

Initiative for Climate Action Transparency - ICAT -

**DEFINING THE INFORMATION NECESSARY TO TRACK
PROGRESS MADE IN IMPLEMENTING AND ACHIEVING
BELIZE'S NATIONALLY DETERMINED CONTRIBUTIONS
(NDC)**

Initiative for Climate Action Transparency - ICAT -

Defining the Information Necessary to Track Progress Made in Implementing and Achieving Belize's Nationally Determined Contributions (NDC)

Deliverable #2 – Part 2

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List of Abbreviations

BAU	Business as Usual
BTR	Biennial Transparency Report
BUR	Biennial Update Report
CO ₂ e	Carbon Dioxide Emission
CH ₄	Methane
EES&L	Energy Efficiency Standard and Living
ETF	Enhanced Transparency Framework
GHG	Greenhouse Gas
HFC	Hydrofluorocarbons
IPCC	Intergovernmental Panel on Climate Change
LDCs	Least Developed Countries
LPG	Liquified Petroleum Gas
MPGs	Modalities, Procedures and Guidelines
MRV	Measurement, Reporting and Verification
N ₂ O	Nitrous oxide
NDC	Nationally Determined Contribution
NF ₃	Nitrogen trifluoride
NIR	National Inventory Report
PA	Paris Agreement
PFC	Perfluorocarbon
RES	Renewable Energy Source
SF ₆	Sulphur hexafluoride
SIDS	Small Island Developing State
TMA	Transit Needs Assessment
UNFCCC	United Nations Framework Convention on Climate Change

Introduction

Under the Paris Agreement (PA), Article 13 provides the establishment of an Enhanced Transparency Framework (ETF) to guide Parties' transparency with their climate action and support. The ETF was further operationalized at COP24 through the adoption of the Katowice Climate Package, which included the Modalities, Procedures, and Guidelines (MPGs) for the ETF (Antonio, Romano and Brocchieri 2020). The MPGs introduced a new set of guidelines applicable to all Parties to the UNFCCC, with specific built-in flexibility for those developing countries that impose a high necessity, considering their capacities. Moreover, additional discretion was granted to countries belonging to the group of Least Developed Countries (LDCs) and Small Islands Developing States (SIDS). The rulebook provides detailed information to guide monitoring and reporting on Belize's Nationally Determined Contributions (NDC). The requirements introduced by the MPGs set the basis for information to be submitted in the Biennial Transparency Reports (BTRs), including information necessary to track progress for NDCs. Belize's contribution as it relates to the mitigation potential is centred on the actions towards a low carbon economy in the form of the country's mitigation activities outlined in the NDC (Belize NDC 2015). Specifically, Belize's NDC establishes greenhouse gas (GHG) reduction targets relative to a business-as-usual (BAU) scenario (Belize NDC 2015). The GHG inventory data is fundamental in calculating BAU scenarios. This information is essential for targets that are formulated relative to a reference level.

Relevant indicators are necessary for monitoring activities and targets set within the NDC. Essentially, indicators should be properly defined and established to assess progress in the implementation and achievement of the NDC. For example, comparing GHG inventories with emission reference points/levels or comparing current annual emissions to annual targets (reliant on whether it is a multi-year GHG target); or taking into account different policies and measures to be implemented to achieve the NDC targets (Antonio, Romano and Brocchieri 2020). Correspondingly, information on the scope and coverage of the NDC to further facilitate understanding of targets should be incorporated, along with both qualitative and quantitative information (Antonio, Romano and Brocchieri 2020). Qualitative targets can consider the implementation status, whereas, quantitative targets can consider, information on hectares of reforestation or the percentage reduction in GHG emissions per unit GDP. Establishing this information will allow clarity in understanding NDC progress. The MPGs also require that countries include coverage of sectors through the IPCC national GHG inventory guidance

defining which sectors and gasses are to be considered. Based on the commitments made from sectoral standpoints covering Forestry, Energy, Waste, Agriculture and Transport, clear and consistent indicators are needed to track progress, centring on the new reporting requirements. To ascertain target improvements, existing indicators and emerging indicators were assessed to determine their validity towards international and national requirements. To examine soundness, specific documents relating to the mitigation activity were evaluated, particularly, Sustainable Development Goals (SDG), Environmental Statistics Self-Assessment Tool (Report of the Environmental Statistics Assessment) (ESSAT), National Biodiversity Strategy & Action Plan (NBSAP), National Development Framework, Horizon 2030, etc. A full list of the document used is presented in Annex 1.

This paper describes an appropriate selection of indicators to track progress and implementation towards the mitigation targets of Belize's NDC, (i) through abiding by the international and national requirements; (ii) examining concrete progress and impact indicators, and (iii) analysing reporting frequency and quality.

Reporting Requirements on NDC Targets under the Paris Agreement

Reporting requirements introduced by the MPGs include the need for Parties to provide detailed information on their NDC targets. Such information shall be provided by Parties through i) a description of the NDC, as well as ii) the provision of information necessary to track progress towards implementation and achievement of the NDC.

The description of a Party's NDC, including its subsequent updates, shall include as applicable: target types, target years or periods, reference points/levels/baselines or base year, time frames, scope and coverage, intention to use cooperative approaches. Moreover, each party shall select relevant indicators that it will use to report on progress made in implementing and achieving the NDC over its implementation period, by comparing the most recent information to those relative to the reference point/level/baseline or base year. Indicators can be quantitative or qualitative, economy-wide or sectorial, and may include, for example: net GHG emissions and removals, percentage of renewable energy use or production, sectoral indicators, non-GHG related indicators, status of implementation of policies or measures or any other relevant qualitative indicators (Desgain and Sudhir 2016). In the context of ensuring clarity around NDC targets and progress towards their attainment, especially in case of qualitative targets and indicators, relevant information on domestic mitigation policies and measures, actions and plans may also be useful to be reported.

In reporting the BTR, countries with targets formulated as reductions from BAU scenarios, as a percentage, should report current values in percentage or tCO_{2e} at the time of reporting. This is important for a consistent understanding of progress throughout the implementation process. It is pertinent to complement indicators with data sources, definitions, methodologies, assumptions, and any updates that are consistent with understanding if NDC targets are being met. This also includes templates, reporting formats and outlines (not established by the MPGs but expected to be adopted at COP 26). It is important to ensure that relevant information (e.g. indicators, targets) are in place for a smooth transition from the current MRV system towards the new regime under the Paris Agreement, as it would facilitate reporting towards the new international transparency requirements as well as enhance robustness of domestic monitoring for national purposes.

Belize's NDC covers the following sectors: Forestry, Energy, Waste, Agriculture, and Transport. For Belize to meet its commitments, it requires the availability of cost-effective

technology, capacity building and adequate financial support to be fully implemented. Accordingly, to track progress, sectoral indicators are relevant to provide information on activity levels (e.g. Forestry Sector, hectares of reforestation; Energy Sector, percentage of renewable energy use). The MPGs also provides context on the GHGs that shall be reported in the National Inventory Report (NIR). Such guidelines provide that developing country Parties who deemed it necessary, in light of their capacity, to have the flexibility to report only on CO₂, CH₄ and N₂O emissions. However, they also clarify that if such countries venture into activities leading to reductions of HFC, PFCs, SF₆, and/or NF₃ emissions in the implementation of their NDC, an obligation arises to report on the estimation of such gases and the relative methodological information, and it must be presented in the NIR without any flexibility provision (UNFCCC 2018).

Belize's national GHG inventory and Forest Reference Emission Level (FREL) make provisions to report on CH₄, N₂O and CO₂. However, the Fourth National Communication and First Biennial Update Report made an indication of HFCs and PFCs using refrigeration and air conditioning time series, providing estimates of global warming potential. As a result, Belize will need to input the necessary methodological information in the NIR. Hence, unit of measurement should be consistent throughout the reporting process. Furthermore, the importance of principles that promote sustainable development, environmental integrity, governance, and robust accounting are also ideal in supporting NDC indicators. For future reference, Belize should identify actions, policies and measures that are no longer effective or in existence in comparison to the previous BURs, providing the cause for such change; the effect GHG emissions from international transport, and information on modifying longer-term trends in GHG removals.

Information Necessary to Track progress made in Implementing and Achieving Belize NDCs

Building on the general requirements as outlined and discussed in the previous subsections, Belize-specific information that is required to track progress towards implementation and achievement of the targets defined in the country's NDC at the sectorial level is presented below. The tables identify the mitigation activities of the NDC with the established sectors (Forestry, Energy, Transport, Waste and Agriculture) and how the indicators relate to the target, the information on reference points level, baseline, base years, or starting point, and any recalculation of the GHG inventory. Each table provides information on the target, target description, target tracking, the mitigation activity for the sector and the relevant indicators to assess target progress. As it relates to targets and indicators, the information needs to be consistent; more so, the methodologies for monitoring of policies and measures. The information mentioned above can be presented as a structured summary or in a tabular format. The tracking information listed below presents national indicators both already established, and to be validated.



Table 1: Provides information on indicators that are needed to be tracked to assess progress for the Forest Sector NDC mitigation activity

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
Area- reforested (ha)	Regeneration of 124,864 (ha) could generate 16million t CO ₂ e reduction every year	Replant 50% of the loss in forest cover	Afforestation/ reforestation for forest cover loss during the period 1989-2012	Absolute Emissions Reduction	Reserves and sustainable forest Management 2015 estimate of 3,300Gg CO ₂ down to zero emissions. 410.5Gg-per year by 2030 Cumulative 2,477Gg-2020-2030	Area- reforested is not being collected as stated in the ESSAT report
Average emission reduction CO ₂ -eq year	Net GHG emissions and removals for Forestry and land use	Average expected emission reduction of forest fire is assumed to equal to GHG emission. 2020-119.59Gg CO ₂ -eq 2030-119.59Gg CO ₂ -eq 2033-119.59Gg CO ₂ -eq (Time series)	BAU is established using the average historical emissions from year 2001-2018	Forest Act REDD + strategy		Deforestation is driven primarily by agriculture expansion and is not yet guided by an integrated national land-use plan. (NBSAP)
Forest Reference Emission Level (Average emission CO ₂ -eq yearly)	Track net emissions in t CO ₂ e. Assess the country performance on reducing emissions from forest degradation, conservation of forest carbon stocks, sustainable management of forest carbon stocks	Yearly estimates of emission removals, covering 15years. Multiyear targets	2001-2015	Absolute Emissions Reduction		



Table 2: Provides information on indicators that are needed to be tracked to assess progress for the Coastal Zone/Fisheries Sector NDC mitigation activity on Mangroves

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
Area of mangroves reforested (ha)	Carbon removal by mangrove is based on 9.9t.d.m/ha/year	Emission reduction potential 66.1Gg CO ₂ -eq per year between 2020-2030	BAU was established using lineal progression. Reference scenario was based during 2018-2030	Protection and restoration of mangroves forest through the Forest Regulation 2018	Mangroves Net carbon sink 2.2-35Gg CO ₂ per year b/w 2020 & 2030 cumulative	<p>This regulation focus on mangroves in critical areas; including improvements on the application process for alteration permits, systematic fee, strengthened penalties and fines.</p> <p>Note: The relevant project in place with Mangrove Restoration is the Blue Carbon Incentive. It explores options for the sale or trading of carbon credits on the international markets. Also, in place is the Restoration Riparian Forest project in watersheds, which explores the inclusion of private forest in emission reduction payment agreements and benefit sharing.</p>
Net GHG emission and removals by mangroves (ha) yearly	Carbon removal by mangrove is based on 9.9t.d.m/ha/year	Emission reduction potential 22.1Gg CO ₂ eq per year by 2033	BAU was established using established estimating the conversion to settlements land from Mangrove Forest during 2001-2018	Reduce losses of mangrove due to Housing Development and in Protected Areas		
No. of permits issued for mangrove alteration.	Permits assist in regulating illegal actives (mangrove destruction, clearance). It would track enforcement efforts on conservation initiatives.	Reduce pressure on mangrove degradation	2018	Restoration and Protection		



Table 3: Provides information on indicators that are needed to be tracked to assess progress for the Energy Sector NDC mitigation activity for reducing Fuelwood Consumption

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
No. of imports of efficient stoves in place of wood fuel.	This indicator can be used to track imports on efficient stoves through the standards set by the Belize Bureau of standards. The increase in imports could mean less fuelwood consumption	BAU was established using a 66% reduction by 2033 in the consumption of fuel and associated emissions from the use of wood in the residential sector 2020-1.18Gg CO2-eq 2030- 12.99 Gg CO2-eq 2033-16.53Gg CO2-eq (Yearly targets)	2020-2030	Absolute Emissions Reduction	Fuelwood Consumption Reduction of fuelwood consumption by 27%-66% 2.1Gg CO2 per year 2020& 12.4Gg CO2 by 2030. Cumulative	Additional Information can be obtained from the Belize Customs Department
Average energy efficiency performance use of imported appliances	Average emission reduction annually	BAU. Potential annual savings in 2030-reduce electricity use by over 57.6 GWh- Reduce CO2 emissions 50,000 tons	2020-2030	Absolute Emissions Reduction		Preliminary phase of data collection
Increased promotion of efficient stoves (media outlets)	This indicator can be used to track market growth, through questionnaire, survey, and polls	Educational campaigns and awareness can influence sales production in energy-efficient stoves, as a return reducing GHG emission.	No data	Emission Reduction		Not enough information on this yet but can be geared towards the future on data collection



Table 4: Provides information on indicators that are needed to be tracked to assess progress for the Energy Sector NDC mitigation activity for the implementation of the Sustainable Energy Action Plan

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
Energy auditing	This indicator can track energy efficiency in the public sector. It is an efficient tool for assessing energy use.	BAU is based on applying the grid emission factor to 400kw installed 2020-0.21 Gg CO2-eq 2025-0.21 Gg CO2-eq 2030-0.21 Gg CO2-eq Yearly target	2020-2030	Improve Energy efficiency within Residential, Business and Public Sector	Sustainable Energy Action Plan 85% renewable energy by 2030 Reduction of transmission and distribution losses of 12% to 7% by 2030 2,514 Gg CO2 until 2030 or 168 Gg CO2 per year. Grid infrastructure 160-273 CO2 until 2030	An energy audit project was conducted in Belize City assessing energy usage for several buildings.
Percent reduction in electricity consumption	Energy efficiency standards and labelling	BAU is based EE S&L for appliances as 16% of reduction of electricity consumption. 2020-19.89 Gg CO2-eq 2030-27.78 Gg CO2-eq 2033-30.71 Gg CO2-eq (Yearly target)	2020-2033	Improve Energy Efficiency in Commercial and Domestic Sector		Note: Fuelwood consumption in Table 3. also use energy efficiency standards and labelling as an indicator both fall under the energy sector
Percent reduction in fuel consumption	Energy-efficient Industry	BAU is based EE S&L for appliances as a 10% reduction in fuel consumption. 2020-0.51 Gg CO2-eq 2030-0.71 Gg CO2-eq 2030-0.79 Gg CO2-eq (Yearly targets)	2020-2033	Improve Energy efficiency in the Industrial Sector		
Percent of electricity produced with fossil fuels replaced by RES	Production capacity of renewable energy	BAU is based on fossil fuel replaced by renewable energy 2020-14.27 Gg CO2-eq 2030-157.01- Gg CO2-eq 2033-199.83 Gg CO2-eq (Yearly targets)	2020-2033	New RES Capacity		



Table 5: Provides information on indicators that are needed to be tracked to assess progress for the Transport Sector NDC mitigation activity

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
Amount. of tax issued on new and old model vehicles	The application of tax can incentives the use of efficient vehicles and fuel	Taxes applied to vehicles based on their emissions, age, or fuel consumption	Not yet established	Development of a domestic transport policy implement a national transportation plan	Transport sector (National transportation master plan) 20% reduction in conventional transportation fuel use by 2030. Energy efficiency through appropriate policies	The national Belize motor vehicle registration system is in its preliminary phase.
No. of new and improve transit services	The indicator would track road/route improvements, local & regional bus services which	BAU was established using the assumption derived from TNA 2017. 2020-6.64Gg CO2-eq 2030-73.07Gg CO2-eq 2033-93.0064Gg CO2-eq (Yearly targets)	2020-2033	Improve public transportation		
No. Imported hybrid and electric cars	Note: Transport Master Plan-In terms of GHG reduction, it was not possible to calculate emission for each scenario due to the difficulties faced with characterizing the national fleet	Imports on energy-efficient automobiles. The registration system would provide information on fuel economy labels and fuel economy std. This is considered a long-term initiative under the EESAT document	2018	Belize Motor vehicle registration system		
No. of vehicles retrofitted with LPG fuel system	Imports on automobiles with fuel-efficient engines (model level details). The Belize motor vehicle registration can provide information on imports	BAU base on the study Cleaner& more efficient fuels & vehicles BZE 2020-18.01Gg CO2-eq 2030-198.10Gg CO2-eq 2033-252.13Gg CO2-eq (Yearly targets)	2020-2033	Energy efficiency standards and labels for cars		



Table 6: Provides information on indicators that are needed to be tracked to assess progress for the Waste Sector NDC mitigation activity

Indicators	Description On indicators	Target Description	Target Tracking	Target	NDC Mitigation Activity	Comments
Generation of waste per annum metric tonnes	Average emission reduction of waste going to the landfill	BAU is based on open burning reduction to zero and the percentage of waste going to the landfill is 100% Emission reduction potential 34.78 01Gg CO2-eq	2016-2019	National Solid Waste Management Strategy and Plan	National Solid Waste Management Strategy and Plan	
Annual emission reduction from the types of waste management practices	Waste treatments that reduce methane emissions from landfill (Biological treatment, waste to energy)	Reduce GHG emission by category in the waste sector. BAU use historical time series of GHG emission. It does not indicate GHG reduction	2012-2030	Reduce methane emissions by capping and closing dumps		Waste to energy is not an initiative that is being anticipated in the immediate future for BSAWMA
No. of waste facility expansion and upgrades	The Solid Waste Management Plan II provides for the expansion of Transfer station and composting facility. On-site assessment can be used to track facility expansion and standard	Expansion of transfer station to include Punta Gorda, Dangriga, Placencia, Belmopan, Orange Walk & Corozal	Reference point 2015	Improve waste management process		COVID has delayed project plans
No. of reliable wastewater system (Industrial, Residential and Tourism sector)	Annual emission reduction from proper wastewater treatment The improvement in the wastewater treatment can have a significant impact on GHG emissions	BAU was based on changes in discharged practices 2020-3.82Gg CO2-eq 2030-42.02Gg CO2-eq 2033-53.48Gg CO2-eq (Time series)	2012-2033	Improvement of wastewater treatment		



Table 7: Provides information on indicators that are needed to be tracked to assess progress for the Agriculture Sector

Indicators	Description On indicators	Target Description	Target Tracking	Target	BUR objective and CAEP Targets	Comments
tCO ₂ e of avoided CH ₄	Changes of CH ₄ emission due to changes in feeding practice and enteric fermentation	BAU is based on a 20% emission reduction in the BAU of category 3A livestock, which comprise of enteric formation and manure management 2020-36.84 GgCO ₂ -eq 2030-47.64 GgCO ₂ -eq 2033-52.81 GgCO ₂ -eq Time series	2009-2017	Promote GHG emission reduction by improving feeding practices of livestock through implementing effective livestock management	Belize Mitigation potential is directed towards Belize Agriculture Management Information System: This objective was established under the BUR. Note: The NDC did not provide emission reduction targets	There is no planned mitigation action with real effect on the GHG emissions as stated in the BUR. Enteric fermentation accounts for 74% of the emissions from agriculture. Note: Project-Improving livestock sector productivity and climate resilience in Belize
tCO ₂ e of avoided N ₂ O emissions	Changes of N ₂ O emissions due to changes in soil and manure management	Green Manure and cover crops have valuable use in maintain soil fertility. Quantitative data for emission reduction from manure management is not collected at the sector level but at institutional level there is a possibility	Base year 2009	Promote GHG emission reduction by improving soil and manure management that controls the decomposition process		N ₂ O emissions from soil management accounts for 24% followed by biomass burning and manure management at approximate 5%
tCO ₂ e of avoided N ₂ O emission	Changes of N ₂ O emission due to changes in agriculture crop management. Legume rotation can decrease use of synthetic nitrogen-based fertilizer.	Crop rotation, is attributed to indirect emission reduction in the medium and long term per unit of output Climate Smart Agriculture (CSA) is more than 60% adopted throughout the region	Base year 2009	Promote GHG emission by improving crop management through altering crop cultivation methods		Emission cannot be estimated due to lack of data (Fourth national greenhouse gas inventory). Note: Project-Biochar Production (LDN project)



tCO ₂ e avoided of CH ₄ through manure management	Changes of CH ₄ emission due to changes in manure practices	Quantitative data for emission reduction from manure management is not collected at the sector level but at institutional level there is a possibility	Base year 2009	Promote GHG emission reduction by improving manure management through capture, storage, treatment, and utilization of animal manure in an environmentally sustainable practice		Manure management couldn't be estimated due to limited information on new management practices. (Fourth national greenhouse gas inventory)
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Analysis of the Target and Policies included in Belize's NDC

The policies from each sector were assessed to determine whether policies are in accord with targets. This was achieved mainly through policy objectives, and if the objectives were clear and in alignment with the NDC targets. The sectors are as follows, Coastal Zone, Forestry, Energy, Transport, Waste, also Agriculture and Tourism.

Table 8: Showing the policy assessment for the Coastal Zone Sector

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
Forest (Protection of Mangroves) Regulation 2018	Prevent mangrove alteration. Mangrove restoration and reforestation.	The regulation has been updated. The improvements consider mangrove protection and restoration	It does not mention the quantitative reduction of GHG. However, it speaks of carbon storage and sequestration potential



Table 9: Showing the policy assessment for the Forestry Sector in accord with NDC Target.

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
Forest Act	The updated Forest Act provides restructuring and enhancement of penalties to more effective and realistic measures for forest offences	The reporting requirement addresses updates, and as such, is aligned	
Belize National Land Use Policy	Includes the design and the development of a land suitability mapping tool	The 2011 land use policy is being updated, through the implementation of the Belize Climate Resilient Infrastructure project	
National Forest policy	(i) Enhance the quality and productivity of Belize forest, ensuring sustained flow of goods and services to meet the development needs of the people. (ii) Encourage stakeholder participation in the planning and decision-making process. (iii) ensure equitable access to and use of resources, acknowledging the rights of all Belizean. (iv) raise awareness among public and government agencies on forest benefits from forest resource conservation and sustainable management. (v) Enhanced applied research for the forest flora and fauna. (vi) Guide action as it relates to direct and indirect threats posed by climate change on forest and forest-dependent people	The National Forest Policy is a key tool that is aligned with the NDC, it supports and complements both the Forest act and the National Land Use Policy and is further indicated through the objectives. The policy also focuses on reducing deforestation and degradation through strategy implementation: promoting land usage and planning, contributing to forest resource management. Promote the development of agroforestry in agriculture expansion hotspots. Promote replanting programme, reforestation/ Afforestation initiatives.	



Table 10: Showing the policy assessment for the Energy Sector in accord with NDC Target

<i>Policy/Strategic plan</i>	<i>Objectives</i>	<i>Results (Alignment with NDC Targets)</i>	<i>Comments</i>
Sustainable Energy Action Plan	<p>To achieve and promote Belize's renewable energy.</p> <p>To achieve energy efficiency potential.</p> <p>Improve sustainable energy in rural areas.</p>	The action plan does support the targeted initiative in the expansion of renewable energy potential in hydro, biomass, wind and solar. At present Waste to energy is unknown. On the other hand, energy efficiency is in its pilot/ trial phase, including energy efficiency labelling appliances, energy conservation building codes, energy auditing.	
National Energy Policy Framework	<p>Reduce the cost of energy use</p> <p>Reduce the amount of GHG emissions</p> <p>Increase renewability index (percentage of indigenous renewable energy in the total energy supply mix)</p> <p>Reduce dependency on outside foreign energy resources.</p> <p>Increase the diversity of the energy supply mix.</p> <p>Increase the use of electricity</p>	The national framework supports the energy action plan as outline in the objectives	



Table 11: Showing the policy assessment for the Transport Sector in accord with NDC Target

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
The National Development Framework, Horizon 2030	Promote Green Energy	The Horizon 2030 supports the master plan which adopts the National Transport Policy, addressing vehicle, marine or aquatic, and air transport ensuring safety and efficiency to reduce environmental impact.	Cross-cutting, with Development framework. Note that some of the foundation policy will be repeated throughout some of the sectors.
Belize Motor vehicle registration system.	To access information management electronically in the field of transportation to improve Belize's transport services and issues. Digitalizing paper records and introducing audit mechanisms. Assist the transport offices of Belize to establish a centralized database enhancing storage, integration, and exchange of data and to assist the overall development of transport services.	The project initiative has already been implemented since 2017 and is expected to finalize by 2021. The project development will enable countrywide transport information on vehicle registration, transfer, renewal, and importation data. Import data is beneficial for identifying model types and details on efficiency. An established vehicle system for Belize is in alignment with energy efficiency goals and would provide necessary information on imports.	
Belize Development Framework 2030	<p>To develop effective governance through the improvement of public service delivery.</p> <p>To build a resilient economy via the development of the domestic market as a springboard for growth.</p> <p>Promote environmental sustainability and green energy in development.</p> <p>Promote healthy people in a healthy environment</p>	The framework does not address specific policies or programs related to transport but focuses on the vision following four aspects presented in the objectives section. The third objective is in line with the mitigation target (efficiency standard) which calls for the implementation of the environmental strategy; climate change mitigation planning and strategies ensuring safety and efficiency in vehicles, and in marine, aquatic and air transport with the lowest environmental impact.	The framework provides (International Monetary Fund 2018) a wider scope on modes of transportation. As opposed to only focus on initiatives for vehicles, it opens the avenue for efficiency in aeroplanes and vessels.



Table 12: Showing the policy assessment for the Waste Sector in accord with NDC Target

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
National Solid Waste Management Policy	<p>Enforcement of legislation relating to solid waste.</p> <p>Waste prevention at source.</p> <p>Adequate human resources.</p> <p>Greater waste recovery and recycling.</p> <p>Waste generated is treated, processed, and disposed of following best practices.</p> <p>Existing and old waste dumpsites and illegal hotspots are close, remediated and restored.</p>	<p>The national solid waste plan has provided the necessary information on waste management and process improvement. However, clarity was lacking in GHG emission reduction. The overarching principle for managing solid waste under the substantiable development section highlights reducing emissions to air and water. Section 2.2.3 provided information on open fire tyre emissions and importation. The section on Waste management option also provided information, giving examples of incineration with energy recovered as electricity, landfilling of untreated mixed waste -gearing towards landfill gas recovery which can be used for energy production, and could then reduce GHG emissions.</p>	<p>As it relates to the target, (GHG emission reduction) the scenarios used for waste management options didn't present any estimated value but provided assumptions on economic viability.</p>



Table 13: Showing the policy assessment for the Agriculture Sector in accord with NDC Target

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
National Agriculture and Food Policy of Belize 2015-2030	A4.13. Climate Change Mitigation risk	Section A4.13. provides information on the potential role of the agriculture sector as an entity to have a dual role as energy users and energy suppliers in the form of bioenergy, it also presents as a means of climate change mitigation, substituting bio-energy for fossil-fuels.	BELTRAIDE is looking into investment opportunities in biofuel in the form of ethanol.

Table 14: Showing the policy assessment for the Tourism Sector in accord with NDC Target

Policy/Strategic plan	Objectives	Results (Alignment with NDC Targets)	Comments
National Sustainable Tourism Master Plan 2030	<p>Increase arrivals and tourism movement within the region and the country.</p> <p>Reduce health hazard and visual and environmental pollution.</p> <p>Reduce consumption of scarce resources</p> <p>Improve application green technologies recycling and energy conservation.</p> <p>Enhance transportation capacity by meeting increasing tourist arrivals and flows</p> <p>Enhance transport safety and reliability</p> <p>Enhance the tourism destination's competitiveness</p> <p>Increase the tourism satisfaction level</p>	The tourism master plan is cross-cutting, integrating with different sectors, energy, transport, waste, and forestry. Example, introducing sub-programs for waste management for tourism destination, and non-renewable resources management identifying the needs of limited consumption of resources targeting water and energy	The national tourism master plan provides a framework for sustainable management.

Conclusion

To track progress towards the implementation of Belize's NDC, it is important to conform to both national and international requirements. The information required varies on the NDC target, covering qualitative and quantitative information to be tracked using established indicators. The challenge in identifying relevant indicators is reliant on NDC mitigation targets: if these are not properly established, it will prove difficult to identify concrete indicators. There are several reasons for the current lack of clarity in the NDC targets, such as sectors not measuring or collecting data on projects, lack of adequate information sharing among national institutions, lack of experience in providing information on targets coupled with lack of data for the country (i.e. not having a centralized data hub).

Several mitigation initiatives are being done throughout the country of Belize, with the underlying challenge being the lack of monitoring and reporting of data. The reporting on policy implementation status is also an integral part of the MPGs' requirements, it allows to assess whether the policies or mitigation action were implemented, to what extent they were implemented, and to what extent they have met the mitigation target, thus assessing their enforcement and effectiveness. Some of the policies that are instrumental in achieving Belize's mitigation targets fall short in streamlining climate change into their scope. In the case of the Waste sector, GHG emission reduction was not clearly stated, similarly to the Transport sector and Agriculture. The other sectors (Energy Coastal Zone/ Fisheries and Forestry), however, have mainly provided the relevant information in reducing GHG emissions. Considering the information presented, it is essential for all relevant information to be consistent and in-line with the national and international reporting requirements, as prescribed by the MPGs.

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Annex 1

The full list of documents used in this report.

National Forest Policy
National Solid Waste Management Plan
Belize Forest Act
Comprehensive National Transport Master Plan
Horizon 2030
National Sustainable Tourism Master Plan
Greenhouse Gas Mitigation Assessment Consultancy
Report of the Environment Statistics Assessment Using the Environment Statistics Self-Assessment Tool (ESSAT)
National Biodiversity Strategy & Action Plan
Belize National GHG Inventory Report
Sustainable Energy Action Plan
National Forest Policy
Mangrove Regulation 2018
A National Climate Change Policy, Strategy and Action Plan to Address Climate in Belize
National Agriculture and Food Policy of Belize 2015-2030