resilient Rural Belize	AFOLU		Yes			
117	Rotaract Belize	Non-Governmental Organizations				Yes	
118	Rural Community Development Unit	Governance		Yes			
119	San Pedro Town Council	Governance		Yes			
120	Santander Sugar Factory	AFOLU		Yes			
121	Sarstoon Temash Institute for Indigenous Management (SATIM)	Indigenous and Vulnerable Communities		Yes		Yes	
122	SJCJC Environmental Club	Environment				Yes	

123	Solid Waste Management Authority	Human Settlements	Yes				
124	Southern Environmental Association	Biodiversity		Yes			
125	St. John's Credit Union	Finance				Yes	
126	St. Michael's Credit Union	Finance				Yes	
127	Statistical Institute of Belize (SIB)	Cross-cutting		Yes		Yes	
128	Sugar Industry Research and Development Institute	AFOLU		Yes		Yes	
129	Sustainable Development Unit	Governance		Yes			Yes
130	TexBel Farms	AFOLU		Yes			
131	The Nature Conservancy	Biodiversity				Yes	Yes
132	Toledo Cacao Growers Association	Private Sector		Yes			
133	Toledo Institute for Development and Environment (TIDE) Belize	Environment				Yes	
134	Turneffe Atoll Sustainability Association (TASA)	Non-Governmental Organizations		Yes			
135	UB Environmental Club	Environment				Yes	
136	UNDP	International Development		Yes		Yes	Yes
137	UNEP	International Development				Yes	
138	UNHCR	Human Settlements				Yes	
139	UNICEF	International Development				Yes	Yes
140	United Belize Advocacy Movement (UNIBAM)	Non-Governmental Organizations		Yes		Yes	
141	United Nations Convention to Combat Desertification	International Development		Yes			
142	University of Belize Environmental Research Institute	Environment		Yes			
143	Wild tracks Belize	Biodiversity				Yes	
144	Women's Department	Gender		Yes			
145	World Wildlife Fund	Biodiversity		Yes			Yes
146	Ya'axché Conservation Trust	Environment		Yes			
147	Yalbac Ranch	Environment		Yes			

148	Bullet Tree SDA Primary School	Education					Yes
149	Belize Sugar Industries	AFOLU					Yes
150	Green Initiative	Environment					Yes
151	Holy Redeemer Credit Union	Finance					Yes
152	The Julian Cho Society	Indigenous and Vulnerable Communities					Yes
153	University of West Indies	Education					Yes
154	The ILS Phoenix Foundation	Non-Governmental Organizations					Yes
155	Millennium Challenge Corporation	International Development					Yes

MINISTRY OF SUSTAINABLE DEVELOPMENT,
CLIMATE CHANGE & SOLID WASTE MANAGEMENT

Photo by Frank Hachmann