



Food and Agriculture
Organization of the
United Nations

ENVIRONMENT
AND NATURAL
RESOURCES
MANAGEMENT

SYNTHESIS

REGIONAL ANALYSIS OF THE NATIONALLY DETERMINED CONTRIBUTIONS IN THE CARIBBEAN

Gaps and opportunities in the agriculture
and land use sectors



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Krystal Crumpler, Giulia Gagliardi, Alexandre Meybeck, Sandro Federici, Tanja Liew, Mario Bloise, Valentyna Slivinska, Olga Buto, Mirella Salvatore, Ignacia Holmes, Julia Wolf and Martial Bernoux

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ACRONYMS AND ABBREVIATIONS

AFOLU	Agriculture, Forestry and Other Land Use
BAU	Business-as-usual
CDB	Caribbean Development Bank
DRR	Disaster risk reduction
FAO	Food and Agriculture Organization of the United Nations
GDP	Gross domestic product
GHG	Greenhouse gas
INDC	Intended Nationally Determined Contributions
IPCC	Intergovernmental Panel on Climate Change
IPPU	Industrial processes and products use
LLDC	Land-locked developing country
LULUCF	Land Use, Land Use Change and Forestry
M&E	Monitoring and evaluation
MRV	Measurement, reporting and verification
MRV	Measurement, reporting and verification
NAMA	Nationally Appropriate Mitigation Action
NAP	National Adaptation Plan
NC	National Communication
NDC	Nationally Determined Contributions
NGHGI	National greenhouse gas inventory

OECD	Organisation for Economic Co-operation and Development
SDG	Sustainable Development Goal
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USD	United States dollar
2030 Agenda	2030 Agenda for Sustainable Development

CHEMICAL FORMULAE

CO₂

Carbon dioxide

Mt CO₂ eq

Million tons of carbon dioxide equivalent

N₂O

Nitrous oxide

INTRODUCTION

The Paris Agreement constitutes a landmark achievement in the international response to climate change, as developed and developing countries alike committed to do their part in the transition to a low-emission and climate-resilient future. Underpinning the Agreement are the (Intended) Nationally Determined Contributions ((I)NDCs),¹ representing the main national policy framework, under the United Nations Framework Convention on Climate Change (UNFCCC), by which Parties communicate their commitment to reducing national greenhouse gas emissions (GHG) and adapting to the impacts of climate change, based on national priorities, circumstances and capabilities, and support needs.

FAO recognizes that its goals to eliminate hunger, food insecurity and malnutrition, reduce rural poverty, and make agriculture, forestry and fisheries more productive and sustainable cannot be fulfilled without decisive action on climate change (FAO, 2013a). The NDCs present a natural framework for FAO's work on climate change, as they already define, at the highest political level, targets and strategies for responding to the consequences and addressing the causes of climate change. Overall, 86 and 97 percent of developing countries include the role of the agriculture and/or Land Use, Land Use Change and Forestry (LULUCF) sector² in their mitigation and adaptation priorities, respectively (FAO, forthcoming a).

The main objective of this report is to provide a regional synthesis of the climate change mitigation and adaptation commitments in the agriculture and land use sectors set forth in the NDCs of countries in the Caribbean and to identify opportunities for enhancing mitigation and adaptation ambitions, capturing their synergies and leveraging climate finance and international support options in the region. It aims to guide FAO – and policy makers and practitioners in the region – committed to providing the country support required for accelerating progress on and scaling up NDCs in the agriculture and land use sectors, and ensuring that future commitments are clear, quantifiable, comparable, transparent and ambitious.




















































This analysis is based on the information reported in the latest NDCs, National Communications and Technical Needs Assessments of 20 Parties to the UNFCCC submitted as of 1 August 2019. The methodological framework is contained in FAO, 2019. **Annex 1** contains the list of all documents assessed by country. For the sake of this document, the Caribbean refers to the following 13 countries: Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Trinidad and Tobago, all of which are classified as Small Island Developing State (SIDS) (UNSD, n.d.).

¹ For the purpose of this document, the (I)NDCs and NDCs are collectively referred to as NDCs.

² For the purposes of this document, the Agriculture and LULUCF sectors, as defined by Intergovernmental Panel on Climate Change (IPCC), are also collectively referred to as the “agriculture and land use sectors.”

TABLE 1.

NDC CARIBBEAN SUMMARY TABLE

FAOSTAT COUNTRY NAME	MITIGATION IN AGRICULTURE SECTOR INCLUDED	MITIGATION IN LULUCF SECTOR INCLUDED	ADAPTATION IN AGRICULTURE INCLUDED	DRR/M ³ IN AGRICULTURE INCLUDED	GENDER MENTIONED	CO-BENEFITS MENTIONED	SDGs ⁴ MENTIONED	NAP ⁵ MENTIONED	LOSS AND DAMAGE MENTIONED
ANTIGUA AND BARBUDA									
BAHAMAS									
BARBADOS									
CUBA									
DOMINICA									
DOMINICAN REPUBLIC									
GRENADA									
HAITI									
JAMAICA									
SAINT KITTS AND NEVIS									
SAINT LUCIA									
SAINT VINCENT AND THE GRENADINES									
TRINIDAD AND TOBAGO									

³ Disaster risk reduction and management (DRR/M).

⁴ Sustainable Development Goals (SDG).

⁵ National Adaptation Plan (NAP).

REGIONAL CIRCUMSTANCES

The climate in the Caribbean is tropical, with one or two wet seasons per year. The average temperature ranges between 25.5 °C and 26.4 °C and average annual precipitation average is 1 687 mm per year (FAOa, n.d.).⁶ In 2017, precipitation extremes reached up to 1030 mm in Antigua and Barbuda and up to 2 350 mm in Grenada (WB, n.d.).

Total land area of the region amounts to approximately 21 million ha or 0.2 percent of global land area⁷ (FAOb, n.d.) , of which 83 percent is considered suitable for agriculture⁸ FAOc, n.d.). Several countries in the region suffer from water scarcity, or when average water available per person falls below 1 000 m³/year (FAO, 2014). Antigua and Barbuda (566 m³ per capita per year), Barbados (282 m³/year per capita), St. Kitts and Nevis (432 m³/year per capita) and St. Vincent and the Grenadines (913 m³/year per capita) are all considered water-scarce countries (FAOa, n.d.).⁹

The contribution of agriculture to Caribbean gross domestic product (GDP) is similar to the global average at 12.4 percent, but the importance of the sector varies widely across the region. Variations in the contribution of the agricultural sector to total GDP range from 19 percent in Dominica and 17 percent in Haiti¹⁰ to as low as 1 percent in Trinidad and Tobago, Bahamas, and Saint Kitts and Nevis (WB, n.d.).¹¹ While the agricultural sector employs 1.3 million people directly, it supports the livelihoods of 4.5 million people in the region: CARICOM countries employ over 182 000 people in fisheries, operate around 25 000 boats, and produce around 161 000 tonnes for a value of about USD 700 million per year (FAO, 2013b).

The Caribbean is home to a total of 38 million inhabitants¹² (FAOb, n.d.) with a great variation in GDP. In 2015, the region's economic growth was estimated at 3.1 per cent. GDP in the Caribbean is highly heterogenous, from USD 32 000 in Trinidad and Tobago to USD 1 784 per capita in Haiti (WB, n.d.).¹³

The Caribbean region has made progress in reducing undernourishment and towards meeting the global hunger targets. The number of undernourished persons in the Caribbean has declined from 27 percent to 19.8 percent between 1991 and 2015.¹⁴ Almost all CARICOM countries import more than 60 percent of the food they consume with half of them importing more than 80 percent of the food they consume. Only three countries (Belize, Guyana, and Haiti) produce more than 50 percent of their consumption. Food imports are projected to increase to about USD 8–10 billion by 2020 if current efforts are not successful in reducing this trend (FAO, 2015). Damage and loss due to natural disasters has been increasing over the past 15 years (EM-DAT, n.d.).¹⁵

⁶ Data refers to year 2017.

⁷ Data refers to year 2015.

⁸ Data refers to the year 2009.

⁹ Data refers to year 2015.

¹⁰ There is no data on the contribution of Agriculture to the GDP for Haiti in FAOSTAT, but other references suggest the share of 17 percent, see FAO and Caribbean Development Bank (CDB), 2019.

¹¹ Data refers to year 2015.

¹² Data refers to year 2017.

¹³ Data refers to year 2017.

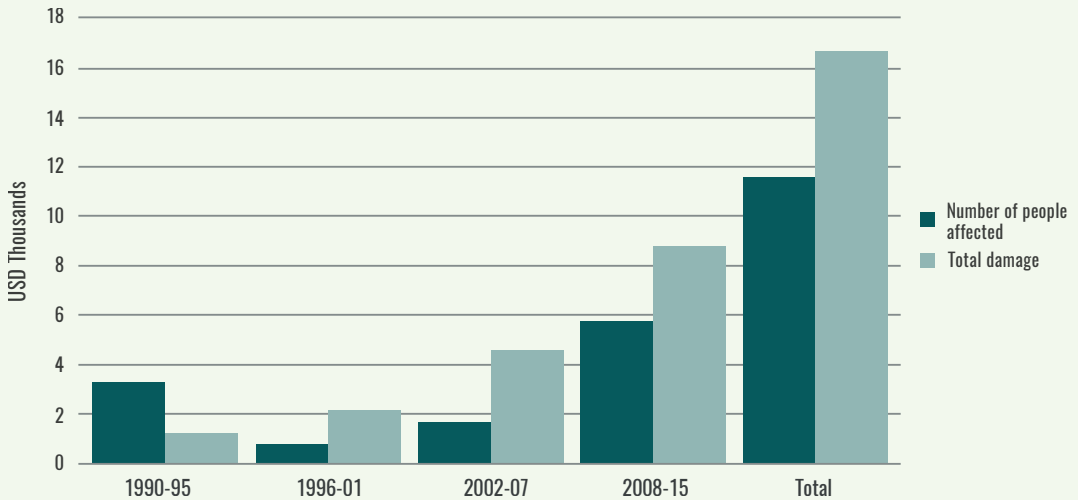
¹⁴ Refers to CARICOM countries, Dominican Republic and Cuba.

¹⁵ Data refers to the year 2015.

Figure 1 illustrates the number of people in the Caribbean affected and total damage by natural disasters (FAO, 2015).

FIGURE 1.

NUMBER OF PEOPLE AFFECTED AND TOTAL DAMAGE IN THE CARIBBEAN BY NATURAL DISASTERS (1990-2015)



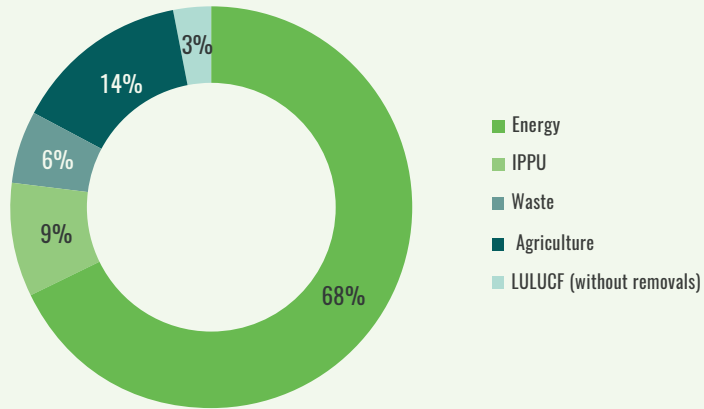
Source: EM-DAT, n.d.

The Agriculture, Forestry and Other Land Use (AFOLU) sector¹⁶ represents the second largest share of emissions in the region (17 percent), after the Energy sector (68 percent), and followed by the industrial processes and product use (IPPU) (9 percent) and waste (6 percent) sectors. Emissions from the agriculture sector (25.56 Mt CO₂ eq.) are greater than those from the Land Use, Land Use Change and Forestry (LULUCF) sector, excluding removals (4.7 Mt CO₂ eq.), equal respectively to 14 and 3 percent shares of national emissions, respectively. Including removals, the LULUCF sector represents a net sink (19.87 Mt CO₂ eq.). **Figure 2** illustrates the share of economy-wide emissions in the region by sector.

¹⁶ The AFOLU sector refers to the Agriculture and LULUCF sector as defined by IPCC (2006).

FIGURE 2.

ECONOMY-WIDE EMISSIONS IN THE CARIBBEAN, BY SECTOR (SHARE OF TOTAL EMISSIONS)



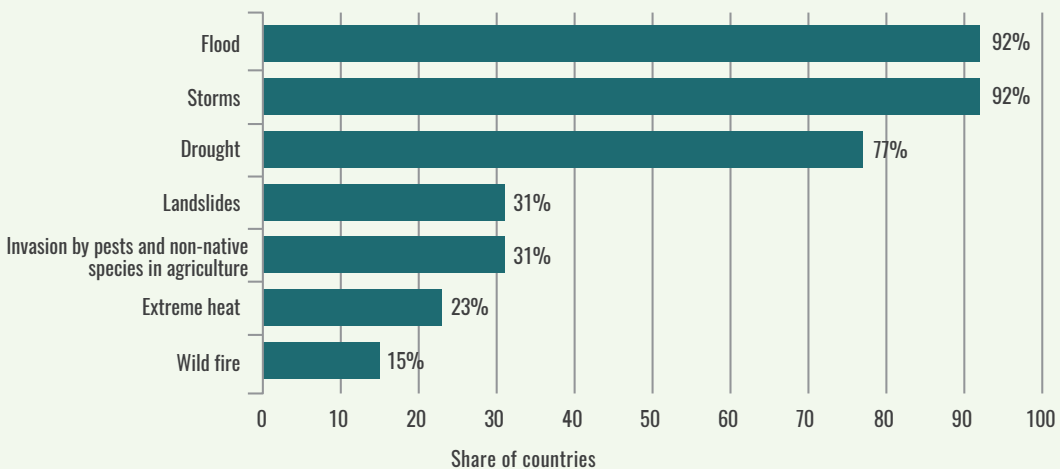
Source: National greenhouse gas inventories (NGHGI) submitted to UNFCCC.

CLIMATE-RELATED IMPACTS, HAZARDS AND VULNERABILITIES

The majority of the countries in the region report the occurrence of floods and storms amongst observed and/or projected climate-related hazards (92 percent of countries each), followed by drought (77 percent), landslides (31 percent), invasion by pests and non-native species in agriculture (31 percent), extreme heat (23 percent) and wildfire (15 percent). **Figure 3** illustrates the share of countries with observed and/or projected climate-related hazards reported, by type of hazard.

FIGURE 3.

OBSERVED AND/OR PROJECTED CLIMATE-RELATED HAZARDS REPORTED IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OF COUNTRIES)

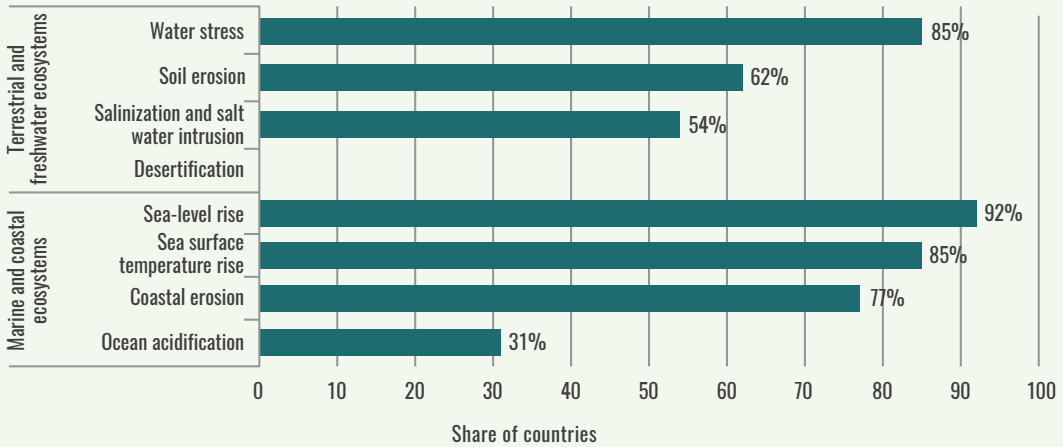


In terrestrial and freshwater ecosystems, water stress, soil erosion and salinization are reported most frequently amongst observed and/or projected climate-related slow onset events (85, 62 and 54 percent of countries, respectively).

In marine and coastal ecosystems, sea level rise, sea surface temperature rise, and coastal erosion are reported most frequently amongst observed and/or projected climate-related slow onset events (92, 85 and 77 percent of countries, respectively), followed by ocean acidification (31 percent). **Figure 4** illustrates the share of countries that report observed and/or projected climate-related slow onset events, by type of event.

FIGURE 4.

OBSERVED AND/OR PROJECTED CLIMATE-RELATED SLOW ONSET EVENTS IN MARINE AND TERRESTRIAL ECOSYSTEMS REPORTED IN THE NDCs OF CARIBBEAN COUNTRIES



Ocean and coastal zones, along with agro-ecosystems, are the most often mentioned as vulnerable ecosystems (77 and 69 percent of countries, respectively), followed by inland water (23 percent).

Crops and fisheries are the most often mentioned as vulnerable agricultural sub-sectors to climate change (54 and 46 percent of countries, respectively), followed by forestry and livestock (23 percent each).

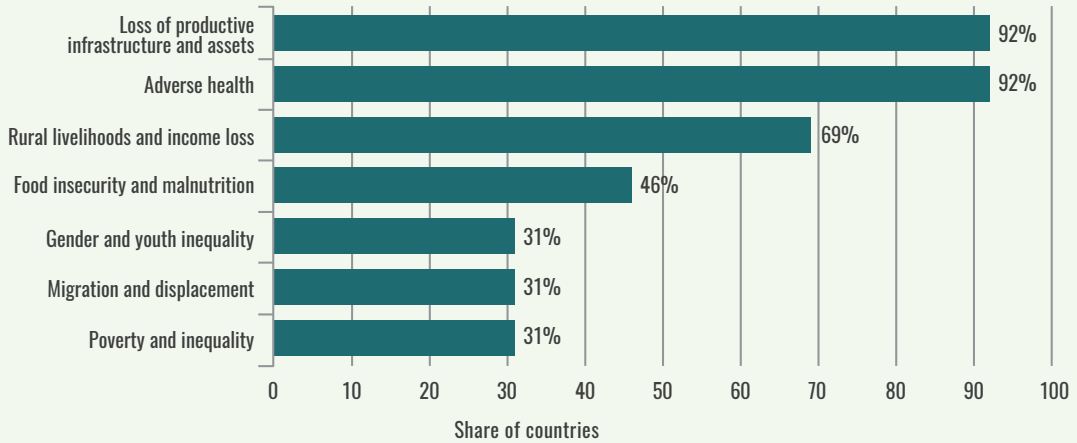
Climate-related impacts on water, land and soil resources are reported most frequently amongst natural resource-related impacts (85 percent of countries each) across all ecosystems.

Loss of primary production and productivity, coastal erosion and changes in water availability and quality are reported most often amongst ecosystem service-related impacts, followed by changes in species range, abundance and extinction and coastal erosion (77, 69 and 69 percent of countries, respectively) followed by pests and diseases incidence and mangrove mortality and/or coastal reef degradation (38 percent, respectively), amongst others.

In social systems, productive infrastructure and assets, as well as human health, are the most often reported at risk under climate change (92 percent of countries each), followed by loss of rural livelihoods and incomes (69 percent), food insecurity and malnutrition (46 percent), gender and youth inequality (31 percent), migration and displacement (31 percent) and poverty and inequality (31 percent). Figure 5 illustrates the share of countries that report one or more observed and/or expected climate-related impact, vulnerability and risk in social systems out of countries with impacts reported, by risk type.

FIGURE 5.

OBSERVED AND/OR PROJECTED CLIMATE-RELATED RISKS IN SOCIAL SYSTEMS REPORTED IN THE NDCs OF CARIBBEAN COUNTRIES



Geography and topography, along with economic dependence on agriculture and natural resources, are the most frequently reported amongst the non-climatic stressors of vulnerability (100 and 77 percent of countries with vulnerabilities in social systems reported, respectively), followed by natural hazards (69 percent) poverty and low levels of development (54 percent), weak institutions and governance (31 percent) and conflict (31 percent), amongst others.

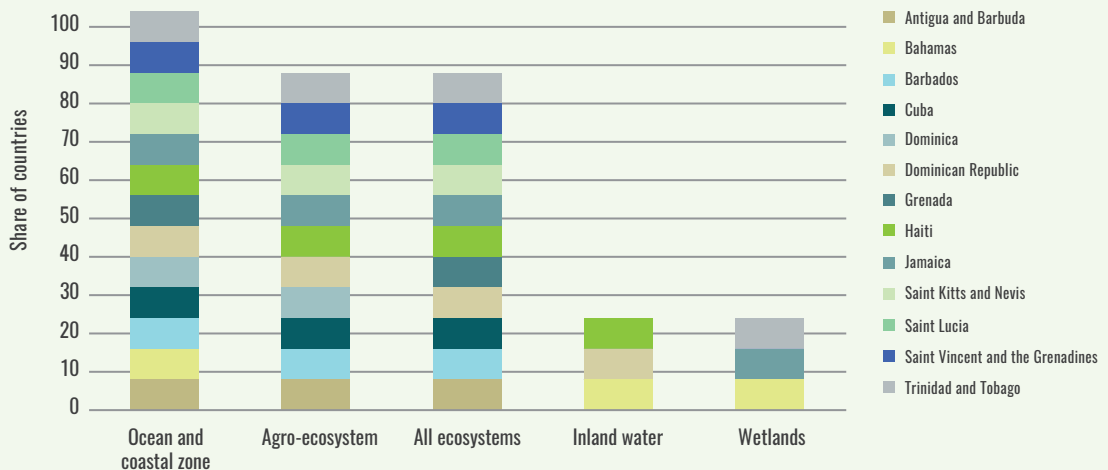
ADAPTATION CONTRIBUTIONS IN THE AGRICULTURE AND LAND USE SECTORS

All countries in the Caribbean, with the exception of one,¹⁷ communicated an adaptation component in their NDCs (92 percent of all countries), all of which include the agriculture and land use sectors.

All countries with an adaptation component include at least an adaptation policy or measure in agro-ecosystems (90 percent of countries with adaptation), followed by agro-ecosystems and ecosystems in general (85 percent of countries with adaptation, respectively), and inland water and wetland ecosystems (23 percent each). **Figure 6** illustrates the share of countries that include one or more (to avoid bias of representation) adaptation measure in ecosystems, by type of ecosystem, out of countries with an adaptation component.

FIGURE 6.

ADAPTATION POLICIES AND MEASURES IN ECOSYSTEMS IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION)

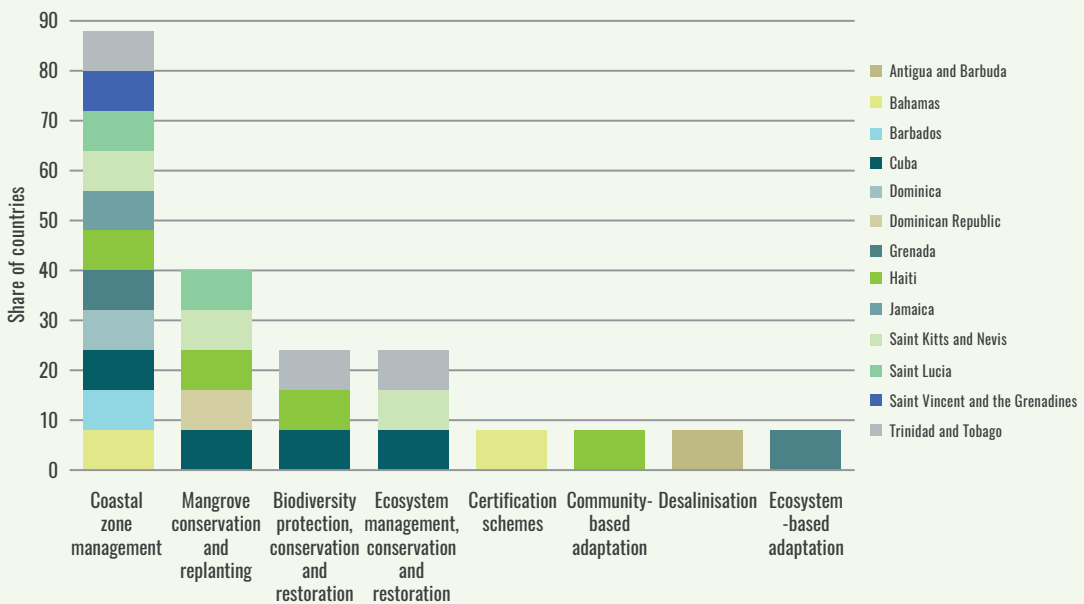


¹⁷ Trinidad and Tobago but agricultural adaptation measures are included in NC.

All countries with an adaptation component include at least one policy or measure in ocean and coastal zone ecosystems. The majority of these countries promote coastal zone management (85 percent of countries with adaptation in ecosystems), followed by mangrove conservation and replanting (38 percent), biodiversity and ecosystem protection, conservation and restoration (23 percent each), amongst others. **Figure 7** illustrates the share of countries with one or more (to avoid bias of representation) adaptation measure in ocean and coastal zone ecosystems, by management activity, out of countries with adaptation in ecosystems.

FIGURE 7.

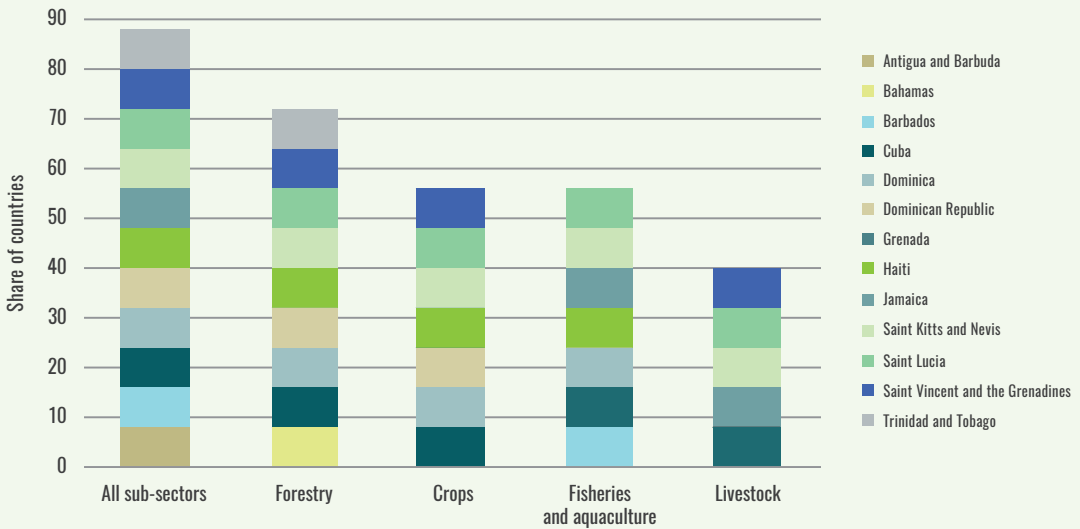
ADAPTATION POLICIES AND MEASURES IN OCEAN AND COASTAL ZONE ECOSYSTEMS IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN ECOSYSTEMS)



Eighty-five percent of countries with an adaptation component identify at least one policy or measure in agro-ecosystems. The majority of these countries promote adaptation in agriculture in general (85 percent of countries with adaptation in agro-ecosystems), followed by in forestry (69 percent), fisheries and aquaculture and the crops sub-sectors (54 percent each), livestock (38 percent) and integrated systems (23 percent). **Figure 8** illustrates the share of countries with one or more (to avoid bias of representation) adaptation measure, by sub-sector, out of countries with adaptation in agro-ecosystems.

FIGURE 8.

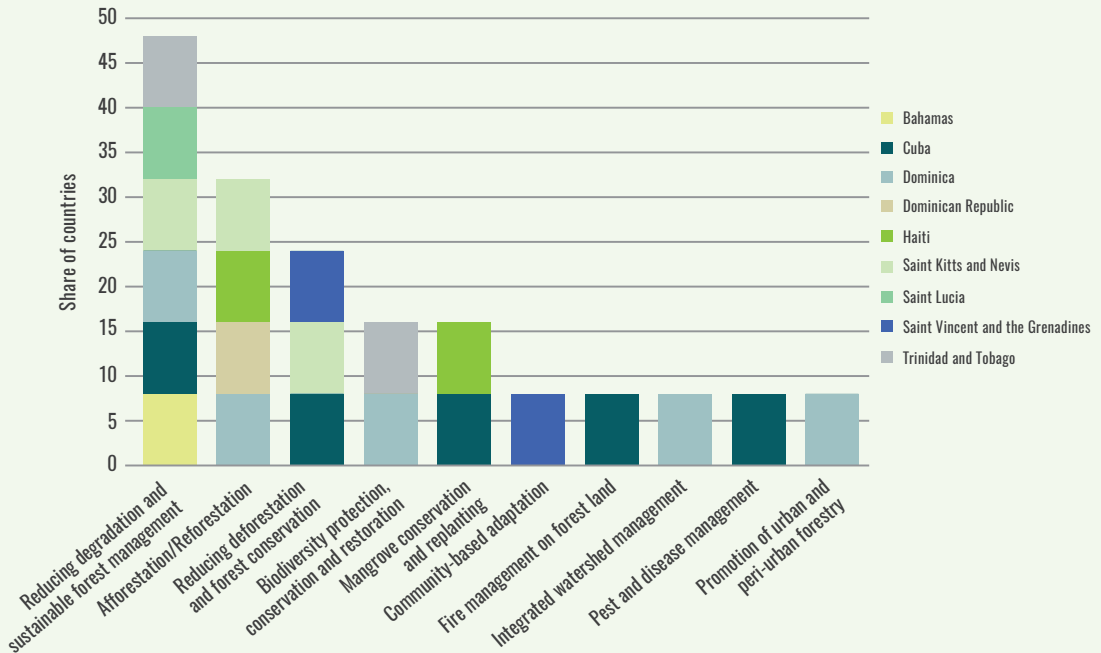
ADAPTATION POLICIES AND MEASURES IN AGROECOSYSTEMS IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN AGRO-ECOSYSTEMS)



Sixty-nine percent of countries with adaptation in agro-ecosystems include at least one policy or measure in the forestry sub-sector. The majority of these countries promote reducing degradation and SFM (46 percent of countries with adaptation in agro-ecosystems), followed by afforestation/reforestation (31 percent) and reducing deforestation and forest conservation (23 percent), and mangrove conservation and replanting and biodiversity protection, conservation and restoration (15 percent each), amongst others. **Figure 9** illustrates the share of countries with one or more (to avoid bias of representation) adaptation measure in the forestry sub-sector, by management activity, out of countries with an adaptation in agro-ecosystems.

FIGURE 9.

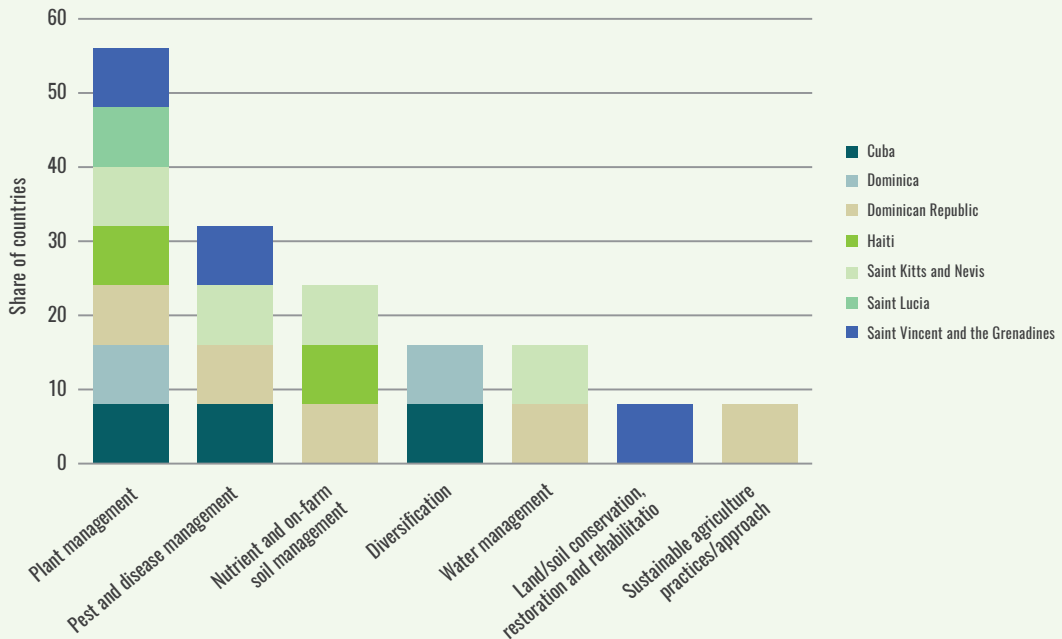
ADAPTATION POLICIES AND MEASURES IN THE FORESTRY SUB-SECTOR IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN AGRO-ECOSYSTEMS)



Fifty-four percent of countries with adaptation in agro-ecosystems include at least one policy or measure in the crops sub-sector. The majority of these countries target plant management (54 percent of countries with adaptation in agro-ecosystems), followed by pest and disease management (31 percent) and nutrient and on-farm soil management (23 percent), amongst others. **Figure 10** illustrates the share of countries with one or more (to avoid bias of representation) adaptation measure in the crops sub-sector, by management activity, out of countries with an adaptation in agro-ecosystems.

FIGURE 10.

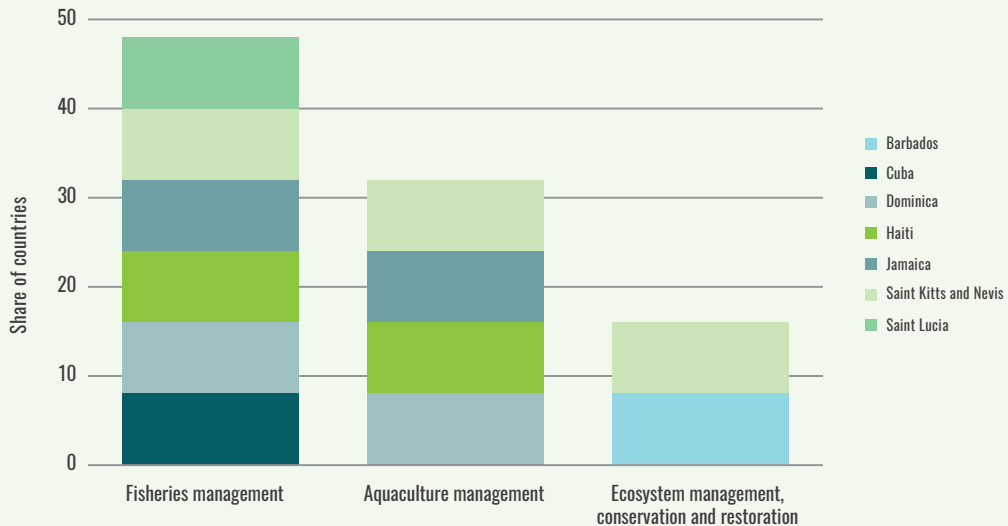
ADAPTATION POLICIES AND MEASURES IN THE CROPS SUB-SECTOR IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN AGRO-ECOSYSTEMS)



Fifty-four percent of countries with adaptation in agro-ecosystems include at least one policy or measure in the fisheries and aquaculture sub-sector. The majority of these countries promote improved fisheries practices (46 percent of countries with adaptation in agro-ecosystems), followed by improved aquaculture practices (31 percent) and ecosystem management, conservation and restoration (15 percent). **Figure 11** illustrates the share of countries with one or more (to avoid bias of representation) adaptation measure in marine fisheries and aquaculture, by management activity, out of countries with an adaptation in agro-ecosystems.

FIGURE 11.

ADAPTATION POLICIES AND MEASURES IN THE FISHERIES AND AQUACULTURE SUB-SECTOR IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN AGRO-ECOSYSTEMS)



Thirty-eight percent of countries with adaptation in agro-ecosystems include at least one policy or measure in the livestock sub-sector. The majority of these countries promote general livestock management¹⁸ and improved feeding practices¹⁹ (23 percent of countries with adaptation in agro-ecosystems, respectively), followed by animal breeding and husbandry²⁰ (15 percent) and intensification²¹ (8 percent).

Ninety-two percent of countries with an adaptation component include at least one policy or measure targeting land and soil use and management. The majority of these countries promote coastal zone management (85 percent of countries with adaptation in ecosystems), followed by land/soil conservation, restoration and rehabilitation²² (31 percent), amongst others.

Ninety-two percent of countries with an adaptation component include at least one policy or measure targeting ecosystems and biodiversity conservation. The majority of these countries promote ecosystem management, conservation and restoration²³ (62 percent of countries with adaptation in ecosystems), followed by crop breeding and diversification²⁴ (54 percent), pest and disease management²⁵ (31 percent), and ecosystem-based adaptation²⁶ (15 percent), amongst others.

¹⁸ Jamaica (NC), St Lucia (NC) and Cuba (NC).

¹⁹ St Lucia (NC) and St Vincent and the Grenadines (NC).

²⁰ St Kitts and Nevis, Jamaica (NC) and St Vincent and the Grenadines (NC).

²¹ St Kitts and Nevis.

²² St Kitts and Nevis (NC), Haiti, St Vincent and the Grenadines and Trinidad and Tobago (NC).

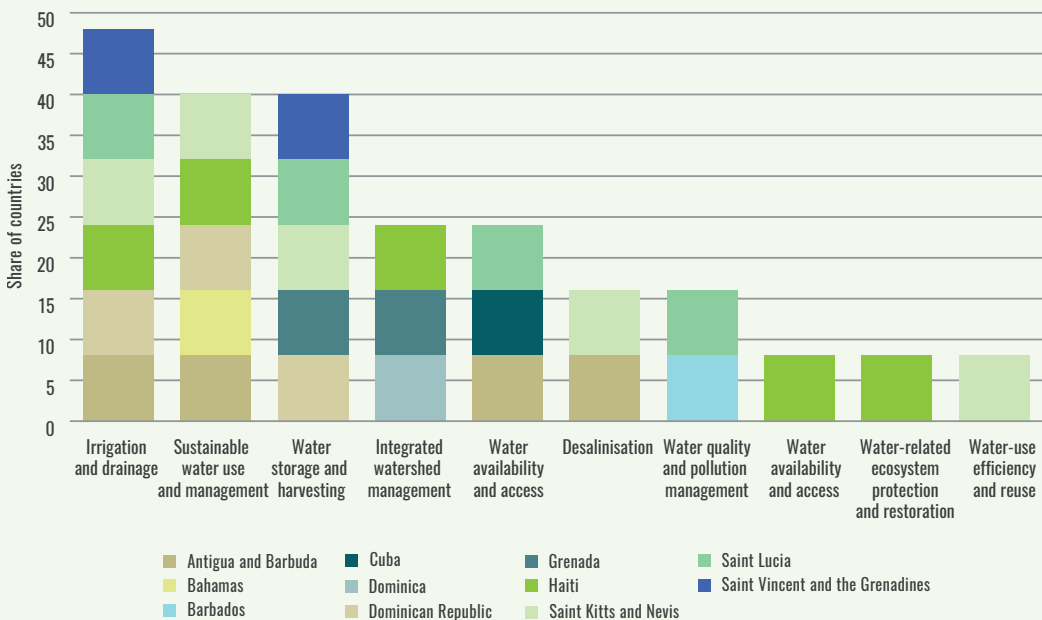
²³ Barbados (NC), St Kitts and Nevis (NC), Bahamas, Dominican Republic (NC), Jamaica (NC), St Lucia (NC), Trinidad and Tobago (NC) and Cuba (NC).

²⁴ Dominica (NC), St Kitts and Nevis (NC), Haiti, Bahamas, Dominican Republic (NC), St Lucia, and Cuba.

²⁵ St Kitts and Nevis (NC), Dominican Republic (NC), St Vincent and the Grenadines (NC) and Cuba (NC).

²⁶ Grenada and Jamaica (NC).

Eighty-five percent of countries with an adaptation component include at least one policy or measure targeting water use and management. The majority of these countries promote irrigation and drainage (46 percent of countries with adaptation in ecosystems), followed by water storage and harvesting (38 percent), sustainable water use and management (38 percent), water availability and access (23 percent) and water quality and pollution management (23 percent), amongst others. Figure 12 illustrates the share of countries with one or more (to avoid bias of representation) water-related adaptation measure, by resource use and management option, out of countries with adaptation in ecosystems.

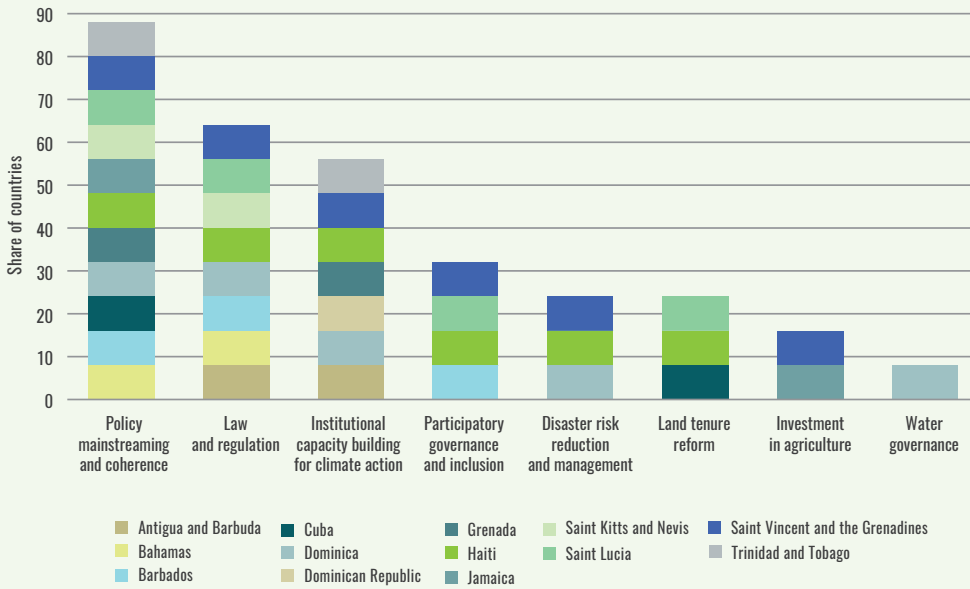
FIGURE 12.
WATER-RELATED ADAPTATION MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN ECOSYSTEMS)


All countries with an adaptation component in the region identify at least one adaptation policy or measure in social systems, primarily around the institutions and governance pillar.

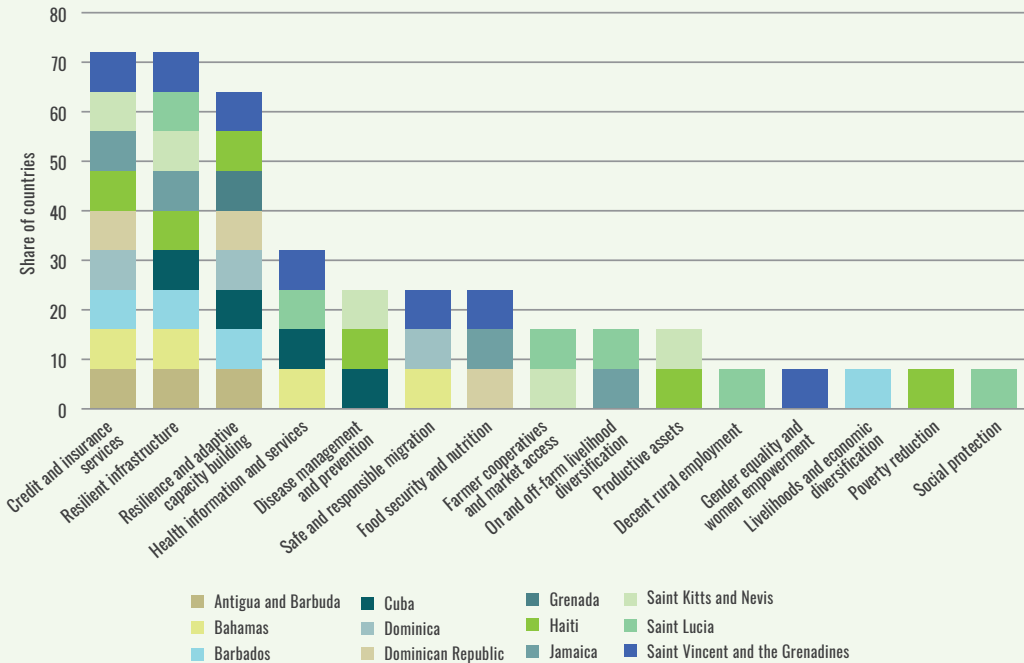
All countries with an adaptation component include at least one policy or measure related to institutions and governance. The majority of these countries promote policy mainstreaming and coherence (85 percent of countries with adaptation in social systems), followed by law and regulation (62 percent), institutional capacity building (54 percent), participatory governance and inclusion (31 percent) and land tenure reform and disaster risk reduction (DRR) (23 percent each), amongst others. Figure 13 illustrates the share of countries with one or more (to avoid bias of representation) institutions and governance-related adaptation measure, by intervention option, out of countries with adaptation in social systems.

FIGURE 13.

INSTITUTIONS AND GOVERNANCE-RELATED ADAPTATION MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN SOCIAL SYSTEMS)



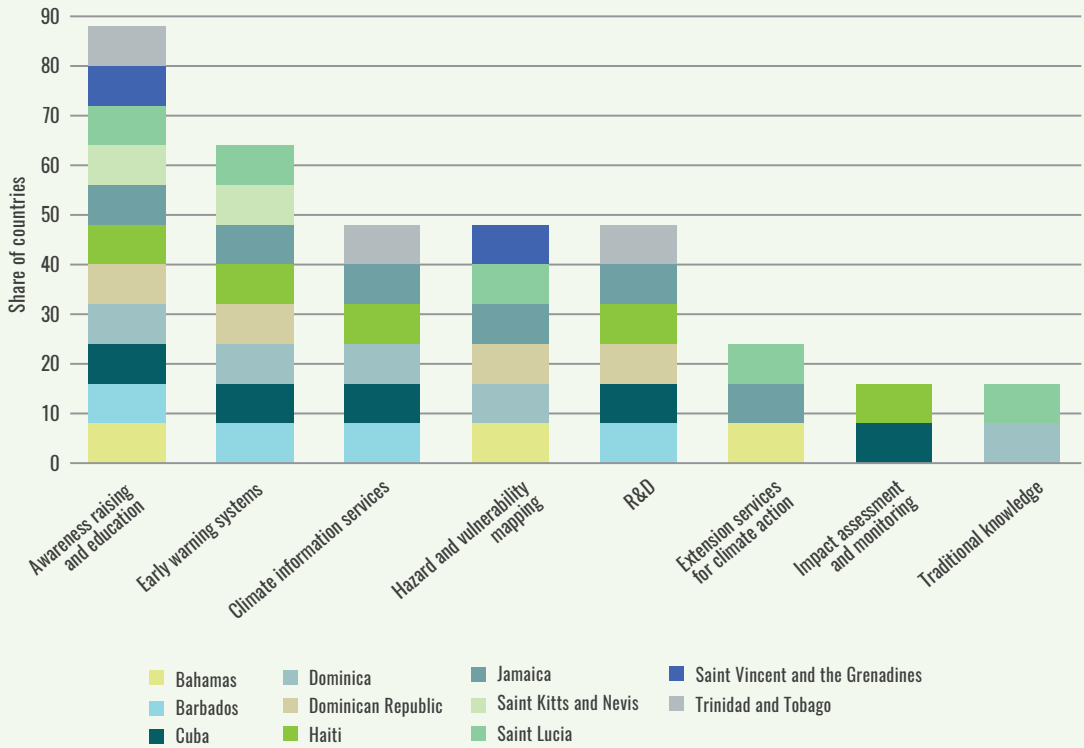
Ninety-two percent of countries with an adaptation component in the region include at least one policy or measure related to socio-economics and well-being. The majority of these countries promote resilient infrastructure and credit and insurance services (69 percent of countries with adaptation in social systems, respectively), followed by resilience and adaptive capacity building (62 percent), health information and services (31 percent) and food security and nutrition, safe and responsible migration, and disease management and prevention (23 percent each), amongst others. **Figure 14** illustrates the share of countries with one or more (to avoid bias of representation) socio-economics and well-being-related adaptation measure, by intervention option, out of countries with adaptation in social systems.

FIGURE 14.
SOCIO-ECONOMICS AND WELL-BEING RELATED ADAPTATION MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN SOCIAL SYSTEMS)


Eighty-five percent of countries with an adaptation component include at least one policy or measure related to knowledge and capacity. The majority of these countries promote awareness raising (85 percent of countries with adaptation in social systems), followed by early warning systems (62 percent), climate information services, hazard and vulnerability mapping and research and development (R&D) (46 percent each), amongst others. **Figure 15** illustrates the share of countries with one or more (to avoid bias of representation) knowledge and capacity-related adaptation measure, by intervention option, out of countries with adaptation in social systems.

FIGURE 15.

KNOWLEDGE AND CAPACITY-RELATED ADAPTATION MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH ADAPTATION IN SOCIAL SYSTEMS)

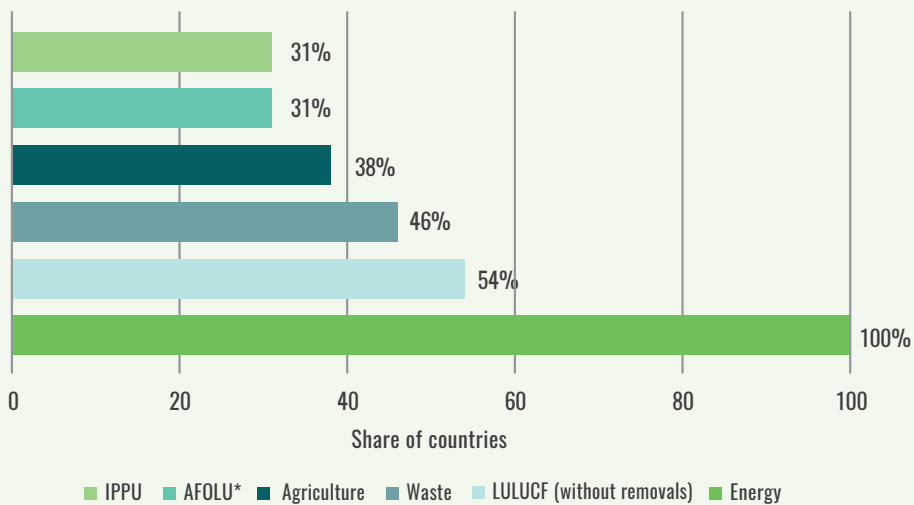


MITIGATION CONTRIBUTIONS IN THE AGRICULTURE AND LAND USE SECTORS

All 13 countries in the Caribbean communicated a general mitigation contribution in their NDC, 11 of which (85 percent) set a GHG target and two²⁷ (15 percent) qualify their contribution in terms of “Action-only.” Around one-fourth are economy-wide in scope, covering emissions from all IPCC sectors – Energy, industrial processes and products use (IPPU), AFOLU and Waste. **Figure 16** illustrates the IPCC sectors included in general mitigation contributions by share of countries at the regional level. Annex 2 contains detailed information on each country’s general mitigation contribution.

FIGURE 16.

SECTORS INCLUDED IN THE GENERAL MITIGATION CONTRIBUTIONS IN THE NDCs OF CARIBBEAN COUNTRIES



*AFOLU refers to when both agriculture and LULUCF sectors are included in mitigation contribution.

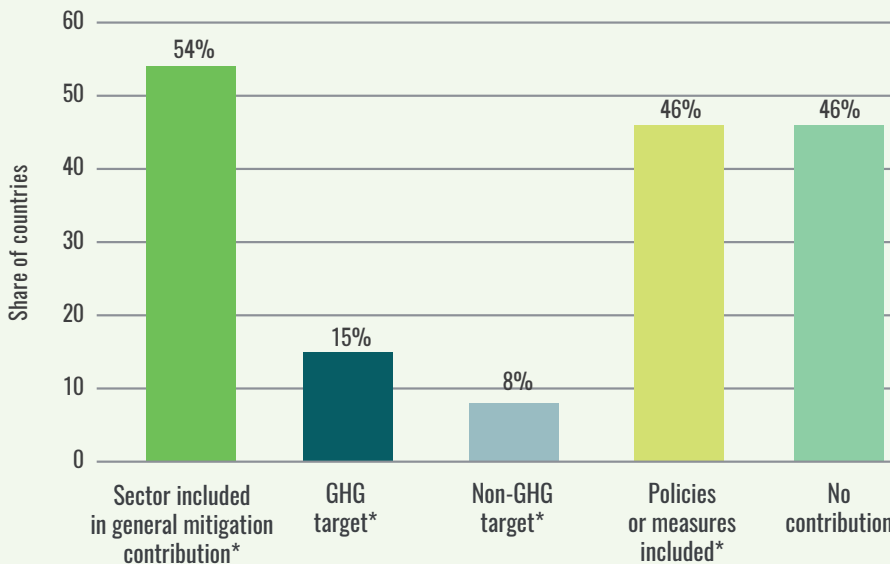
²⁷ Antigua, Barbuda and Cuba.

Thirty-eight percent of countries in the region include agriculture in their general mitigation contribution, while the remaining (62 percent) do not include mitigation in the sector. When considering additional information from national communications NCs, almost half (46 percent) of countries include mitigation policies or measures in agriculture. **Annex 3** contains detailed information on each country's agricultural mitigation contribution.

Fifty-four percent of countries in the region include LULUCF in their mitigation contribution, expressed as either a set of mitigation policies or measures (46 percent of countries), a GHG target compared to a business-as-usual (BAU) scenario (Bahamas and Dominica) and/or a non-GHG target (Antigua and Barbuda). Around half of the countries (46 percent) do not include mitigation in the sector. **Figure 17** illustrates the share of countries with a mitigation contribution in the LULUCF sector by type. **Annex 4** contains detailed information on each country's LULUCF mitigation contribution.

FIGURE 17.

TYPE OF MITIGATION CONTRIBUTIONS IN THE LULUCF SECTOR EXPRESSED IN THE NDCs OF CARIBBEAN COUNTRIES

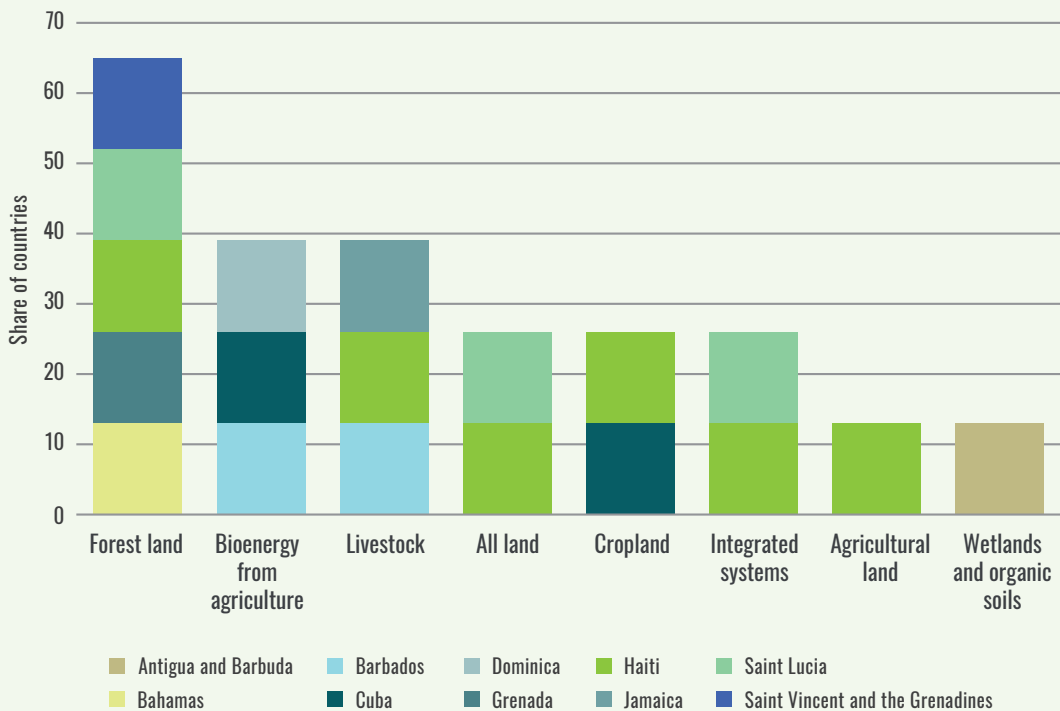


*Legend categories are not mutually exclusive. Note: Antigua and Barbuda, Bahamas, St Vincent and the Grenadines and St Lucia include additional policies or measures in the NCs.

Overall, 62 percent of countries in the Caribbean include at least one mitigation policy or measure in the agriculture and/or land use sectors. **Figure 18** illustrates the share of countries with one or more (to avoid bias of representation) policies or measures, by land use category/sub-sector, out of countries with mitigation in the agriculture and/or land use sectors.

FIGURE 18.

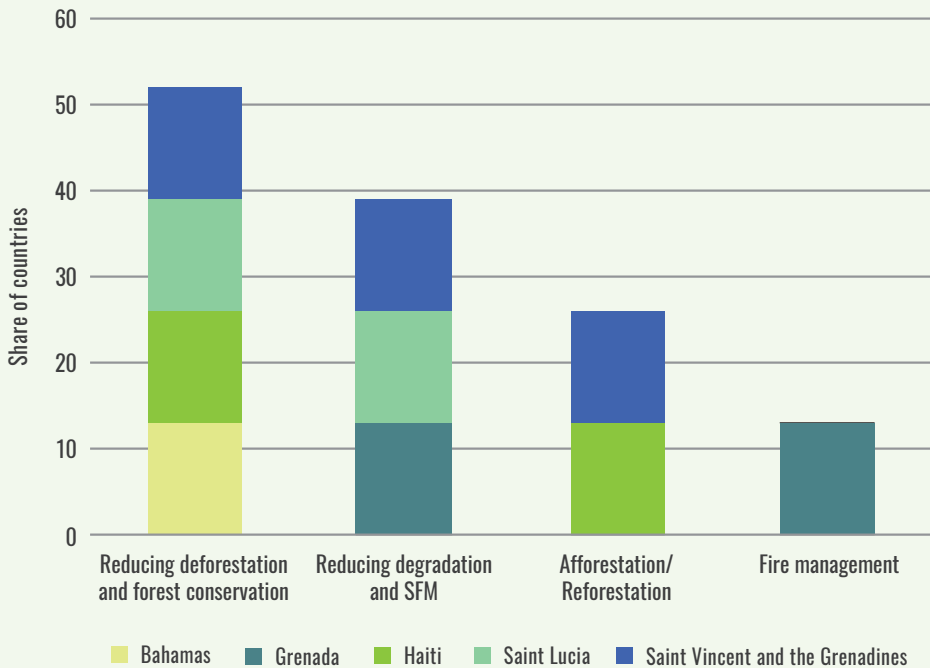
MITIGATION POLICIES OR MEASURES IN THE AGRICULTURE AND LAND USE SECTORS INCLUDED IN THE NDCs OF CARIBBEAN COUNTRIES, BY SECTOR/LAND USE (SHARE OUT OF COUNTRIES WITH MITIGATION IN THE AGRICULTURE AND/OR LAND USE)



Sixty-three percent of countries in the region with mitigation in the agriculture and/or land use sectors include at least one policy or measure on forest land. Reducing deforestation and improving forest conservation is most frequently promoted amongst mitigation policies and measures on forest land (50 percent of countries with mitigation in agriculture and/or LULUCF), followed by reducing degradation and promoting sustainable forest management (SFM) (38 percent), afforestation/reforestation (25 percent) and fire management (13 percent). **Figure 19** illustrates the share of countries with one or more (to avoid bias of representation) policy or measure on forest land, by management activity, out of countries with mitigation in the agriculture and/or land use sectors.

FIGURE 19.

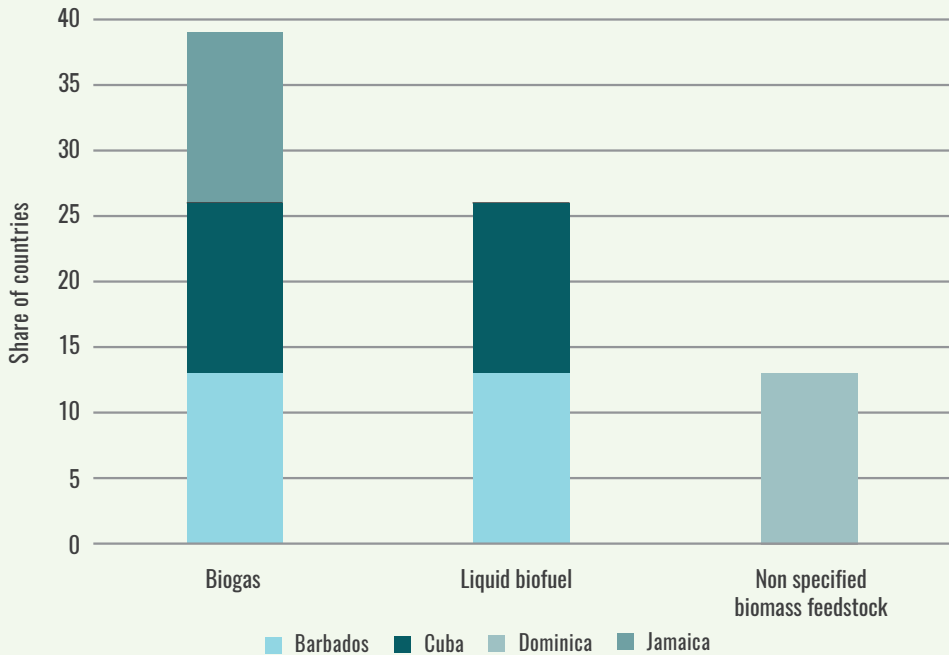
MITIGATION POLICIES OR MEASURES ON FOREST LAND IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH MITIGATION IN THE AGRICULTURE AND/OR LAND USE)



Thirty-eight percent of countries in the region with mitigation in the agriculture and/or land use sectors include at least one mitigation policy or measure targeting bioenergy production from agricultural biomass. The majority of these countries aim to reduce net emissions across all sectors by substituting fossil fuel as a source of energy through the production of biogas (38 percent of countries with mitigation in agriculture and/or land use), followed by liquid biofuel production (25 percent) and bioenergy production from non-specified biomass feedstock (13 percent). **Figure 20** illustrates the share of countries with one or more (to avoid bias of representation) bioenergy-related policy or measure, by management activity, out of countries with mitigation in the agriculture and/or land use sectors.

FIGURE 20.

BIOENERGY-RELATED MITIGATION POLICIES OR MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH MITIGATION IN THE AGRICULTURE AND/OR LAND USE)



Three countries include at least one mitigation policy or measure in livestock (38 percent of countries with mitigation in agriculture and/or land use), either as improved manure management²⁸ or improved feeding practices.²⁹

Two countries include at least one mitigation policy or measure on cropland (25 percent of countries with mitigation in agriculture and/or land use), either as nutrient,³⁰ plant,³¹ or rice management.³²

Two countries³³ include at least one mitigation policy or measure in integrated systems (25 percent of countries with mitigation in agriculture and/or land use), both promoting agroforestry.

Only one country³⁴ includes at least one mitigation policy or measure on wetlands and organic soils (10 percent of countries with mitigation in agriculture and/or land use).

²⁸ Barbados (NC) and Jamaica (NC).

²⁹ Haiti.

³⁰ Cuba.

³¹ Haiti (NC).

³² Haiti (NC)

³³ St Lucia (NC) and Haiti.

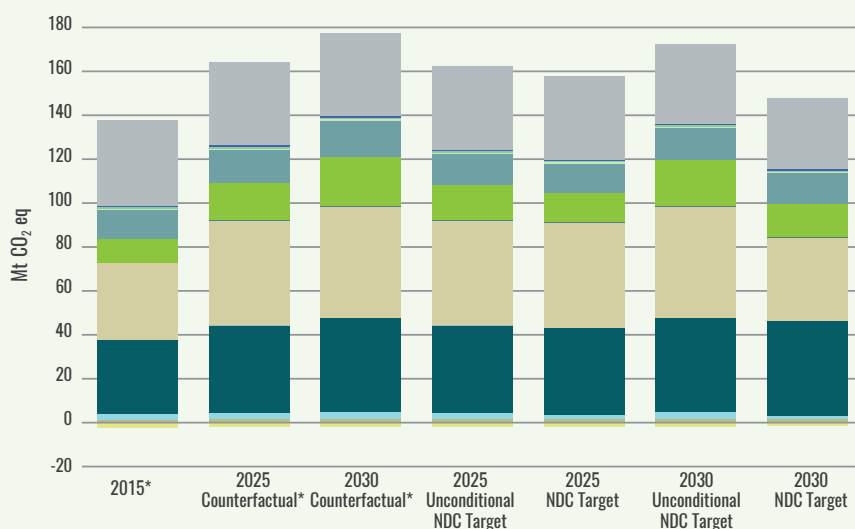
³⁴ Antigua and Barbuda.

MITIGATION GAP AND OPPORTUNITY ANALYSIS

Without implementation of the NDCs, total economy-wide net emissions in 2030 are expected to increase by around 30 percent compared to those reported in 2015, rising from 121.2 Mt CO₂ eq. in 2015 to 157.3 Mt CO₂ eq. in 2030. Eleven out of the 13 countries in the region,³⁵ representing 74 percent of economy-wide net emissions in the region, set a general GHG target, covering the 2016–2030 period.

Under the mitigation scenario, total net emissions in the region are expected to decrease by roughly 17 percent compared to the 2030 counterfactual scenario, or from 157.3 Mt CO₂ eq. to 131 Mt CO₂ eq. in 2030, which equates to a cumulated net reduction of -245.1 Mt CO₂ eq. over the implementation period, of which 78 percent is explicitly referenced as conditional to international support. **Figure 21** compares the aggregated net emissions in 2015 against the 2025/2030 counterfactual net emission scenarios and the 2025/2030 net emission scenarios based on the GHG targets in the NDCs.

³⁵ Antigua and Barbuda and Cuba do not communicate a GHG target.

FIGURE 21.
AGGREGATED HISTORICAL (2015), COUNTERFACTUAL (2030) AND UNCONDITIONAL AND COMBINED MITIGATION SCENARIOS (2030) IN THE CARIBBEAN


	2015*	2025 Counterfactual*	2030 Counterfactual*	2025 Unconditional NDC Target	2025 NDC Target	2030 Unconditional NDC Target	2030 NDC Target
Antigua and Barbuda**	1,189.1	1,420.2	1,535.7	1,420.2	1,420.2	1,535.7	1,535.7
Bahamas	-2,444.0	-1,985.5	-1,985.5	-1,985.5	-1,985.5	-1,985.5	-1,985.5
Barbados	2,070.7	2,350.0	2,500.0	2,350.0	1,480.5	2,500.0	1,208.3
Cuba**	30,234.7	35,686.4	38,412.3	35,686.4	35,686.4	38,412.3	38,412.3
Dominica	61.1	164.5	164.5	100.0	100.0	91.0	91.0
Dominican Republic	31,477.2	42,873.2	45,598.1	42,873.2	42,873.2	45,598.1	34,198.6
Grenada	271.0	251.6	251.6	251.6	176.2	176.2	151.0
Haiti	9,419.7	15,000.0	20,000.0	14,500.0	11,900.0	19,000.0	13,800.0
Jamaica	12,007.5	13,443.0	14,492.0	12,370.0	12,099.0	12,773.3	12,318.6
Saint Kitts and Nevis	465.4	626.0	836.0	488.3	488.3	505.8	505.8
Saint Lucia	681.3	758.0	816.0	758.0	636.7	816.0	591.6
Saint Vincent and the Grenadines	471.3	600.0	468.0	468.0	468.0	468.0	468.0
Trinidad and Tobago	35,288.2	34,234.0	34,234.032	34,234.032	34,234.032	32,534.032	29,098.9272

*Estimated based on national data, when available, and linearly interpolated, extrapolated or projected data.

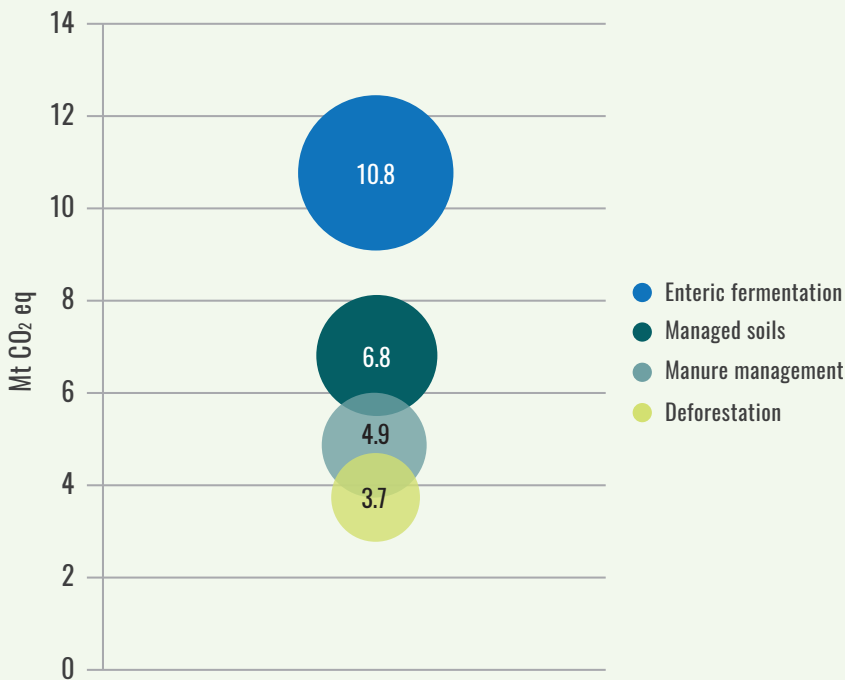
**Country without a GHG target where the 2030 counterfactual scenario is projected based on sub-regional emission trends and used under the 2030 mitigation scenarios, assuming the absence of mitigation.

Note: If a country does not set an unconditional and/or combined target, the counterfactual scenario emission level is used, assuming the absence of mitigation.

When emissions from the agriculture and LULUCF sector are combined, the largest GHG hotspots in the region are emissions from enteric fermentation (35 percent of total emissions), followed by managed soils (23 percent), manure management (16 percent) and deforestation (12 percent). However, the LULUCF sector constitutes a net sink at the regional level, mainly from removals by forest management³⁶ (99.8 percent of removals). **Figure 22** illustrates the GHG hotspots in the AFOLU sector, at sub-regional level, where the size of the bubble corresponds to the amount of Mt CO₂ eq.

FIGURE 22.

GHG HOTSPOTS IN THE AFOLU SECTOR IN THE CARIBBEAN, PER GHG CATEGORY



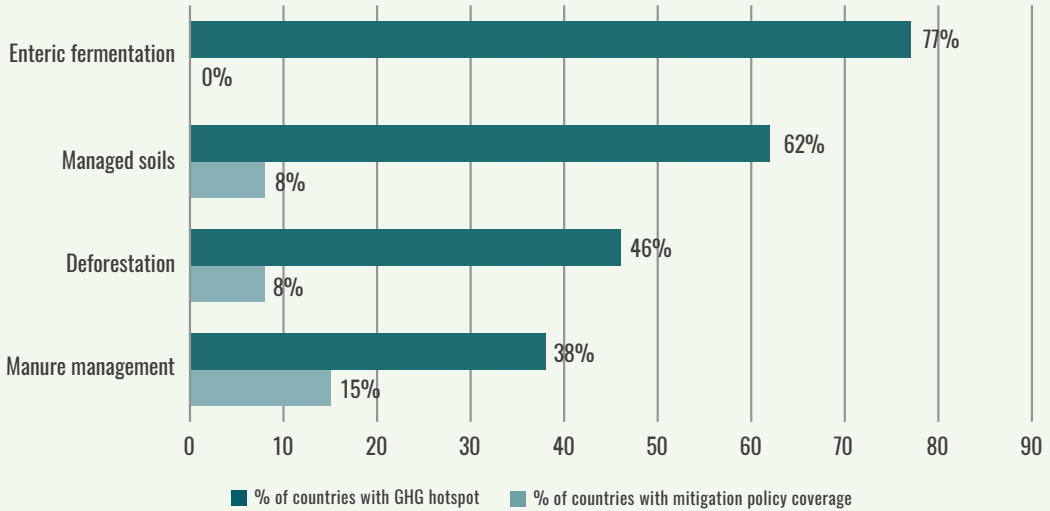
Overall, high to very high mitigation policy coverage gaps³⁷ are observed in relation to emissions from enteric fermentation, managed soils, deforestation and manure management. **Figure 23** presents the results of the mitigation policy gap and opportunity analysis by which the percent of countries with each type of GHG hotspot is compared against the share of countries with mitigation policy coverage in the NDCs, ordered from highest to lowest policy coverage gap.

³⁶ Forest management accounts for total net emissions related to IPCC (2006) land use category “Forest land remaining forest land” and IPCC (1996) category “Changes in forest and other woody biomass,” when those categories are a net sink at national level.

³⁷ Only GHG hotspots identified for over a 10 percent share of countries are presented.

FIGURE 23.

MITIGATION GAP AND OPPORTUNITY ANALYSIS RESULTS FOR THE CARIBBEAN, PER GHG HOTSPOT (SHARE OF COUNTRIES WITH GHG HOTSPOTS COMPARED AGAINST SHARE OF COUNTRIES WITH MITIGATION POLICY COVERAGE IN NDCs)



It should be noted that the analysis serves as a broad review of the coverage of mitigation policies or measures mentioned in the NDC and not an assessment of their strength, which should be further assessed in terms of type (e.g. action, policy, project, programme or framework), scale, comprehensiveness and timeframe. The analysis, therefore, serves as an initial stocktaking of policy coverage and does not necessarily indicate policy effectiveness.

ADAPTATION GAP AND OPPORTUNITY ANALYSIS

In ecosystems, moderate adaptation policy coverage gaps are found in relation to climate-related impacts observed or projected in the provision of crops and freshwater, as well as the control of pests and diseases and nutrient cycling. Moderate policy coverage gaps are also found in relation to climate-related impacts observed or projected in inland water ecosystems and around storms, floods and and wildfires.

In social systems, a high adaptation policy coverage gap is found in relation to climate-related migration and displacement. Low to moderate policy coverage gaps are also observed in relation to climate-related adverse health, rural livelihoods and income loss and gender and youth inequality.

It should be noted that the analysis serves as a broad review of the coverage of adaptation priority sectors and measures mentioned in the NDCs and not an assessment of their strength, which should be further assessed in terms of type (e.g. action, policy, project, programme or framework), scale, comprehensiveness and timeframe. The analysis, therefore, serves as an initial stocktaking of policy coverage and does not necessarily indicate policy effectiveness.

OPPORTUNITIES FOR LEVERAGING SYNERGIES WITH SUSTAINABLE DEVELOPMENT

The world faces a double challenge of eradicating hunger by 2030 and addressing global climate change at the same time. In 2015, with the adoption of the 2030 Agenda for Sustainable Development and the Paris Agreement, developed and developing countries alike pledged to take ambitious action to end all forms of poverty, fight inequalities, and tackle climate change, ensuring that no one is left behind.

Overall, 85 percent of countries in the Caribbean explicitly recognize the co-benefits of either mitigation or adaptation in the agriculture and land use sectors within their NDCs – the majority from adaptation. Adaptation in forestry³⁸ and ocean and coastal zones³⁹ represent the main areas in which mitigation co-benefits are most frequently reported, while mitigation on forest land,⁴⁰ wetlands and organic soils,⁴¹ blue carbon⁴² and integrated systems⁴³ the main areas in which adaptation and/or sustainable development co-benefits are most frequently reported.

Alignment between the climate and sustainable development agenda presents a unique opportunity for countries to co-deliver. The greatest area of convergence between the region’s NDCs in the agriculture and land use sectors and the SDGs, after SDG 13 “Climate Action,” are found around SDG targets 2.3 “Assure agricultural productivity for marginalized”, 8.1 “Sustainable economic growth”, 12.2 “Efficient use of natural resources”, 1.5 “Build the resilience of the poor and vulnerable” and 15.3 “Restore degraded land and combat desertification”. **Figure 24** illustrates the area of convergence between climate actions in the agriculture and land use sectors and the SDGs.

³⁸ Bahamas, Cuba, Dominica, Dominican Republic, Haiti, St Lucia, St Vincent and the Grenadines.

³⁹ Cuba, Grenada and St Vincent and the Grenadines.

⁴⁰ Bahamas.

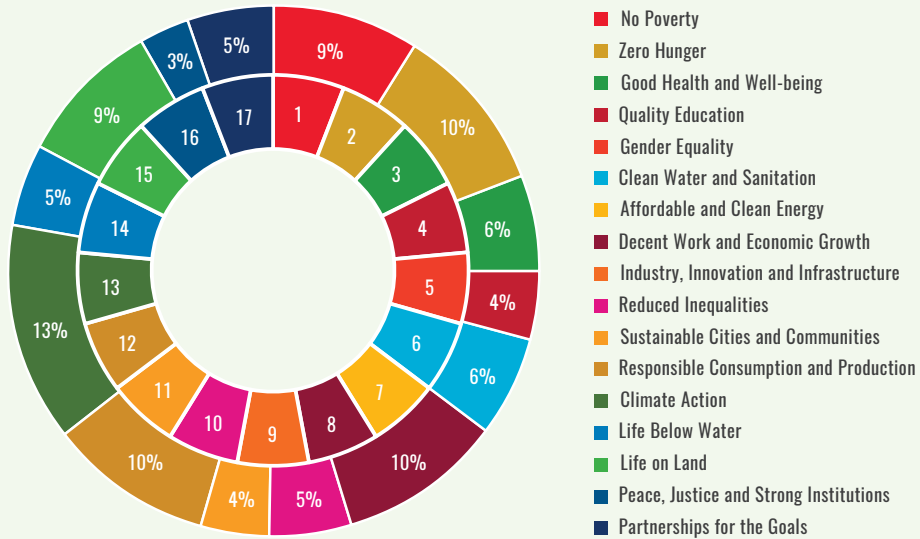
⁴¹ Antigua and Barbuda.

⁴² Haiti.

⁴³ St Lucia.

FIGURE 24.

DEGREE OF CONVERGENCE BETWEEN CLIMATE ACTIONS IN THE AGRICULTURE AND LAND USE SECTORS IN THE CARIBBEAN AND SDGs



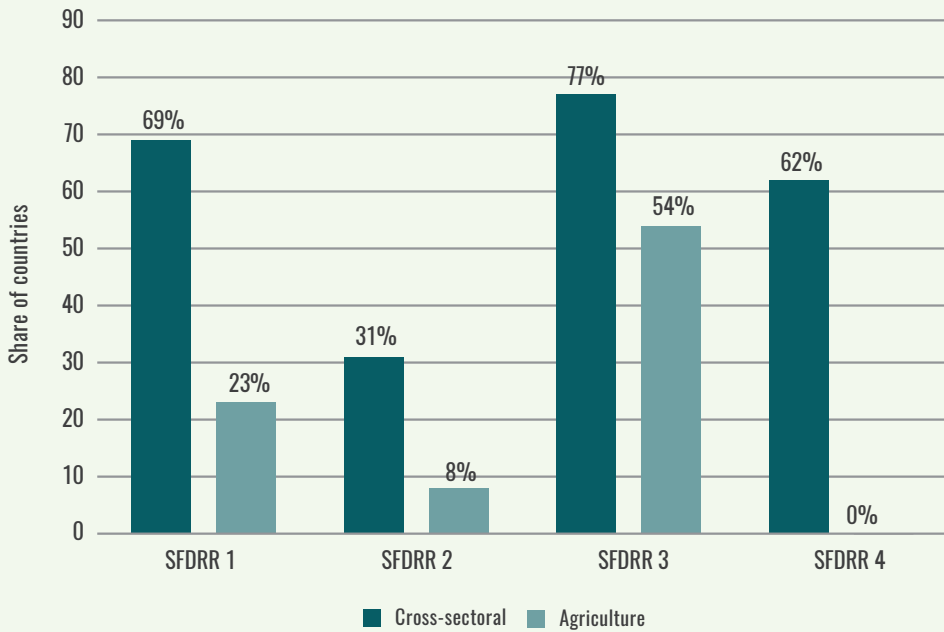
The Sendai Framework for Disaster Risk Reduction (SFDRR) presents an opportunity to enhance coherence across climate and development agendas and promote cooperation, as appropriate, for linked implementation, monitoring and reporting processes.

Only 15 percent of countries in the region promote food loss and waste reduction-related measures as part of their adaptation (Haiti) or mitigation (Cuba) contribution.

Around two-thirds of countries in the region promote climate change adaptation measures that contribute to the Sendai Framework, with the greatest areas of convergence found around priority for action III “Investing in disaster risk reduction” and I “Understanding disaster risk.” (77 and 69 percent of countries with adaptation, respectively). On the other hand, a gap is found in adaptation measures related to priority for action II “Strengthening disaster risk governance” (31 percent). **Figure 25** illustrates the share of countries with cross sectoral and/or agriculture-related adaptation priorities contributing to the SFDRR, per SFDRR priority for action, out of countries with an adaptation component.

FIGURE 25.

ALIGNMENT BETWEEN ADAPTATION MEASURES IN THE NDCs OF CARIBBEAN COUNTRIES AND THE SENDAI FRAMEWORK, PER SFDRR PRIORITY FOR ACTION PILLAR (SHARE OUT OF COUNTRIES WITH ADAPTATION)



BARRIERS AND SUPPORT NEEDS

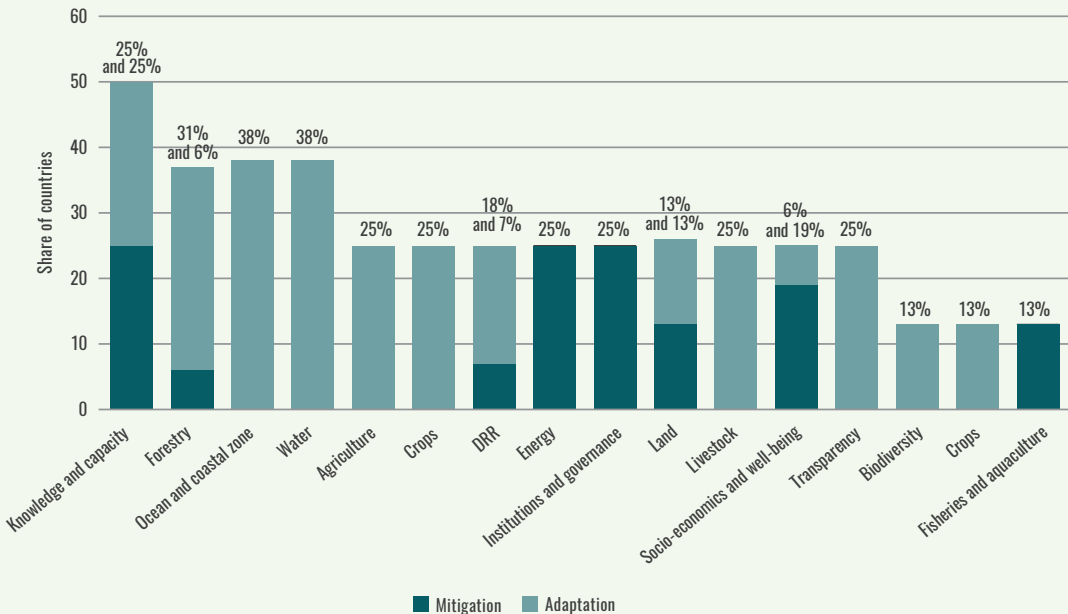
Sixty-two percent of all countries in the Caribbean report at least one priority need for implementing climate action in the agriculture and land use sectors, primarily for adaptation (80 percent of needs) as opposed to mitigation (20 percent).

In particular, the majority of these countries report support needs related to knowledge and capacity in the agriculture and land use sectors (50 percent of countries with needs reported), followed by forestry, ocean and coastal zones and water (38 percent each), amongst others. **Figure 26** illustrates the share of countries with priority support needs for climate change adaptation and mitigation, by sector, out of countries with needs reported.

Data collection and management is the most frequently reported technology need in the agriculture and land use sectors (16 percent of total technologies), followed by climate information and early warning systems and mapping and monitoring (15 percent each) and irrigation and drainage (12 percent), amongst others.

FIGURE 26.

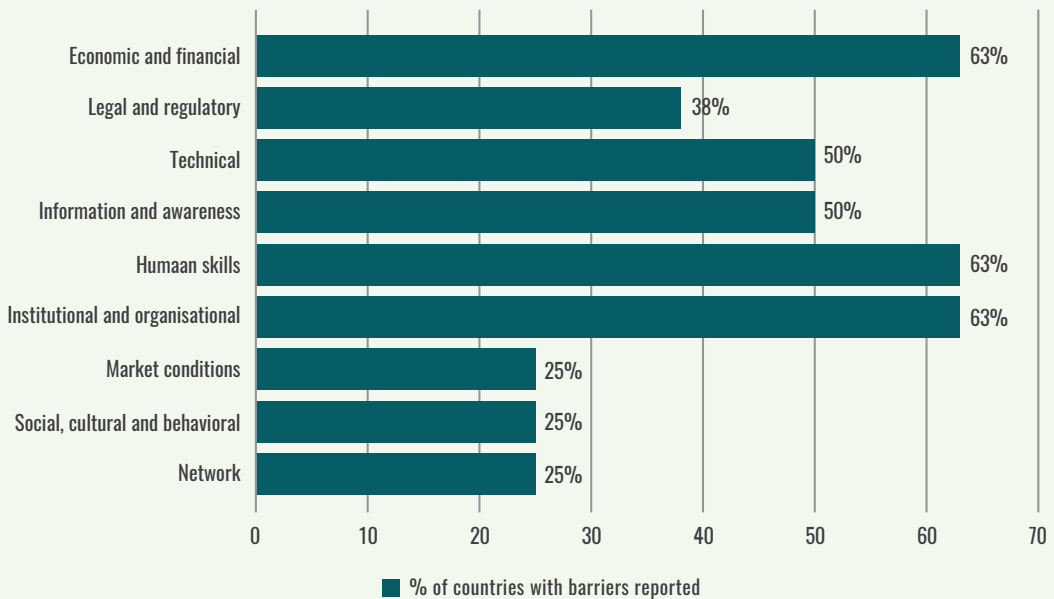
PRIORITY SUPPORT NEEDS REPORTED FOR IMPLEMENTATION OF CLIMATE CHANGE ADAPTATION AND MITIGATION IN THE AGRICULTURE AND LAND USE SECTORS, BY SECTOR/DIMENSION (SHARE OUT OF COUNTRIES WITH SUPPORT NEEDS REPORTED)



The majority of countries in the Caribbean report economic and financial, human skills and institutional and organizational-related barriers (63 percent of countries with barriers reported) impeding the implementation of climate change adaptation and mitigation measures in the agriculture and land use sectors. Technical, informational and awareness and legal and regulatory-related barriers are also prominent (50, 50 and 38 percent, respectively). **Figure 27** illustrates the share of countries in the region with barriers reported, by type.

FIGURE 27.

BARRIERS TO THE IMPLEMENTATION OF CLIMATE CHANGE ADAPTATION AND MITIGATION REPORTED IN THE TNAs OF CARIBBEAN COUNTRIES (SHARE OUT OF COUNTRIES WITH BARRIERS REPORTED)



All countries in the region express financial support needs and 92 percent of countries include capacity-building and technology transfer support needs, respectively.

CONCLUSION

While the Caribbean contributes to less than 0.5 percent of global GHG emissions (WB, n.d.), and is disproportionately impacted by climate change and variability, all but two countries⁴⁴ in the region set a general GHG target. Without implementation of the NDCs, net emissions are expected to increase by around 30 percent in 2030 compared to 2015 levels. Under the mitigation scenario, total net emissions in the region are expected to decrease by roughly 17 percent compared to the 2030 counterfactual scenario. Around 80 percent of that reduction is conditional to international financial support.

After Energy, the Agriculture, Forestry and Other Land Use (AFOLU) sector represents the second largest share of emissions, at 17 percent of total, primarily from enteric fermentation and managed soils. However, the LULUCF sector constitutes a net sink at the regional level, mainly from removals by forest management (99.8 percent of removals).

Around 62 percent of countries in the region are committed to mitigation in the agriculture and/or LULUCF sector, primarily through mitigation on forest land, such as reducing deforestation and forest conservation, while around one-third of countries promote bioenergy production from agriculture and mitigation in the livestock sector. Only two countries set a GHG target in the LULUCF sector (Bahamas and Dominica) and one country (Antigua and Barbuda) presents a non-GHG target. None of the countries communicate a specific agricultural GHG or non-GHG target.

At the regional level, high to very high mitigation policy coverage gaps⁴⁵ are observed in relation to emissions from enteric fermentation, managed soils, deforestation and manure management.

Water stress, soil erosion and salinization are degrading terrestrial and freshwater ecosystems in the Caribbean, while sea level rise and coastal erosion are threatening marine and coastal ecosystems. Climate-related floods, storms, droughts and landslides are amongst the most frequently reported observed and/or projected climate-related hazards in the region.

Ocean and coastal ecosystems are the most often reported as vulnerable, as are agro-ecosystems, particularly crops and fisheries. Land and soil resource degradation, changes in primary production and productivity, changes in water quality and quantity, pests and diseases incidence and mangrove mortality and coastal reef degradation are amongst the most frequently.

Climate-related losses of productive infrastructure and assets, adverse health and rural livelihoods and income losses constitute the most frequently reported climate-related risks in social systems, all exacerbated by the underlying economic dependence on agriculture and natural resources reported as a non-climatic driver of vulnerability and challenging geography and topography.

⁴⁴ Antigua and Barbuda and Cuba.

⁴⁵ Only GHG hotspots identified for over a 10 percent share of countries are presented.

Indeed, all but one country⁴⁶ in the region include adaptation in the agriculture and land use sectors (92 percent), primarily in ocean and coastal zones, forestry and fisheries and aquaculture. Coastal zone management, mangrove conservation and planting, sustainable forest management, crop breeding and diversification, and irrigation and drainage appear most frequently amongst adaptation strategies in the region. Adaptation policy mainstreaming and coherence, resilient infrastructure, credit and insurance services, the use of traditional knowledge and impact assessment and monitoring are prominently promoted in the adaptation priorities in social systems of Caribbean counties.

At the regional level, moderate adaptation policy coverage gaps are found in relation to climate-related impacts observed or projected on the provision of crops and freshwater, as well as the control of pests and diseases and nutrient cycling. Moderate policy coverage gaps are also found in relation to climate-related impacts observed or projected in inland water ecosystems and around climate-related storms, floods and and wildfires.

A high adaptation policy coverage gap is found in relation to climate-related migration and displacement. Low to moderate policy coverage gaps are also observed in relation to climate-related adverse health, rural livelihoods and income loss and gender and youth inequality.

Climate action in forestry, ocean and coastal zones, wetlands and integrated systems present the greatest potential for leveraging mitigation, adaptation and sustainable development co-benefits in the region. Only 15 percent of countries in the region promote food loss and waste reduction measures as part of their adaption (Haiti) or mitigation (Cuba) contribution. And more can be done to strengthen disaster risk governance (priority II) and enhance disaster preparedness and “build back better” (priority IV) in the agriculture and land use sectors.

Climate action in the agriculture and land use sectors will require rapid mobilization of financial resources, enhanced capacities and the transfer of technology in the region. Over 90 percent of countries in the Caribbean reference capacity-building, financial and technology transfer support needs.

Addressing the financial, human, institutional and organizational barriers to the uptake and dissemination of technologies will be key to upscaling climate action in the agriculture and land use sectors. Investments in the sustainable management and use of forests, ocean and coastal zones and water resources, as well as in priority technologies, including data collection and management, climate information and early warning systems and mapping and monitoring and irrigation and drainage are needed for upscaling climate action in the agriculture and land use sectors.

By highlighting the gaps in the coverage of mitigation and adaptation in the agriculture and land use sectors, as well as illustrating opportunities for enhancing climate action ambitions in the next round of NDCs, this analysis can serve as an important roadmap for informing programming and directing future investments in support of low-emission and climate-resilient agriculture and food systems in the region.

⁴⁶ Trinidad and Tobago includes adaptation measures in NC.

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ANNEXES

ANNEX 1.

SOURCE OF NATIONAL DATA FOR ANALYSIS

COUNTRY	NDC	NC	TNA
ANTIGUA AND BARBUDA	2016	2016	
BAHAMAS	2016	2015	
BARBADOS	2016	2018	
CUBA	2016	2015	2013
DOMINICA	2016	2012	
DOMINICAN REPUBLIC	2017	2017	2012
GRENADA	2016	2000	2017/2018
HAITI	2017	2013	
JAMAICA	2017	2019	
SAINT KITTS AND NEVIS	2016	2016	
SAINT LUCIA	2016	2017	
SAINT VINCENT AND THE GRENADINES	2017	2016	
TRINIDAD AND TOBAGO	2018	2013	

ANNEX 2.

GENERAL MITIGATION CONTRIBUTIONS IN THE CARIBBEAN, BY SCOPE, TYPE AND TARGET

COUNTRY	SOURCE	SCOPE OF CONTRIBUTION	TYPE OF CONTRIBUTION	TYPE OF GHG TARGET	2030 UNCONDITIONAL REDUCTION (PERCENT)	2030 CONDITIONAL REDUCTION (PERCENT)	2030 COMBINED REDUCTION (PERCENT)
ANTIGUA AND BARBUDA	NDC	MULTI-SECTORAL	ACTION ONLY	NA	NA	NA	NA
BAHAMAS	NDC	MULTI-SECTORAL	GHG TARGET	BASE YEAR	NA	NA	30.00
BARBADOS	NDC	MULTI-SECTORAL	GHG TARGET	BAU	NA	NA	44.00
CUBA	NDC	MULTI-SECTORAL	ACTION ONLY	NA	NA	NA	NA
DOMINICA	NDC	ECONOMY-WIDE	GHG TARGET	BASE YEAR	44.70	0.00	44.70
DOMINICAN REPUBLIC	NDC	ECONOMY-WIDE	GHG TARGET	BASE YEAR	0.00	25.00	25.00

GRENADA	NDC	MULTI-SECTORAL	GHG TARGET	BASE YEAR	NA	NA	40.00
HAITI	NDC	MULTI-SECTORAL	GHG TARGET	BAU	5.00	26.00	31.00
JAMAICA	NDC	UNI-SECTORAL	GHG TARGET	BAU	7.76	2.24	10.00
SAINT KITTS AND NEVIS	NDC	ECONOMY-WIDE	GHG TARGET	BAU	35.00	0.00	35.00
SAINT LUCIA	NDC	UNI-SECTORAL	GHG TARGET	BAU	NA	NA	23.00
SAINT VINCENT AND THE GRENADINES*	NDC	UNI-SECTORAL	GHG TARGET	BAU	NA	NA	NA
TRINIDAD AND TOBAGO	NDC	MULTI-SECTORAL	GHG TARGET	BASE YEAR	4.97	10.03	15.00

*NDC end date set for 2025. Calculated based on reported data.

ANNEX 3.

NATIONAL MITIGATION CONTRIBUTIONS IN THE AGRICULTURE SECTOR, BY TYPE AND TARGET

COUNTRY	SOURCE	TYPE OF CONTRIBUTION	TYPE OF GHG TARGET	2030 UNCONDITIONAL REDUCTION (PERCENT)	2030 CONDITIONAL REDUCTION (PERCENT)	2030 COMBINED REDUCTION (PERCENT)
ANTIGUA AND BARBUDA	NDC	NO CONTRIBUTION	NA	NA	NA	NA
BAHAMAS	NDC	NO CONTRIBUTION	NA	NA	NA	NA
BARBADOS	NDC	NO CONTRIBUTION	NA	NA	NA	NA
CUBA	NDC	POLICIES OR MEASURES ONLY	NA	NA	NA	NA
DOMINICA	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA	NA	NA
DOMINICAN REPUBLIC	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA	NA	NA
GRENADA	NDC	NO CONTRIBUTION	NA	NA	NA	NA
HAITI	NDC	POLICIES OR MEASURES ONLY	NA	NA	NA	NA
JAMAICA	NDC	NO CONTRIBUTION	NA	NA	NA	NA
SAINT KITTS AND NEVIS	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA	NA	NA
SAINT LUCIA	NDC	NO CONTRIBUTION	NA	NA	NA	NA
SAINT VINCENT AND THE GRENADINES*	NDC	NO CONTRIBUTION	NA	NA	NA	NA
TRINIDAD AND TOBAGO	NDC	NO CONTRIBUTION	NA	NA	NA	NA

*NDC end date set for 2025.

ANNEX 4.

NATIONAL MITIGATION CONTRIBUTIONS IN THE LAND USE, LAND USE CHANGE AND FORESTRY (LULUCF SECTOR, BY TYPE AND TARGET

COUNTRY	SOURCE	TYPE OF CONTRIBUTION	TYPE OF GHG TARGET	2030 CUMULATED NET REDUCTION (MT CO ₂ EQ)
ANTIGUA AND BARBUDA	NDC	NON-GHG TARGET	NA	NA
BAHAMAS	NDC	GHG TARGET	BAU	-5.66
BARBADOS	NDC	NO CONTRIBUTION	NA	NA
CUBA	NDC	NO CONTRIBUTION	NA	NA
DOMINICA	NDC	GHG TARGET	NA	NA
DOMINICAN REPUBLIC	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA
GRENADA	NDC	POLICIES OR MEASURES ONLY	NA	NA
HAITI	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA
JAMAICA	NDC	NO CONTRIBUTION	NA	NA
SAINT KITTS AND NEVIS	NDC	SECTOR INCLUDED IN GENERAL CONTRIBUTION ONLY	NA	NA
SAINT LUCIA	NDC	NO CONTRIBUTION	NA	NA
SAINT VINCENT AND THE GRENADINES*	NDC	POLICIES AND MEASURES ONLY (ADDITIONAL)	NA	NA
TRINIDAD AND TOBAGO	NDC	NO CONTRIBUTION	NA	NA

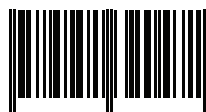
*NDC end date set for 2025.



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