

TECHNICAL ASSESSMENT OF CLIMATE FINANCE IN EASTERN CARIBBEAN STATES

ANNEX TO THE ORGANIZATION OF EASTERN
CARIBBEAN STATES CLIMATE FINANCE ACCESS
AND MOBILIZATION STRATEGY





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Abbreviations and acronyms

AF	Adaptation Fund	NAP	national adaptation plan
AFOLU	agriculture, forestry and other land use	NAPA	national adaptation programme of action
Annex I Party	Party included in Annex I to the Convention	NC	national communication
BUR	biennial update report	NDA	national designated authority
CARICOM	Caribbean Community	NDC	nationally determined contribution
CCCCC	Caribbean Community Climate Change Centre	NGO	non-governmental organization
CCPI	Caribbean Carbon Pricing Initiative	non-Annex I Party	Party not included in Annex I to the Convention
CIF	Climate Investment Funds	OECD	Organization for Economic Co-operation and Development
CO ₂	carbon dioxide	OECS	Organization of Eastern Caribbean States
COP	Conference of the Parties	REDD+	reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks (decision 1/CP.16, para. 70)
DAC	Development Assistance Committee	SIDS	small island developing State(s)
ECCB	Eastern Caribbean Central Bank	SIRF Fund	Sustainable Island Resource Framework Fund
ECCU	Eastern Caribbean Currency Union	TAP	technology action plan
GCF	Green Climate Fund	TNA	technology needs assessment
GDP	gross domestic product	UNDP	United Nations Development Programme
GEF	Global Environment Facility	WBG	World Bank Group
GHG	greenhouse gas		
GIS	geographic information system		
GIZ	German Agency for International Cooperation		
INDC	intended nationally determined contribution		
IADB	Inter-American Development Bank		
LDC	least developed country		
LED	light-emitting diode		
MDB	multilateral development bank		





Executive summary

By its decisions pertaining to long-term climate finance the COP requested the secretariat to explore ways and means to assist developing country Parties in assessing their climate finance needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating these climate finance needs into action.¹ In response to this mandate, the Needs-based Climate Finance project was launched to facilitate access to, and the mobilization of, climate finance for the implementation of priority projects and programmes identified by developing country Parties.



The technical assessment covers six Eastern Caribbean independent States (Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines) belonging to OECS – a political and economic union of 11 countries.

To finance the climate change needs expressed to date of these countries, the region needs a total of approximately USD 3.3 billion to USD 4.576 billion up to 2030. Considering the lower boundary, namely USD 757 million for adaptation, USD 1.5 billion for mitigation and USD 1.0 billion for a combination of cross-cutting measures. Using current estimates, this equates to approximately USD 409 million in climate finance needed annually for 2022–2030. The amount of finance required for mitigation is twice as much as for adaptation, but most adaptation measures need to be financed sooner (within the next 5–10 years) than those for mitigation.²

The priorities for financing include measures and action in the following sectors: agriculture, water, coastal and marine ecosystems, forestry and other land use, public health and tourism. Agriculture, energy, forestry and other land use, transport and waste are priority sectors for mitigation measures.

To date, the inflow of climate finance from public international sources to address needs has been on average USD 84,856 million per year.³ Although the time frames are not directly comparable and private and domestic funding is not accounted for, it could be broadly inferred that currently the region is missing approximately 5 times the annual funding needed for priorities expressed in national reports submitted to the UNFCCC secretariat.

Some of the most critical barriers to climate finance access and mobilization in the region include limited human resources and institutional capacity to develop and implement projects. This, together with insufficient awareness and information of potential sources of international climate finance, procedure for access, and just some of the barriers to implementing climate action in the region. As noted in the overview of documents submitted to the UNFCCC, some countries lack sector-specific data as well as cost of adaptation and mitigation needs.

The region needs approximately USD 3.3 billion to USD 4.576 billion up to 2030.

¹ Decision 6/CP.23, para. 10 and decision 4/CP.26, para 22.

² Information and data contained herein (e.g. climate finance flows, needs and priorities, policies etc.) from developing countries are to be treated as status quo at time of drafting, may not contain all sources of information, and are subject to change as these are revised or submitted / published by countries. Hence data and information may be underestimated.

³ The only data currently available for this estimate come from 2010–2019.



I. Introduction

A. Framing the mandate

1. COP 23 requested, and COP 26 reiterated the request, that the secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional and other multilateral channels, explore ways and means to assist developing country Parties¹ in assessing their needs and priorities, in a country-driven manner, including technological and capacity-building needs, and in translating climate finance needs into action.²

2. This mandate led to the establishment of the Needs-based Climate Finance project, which aims to facilitate access to and the mobilization of climate finance in support of the needs identified by developing countries for the implementation of their priority projects and programmes as outlined in consultations, UNFCCC submissions and other relevant national and regional documentation.

3. This technical assessment was conducted by Eastern Caribbean countries belonging to OECS – a political and economic union of six independent States³ and five overseas territories of two developed countries⁴ – with the support of the secretariat, experts and the regional collaboration centre at St. George's.

B. Aim and purpose

4. This technical assessment aims to provide evidence-based comprehensive information on the regional needs of the independent OECS States,⁵ as well as a pipeline of priority projects, to underpin the development of the regional Climate Finance Access and Mobilization Strategy that will enable countries in the region to access and mobilize climate finance for implementing priority mitigation and adaptation actions.



5. The proposed regional strategy shall be based on the needs identified by Eastern Caribbean countries, as outlined in relevant national policies, strategies and reports, and shall be endorsed at the highest political level by OECS to ensure implementation.

C. Methodology

6. The methodology for the technical assessment consists predominantly of the technical analysis of aggregated quantitative and qualitative data derived from the assessment of developing countries' needs and priorities. As such, it is primarily a desk-based assessment complemented by engagement with stakeholders from the region and consultations with national, regional and international experts. The stakeholder engagement took the form of regular communications and regional workshops to which international experts were invited.

1 Non-Annex 1 Parties.

2 Decision 6/CP.23, para. 10, and decision 4/CP.26, para 22.

3 OECS protocol members that are not overseas territories.

4 Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, Grenada, Guadeloupe, Martinique, Montserrat, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, of which Anguilla, British Virgin Islands and Montserrat are overseas territories of the United Kingdom of Great Britain and Northern Ireland, and Guadeloupe and Martinique are overseas territories of France.

5 As footnote 4 above.

7. Key research questions included:

- What are the identified needs and priorities for countries in the region from the perspective of sustainable development and economic diversification and in terms of balancing adaptation and mitigation with co-benefits?
- How are climate finance flows currently channelled?
- What are the challenges and opportunities in terms of addressing needs and scaling up climate finance flows?

1. **Methodological approach for determining needs**

8. In order to produce a description of climate finance needs for the region, all public communications from countries to the secretariat were assessed, and consideration was given to needs expressed by countries in their national visions and national development and sectoral plans, along with information from the country programmes of the GCF and MDBs operating in the region, when available. Needs are summarized by thematic area as needs for adaptation, adaptation with mitigation co-benefits and economic diversification with mitigation co-benefits; needs by sector and subsector; and needs by time frame where information was available. Needs for technology development and transfer, and capacity-building needs are also summarized. [Table 1](#) shows which documents were reviewed (see [figure 1](#)) as sources of information used for the analysis of needs and priorities of countries in the region.

9. The information used has limitations and data sets contain several gaps.⁶ For example, at the time writing, neither Dominica nor Saint Vincent and the Grenadines had submitted an updated NDC. On average, countries submitted five documents. While most countries identified their needs in relation to adaptation and mitigation (qualitative or cost needs), some estimated the costs associated with the identified needs (quantitative needs). Furthermore, needs were reported by thematic area (i.e. adaptation, mitigation or cross-cutting), sector (e.g. agriculture, coastal zones, energy, health, transport or water), means of implementation (e.g. finance, technology or capacity-building), and time frame.

10. Moreover, the sources of data provided by countries use different time frames. Generally, time frames for needs fall into either immediate term (fewer than 5 years), short term (5–10 years), medium term (11–20 years) or long term (21–30 years). Immediate-term needs are more likely to be based on identified capacity or development projects that are in the pipeline, and longer-term needs generally come from vision or strategy documents.

11. BURs are submitted by developing countries every two years, with the SIDS and the LDCs awarded the flexibility to submit BURs at their discretion. BURs are aimed at providing updates on GHG inventories and

mitigation and adaptation actions undertaken, and on gaps and related finance, technology, and capacity-building needs, mostly over a time frame of 5–10 years. At the time of writing only two countries in the region had submitted BURs, namely Antigua and Barbuda in 2020 and Saint Lucia in 2021.

12. Established under the Cancun Adaptation Framework, NAPs are part of a country-led process that aims to enable Parties to address their medium- and long-term adaptation needs by developing the strategies to address them progressively, iteratively and as part of a gender-sensitive, participatory and transparent approach. The NAP process itself is aimed at coherently integrating adaptation into national policies, programmes and activities, meaning that needs identified by most NAPs are over the short to medium term (up to 20 years). At the time of writing three countries had submitted NAPs: Saint Lucia in 2018, Saint Vincent and the Grenadines and Grenada in 2019.

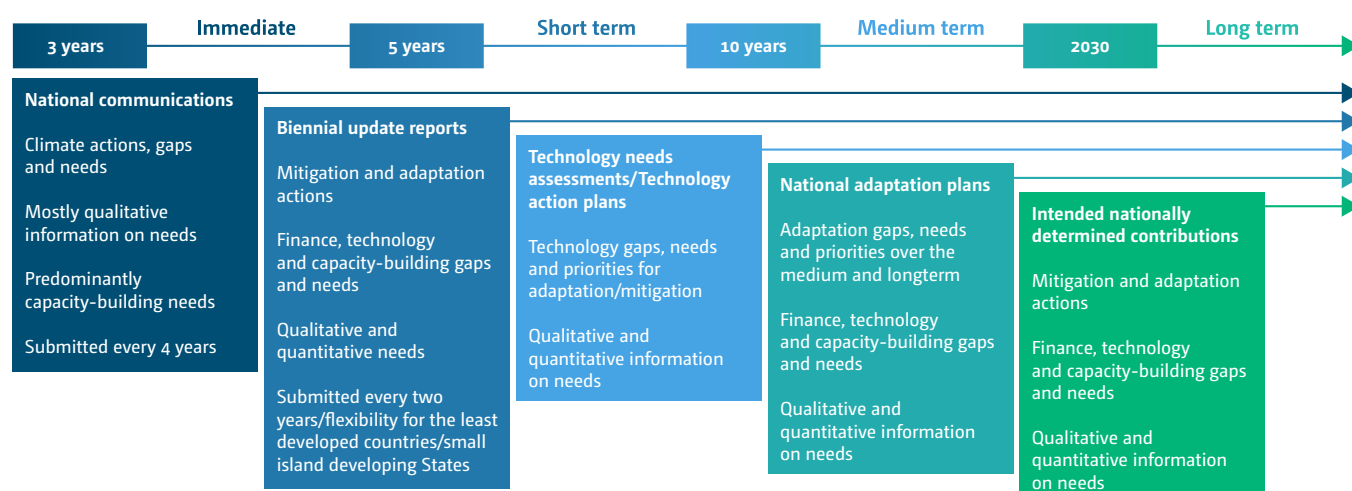
13. NCs, which are generally submitted every four years, provide an update on GHG inventories, climate change vulnerabilities, adaptation actions undertaken and needs. NCs are more likely to contain qualified rather than quantified information on needs, in relation to capacity-building over the immediate and short term. All OECs member States have submitted at least two NCs between 2000 and 2019. Antigua and Barbuda, Dominica and Saint Lucia submitted a third round of NCs, dating from 2016, 2020 and 2017 respectively.

14. In NDCs, countries set out their contributions to taking climate action and describe the means of implementation (i.e. finance, technology or capacity-building) required. Most countries identify contributions up to 2030. At the time of writing all countries had submitted NDCs but not all updated versions (see [table 1](#)).

15. TNAs are aimed at determining climate technology needs and priorities for facilitating climate action and building national capacity. TNAs include a TAP, a succinct action plan that aims to promote priority technology uptake and diffusion for mitigating and adapting to climate change. Needs are identified over a period of up to 20 years, with the time frame depending on the type of technologies and activities involved (e.g. scale-up and replication of existing technologies or use of new ones). At the time of writing five countries had submitted TNAs and TAPs, namely Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis, and Saint Lucia.

6 Additional documents that set context for Saint Lucia that have not been included in this assessment are NAP Financing Strategy, NDC Financing Strategy, Medium Term Development Strategy, Country Roadmap, Resilient Ecosystem and Adaptation Strategy Action Plan, and Sectorial Adaptation Strategy Action Plans for agriculture, fisheries, resilient ecosystems and water.

Figure 1
Overview of national reports submitted to the UNFCCC



Source: UNFCCC.

Table 1
Submission of communications by year up to April 2022

	UNFCCC									Climate funds			
	BUR1	NDC/ INDC1	NDC/ INDC Update	NAP	NC1	NC2	NC3	TNA	TAP	GCF	GEF	Regional banks	WB
Antigua and Barbuda	2020	2016	2021	–	2001	2011	2016	2002	–	2022	2017	–	2013
Dominica	–	2016	2022	–	2001	2012	2020	2004	–	2022	2015	–	2014
Grenada	–	2016	2020	2019	2000	2017	2019	2018	2018	2021	2017	–	2017
Saint Kitts and Nevis	–	2016	2021	–	2001	2016	–	2006	–	2022	2020	–	2003
Saint Lucia	2021	2016	2021	2018	2001	2012	2017	2003	–	2021	2019	–	2017
Saint Vincent and the Grenadines	–	2016	–	2019	2000	2016	–	–	–	2022	2017	–	2017

Source: UNFCCC.

2. Methodological approach for climate finance flows

16. Information for tracking international public climate finance flows from bilateral and multilateral contributions to developing countries is publicly available on the OECD Creditor Reporting System database. Currently, this is the most comprehensive source of information available on international public climate finance flows. Sector classifications are based on the sectoral definitions set out in the OECD DAC database, with slight adjustments to ensure that the priority sectors of the countries are reflected. Adjustments include:

- Combining “energy policy”, “energy generation, renewable sources” and “energy generation, non-renewable sources” into one collective “energy” sector;
- Extracting “waste management/disposal” from the “water supply and sanitation” sectoral classification and making “waste” a stand-alone sector;
- Extracting “flood prevention/control” and “biodiversity” from “general environmental protection” and making both stand-alone sectors.

17. Currently, there is no internationally agreed definition of climate finance. In determining the amounts to be reported as climate finance, reporting entities rely on their own operational definitions, and differences can affect estimates of overall finance flows. The core definition adopted by OECD, MDBs and the International Development Finance Club is generally in accordance with that suggested in the 2014 Biennial Assessment and Overview of Climate Finance Flows Report of the Standing Committee on Finance: “Climate finance aims at reducing emissions and enhancing sinks of greenhouse gases and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts”. This assessment aims to gather information on needs and flows under this working definition. It should also be noted that Article 2, paragraph 1(c) of the Paris Agreement refers to finance flows that are “consistent with”, rather than aimed at, a pathway towards low GHG emissions and climate-resilient development.



II. Regional context

A. Socioeconomic context

18. The Caribbean is a diverse region with significant economic growth opportunities. The Eastern Caribbean is composed of a group of islands that set the boundary between the Atlantic and Caribbean Oceans. The area is divided into two groups, namely the Leeward Islands and the Windward Islands,⁷ the latter being the more southerly part of the chain. The Leeward Islands comprise Antigua and Barbuda, Guadeloupe, Saint Kitts and Nevis, Saint Martin and the British Virgin Islands, of which the largest settlement is Antigua and Barbuda. The Windward Islands comprise Carriacou, Dominica, Grenada, Martinique, Petite Martinique, Saint Lucia, and Saint Vincent and the Grenadines, of which the largest settlement is Dominica.⁸



19. The islands in this region share a common colonial past, many of them being former overseas territories of European countries. The Leeward Islands became a British colony in 1671. In 1816, the colony as a federation of islands was dissolved, and the islands were ruled individually. However, the colony of the Leeward Islands was re-established in 1833. Today, the Leeward Islands are composed of 2 countries (Antigua and Barbuda, and Saint Kitts and Nevis) and 11 overseas territories belonging to the France, the Netherlands, the United Kingdom of Great Britain and Northern Ireland and the United States of America.⁹

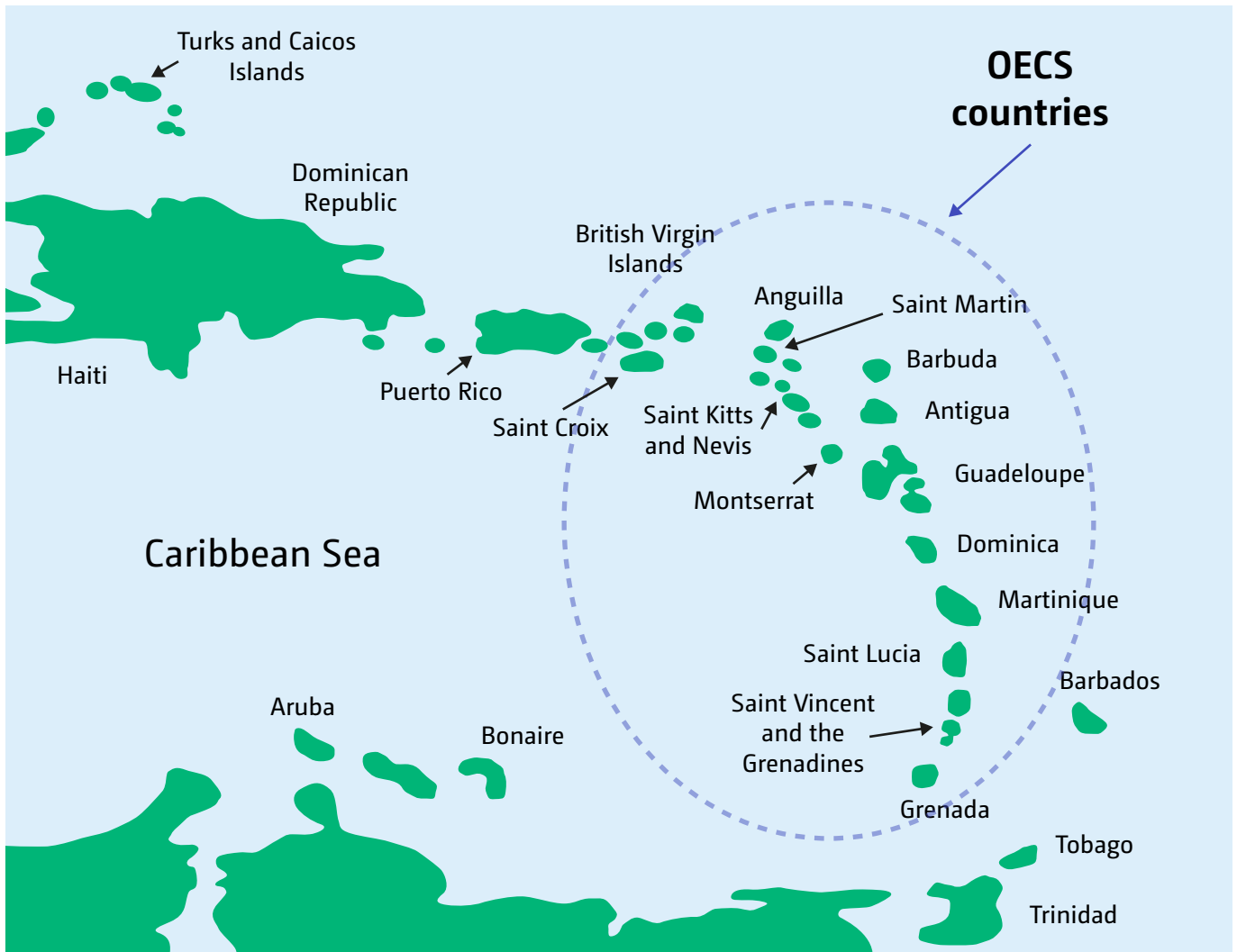
20. The Windward Islands were a British colony from 1833 to 1960 and originally consisted of the islands of Grenada, Saint Lucia, Saint Vincent and the Grenadines. Today these islands constitute three sovereign States. The Windward Islands consist of four countries (Dominica, Grenada, Saint Lucia, and Saint Vincent and the Grenadines) and one French overseas territory (Martinique).

7 'Windward' means towards the source of the wind (upwind), while 'leeward' is the opposite direction.

8 <https://www.oecs.org/en/who-we-are/member-states>.

9 Kelsick CA.1960. Constitutional History of the Leewards. Caribbean Quarterly, pp. 177–209.

Figure 2
Location of Organization of Eastern Caribbean States countries



Source: Organization of American States.

1. Regional integration

21. OECS is an international intergovernmental organization dedicated to regional integration in the Eastern Caribbean. It was established on 18 June 1981, when seven Eastern Caribbean countries signed a treaty agreeing to cooperate and promote unity and solidarity among the members. The treaty became known as the Treaty of Basseterre, after the capital of Saint Kitts and Nevis.¹⁰

22. In 2010, the Treaty of Basseterre was revised and updated, creating an economic and customs union where trade barriers are reduced or removed for a single market. The revised treaty was signed on 18 June 2010 in Saint Lucia at the fifty-first meeting of OECS. The revised treaty established a single financial and economic space where goods, people and capital can move freely. It also allowed the harmonization of monetary and governmental policies relating to taxes and revenue. The countries of this economic union continue to adopt a common approach to trade, health, education and the environment, as well as the development of critical sectors such as agriculture, tourism and energy.¹¹

¹⁰ <http://oecs.org/en/who-we-are/about-us>.

¹¹ Ishmael L. 2002. The OECS Model of Integration in the Context of Caribbean Regionalism. *Members of CRIES/CRIES MEMBERS*.

23. OECS today is an eleven-member group, including Leeward and Windward Islands of Antigua and Barbuda, Dominica, Grenada, Montserrat,¹² Saint Kitts and Nevis, Saint Lucia, and Saint Vincent and the Grenadines as full member States. These islands are part of the economic union and receive full advantages, such as free movement of people and goods. Anguilla and the British Virgin Islands (United Kingdom overseas territories) together with Guadeloupe and Martinique (departments of France) are associate members of OECS.¹³

24. Together OECS member States cover a land area of 5,900.6 km² inhabited by 1.4 million people and with a GDP of USD 5,247 (2021).¹⁴

25. OECS works closely with its development partners through several bilateral and multilateral agreements to advance the development agenda for the Eastern Caribbean region. One of these strategic partners is CARICOM, a grouping of 20 countries, comprising 15 member States and 5 associate member States. Except for Guadeloupe and Martinique, all OECS member States are also member States of CARICOM (see table 2).

Table 2
Organization of Eastern Caribbean States and CARICOM countries

	OECS membership type	CARICOM membership type	Independence status	Annex I / Non-Annex I ^a
Anguilla	Associate member	Associate member	British overseas territory	Annex I
Antigua and Barbuda	Protocol member	Member State	Independent State	Non-Annex I
Bahamas	–	Member State	Independent State	Non-Annex I
Barbados	–	Member State	Independent State	Non-Annex I
Belize	–	Member State	Independent State	Non-Annex I
Bermuda	–	Associate member	British overseas territory	Annex I
British Virgin Islands	Associate member	Associate member	British overseas territory	Annex I
Cayman Islands	–	Associate member	British overseas territory	Annex I
Commonwealth of Dominica	Protocol member	Member State	Independent State	Non-Annex I
Guyana	–	Member State	Independent State	Non-Annex I
Grenada	Protocol member	Member State	Independent State	Non-Annex I
Guadeloupe	Associate member	–	French overseas territory	Annex I
Haiti	–	Member State	Independent State	Non-Annex I
Jamaica	–	Member State	Independent State	Non-Annex I
Martinique	Associate member	–	French overseas territory	Annex I
Montserrat	Protocol member	Member State	British overseas territory	Annex I
Saint Kitts and Nevis	Protocol member	Member State	Independent State	Non-annex I
Saint Lucia	Protocol member	Member State	Independent State	Non-annex I

12 Montserrat is the only non-sovereign full member of OECS. This island is an overseas territory of the United Kingdom.

13 OECS. 2022. *Member States*. <https://oecs.org/en/who-we-are/member-states>.

14 OECS. 2022. *Member States*. <https://oecs.org/en/who-we-are/member-states>.

Table 2 (continued)
Organization of Eastern Caribbean States and CARICOM countries

	OECS membership type	CARICOM membership type	Independence status	Annex 1 / Non-Annex 1 ^a
Saint Vincent and the Grenadines	Protocol member	Member State	Independent State	Non-annex I
Suriname	–	Member State	Independent State	Non-Annex I
Trinidad and Tobago	–	Member State	Independent State	Non-Annex I
Turks and Caicos Islands	–	Associate member	British overseas territory	Annex I

Source: CARICOM.

^a OECS and CARICOM members states belonging to countries listed in Annex I to the UNFCCC and those not listed (Non-Annex I countries)

2. Economic landscape

(a) Gross domestic product

26. The six independent OECS States have a total population of 630,206. The total GDP of these countries in 2020 was USD 872,134,546 and the estimated GDP per capita was USD 54,759. The average GDP growth rate for 2015–2021 was 0.3% and in 2022 was 6%.

27. The country with the largest economy in the region is Saint Lucia, followed by Antigua and Barbuda. Grenada, Saint Kitts and Nevis, and Saint Vincent and the Grenadines. have similar levels of GDP, of around

USD 770–870 million. The smallest economy in the region is that of Dominica with a GDP of around 385 million, with the country having an average negative growth rate of –1.09% for 2015–2021. The second smallest economy is that of Saint Kitts and Nevis, with a GDP of USD 777 million, almost double that of Dominica. Saint Kitts and Nevis and Saint Lucia have also seen negative growth rates between 2015–2021 (–0.82% and –0.50% respectively). However, these three States are estimated to have the highest growth rates in 2022. Grenada (1.7%) saw the highest growth rate in the same period, followed by Antigua and Barbuda (1.33%) and Saint Vincent and the Grenadines (1.07%) (see [table 3](#)).

Table 3
Gross domestic product per capita in 2020 and estimated growth rate in 2022

	Population	GDP (USD million)	GDP per capita (USD)	GDP growth rate (2015–2021 average) (%)	2022 GDP growth rate (%)
Antigua and Barbuda	97 928	1 085	11 077.45	1.33	4.71
Dominica	71 991	385	5 349.54	-1.09	5.68
Grenada	112 519	795	7 067.81	1.66	5.19
Saint Kitts and Nevis	53 192	776	14 599.52	-0.82	8.14
Saint Lucia	183 629	1 617	8 804.56	-0.50	10.45
Saint Vincent and Grenadines	110 947	872	7 860.82	1.07	2.71
Total / Average rates	630 206	5 531	54 759.70	0.275 (average)	6.147 (average)

Source: OECS Statistics. 2022 and WB. 2022.

28. The tourism sector accounted for 34% of the economic activity of the region (see [table 4](#)) in 2022 but remains the most important sector for the region's GDP, followed by construction. Other sectors include mining and quarrying, other community, social and personal services, health and social work; and activities of private households as employers. The public sector contributes as much to GDP in the region as domestic consumption and trade, whereas climate relevant sectors such as agriculture, energy and fisheries contribute the least to overall GDP.

29. Between sectors there are large differences between countries notably, Dominica has the largest percentage of GDP from the agriculture and fishing sector in the region, namely 14.3%, as opposed to 2–6% in all other countries in the region. Saint Kitts and Nevis has the largest percentage of GDP from the construction sector, namely 18.69%. For Saint Lucia, the largest percentage of its GDP comes from tourism, namely 33.50%. For Antigua and Barbuda, the largest share of GDP comes from the wholesale and retail sector, namely 13.79%. The public sector generates the largest percentage of GDP in the region.

Table 4
Contribution of gross domestic product by sector in 2021, in constant prices as a percentage

	Agriculture and fishing	Energy	Construction	Tourism	Wholesale and retail trade	Public sector ^a	Others ^b
Antigua and Barbuda	2.06	4.34	14.34	32.50	13.79	9.65	23.32
Dominica	14.31	6.26	5.27	21.99	13.04	13.13	26.00
Grenada	6.68	4.50	10.68	26.62	8.29	7.20	36.03
Saint Kitts and Nevis	1.82	1.38	18.69	27.06	5.82	11.73	33.50
Saint Lucia	2.04	3.81	4.81	33.50	12.17	7.03	36.64
Saint Vincent and Grenadines	6.87	4.14	7.19	22.87	13.40	10.65	34.88
Average	5.63	4.1	10.16	27.42	11.1	9.9	31.73

Source: OECS Statistics. 2022.

^a The public sector involves health, education and government spending.

^b Includes mining and quarrying, other community, social and personal services, health and social work; and activities of private households as employers.

30. [Table 5](#) shows Saint Lucia and Antigua and Barbuda as the countries with the largest number of tourists. These countries are also those with the largest contributions to their GDP from the tourism sector (see [table 4](#)) and the highest GDP in the region (see [table 3](#)). The countries with the smallest number of tourists are Dominica and Grenada, hence with Saint Vincent and the Grenadines are also the countries with the smallest GDP in the region.

The tourism sector remains the most important sector for the region.

Table 5
Tourism and balance of payments, 2020

	Total visitors	Total visitor expenditure	Balance of payments (Net with errors and omissions) (USD million)
Antigua and Barbuda	397 782	350.09	28.18
Dominica	145 877	21.26	83.67
Grenada	216 867	58.53	69.84
Saint Kitts and Nevis	300 686	45.53	-22.19
Saint Lucia	455 408	317.87	75.09
Saint Vincent and Grenadines	154 828	43.76	88.16
Total	1 671 448	837.04	322.75

Source: OECS Statistics. 2022.

31. Table 6 shows growth rates for different economic activities across the OECS independent States. All sectors showed a strong decline in 2020 owing to the effects of the pandemic. The sector with the largest growth rate pre- and post-pandemic is tourism.

Table 6
Growth rate of gross domestic product by economic activity in constant prices as a percentage

Sector	2019	2020	2021	2022
Agriculture and fishing	6.14	-12.47	9.66	12.49
Construction	-0.3	-19.29	11.49	10.42
Electricity and water	7.54	-5.44	2.67	3.05
Financial	5.92	-0.71	3.30	1.92
Tourism	38.53	-79.11	15.77	52.71
Manufacturing	-5.72	-17.38	1.24	2.42
Public administration, defense, compulsory social security and education	7.50	-3.30	3.25	2.17
Real estate, renting and business activities	2.61	-12.88	-0.03	2.01
Wholesale and retail trade	-0.87	-17.17	10.37	5.50
Other ¹⁵	-1.28	3.53	-2.95	-12.40

Source: OECS Statistics. 2022.

¹⁵ Includes mining and quarrying, social and personal services, health, social work and activities of private households as employers.

(b) Poverty and inequality

32. Table 7 shows the region's Gini coefficients from 2010¹⁶ and GDP per capita average growth rate. The region's Gini coefficients range from 0.3 to 0.5. The information presented in table 7 describes high income inequality per decile of population within the region. Most independent States in OECS lie on the upper end of the Gini scale, with Antigua and Barbuda having the highest level of income and wealth inequality (0.48 points) and Grenada the lowest (0.37 points). Saint Lucia's also has the largest negative GDP per capita average growth rate (see table 7).

33. The effects of the pandemic reduced GDP per capita by an average of 15% for OECS member States in 2020, compared with 2019. This was caused by low levels of investment in the region.¹⁷ However, Saint Kitts and Nevis and Grenada showed strong GDP per capita average growth 1.16 and 1.02 respectively, the highest in the region.

Table 7
Gini coefficient and change in gross domestic product per capita

	Gini Index 2010 ^a	GDP Per capita growth rate average
Anguilla	.39	–
Antigua and Barbuda	.48	0.14
Dominica	.44	-1.43
Grenada	.37	1.02
Saint Kitts and Nevis	.38	1.16
Saint Lucia	.42	-1.98
Saint Vincent and Grenadines	.40	0.63

Source: UNDP. Regional Human Development Report 2021; and WB. 2022.

^a USA CB. 2022. Gini index. <https://census.gov/topics/income-poverty/income-inequality/about/metrics/gini-index.html>

B. Climate and environment context

34. The scale and intensity of tropical cyclones has been increasing globally for past 40 years. These extreme weather manifestations have threatened human life and destroyed infrastructure, and affected health and well-being, access to freshwater systems, food security, biodiversity and the economies of all small island States.

35. The 58 SIDS across the globe, including all the OECS member States, have long been recognized as being at high risk to climate change and are often described as being on the front line of climate change. SIDS have been active in calling attention to their high vulnerability to climate change and have played a leading role in advocating for stronger ambition to limit global warming. The Alliance of Small Island States has been a strong negotiating group in UNFCCC processes, highlighting that, although those States are negligible contributors to anthropogenic climate change, they are among the most vulnerable to its impacts. The Alliance's "1.5 °C to Stay Alive" campaign was one of the driving forces behind establishing 1.5 °C as the maximum global temperature rise goal in the Paris Agreement.¹⁸

36. The OECS member States are vulnerable to climate change and natural disasters. Extreme weather events are increasingly common in the region. In 2019 and 2020, the region experienced nine category 3 and above hurricanes and a record number of storms in the 2020 hurricane season. Significant hurricanes in the region have included Irma and Maria in 2017 and Dorian in 2019.

SIDS have been active in calling attention to their high vulnerability to climate change and have played a leading role in advocating for stronger ambition.

16 The Gini coefficient is a measurement from WBG that indicates the levels of income and wealth inequality. Values of the coefficient range from 0 to 1, with 1 representing the maximum inequality and 0 the maximum equality (2010).

17 IMF. 2022. *World Economic Outlook*. (19 April 2022). Available at <https://imf.org/en/Publications/WEO>.

18 Thomas A. (ed.). 2020. Obtenido de Climate Change and Small Island Developing States. *Annual Reviews*. Available at <https://annualreviews.org/action/showCitFormats?doi=10.1146%2Fannurev-environ-012320-083355>.

Box 1 Effects of 2017 hurricanes in the Caribbean Region

In 2017, among the 25 Caribbean islands, 22 were affected by at least one category 4 or 5 tropical cyclones. Hurricane Maria destroyed nearly all of Dominica's infrastructure and losses amounted to over 225% of the annual GDP. These events highlighted the pre-cyclone high exposure and vulnerability of these islands and the amplified cumulative impacts of extreme weather conditions. The exposure of these islands, combined with a high concentration of people, low resilience infrastructure, deficient public services in flood-prone coastal areas, inadequate housing, limited access to healthy food and transportation, and unpreparedness, explain the widespread devastation. The loss of mangroves and terrestrial forests exacerbated the cyclone-induced economic crisis. While island communities were still recovering from the 2017 hurricanes, the COVID-19 pandemic caused the closure of global transportation, with harsh socio-economic impacts on tourism-dependent Caribbean economies, illustrating how vulnerability increases compounding crises to both climate and non-climate related events.^a

^a World Bank. 2021. The World Bank in the Caribbean. <https://worldbank.org/en/country/caribbean/overview>

Box 2 Drought in the Caribbean

The *New High-Resolution Drought Atlas for the Caribbean Spanning 1950–2016*, developed by the Department of Earth and Atmospheric Sciences of Cornell University in Ithaca, New York, delivers insight into the historical backdrop of drought variability in the region. It illustrates how since 1950, the Caribbean has been affected by severe droughts (1974–1977, 1997–1998, 2009–2010, and 2013–2016). Results indicate that the 2013–16 drought has been the most severe event during the time interval analysed, which agrees with qualitative reports of many meteorological institutions across the Caribbean.

37. The reduced habitability of small islands is a significant, overarching risk caused by a combination of threats faced by most small islands, even under a global warming scenario of 1.5 °C. In the Caribbean, additional warming by 0.2 ° to 1.0 °C, could lead to a predominantly drier region (5–15% less rain than currently), with associated impacts on agricultural production and yield in the region.¹⁹

38. The impacts of climate change in the Caribbean region present serious threats to the ability to support human life in these territories. Building fiscal and financial resilience and investing in preparedness – be it physical, health-related, or social ‘safety nets’ – are critical to reducing the large human and economic costs caused by climate change in the region.

2. Emissions profile

39. Globally, the region's GHG emissions are negligible, barely 0.0001% of the total global emissions in 2018. However, GHG emissions in all countries have increased exponentially from 2009 (against the 1990 base line), potentially in line with the increase in tourism and construction sectors, which, as seen in [table 4](#), are the main contributors to the region's GDP.

Globally, the region's GHG emissions are negligible, barely 0.0001% of the total global emissions.

Table 8
Total emissions by gas

	Last reported year	Carbon dioxide emissions (Gg)	Methane emissions (Gg CO ₂ e)	Nitrous oxide emissions (Gg CO ₂ e)	Total GHG emissions (Gg CO ₂ e)
Antigua and Barbuda	2000	371.88	142.17	83.70	597.75
Dominica	2017	156.85	52.34	2.29	211.53
Grenada	1994	135.00	1 470.51	0.95	1 606.47
Saint Kitts and Nevis	1994	70.83	59.48	34.10	164.41
Saint Lucia	2010	489.43	87.78	32.67	647.60
Saint Vincent and Grenadines	2004	217.41	66.78	59.83	381.02
Total	–	1 441.4	1 879.06	213.54	3 608.78

Source: UNFCCC GHG inventory.

Note: GHG are considered excluding land use, land-use change and forestry.

Table 9
Greenhouse gas emissions, 1990–2017

	1990	1994	2000	2004	2010	2017	Change in GHG emissions (%)
Antigua and Barbuda	388.63	–	597.75	–	–	–	53
Dominica	–	–	173.9	–	192.54	211.53	21
Grenada	–	1 606.47	–	–	–	–	–
Saint Kitts and Nevis	–	164.41	–	–	–	–	–
Saint Lucia	–	–	493.63	–	647.6	–	31
Saint Vincent and Grenadines	392.18	–	295.12	381.02	–	–	-3

Source: UNFCCC GHG inventory.

Note: GHG are considered excluding land use, land-use change and forestry.

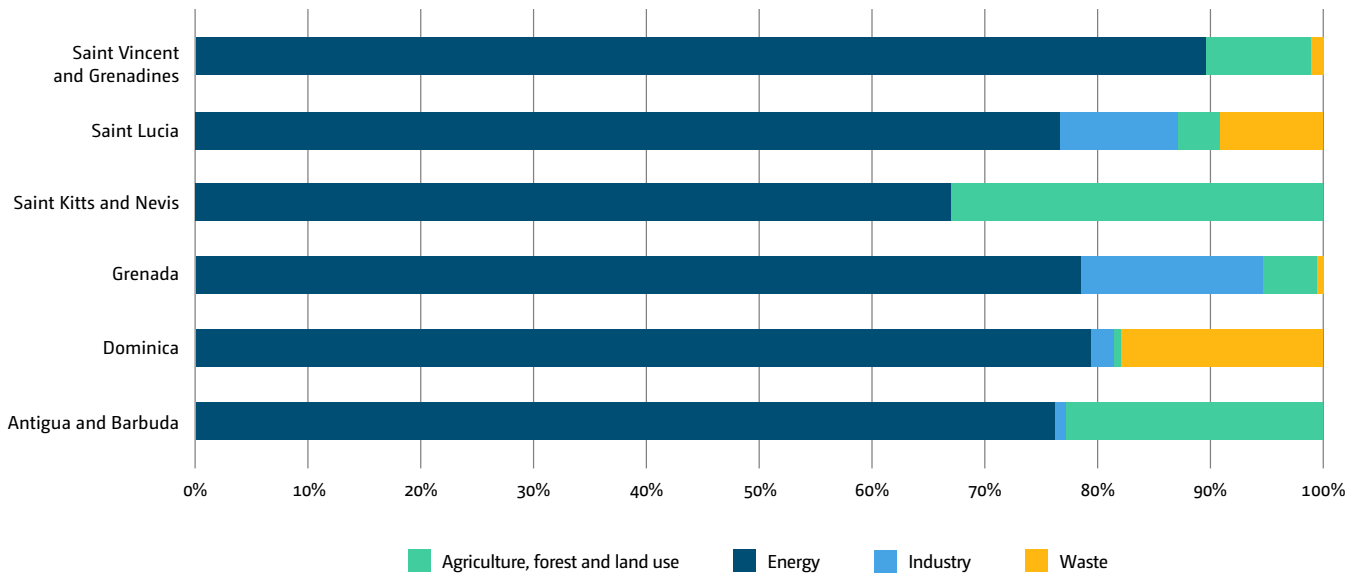
40. Table 8 shows the total GHG emissions in the region amounted to 3,608.78 kt CO₂ eq. Grenada's share is 44% (see table 9). The second largest emitter in the area is Saint Lucia, accounting for 18% of all emissions, followed by Antigua and Barbuda, with 17%. Saint Vincent and the Grenadines emits 10% of the total and Dominica 6%. The share for Saint Kitts and Nevis is the smallest, at only 4%.

41. As seen in figure 3, in all six countries analysed, the sector with the largest share of emissions is the energy sector, accounting for 65 to 80% of total emissions. This is a pattern repeated in all OECs full member States. There are high levels of emissions in the agriculture sector as well, ranging from 5% to 30% in all countries. In the case

of Dominica, the waste sector represents a big source of emissions and the agriculture sector accounts for less than 1%. The country where emissions from agriculture, forestry and land use are most prevalent is Saint Kitts and Nevis with 35% of all its emissions. Economic growth leads to a higher overall consumption of energy and therefore an increase in emissions in the sector.

The largest share of emissions is the energy sector, accounting for 65 to 80% of total emissions.

Figure 3
Total emissions by sector, 2004–2020^a



Source: UNFCCC.

^a Antigua and Barbuda’s latest NC was submitted in 2016, Dominica’s latest NC was submitted in 2020, Grenada’s latest NC was submitted in 2019, Saint Kitts and Nevis’ latest NC was submitted in 2016, Saint Lucia’s latest NC was submitted in 2017 and Saint Vincent and the Grenadines latest NC was submitted in 2016.

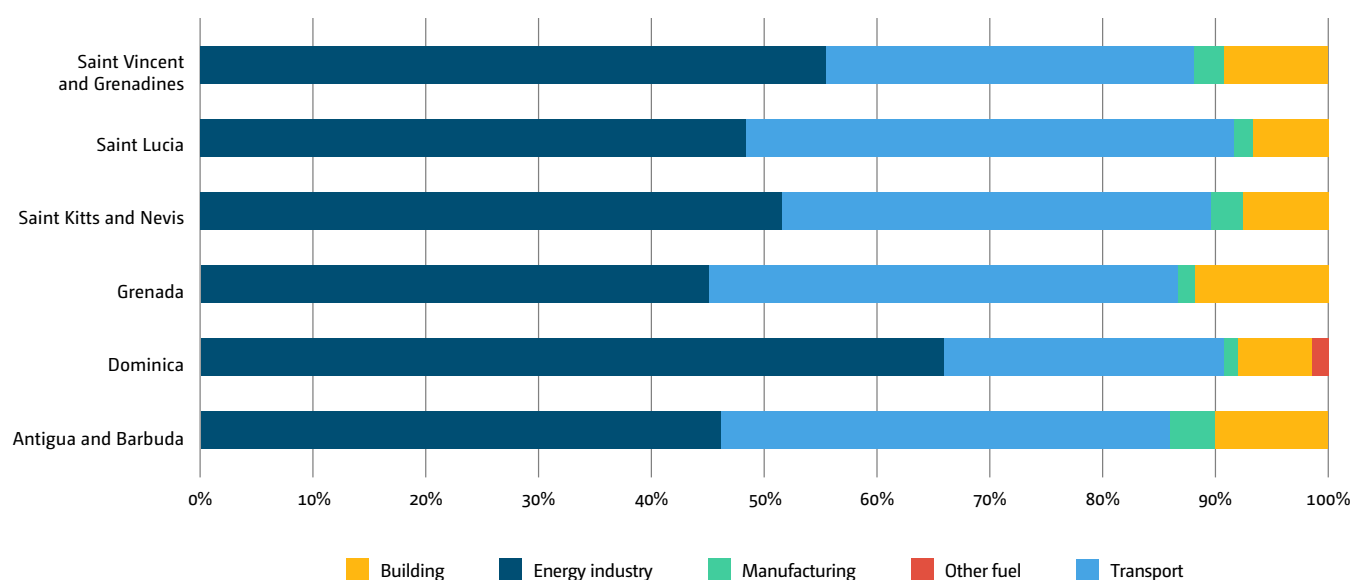
42. Within the energy sector (see figure 4), the energy industry,²⁰ dedicated to the generation of all types of energy, is the source of 60% of all emissions in the region. Transport also plays an important role, with 29% of all emissions. In Grenada, energy and transport industries are the largest emitters and 15% of its energy sector emissions come from the building sector.

Other fuel and manufacturing sectors account for less than 10% each. Antigua and Barbuda stated in its most recent NC (2016) that 100% of its energy sector emissions come from the energy industry. In Dominica, 20% of emissions in the energy sector come from the use of other fuels, and so the country is the largest emitter for this subsector in the region. Saint Kitts and Nevis reported approximately 65% of its emissions from the energy sector.



20 For the purposes of this document, the energy industry refers to all industries involved in the production and sale of energy, including fuel extraction, manufacturing, refining and distribution.

Figure 4
Composition of energy sector carbon dioxide emissions, 2016–2020



Source: NCs.

C. Regional climate-related policies

43. OECS member States have taken measures to address their vulnerability to the heightened risks in the region. These are focused primarily on adaptation measures and building resilient societies while transitioning to a low-carbon economy. The OECS Commission is dedicated to assisting the member States both individually and collectively in their climate efforts by designing and implementing frameworks, programmes and projects at the regional, national and local level, such as the Climate Change Work Programme, which is led by the Climate Change and Disaster Resilience Unit.²¹

44. The OECS Community Resilience Programme aims to target communities; enhance management and organizational capacities at the community level; empower and support communities in their resilience-building efforts; and enhance the resilience of community-level infrastructure, ecosystems and livelihoods. In a similar way, the GIZ project entitled human mobility in the context of climate change seeks to improve applied knowledge related to the sustainable management of human mobility in the Caribbean region and is based on similar GIZ projects in the Pacific and the Philippines.²²

45. OECS also supports international organizations in the development of climate-related initiatives, such as the Caribbean Regional Oceanscape, a project implemented jointly by OECS and WBG,²³ that aims to facilitate cooperation for the transition to a blue economy

through financing ocean conservation and sustainable management of marine resources.

46. The Climate Governance Initiative for the Caribbean aims to support the development of governance structures to allow equitable and just national climate action to implement the Paris Agreement in Caribbean countries. It analyses diverse themes within and outside of the climate change discussion and develops Caribbean-specific approaches for treating them. The purpose of the Initiative is to define a structure for Caribbean climate governance that creates a legal framework to translate international climate change commitments made by Caribbean governments to national and local action; amplifies the voices of Caribbean citizens on climate justice issues nationally, regionally and internationally; and contributes to the development of a just and equitable transition that enables more ambitious climate action in the Caribbean and empowers citizens, especially the most vulnerable, to hold their Governments accountable on climate change.²⁴

47. Given the importance of ocean-based activities in the Caribbean region, several public–private partnerships to co-manage Caribbean marine areas are also under way, such as those developed by the NGO Blue Finance with the Caribbean Environmental Programme, The Nature Conservancy, the Oceans Financing Initiative of the Asian Development Bank, and the Sustainable Islands Platform and Natural Capital Lab of IADB.²⁵

21 <https://oecs.org/climate-&-disaster-resilience/about/about-the-ccdrmu/climate-change-overview.html>.

22 <https://oecs.org/climate-&-disaster-resilience/our-work/programmes-and-projects/community-resilience-programme.html>.

23 <https://oecs.org/en/crop>.

24 Climate Analytics. 2022 *Climate Governance Initiative for the Caribbean*. <https://climateanalytics.org/projects/climate-governance-initiative-for-the-caribbean/#:~:text=The%20Governance%20Initiative%20for%20the,Paris%20Agreement%20in%20Caribbean%20countries>.

25 CBI. 2021. https://climatebonds.net/files/reports/cbi_cabei_report_final_version.pdf.

48. The OECS Green-Blue Economy Strategy and Action Plan aims to have an economically viable, climate resilient, economy that is based largely on sustainable domestic production and inward investment and pursues long-term prosperity for its entire population, its most vulnerable, through socioeconomic inclusiveness, responsible management of its coastal, marine and terrestrial ecological resources, and transparent and participatory governance. It assumes a low carbon, climate-resilient strategy that utilizes the member States indigenous talents and natural resources to transform its coastal and other populations from vulnerability to prosperity and effectively values nature through data-driven planning, mapping and visioning in a holistic way.

49. It places a premium on sustainable use of its marine and coastal resources and ensures that the entire population are aware of and are empowered to take advantage of plausible opportunities for sustainable investment, production and consumption.

D. Financial context

1. Economic union

50. The OECS became an economic union in 2010 under the Revised Treaty of Basseterre.²⁶ The OECS member States agreed to pool their constitutional authority or sovereignty in the following key areas: a common market including a customs union (which allows free trade), monetary policy, trade policy, maritime jurisdiction, common commercial policy, civil aviation, environmental policy and immigration.²⁷

51. The ECCU is a development of OECS under the supervision of ECCB as the monetary authority. The islands share a single currency, the Eastern Caribbean dollar, which is pegged to the United States dollar (2.70 ECD = 1 USD). This is an advantage as the region is less exposed to foreign exchange risks or local currency foreign exchange forward cover cost when obtaining finance and climate finance outside the region's economy. ECCB issues the Eastern Caribbean dollar, maintains its stability and oversees the banking system in the OECS member States. ECCB is governed by a monetary council and a board of directors and is managed by a governor. It was formed in 1983, and it is based in Saint Kitts and Nevis.

52. ECCB provides support and actively monitors developments, primarily in the credit union and insurance sectors. Its core mandates are to maintain price and financial sector stability by acting as a stabilizer and safeguard of the banking system in the Eastern Caribbean Economic and Currency Union.²⁸ The regulatory framework of the domestic banking system has legislative components, which gives ECCB the power to regulate banking business on behalf of and in collaboration with participating governments.

2. Financial institutions

53. The financial system in the region comprises domestic banks, international financial service sector banks, credit unions, insurance companies, national development foundations, development finance institutions, building and loan associations and finance companies. An additional player in the financial system in the region is the Eastern Caribbean Securities Exchange, a fully electronic regional exchange promoted by ECCB to provide ECCU with an accessible marketplace in which to clear settle issue and trade securities and to register companies. There are three types of financial institutions present in the OECS member States, shown in figure 5.

3. Development banks

54. Development banks play a significant role in the financial landscape of the Eastern Caribbean. They have been in existence since the late 1960s and finance small and medium-sized enterprises in most OECS member States. Development banks emerged in the Eastern Caribbean as a post-colonial financial institution with an emphasis on agricultural development.

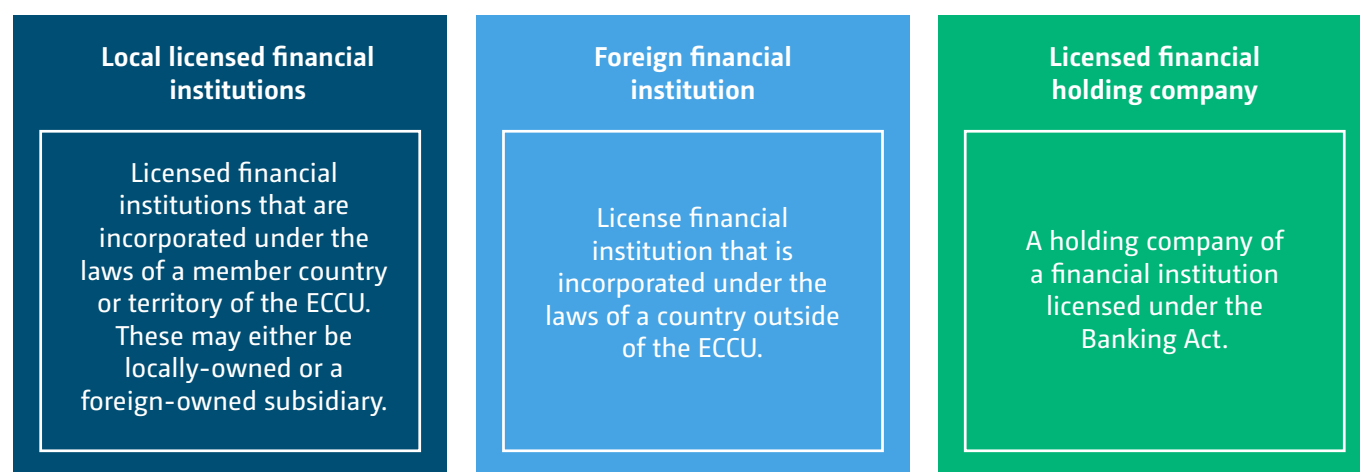
55. WBG and Caribbean Development Bank have a strong presence in the islands. Neither institution provides services to individuals or legal entities, as their goal is to support the development of financial policies in the region. Since 1947, WBG has financed more than 12,000 development projects through interest-bearing and non-interest-bearing loans and grants.

²⁶ Anguilla and the British Virgin Islands, which remain overseas territories and associate members of OECS, have not yet signed the Revised Treaty of Basseterre. Although they are allowed, under Authority supervision, to take part in activities conducted by OECS, they are not Protocol Members of the Eastern Caribbean Economic Union.

²⁷ OECS. 2022. Member States. <https://oece.org/en/who-we-are/member-states>.

²⁸ <https://eccb-centralbank.org/p/about-the-eccb>.

Figure 5
Financial institutions in the Organization of Eastern Caribbean States



Source: ECCB. 2021.

Table 10
Composition of financial institutions licensed by the Eastern Caribbean Central Bank

	Anguilla	Antigua and Barbuda	Dominica	Grenada	Montserrat	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines	Total ECCU
Deposit taking institutions	3	9	4	5	2	7	10	6	46
Commercial banks ^a	3	6	4	5	2	6	5	4	35
Savings banks	–	–	–	–	–	–	–	2	2
Mortgage banks	–	2	–	–	–	–	–	–	2
Micro-finance institutions (that take deposits)	–	1	–	–	–	1	5	–	7
Other financial corporations	–	–	–	–	–	–	1	–	1
Holding companies	–	–	–	–	–	–	1	–	1
Total financial institutions	3	9	4	5	2	7	11	6	47

Source: ECCB. 2016.

^a All commercial banks of the member countries of the Union are licensed by the EECB. They provide monthly, quarterly, and annual reports on their financial condition.

56. In 2021, the financial support for Caribbean countries from WBG was a total of USD 2.6 billion. The resources were used to purchase supplies for the treatment of coronavirus disease 2019, financial support for the unemployed, disaster relief after the eruption of the volcano La Soufrière and the subsequent mass evacuation from Saint Vincent and the Grenadines, and technical support for online training during the quarantine period.

57. The Caribbean Development Bank seeks to reduce social inequalities and poverty rates in borrowing countries by 2025 through the support of inclusive and sustainable growth and promoting good governance. Its functions include mobilizing financial resources from within and outside the region for development, promoting private and public investment, encouraging financial upturn in the region and facilitating business activity and expansion. The Bank takes part in projects related to the development of agricultural enterprises, the improvement of education and the support of businesses. Current projects focus on disaster prevention and pandemic recovery.²⁹ It is also part of the Mainstreaming Climate in Financial Institutions community.

(a) Caribbean Association of Banks

58. The Caribbean Association of Banks is the representative body and recognized voice for banks and other financial institutions in the Caribbean. The Caribbean Association of Banks seeks to influence policies and legislation which have an impact on the sector by advocating on behalf of its members and participating in the global network of similar institutions. The Association was formed in response to the recognized need for member states to mitigate the risk of reliance on external providers and share in the ownership and development of a financial services industry with the capacity to satisfy the financial needs of the people of the region, while at the same time meeting regional and international regulatory requirements and standards. The Association also provides opportunities for discussion on issues that have an impact on the financial services community, and for the sharing of information and experiences, and networking.³⁰

29 Caribbean Development Bank. 2022. Available at <https://caribank.org/> and Immigrant Invest. 2022. *Banks in the Caribbean*. Available at <https://immigrantinvest.com/blog/caribbean-banking-system-en/>.

30 <https://cab-inc.com/members/>.

III. Climate finance needs and priorities

A. Overview

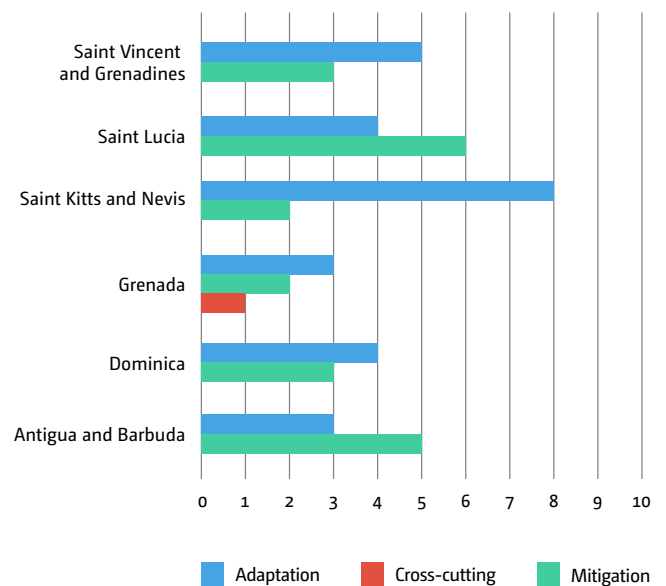
59. In this section, adaptation and mitigation needs are presented by sector, thematic area, estimated cost and time frame (immediate, short-term, medium-term or long-term need). The information presented here is drawn from countries' NCs and submissions to the UNFCCC, including BURs, NAPs, NDCs and TNAs. The time frame described for each mitigation and adaptation action indicates the urgency of its implementation. In general, those actions planned for the long term involve high technology transfers or modifications in national regulations. Those actions with shorter time frames are urgent needs that may have been caused by natural disasters or extreme weather.



60. All six independent OECS States presented adaptation and mitigation needs in the documentation submitted to the secretariat (see figure 6). A total of 49 needs were identified, 27 for adaptation, 21 for mitigation and 1 cross-cutting. The country with the smallest number of needs expressed is Grenada, followed by Dominica. Saint Lucia has the largest number of needs in the documentation, followed by Saint Kitts and Nevis. On average, each State presented a total of eight mitigation and adaptation needs. At the time of writing except for Antigua and Barbuda, and Saint Lucia, all countries have more adaptation than mitigation needs.

A total of 49 needs were identified, 27 for adaptation, 21 for mitigation and 1 cross-cutting.

Figure 6
Number and type of needs by country



Source: NAPs, NDCs, and TNAs.

61. The six independent OECS States submitted national reports to the secretariat which identified needs and priorities in a qualitative and quantitative manner. Figures 7 and 8 provide an overview of the information on needs provided by countries in qualitative and quantitative terms and by different categories. Quantitative data imply that the needs for mitigation and adaptation have been costed.

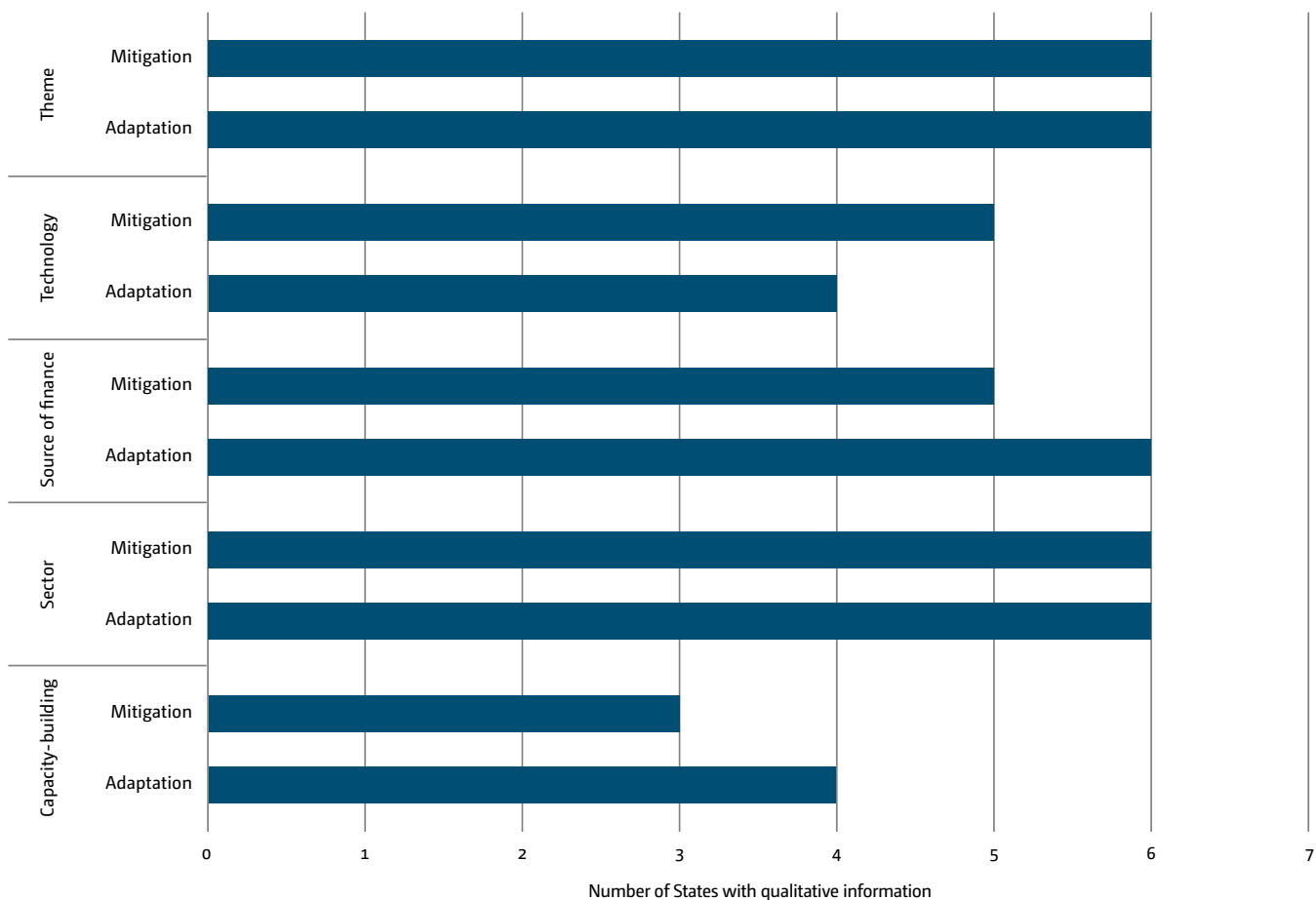
62. Three States identified adaptation needs and adaptation needs with mitigation co-benefits in a quantitative manner (Dominica, Saint Kitts and Nevis, and Saint Vincent and the Grenadines). The cost estimates for those adaptation needs amounted to USD 757,038,921. Five of the six States identified mitigation needs and economic diversification needs with mitigation co-benefits, with cost estimates for those needs amounting to USD 1,464,440,149. Cross-cutting needs amounted to USD 1,054,500,000.

63. All six independent States expressed needs qualitatively for adaptation and for adaptation with mitigation co-benefits by sector, with three States

(Dominica, Saint Kitts and Nevis, and Saint Vincent and the Grenadines) reporting quantitative adaptation needs by sector. All States expressed sector-specific needs for mitigation and economic diversification with mitigation co-benefits in a qualitative manner and five (Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis and Saint Lucia) did so also in a quantitative manner.

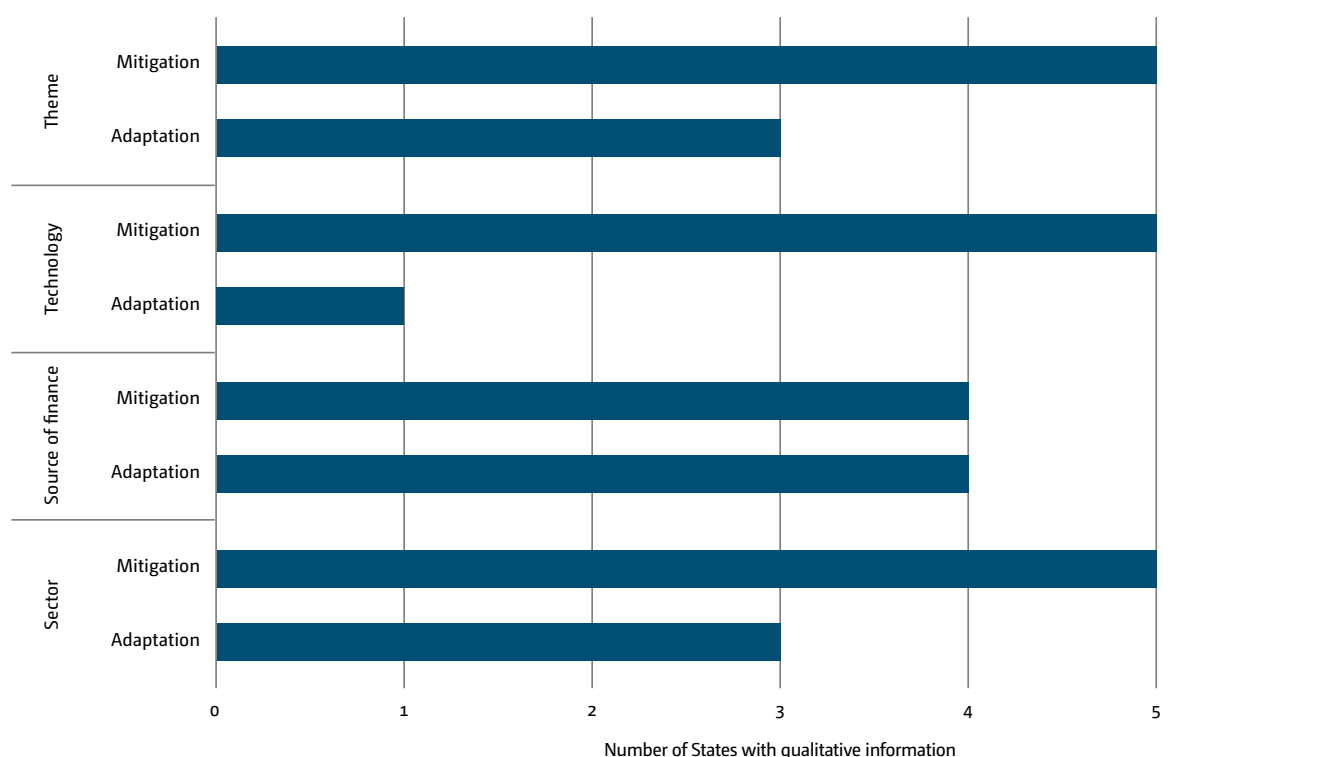
64. Four States (Antigua and Barbuda, Dominica, Grenada and Saint Kitts and Nevis) identified qualitative technology adaptation needs in their TAPs and TNAs and five (Antigua and Barbuda, Dominica, Grenada, Saint Kitts and Nevis and Saint Lucia) identified mitigation needs in a qualitative manner (see figure 7). Only one State (Saint Kitts and Nevis) identified adaptation technology needs in a quantitative manner, amounting to USD 97.98 million. Five States included quantitative information on their technology needs for mitigation and economic diversification, amounting to USD 1,025 million. Concerning sources of climate finance, four States specified whether funding should come from national or international sources.

Figure 7
Overview of qualitative information provided by the Eastern Caribbean States



Source: NAPs, NDCs and TNAs.

Figure 8
Overview of quantitative information provided by the Eastern Caribbean States

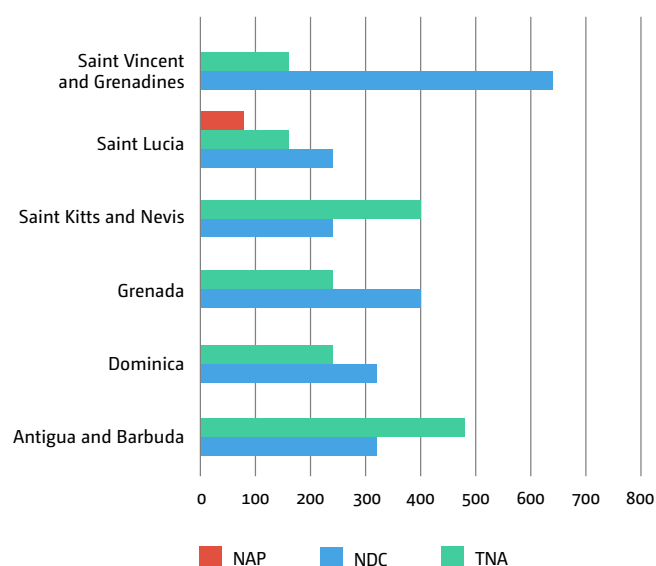


Source: NAPs, NDCs and TNAs.

65. All six countries provided quantitative information on needs, which amount to approximately between USD 3.275 billion and 4.576 billion. Of the needs, 37% were stated by Grenada, 27% by Saint Kitts and Nevis, 18% by Dominica, 11% by Saint Lucia, 7% by Antigua and Barbuda and less than 1% by Saint Vincent and the Grenadines.³¹

66. Most of the quantified needs are derived from NDCs (72%) and TAPs (24%), with the remainder derived from TNAs (almost 4%) and NAPs (less than 1%), although it is worth noting that NAPs are primarily focused on climate-related policies (see figure 9).

Figure 9
Cost of needs identified by country
(USD millions)



Source: NAPs, NDCs and TNAs.

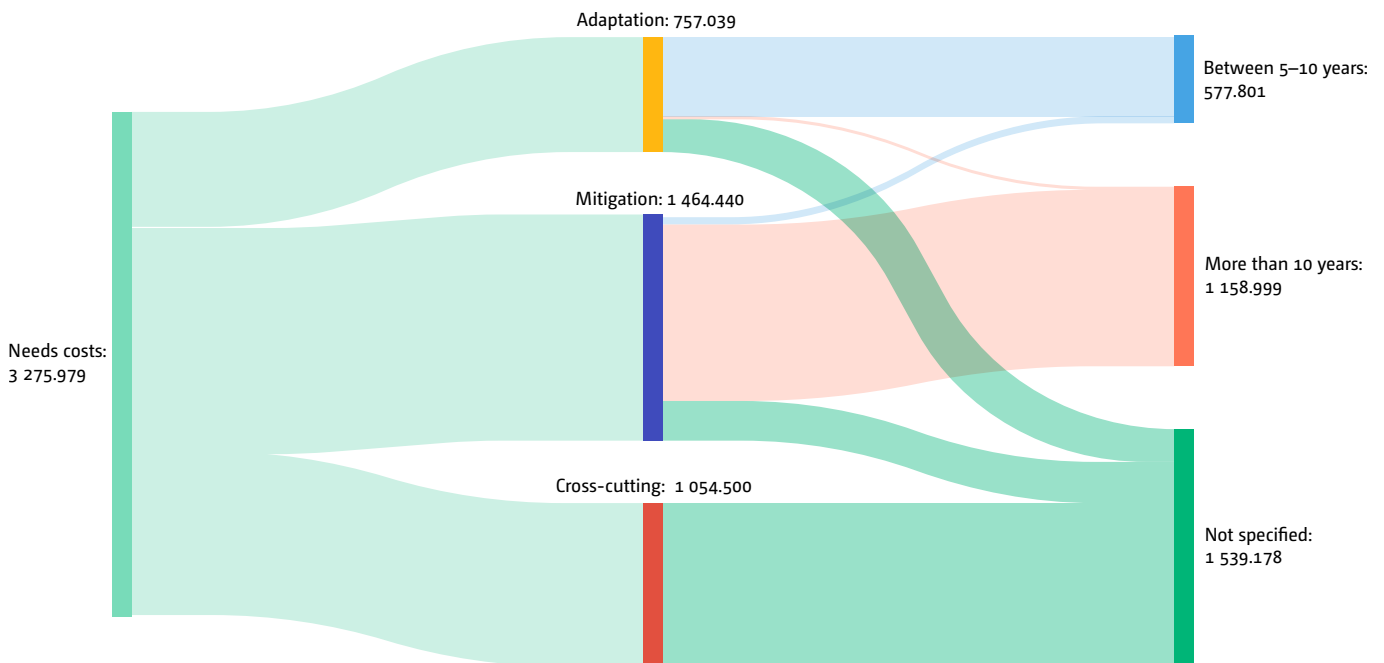
31 Information and data contained herein (e.g. climate finance flows, needs and priorities, policies etc.) from developing countries are to be treated as status quo at time of drafting, may not contain all sources of information, and are subject to change as these are revised or submitted / published by countries. Hence quantitative data may be underestimated.

67. Figure 10 illustrates the cost of needs identified by thematic area and time frame based on the lower boundary in the range (3.275 billion). The largest cost is for mitigation activities, accounting for USD 1,464,440,149 (44.7%), and cross-cutting needs with a total of USD 1,054,500,000 (32.18%) followed by adaptation needs with a total of USD 757,038,921 (23.1%). Of the total needs identified, USD 1,158,999,250 (35.7% of the total) is for projects to be implemented within the next 10 years. This is mainly because most costed needs are reported in NDCs where countries state their national commitments up to 2030 or 2050 and the required means of implementation, including finance. In the

A significant portion of the adaptation finance is needed within the next 10 years.

short term, USD 577,801,421 is reported to be needed for projects within 5 to 10 years but a larger portion (USD 1,539,178,399) has no specified time frame. The amount of finance required for mitigation twice exceeds that for adaptation. A significant portion of the adaptation finance is needed within the next 10 years, whereas most mitigation needs are to be financed over a longer period.

Figure 10
Cost of needs identified by thematic area and time frame
(USD millions)



Source: NAPs, NDCs and TNAs.

Adaptation needs require a total of USD 757,038,921 (23.1%).

68. Table 11 shows the priority areas identified for adaptation was the water sector, which were mentioned by all States. Needs (see table 12) in the water sector amount to USD 210,750,000. Further important adaptation

sectors with costed needs are tourism, with total costed needs of USD 15,450,000 and agriculture, forestry and other land use with total costed needs of USD 14,230,000.

Table 11
Priority sectors for adaptation by country

	AFOLU	Building sector	Coastal and marine ecosystems	Disaster risk reduction	General ^a	Public health	Social sector Vulnerable groups	Tourism	Water
Antigua and Barbuda		✓					✓		✓
Dominica									✓
Grenada	✓				✓			✓	✓
Saint Kitts and Nevis	✓	✓	✓			✓	✓	✓	✓
Saint Lucia	✓	✓	✓			✓	✓	✓	✓
Saint Vincent and the Grenadines	✓		✓	✓		✓			✓

Source: NAPs, NDCs and TNAs.

^a General refers to information technologies, GIS, training and internet access.

Table 12
Estimated cost of adaptation needs by 2030
(US dollars)

	NDCs	NAPs	TNA
Antigua and Barbuda	–	–	–
Dominica	504 508 921	–	–
Grenada	–	–	–
Saint Kitts and Nevis	127 000 000	–	118 380 000
Saint Lucia ^a	–	–	–
Saint Vicent and the Grenadines	–	7 150 000	–
Total	631 508 921	7 150 000	118 380 000

Source: NAPs, NDCs and TNAs.

^a Additional adaptation costs for Saint Lucia may be found in Sectorial Adaptation Strategy Action Plans for agriculture, fisheries and water.

69. Table 13 shows the priority areas identified for mitigation were the energy and transport sectors, which were mentioned by all States. The costs are provided in table 14.

Table 13 Mitigation priority sectors							
	AFOLU	Electricity	Energy	General	Industrial processes	Transport	Waste
Antigua and Barbuda	✓	✓	✓			✓	✓
Dominica	✓		✓			✓	
Grenada	✓		✓	✓		✓	
Saint Kitts and Nevis			✓			✓	
Saint Lucia	✓	✓	✓	✓	✓	✓	✓
Saint Vincent and the Grenadines	✓		✓			✓	

Source: NAPs, NDCs and TNAs.

Table 14 Technology needs and estimated cost (US dollars)		
Sector	Action	Technology cost Subtotal
AFOLU	Microsprinkler	
	Microdam	
	Drip irrigation	
	Soil nutrition management	
	Soil conservation	
	Environmental engineering technologies	
	Habitat protection technologies (e.g. for protecting forest and coastal habitats)	
	GIS and remote sensing techniques and technology	
	Complementary database development and management utilizing appropriate hardware and software for a comprehensive assessment of the resources	
	Silvicultural techniques	
	Early warning systems for forecasting of wet and dry periods	
	Adoption of drought-resistant cultivars	
	Change of sowing and harvesting periods	
	Pesticide application technologies and practices	
Integrated pest management systems and practices		27 853 374

Table 14 (continued)
Technology needs and estimated cost
(US dollars)

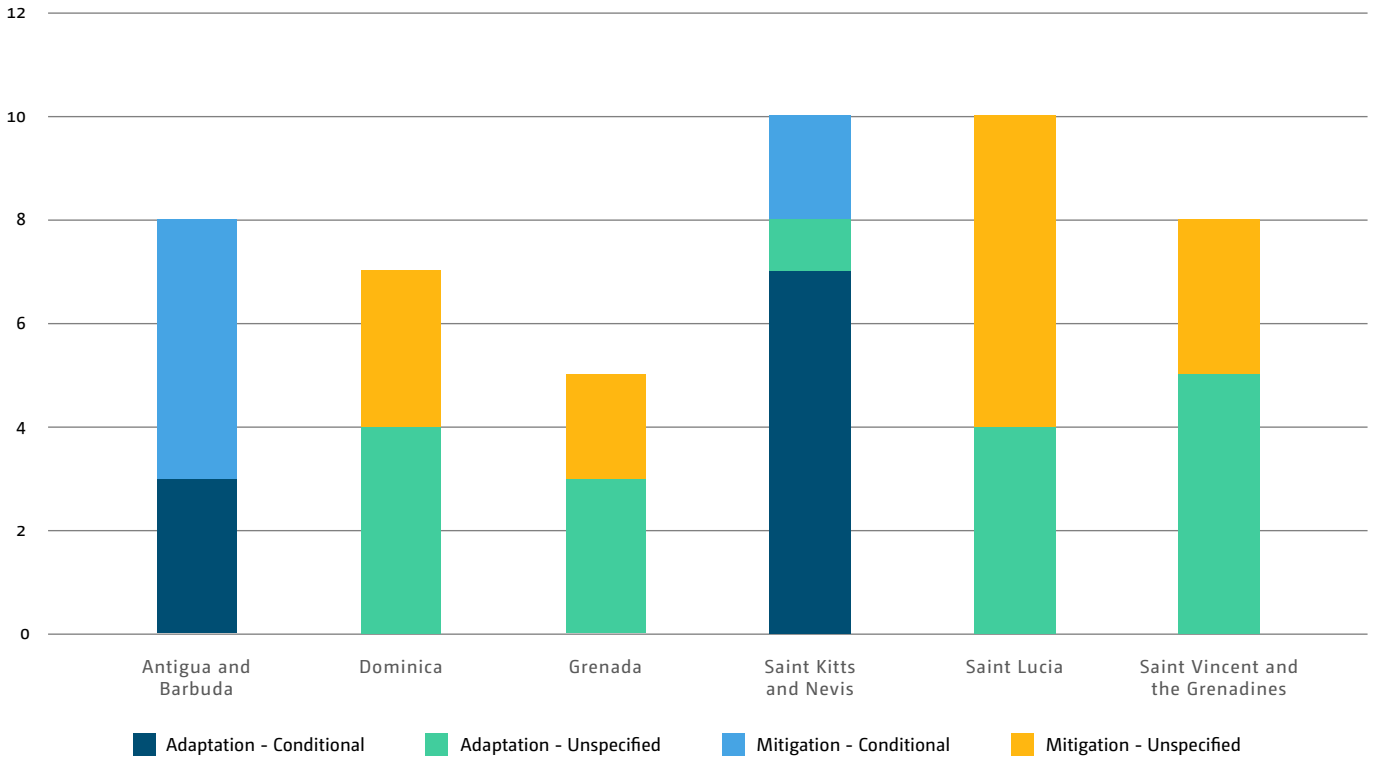
Sector	Action	Technology cost Subtotal
Electricity	Energy efficient appliances	
	Energy saving lamps	
	Solar technology (water heating and air-conditioning)	
	Energy efficient building designs in future housing developments	
	Time of use devices for switching on and off	
	Run-of-the-river hydropower	
	Green roofs	
	Geothermal heat pumps	
	Solar photovoltaics: grid tied and stand-alone	
	Biogas	
	High-efficiency heating, ventilating and air-conditioning technologies	
	Energy technologies (energy efficient electricity plants, wind turbines, photovoltaics and energy conservation technologies)	14 897 500
Energy	Energy efficient windows and doors	
	Construction of energy efficient building infrastructure	
	LED lighting	
	Microscale hydropower	
	Solar and wind power	
	Combine cycle gas turbines	
	Geothermal energy	
	Demand-side management	1 021 363 275
General	Information technologies (e.g. computer hardware and software, GIS, training and Internet access)	368 000 000
Transport	Biofuel vehicles	
	Conversion of existing vehicles to bi-fuel systems	
	Fuel cell vehicles	
	Electric plug-in vehicle	
	Improvement of road infrastructure	
	Battery electric vehicles	
	Solar charging station	
	Integrated public transport	
	Efficiency in transport sector	3 338 000
Waste	–	28 715 000

Source: NAPs, NDCs and TNAs.

70. Estimated total adaptation needs amount to USD 757,038,921, mitigation needs amount to USD 1,464,440,149 and cross-cutting needs to USD 1,054,500,000. The overall total is USD 3,275,979,070, so USD 409,497,388 per year would be needed to meet all needs by 2030.

The estimated overall total is USD 3,275,979,070, so approximately, USD 409,497,388 per year would be needed to meet all needs by 2030.

Figure 11
Needs conditionality by type



Source: NDCs.

71. Climate action in NDCs is often conditional on international support, finance, technology and capacity-building. The adaptation needs and mitigation targets of Antigua and Barbuda and Saint Kitts and Nevis are stated as being almost 100% conditional on international financing. Other countries have not specified conditions for meeting their adaptation, mitigation or cross-cutting goals (see figure 11).

2. Adaptation and mitigation need by sector, subsector and time frame

(a) Energy

72. Of the five countries that provided needs information at the subsectoral level for energy, three

identified biogas, solar photovoltaic and wind systems as priority subsectors. Only one country (Antigua and Barbuda) specified immediate-term needs and two countries (Antigua and Barbuda and Dominica) specified needs in the short term in relation to green roofs and energy efficient windows and doors. Dominica and Grenada identified needs for the medium term, highlighting the necessity of geothermal, LED lighting, run-of-the-river hydropower and wind power. Only one country (Antigua and Barbuda) identified long-term needs related to the construction of energy efficient infrastructure (see figure 12).

73. Table 15 details the needs for the energy sector. The energy sector is the largest emitting sector for all independent OECS States. This implies that efforts, including financing, capacity-building and technology transfer, must be dedicated to this area to meet its adaptation and mitigation needs. The need for these

actions ranges from the immediate to the long term. For example, LED lighting is seen as an immediate-term action, and the actions presented for the medium and long term require a larger amount of technology, technical capacity-building and financing.

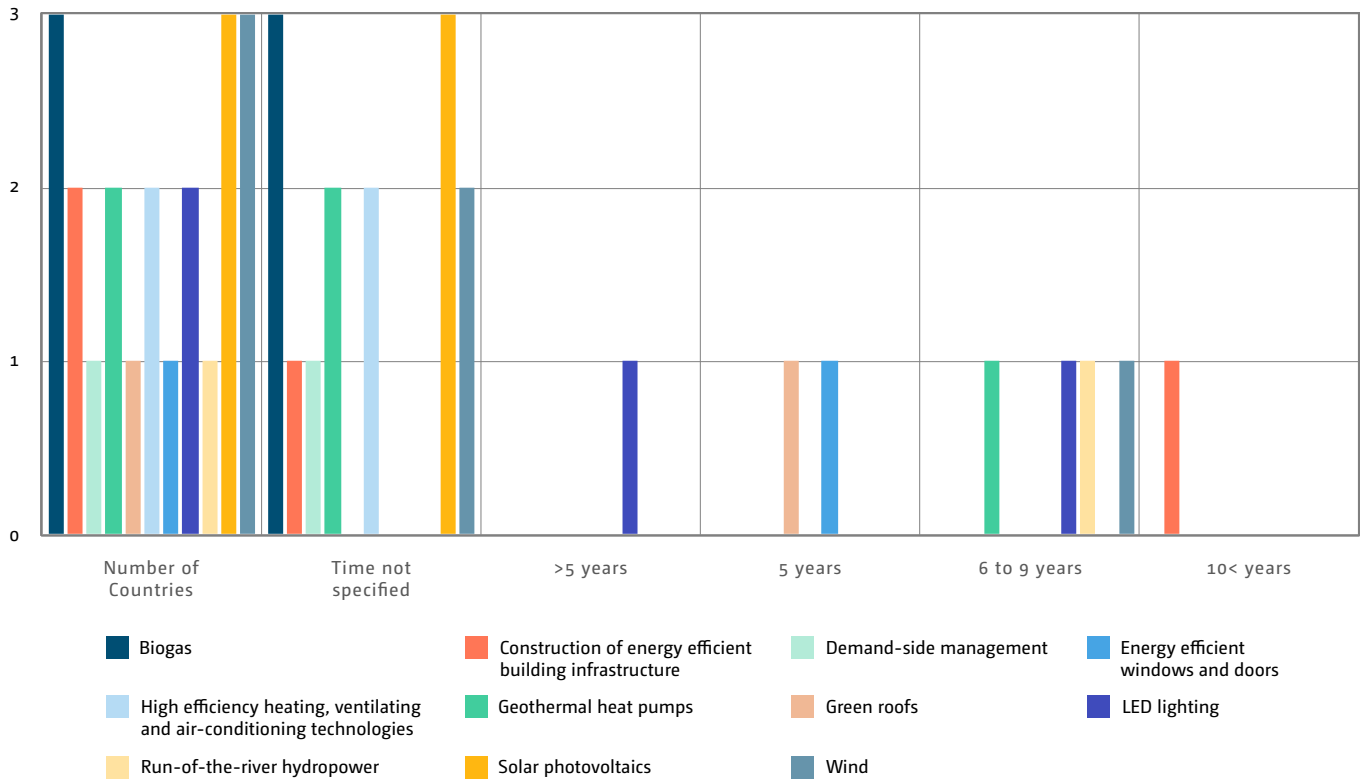
Table 15
Energy needs by country

	Needs
Antigua and Barbuda	<ul style="list-style-type: none"> • Energy efficient windows and doors • Construction of energy efficient building infrastructure • LED lighting
Dominica	<ul style="list-style-type: none"> • Run-of-the-river hydropower • Geothermal • Wind • Green roofs • Geothermal heat pumps
Grenada	<ul style="list-style-type: none"> • Solar photovoltaics: grid tied and stand-alone • LED lighting • Biogas • High efficiency heating, ventilating and air-conditioning technologies
Saint Kitts and Nevis	<ul style="list-style-type: none"> • Microscale hydro • Solar and wind power • Combine cycle gas turbines • Geothermal energy • Demand-side management • Energy demand • Energy efficient appliances • Energy saving lamps (fluorescent instead of incandescent) • Solar technology (water heating and air conditioning) • Energy efficient building designs in future housing developments • Time of use devices for switching appliances on and off
Saint Lucia ^a	<ul style="list-style-type: none"> • Energy technologies (e.g. energy efficient electricity plants, wind turbines, photovoltaic and energy conservation technologies)
Saint Vincent and the Grenadines	–

Source: NAPs, NDCs and TNAs.

^a For more information see Saint Lucia's National Energy Transition Strategy.

Figure 12
Energy needs by subsector and time frame

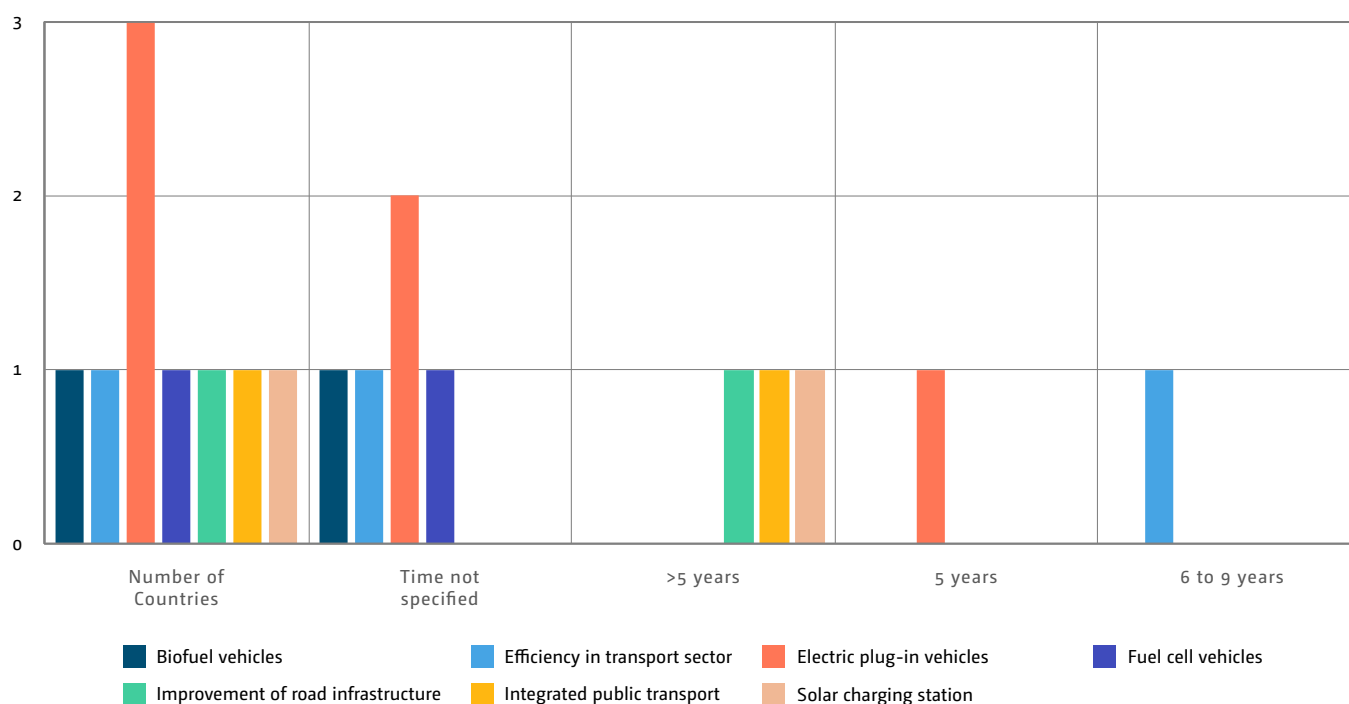


Source: NAPs, NDCs and TNAs.

(b) Transport

74. Three countries (Antigua and Barbuda, Grenada, and Saint Kitts and Nevis) provided information at a subsectoral level for the transport sector, identifying seven areas where transport could use more sustainable models. These countries stated the need for electric plug-in vehicles. Antigua and Barbuda expressed immediate needs related to the improvement of road infrastructure, integrated public transport and solar charging stations, and short-term needs for electric plug-in vehicles. In the medium term, Dominica expressed the need for efficiency in the transport sector (see figure 13).

Figure 13
Transport needs by subsector and time frame



Source: NAPs, NDCs and TNAs.

75. Table 16 shows many needs in the transport sector that are aimed mainly at the transition out of fossil fuels. Some of these activities are subject to national regulations and high technology transfers, hence the medium-term time frame described above. However, public transportation, road infrastructure and solar charging stations are needed in the short term.

(c) Agriculture

76. Table 17 shows the agriculture needs by country. of the six countries, three (Dominica, Grenada, and Saint Kitts and Nevis) have identified needs by subsector related to agriculture. Subsectors in this area relate to practices, tools, infrastructure and technologies to improve management and sustainability of the land. Most of these needs did not specify a time frame, except for Dominica's identification of the need for soil conservation within the next five years. Dominica also specified the need for soil nutrition management in a short-term time period, namely five years (see figure 14).

Table 16
Transport needs by country

	Needs
Antigua and Barbuda	<ul style="list-style-type: none"> Improvement of road infrastructure Battery electric vehicles Solar charging station Integrated public transport Efficiency in transport sector
Dominica	–
Grenada	<ul style="list-style-type: none"> Electric plug-in vehicle
Saint Kitts and Nevis	<ul style="list-style-type: none"> Biofuel vehicles Conversion of existing vehicles to biofuel systems Flexible fueled vehicles Electric vehicles Hybrid vehicles Fuel cell vehicles
Saint Lucia	–
Saint Vincent and the Grenadines	–

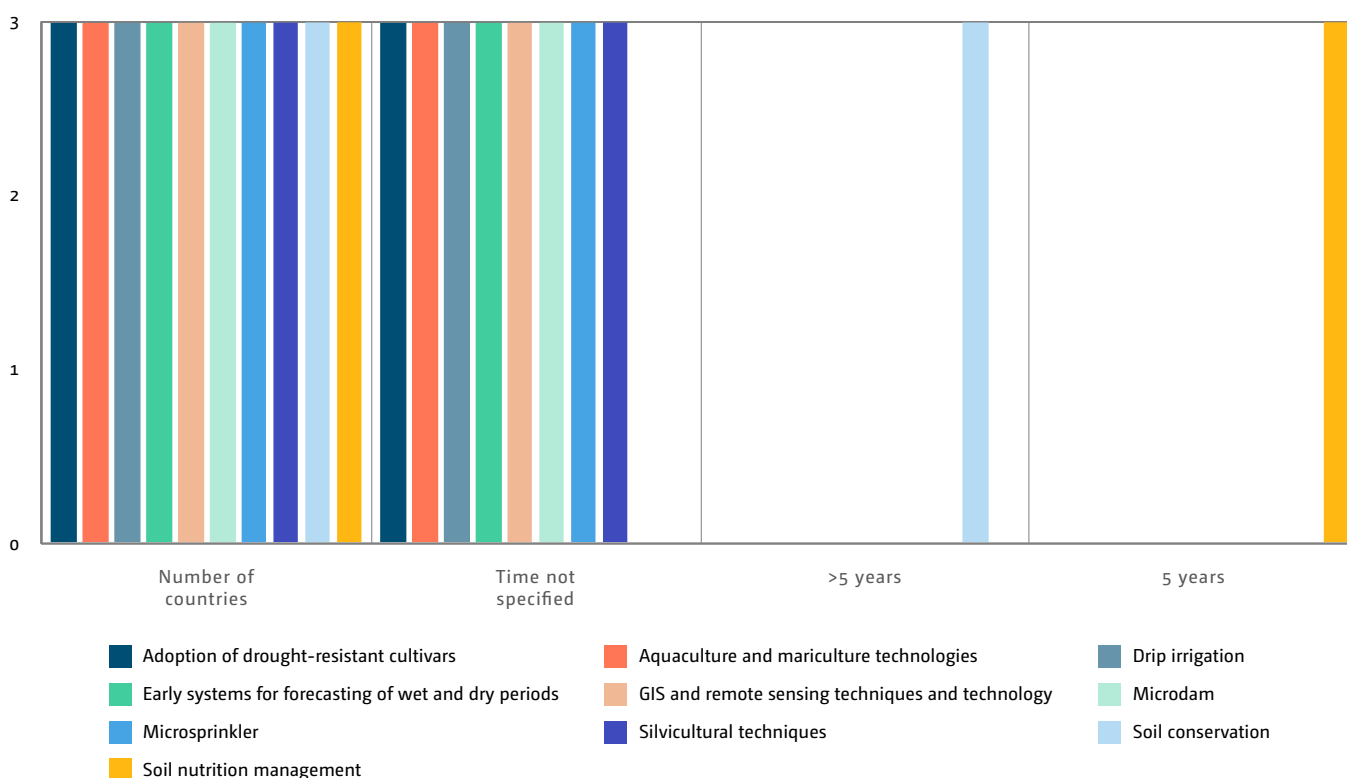
Source: NAPs, NDCs and TNAs.

Table 17
Agriculture needs by country

	Needs
Antigua and Barbuda	–
Dominica	Soil nutrition management Soil conservation
Grenada	Microsprinkler Microdam Drip irrigation
Saint Kitts and Nevis	Early warning systems for forecasting of wet and dry periods Adoption of drought-resistant cultivars GIS Change of sowing and harvesting periods Soil management technologies and practices Aquaculture and mariculture technologies
Saint Lucia	Soil nutrition management Microdam Drip irrigation
Saint Vincent and the Grenadines	–

Source: NAPs, NDCs and TNAs.

Figure 14
Agriculture needs by subsector and time frame



Source: NAPs, NDCs and TNAs.

(d) Water

77. Four countries (Antigua and Barbuda, Dominica, Grenada, and Saint Kitts and Nevis) have stated needs related to the water sector (see [table 18](#)).

78. Of these, the needs related to the subsector of desalination (identified by Saint Kitts and Nevis and Grenada), domestic water conservation (identified by

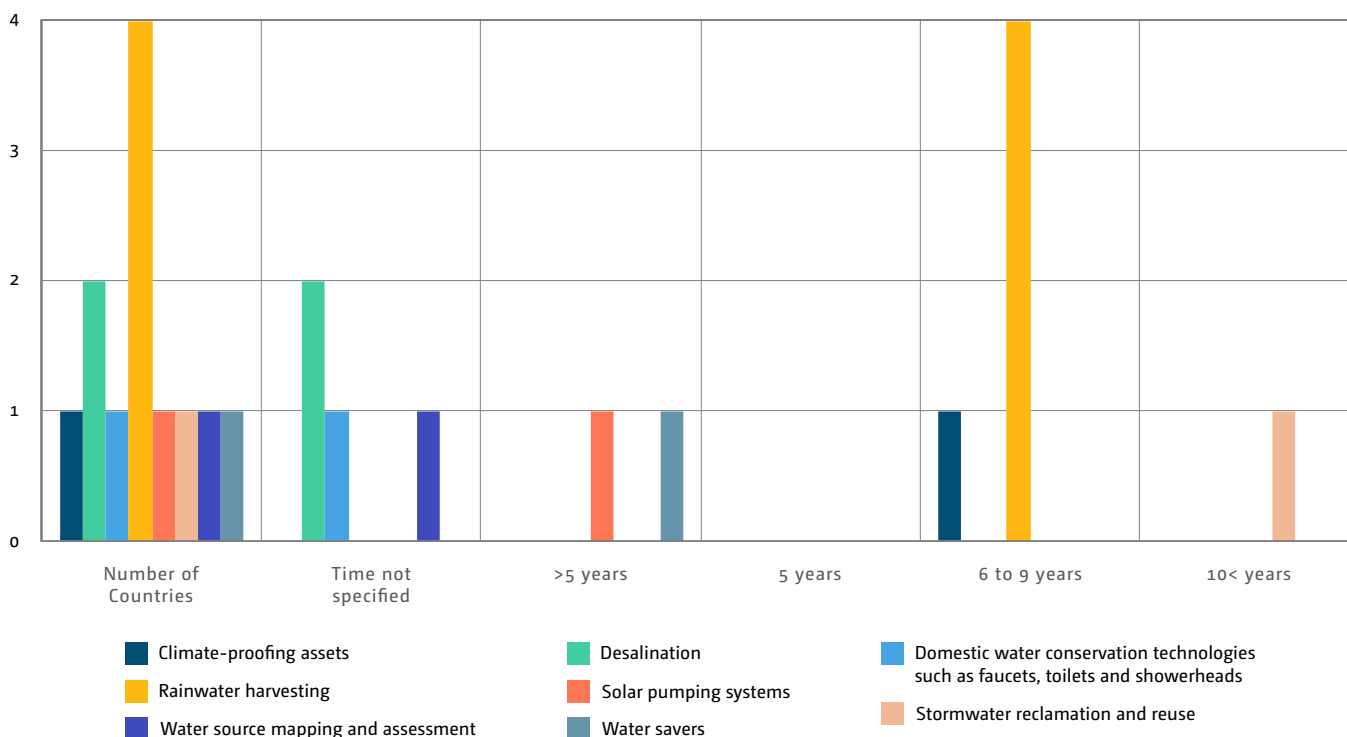
Saint Kitts) and water resource mapping and assessment (identified by Dominica) did not specify a time frame. Antigua and Barbuda identified immediate needs related to solar pumping systems and water savers. In the medium to long term, Antigua and Barbuda, Dominica, Grenada, and Saint Kitts and Nevis stated needs related to climate-proofing assets, rainwater harvesting, and stormwater reclamation and reuse (see [figure 15](#)).

Table 18
Water needs by country

	Needs
Antigua and Barbuda	<ul style="list-style-type: none"> • Solar pumping systems • Rainwater harvesting • Water savers • Climate-proofing assets • Stormwater reclamation and reuse
Dominica	<ul style="list-style-type: none"> • Rainwater harvesting • Water resource mapping and assessment
Grenada	<ul style="list-style-type: none"> • Desalination • Rainwater harvesting
Saint Kitts and Nevis	<ul style="list-style-type: none"> • Domestic water conservation technologies such as water efficient taps, toilets and showerheads • Irrigation technologies including sprinkler systems and drip irrigation • Rainwater harvesting • Technologies for soil and water conservation (also applicable to the agricultural sector) such as storage ponds • Desalination
Saint Lucia	<ul style="list-style-type: none"> • Water, agriculture, fisheries, resilient infrastructure, coastal and marine ecosystems, tourism, public health
Saint Vincent and the Grenadines	–

Source: NAPs, NDCs and TNAs.

Figure 15
Water needs by subsector and time frame



Source: NAPs, NDCs and TNAs.

(e) Disaster

77. While no time frames for disaster needs were reported, it is important to note that disaster needs are mainly on capacity-building (see table 19).

Table 19
Disaster and protection needs by country

	Needs
Antigua and Barbuda	• Management technologies
Dominica	• Management technologies and resilience programs
Grenada	• Information technologies
Saint Kitts and Nevis	• Integrated information systems (process for managing vector populations in such a way as to reduce or interrupt transmission of disease)
Saint Lucia	• Civil works such as breakwaters, water treatment facilities, drainage systems • Management technologies – e.g. training, public awareness, resource management methodologies and strategic planning (e.g. adapting building codes to mitigate climate change impacts) • environmental impact assessment
Saint Vincent and the Grenadines	–

Source: NAPs, NDCs and TNAs.

(f) Environmental protection

80. Saint Lucia and Saint Kitts and Nevis stated needs concerning environmental protection that were not time specific, but were related to accommodation, protection and retreat options, environmental engineering technologies and habitat protection technologies (see [table 20](#)).

81. It is noteworthy that, as for the disaster sector, only two of the six OECS independent States noted needs for environmental protection.

Table 20
Environmental protection needs by country

	Needs
Antigua and Barbuda	• Accommodate and protect the marine sector
Dominica	• Environmental technologies
Grenada	• Protection of forests and seas
Saint Kitts and Nevis	• Retreat, accommodate and protect options
Saint Lucia	• Environmental engineering technologies • Habitat protection technologies
Saint Vincent and the Grenadines	–

Source: NAPs, NDCs and TNAs.

B. Means of implementation

82. The mitigation and adaptation needs presented above are contingent upon receiving international support for technology transfer, capacity-building and financing, including through the AF, GCF, multilateral and bilateral agreements and the local private sector. This support is required as the frequency and intensity of the impacts of climate change in the region is beyond the current the adaptation abilities of Governments and the private sector of the countries in the region.

83. Needs for implementation which include finance, technology development and transfer and capacity-building are communicated through national reports, country programmes and strategies of climate funds and MDBs, and national visions and strategies submitted to the secretariat. In many cases, a combination of finance and technology and capacity-building support is required to develop a response to the identified needs. [Table 21](#) provides a sector-level summary of both technology and capacity-building needs identified in the mapping of needs in the region.

1. Finance needs

84. Finance needs for mitigation and adaptation action identified in national reports to the secretariat cover estimates of cost for climate action and technologies, in addition to structural measures, institutional arrangements and policy reforms that aim to mobilize financial resources, set up climate funds and attract private investment. These needs include:

- Increasing grant and concessional finance at the bilateral and multilateral level with a view to supporting climate actions based on nationally defined needs;
- Strengthening capacity to provide a scientific basis for defining targeted climate finance projects, including by using climate modelling to inform priority-setting;
- Developing appropriate financial risk management tools and approaches for addressing short and long-term financial instability, focusing on the implications of a carbon tax for a number of countries;
- Attracting low-cost loans to cover high upfront costs, including for renewable energy projects;
- Developing a national finance mobilization plan for addressing climate change in both mitigation and adaptation activities and pursuing international and domestic funding possibilities;
- Introducing revolving microcredit funds to support small-scale farmers and the implementation of small water-harvesting projects;
- Using climate finance mechanisms to leverage private sector capital; and
- Introducing insurance mechanisms against climatic hazards.

2. Technology and capacity-building needs

85. Technological development plays a key role in terms of economic growth and diversification. Identifying adequate technologies for adaptation and mitigation needs is necessary for the region to mobilize climate finance resources. OECS member States have highlighted in their national reports to the UNFCCC significant technology-related needs required to transition into more resilient and sustainable economies. Furthermore, capacity-building needs, including awareness-raising, research development and training programmes were mentioned in their BURs, NCs and TNAs.

Table 21
Technology and capacity-building needs by sector

Sector	Technology needs	Capacity-building needs
Water	<ul style="list-style-type: none"> • Wastewater treatment • Storm water reclamation and reuse • Microsprinklers • Drip irrigations • Microdam • Desalination technology • Rooftop rainwater harvesting • Household drinking water treatment and safe storage • Leak detection and management • GIS • Watershed management • Breakwaters • Drainage systems • New pipelines • Low flow water technologies for domestic uses • Information technologies • Solar pumping systems • Rainwater harvesting • Climate-proofing assets 	<p>Capacity-building:</p> <ul style="list-style-type: none"> • Facilitate upskilling opportunities for local plumbers and technicians to increase local capacity and availability of technical skills • Hold public education on wastewater treatment technologies <p>Research:</p> <ul style="list-style-type: none"> • Mapping out utility-dependent zones and communities and ensuring scheduled outages have limited impacts on the most vulnerable <p>Training:</p> <ul style="list-style-type: none"> • Promote training opportunities for local heavy equipment operators to avoid outsourcing specialized jobs <p>Awareness:</p> <ul style="list-style-type: none"> • Promote the implementation of water efficiency standards for devices and appliances • Increase awareness about water consumption and conservation practices
Agriculture	<ul style="list-style-type: none"> • Geographic information system technologies • Agricultural engineering technologies: contour terracing, deep ploughing, windbreaks to change land topography to improve water uptake, reduce run-off, and reduce soil erosion • Seed material for the introduction of salt tolerant crops • Hydroponic production facilities • Artificial cooling technologies • Laboratory research facilities and equipment for crop research • Improved greenhouse Technologies • Environmentally friendly extermination and control material and equipment • Meteorological monitoring equipment • Silvicultural techniques • Pest management practices • Soil nutrition management • Soil conservation 	<p>Capacity-building:</p> <ul style="list-style-type: none"> • Establishing or expanding of a special credit or saving scheme to provide low interest loans for irrigation • Offering concessions by the Governments on pumps for agriculture • Designing smaller irrigation systems which are affordable, scalable, and small • Developing a demonstration site where farmers can obtain hands on experience, learn about technology, and see it in operation <p>Research:</p> <ul style="list-style-type: none"> • Implementing a system to collect data required for designing irrigation systems • Improving disaster warning systems • Strengthening research and development into impacts of climate on tropical agriculture and forestry <p>Training:</p> <ul style="list-style-type: none"> • Developing and adopting appropriate systems and technical capacity in engineering technologies <p>Awareness:</p> <ul style="list-style-type: none"> • Improving the levels of awareness and interest among stakeholders regarding the application of new technologies and practices in agriculture production

Table 21 (continued)
Technology and capacity-building needs by sector

Sector	Technology needs	Capacity-building needs
Environment	<ul style="list-style-type: none"> • Reforestation • Waste management • Coastal area management (e.g. terracing, sluices, and restoration and/rehabilitation of degraded systems) • Habitat protection technologies • Automatic weather stations • Rain gauges • Tidal gauges • Automated salinity and temperature gauges. • Information technologies on meteorological measurement • Floodgates and tidal barriers • Flood warning systems • Maintenance of mangrove systems • Coral reef establishment and restoration • Storm surge barriers • Beach nourishment 	<p>Capacity-building:</p> <ul style="list-style-type: none"> • Enhancing the renovation and retrofitting of buildings by developing the technical capacities on specialist workers and the technologies used <p>Research:</p> <ul style="list-style-type: none"> • Creating an institutional framework to reinforce the information <p>Awareness:</p> <ul style="list-style-type: none"> • Encouraging the public about the importance of the physical land space
Multisector	<ul style="list-style-type: none"> • Hurricane- and storm-resistant physical structures • Liquid and solid waste management equipment • Diversification of tourism products • Tourism development planning • Heavy-duty equipment for inland relocation • Communications equipment for emergency preparedness • Biomass and cogeneration • Inland flood defences • Coastal drainage • Passive house 	<p>Capacity building:</p> <ul style="list-style-type: none"> • Establishing a regulatory framework to change the role and fiscal demands in the public health services. • Supporting the infrastructure and human resources through different various private programmes <p>Awareness:</p> <ul style="list-style-type: none"> • Ensuring public awareness and support of the process for managing vector populations

Table 21 (continued)
Technology and capacity-building needs by sector

Sector	Technology needs	Capacity-building needs
Energy	<ul style="list-style-type: none"> • Energy efficient electricity plants • Combined cycle gas turbines • Wind turbines • Photovoltaics applications (lighting, cooling, heating, general power) • Energy conservation technologies • Ocean thermal electric current plant • Solar technology (water heating and air conditioning) • Information technologies • Geothermal electricity generation technology • Fuel switch to cleaner and cheaper fuels • Natural gas pipeline and storage facilities • High performance engines • Conversion of existing plants to natural gas • Run-of-the river hydro power • Use of sustainable and efficient air conditioner technologies 	<p>Capacity-building:</p> <ul style="list-style-type: none"> • Selecting and implementing a financial and tax incentive scheme to make the renewable energy financially viable • Capacity-building of the Government, stakeholders and policymakers on the potential and advantages of renewable energy technology • Using energy efficiency standards to promote use of mitigation-oriented energy technologies. • Equip regional and international development agencies to provide financing and technical assistance for mitigation-related projects <p>Research:</p> <ul style="list-style-type: none"> • Developing research for the diffusion of high energy efficiency measures and energy standards • Determining the feasibility of developing a demand charge of energy efficient measures • Conducting a study to analyze and collect data to preparation of a renewable energy map <p>Training:</p> <ul style="list-style-type: none"> • Improving training and technical support for financial institutions on assessing energy projects • Improving the capacity and technical competence of use and maintenance of technology through appropriate training programmes <p>Awareness:</p> <ul style="list-style-type: none"> • Building awareness on the nature of the renewable energy and the knowledge-sharing and dissemination
Transport	<ul style="list-style-type: none"> • Energy efficient rail system • Conversion of existing vehicles to bi-fuel systems by installing conversion kits • Battery electric vehicles • Flexible fuelled vehicles • Information technologies • Natural gas, biofuel and electric stations • Improvement of road infrastructure • Solar renewable charging station • Integrated public transport 	<p>Capacity-building:</p> <ul style="list-style-type: none"> • Developing a policy for the regulation of the used car market for electric vehicles • Creating standards and regulation on the age and emission of vehicles imported • Introducing mandatory and voluntary standards and methods for facilitating technology transfer in the road transport sector <p>Research:</p> <ul style="list-style-type: none"> • Conducting feasibility studies is required for solar charging stations to determine suitability and functionality <p>Training:</p> <ul style="list-style-type: none"> • Developing training programs for technicians, electricians and mechanics on the new technologies and programs

Source: NAPs, NDCs and TNAs.

86. The sector with the largest capacity-building needs is the energy sector, which is understandable owing to its importance (it is the highest GHG-emitting sector), and the need to transition to high technology sustainable practices. Agriculture also requires high levels of capacity-building.

IV. Climate finance flows

A. Overview

87. The information presented below has been retrieved from OECD reports and databases, which show climate finance flows to the Eastern Caribbean region from 2010 to 2019 from a variety of agencies and suppliers. This chapter discusses international public finance, comprising bilateral transfers, access to funds and multilateral financing. Flows are analysed according to type of instrument, theme (mitigation, adaptation or cross-cutting), provider, time, climate components and climate objectives, and sectors. Domestic finance, private finance and carbon finance in the region are also examined; however, some information gaps were found in these sectors.



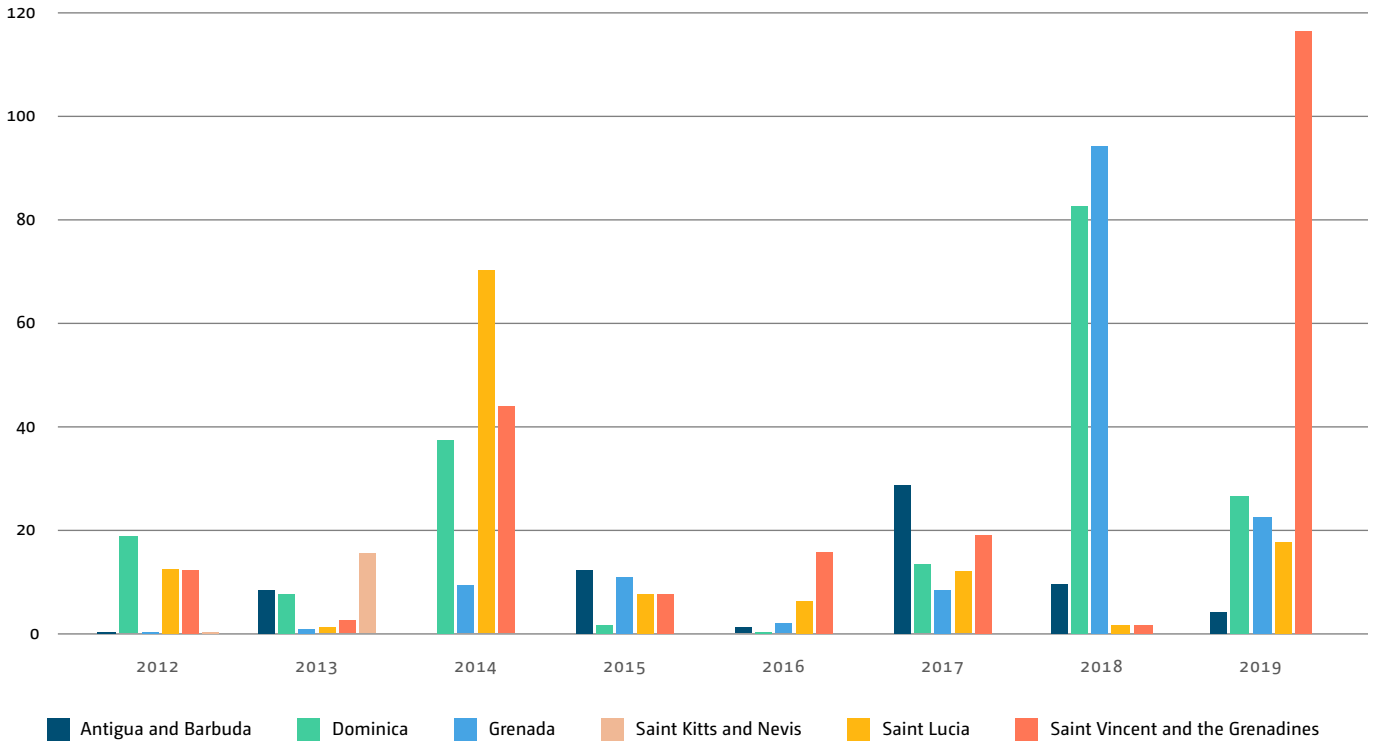
B. International public finance

88. In 2010–2019, the Eastern Caribbean region received a total of USD 764 million of international public finance. Each country has consistently received funds year by year. As seen in [figure 16](#), since 2012 Saint Vincent and the Grenadines has been the main recipient of funds, with a total of USD 219 million. The country with the least amount of funding so far is Saint Kitts and Nevis, with a total of USD 15 million. This is because Saint Kitts and Nevis did not begin to receive international finance flows until 2013, which may have delayed the fulfilment of its climate objectives. Additionally, it is relevant to point out that this State has one of the highest numbers of reported needs, as seen in [figure 6](#).

89. In 2010–2019, the Eastern Caribbean States received financing from three types of providers: bilateral flows (country to country), private funds and multilateral organizations. As shown in [figures 17 and 18](#), the largest source of finance is multilateral providers, embodying almost half of all transactions (43.89%), with WBG as the main provider, followed by funds (29.5%) and bilateral flows (26.6%). The sectors for which these flows were destined will be indicated in the following sections.

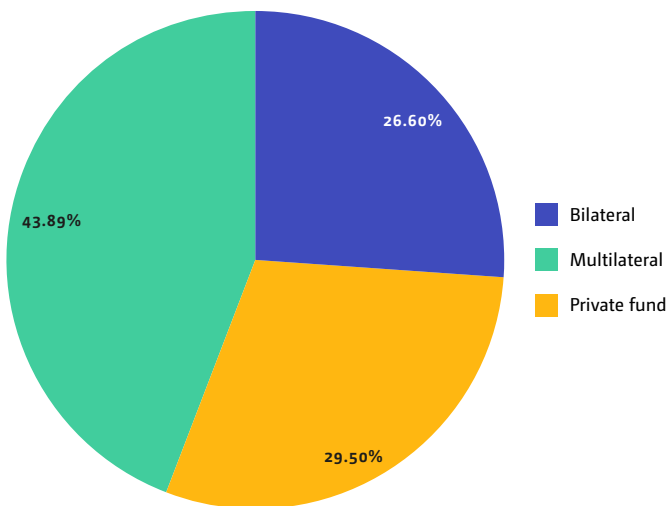
Eastern Caribbean region received a total of USD 764 million of international public finance.

Figure 16
Total international financial flows by country, 2012–2019
(USD hundred thousand)



Source: OECD. 2021.

Figure 17
Sources of international public climate finance flows in Organization of Eastern Caribbean States countries

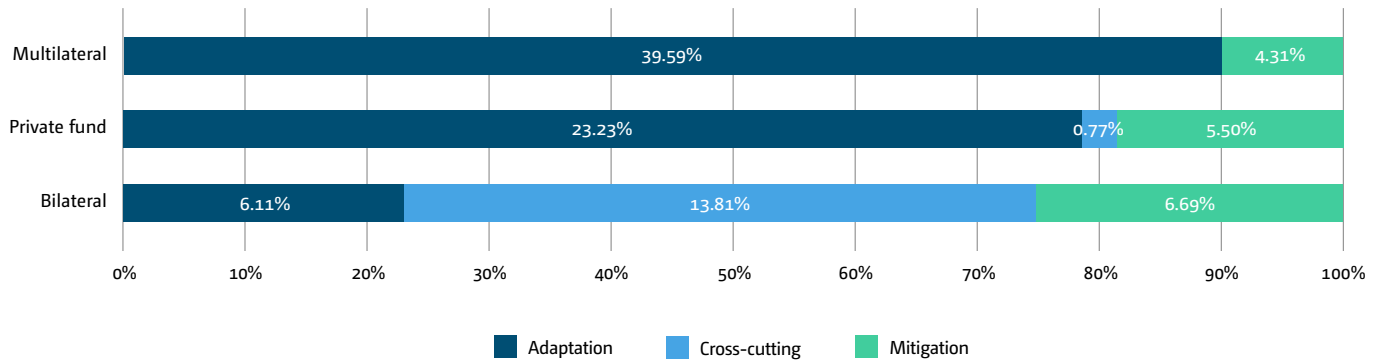


Source: OECD. 2021.

90. As seen in figure 18, the chief climate theme in international financial flows to the OECS member States has been adaptation, with close to 69% of all international public finance flows. Cross-cutting flows add up to approximately 15% and mitigation flows account for 16.5% of the total. Multilateral sources and funds have concentrated their funding mainly on adaptation needs, while bilateral funds have focused on mitigation needs.

Adaptation comprises 69% of all international public finance flows.

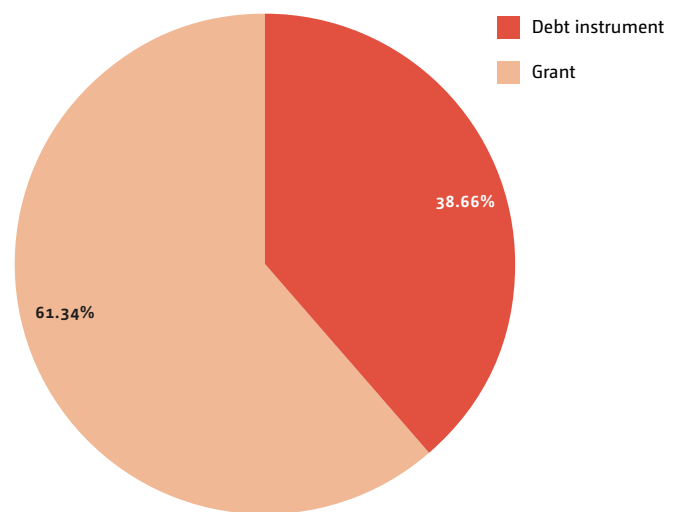
Figure 18
International public climate finance by source and theme, 2000–2019



Source: OECD. 2021.

91. All the climate financial flows in the Eastern Caribbean region over the years have been implemented through a narrow range of financial instruments. As shown in figure 19, 61% of the total has been through grants and 38% through debt instruments. It is expected that in the coming years, with the re-establishment of normal activities and expansion of the region’s financial system, diversification of financial vehicles will be implemented and promoted. The implementation of instruments such as labelled bonds (green or sustainable) or green loans could be explored.

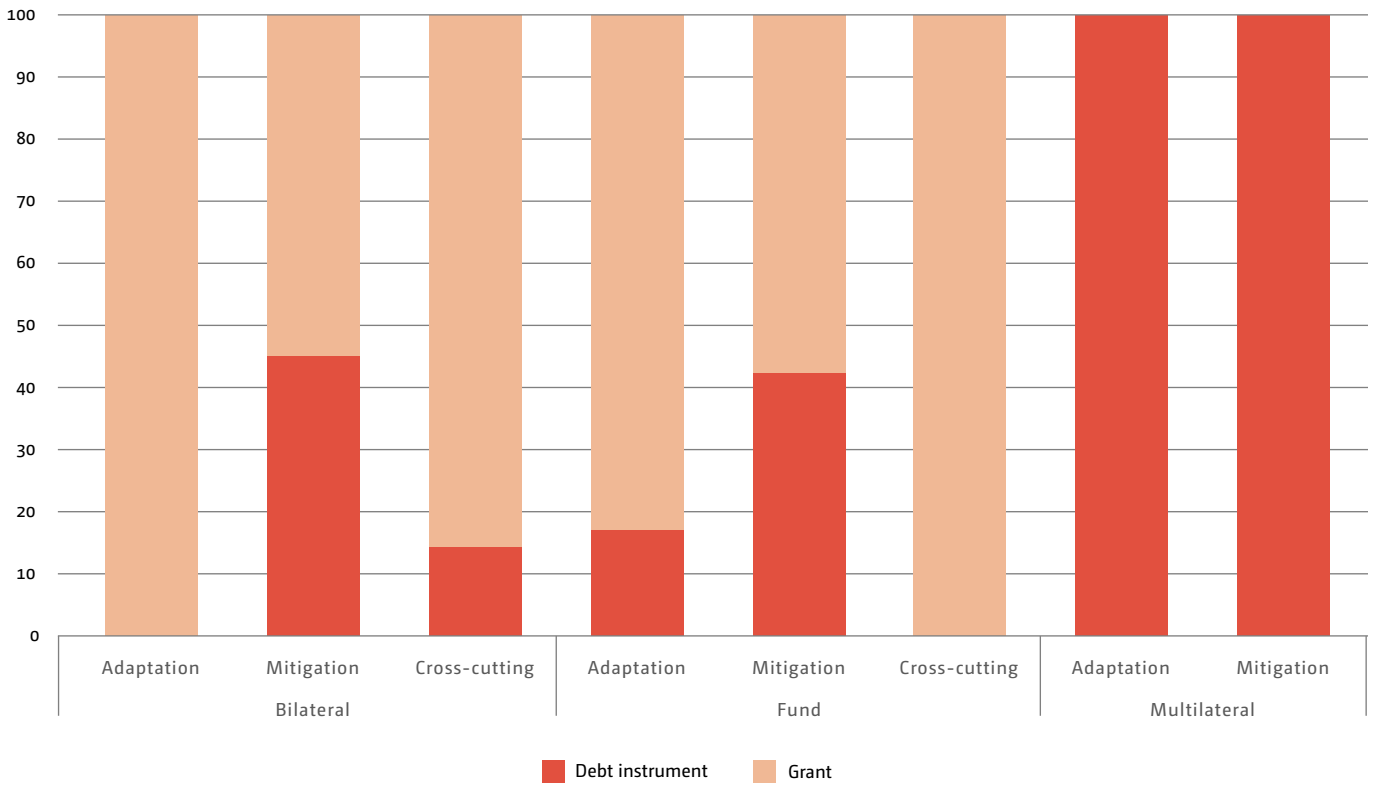
Figure 19
International finance instruments in the region



Source: OECD. 2021.



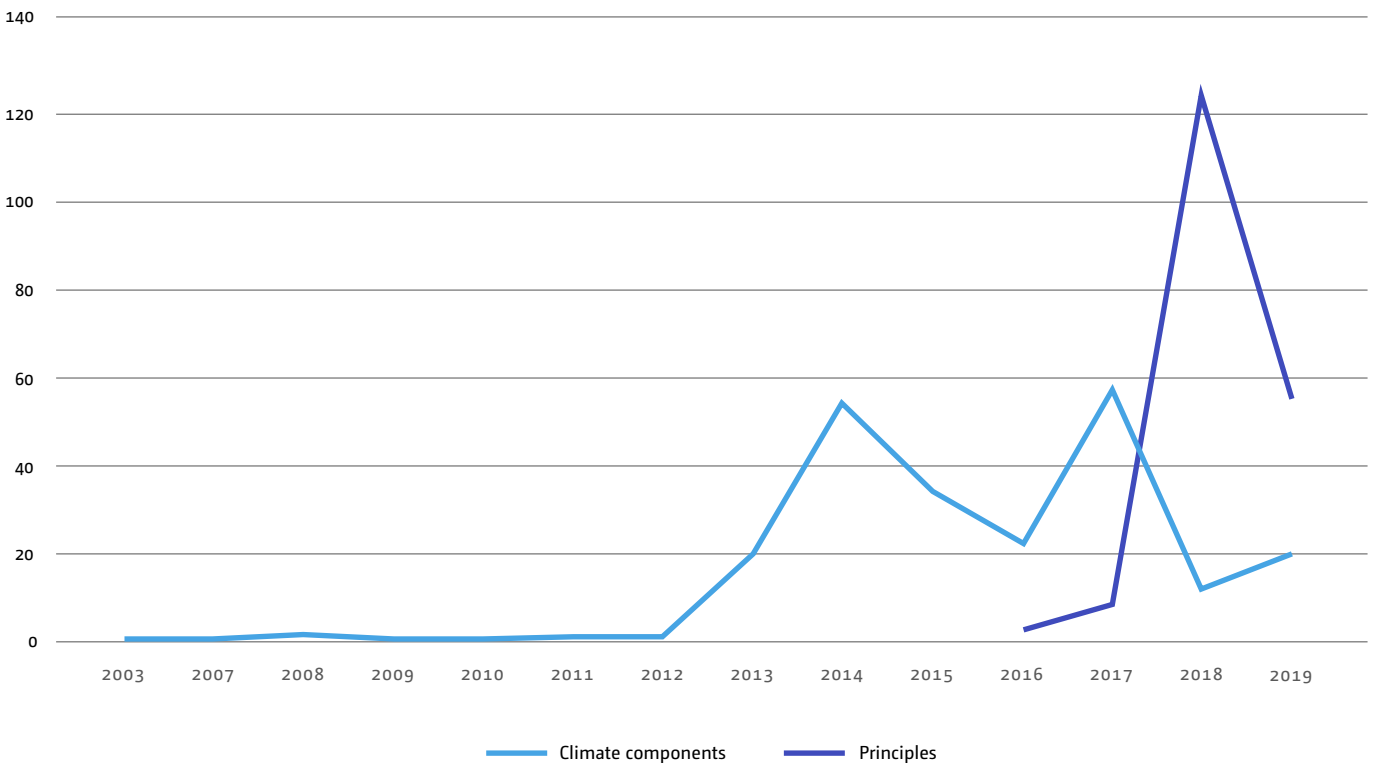
Figure 20
Financial instrument by source and theme in international public climate finance



Source: OECD. 2021.

Figure 21
Climate-related finance flows from international public finance sources, 2012–2019

(USD hundred thousand)

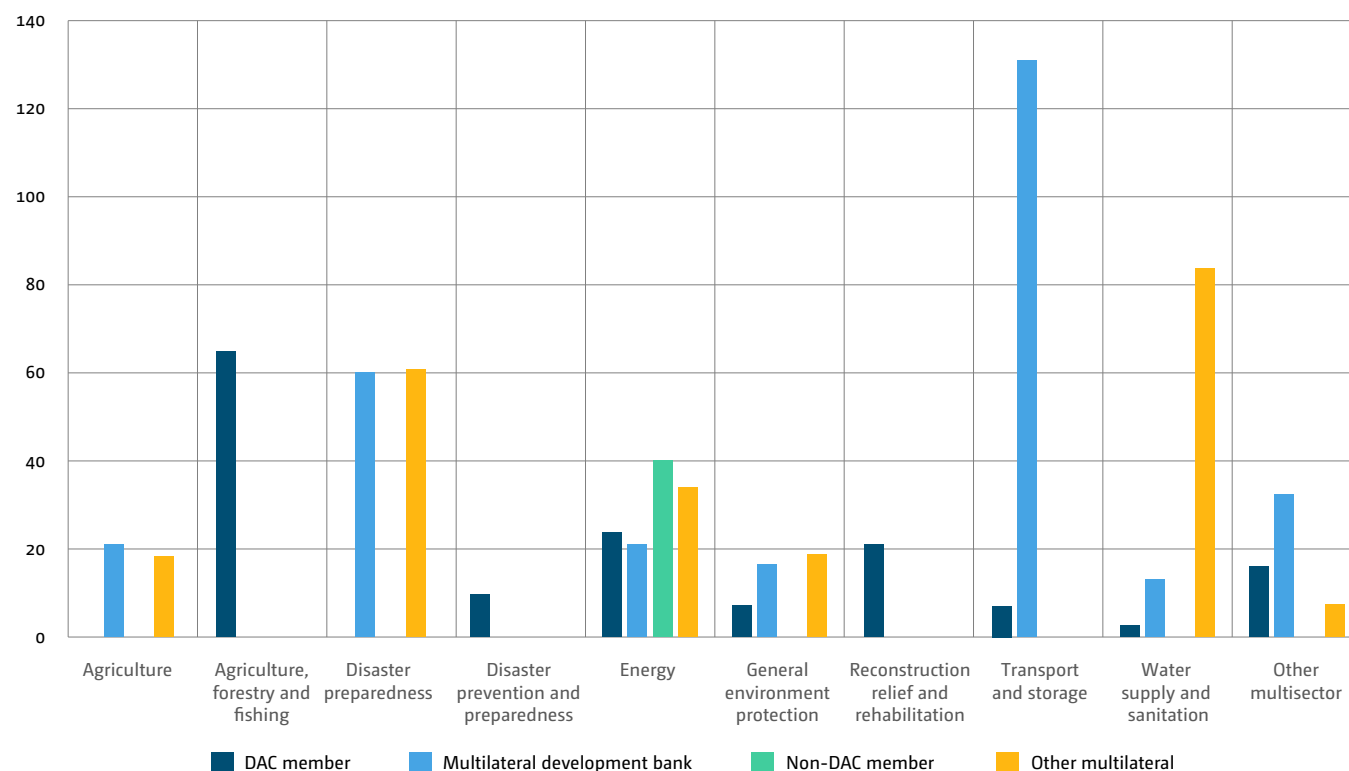


Source: OECD. 2021.

92. Multilateral institutions' flows have been 100% through debt instruments, as shown in figure 20. Bilateral flows and financing from international climate funds have

mainly been implemented through grants, with a slim presence of debt instruments.

Figure 22
International finance flows by sector and provider, 2019
(USD hundred thousand)

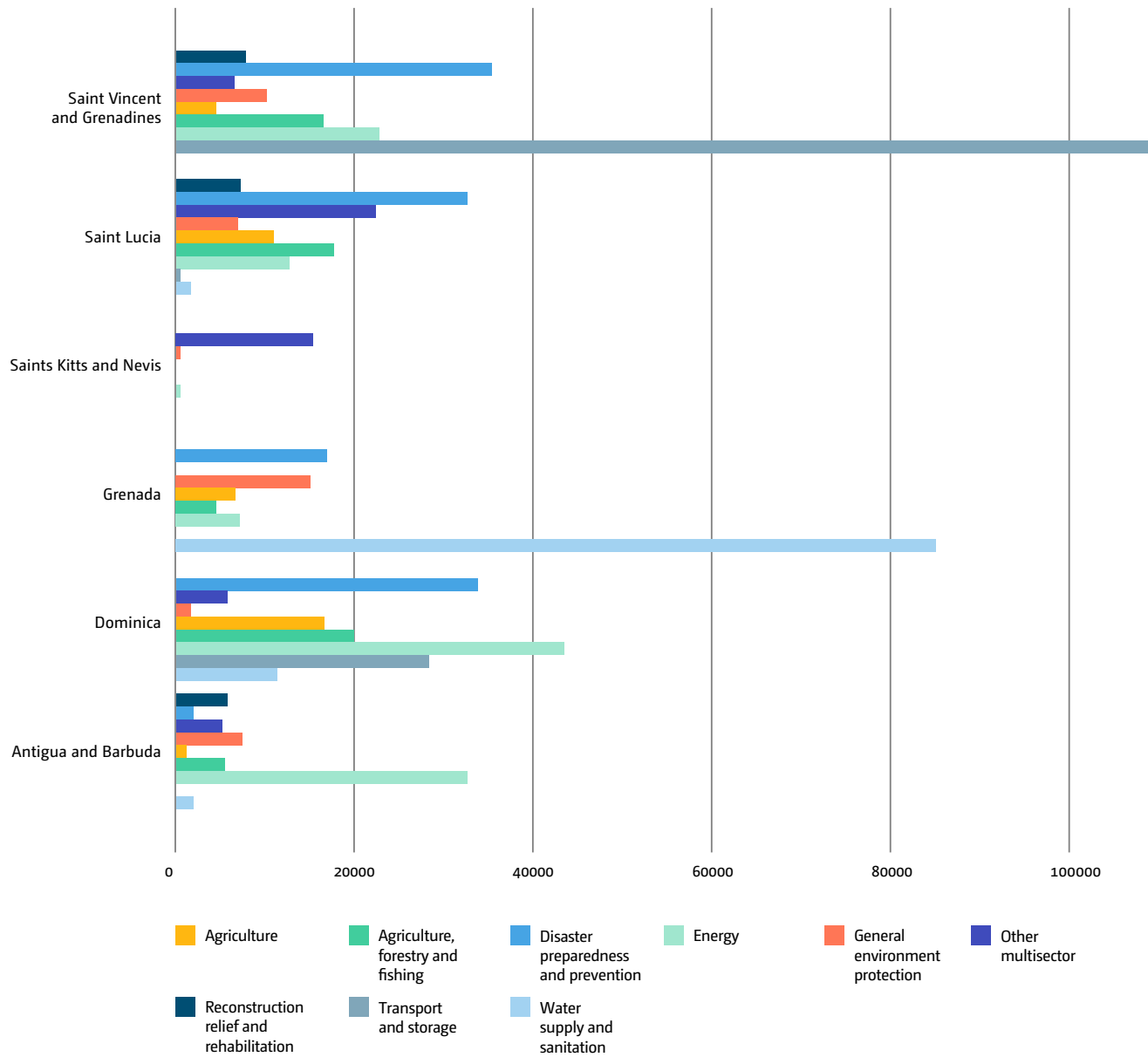


Source: OECD, 2021.

93. Climate-related finance flows from international public sources have varied through time. This can be observed in figure 21, where 2012 saw the beginning of climate components being principal elements of finance flows, with a strong peak in 2014 and 2017. This coincides with the years of extreme climate events such as Hurricane Gonzalo (2014) and Hurricane Maria (2017). Budgets for international finance are determined by multilateral institutions approximately every four years in line with their administrative and bureaucratic processes, which also explains the drop in 2016 (the end of the 2012–2016 financing period). This was followed by a sharp rise that peaked in 2018.

94. Figure 22 shows which sectors have been the focus of finance flows since 2019, as well as the funding source. Up to 2019, the main sector funded was transport and storage. The flows to this economic activity came from MDBs. The sector with the lowest revenue has been disaster prevention, which received flows of DAC members for a total of USD 9.9 million. Energy is the sector with the most diverse finance providers, namely DAC members, MDBs, non-DAC members and other multilateral institutions. In total, DAC members contributed 20%, MDBs 42% and non-DAC members 5% of the finance flows.

Figure 23
International finance flows by country and sector
(USD thousands)



Source: OECD. 2021.

95. Figure 23 describes international financial flows in each Eastern Caribbean State and the sector for which they were destined in 2010–2019. The transport and storage sectors received the largest amount of funding, most of it destined for Saint Vincent and the Grenadines. In Antigua and Barbuda, and Dominica, the energy sector was dominant. Grenada, owing to the importance of tourism to its economy, received the largest amount of funding destined for water supply and sanitation. Saint Lucia, as seen in figure 6, reported considerable mitigation needs, yet the dominant sector targeted by the finance flows was disaster preparedness. Saint Kitts and Nevis has only received climate financial flows categorized as “Other multisector”, which implies the presence of climate components; however, the priority of these is unknown.

C. Domestic finance

96. The Government of Antigua and Barbuda has developed a national fund, the SIRD Fund, to serve as the primary channel for environmental, climate mitigation and adaptation funding from international and domestic sources. The SIRD Fund is established as a special fund under the Finance Administration Act (2006). This status enables Antigua and Barbuda to earmark income from a range of sources to achieve its environmental and climate change goals. Income to the SIRD Fund is provided through domestic and international sources. Domestic sources include visitor fees, pollution charges, carbon credits, taxes, levies and other fees as may be prescribed by regulation. The purpose of the SIRD Fund is to provide

financing to implement the Environmental Protection and Management Act³² in a coordinated, systematic and cost-effective manner. The SIRF Fund is mandated to provide access to funding to the public sector, the private sector and non-governmental and community organizations in Antigua and Barbuda. It can also support environmental management in other islands in OECS.³³

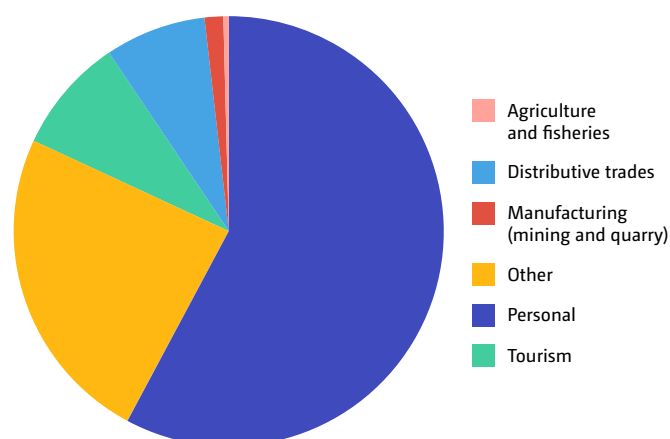
97. Grenada Development Bank has developed the Climate Adaptation Revolving Fund for Vulnerable Households and micro, small and medium-sized manufacturing enterprises. The service is financed by the GCF and is part of the Enhanced Direct Access project for the Eastern Caribbean. The primary objective of the Revolving Fund is to provide the opportunity for privately owned physical assets of vulnerable populations to be more resilient to climate variability and change through concessional micro-financing. This is done by giving loans to households and businesses to undertake adaptation interventions in buildings in accordance with the eligibility criteria. The climate adaptation interventions eligible for funding include efficient water management, sustainable building practices and climate-smart buildings, flood erosion control, renewable energy systems and structural adjustments that increase climate change resilience.³⁴

98. Saint Lucia Development Bank has integrated the Climate Adaptation Financing Facility as a component of the Saint Lucia Disaster Vulnerability Reduction Project. This project and the Climate Adaptation Financing Facility are intended to help Saint Lucia reduce vulnerability to natural hazards and climate change impacts through loans in the agriculture, housing, manufacturing, and tourism sectors.³⁵

99. Data on climate-related finance flows from domestic or local sources in the region is not widely available at an aggregate level. Loans from ECCB mainly take the form of personal loans and there is no presence of climate-related instruments issued by this entity. The distribution of loans by economic activity in OECS is shown in figure 24. More than 50% is destined for personal finances and there is no presence of climate-related purposes.

SIDS, a group of 38 countries, including 16 Caribbean nations, have struggled to attract any kind of climate finance, public or private.

Figure 24
Eastern Caribbean Currency Union loans by economic activity, as of December 2019



Source: ECCU.

100. In the last five years, global financial institutions such as Bank of Nova Scotia and Royal Bank of Canada have scaled back their presence in the Caribbean region, selling their businesses in several markets. While they have not cited the risk of conducting business in climate-vulnerable nations, the moves are leaving the Caribbean with less access to international markets. The capital flight highlights a major downside of relying on private finance to solve the climate problem. Losing even one financial institution can have a huge impact on these small countries. Moreover, a large bank's presence can serve as an important reassurance for other investors and help these nations to lower borrowing costs for the government and citizens. Insurance premiums have already risen since the bank's departures because of growing climate risk.

101. SIDS, a group of 38 countries, including 16 Caribbean nations, have struggled to attract any kind of climate finance, public or private. The group received USD 1.5 billion in climate finance in 2019, a drop from USD 2.1 billion in 2018, according to a report published by OECD last year. One of the key announcements at COP 26 was the Glasgow Financial Alliance for Net Zero – a pledge by banks and asset managers representing USD 130 trillion to meet climate neutrality by mid-century.

102. Private finance is largely being mobilized towards middle-income countries. South Africa, for example, was the beneficiary of a USD 8.5 billion plan to transition away from coal. Much of that involves concessionary finance, which is where developed countries or development banks agree to take the first loss, boosting the return profile for private investors.³⁶

32 See <https://environment.gov.ag/laws-education#law/Environmental-Protection-%26-Management-Act-2019>.

33 See <https://environment.gov.ag/sirf#about>.

34 See <https://grenadadevelopmentbank.com/eda-project.html>.

35 See <https://sldb.lc/climate-adaptation-financing-facility-caff>.

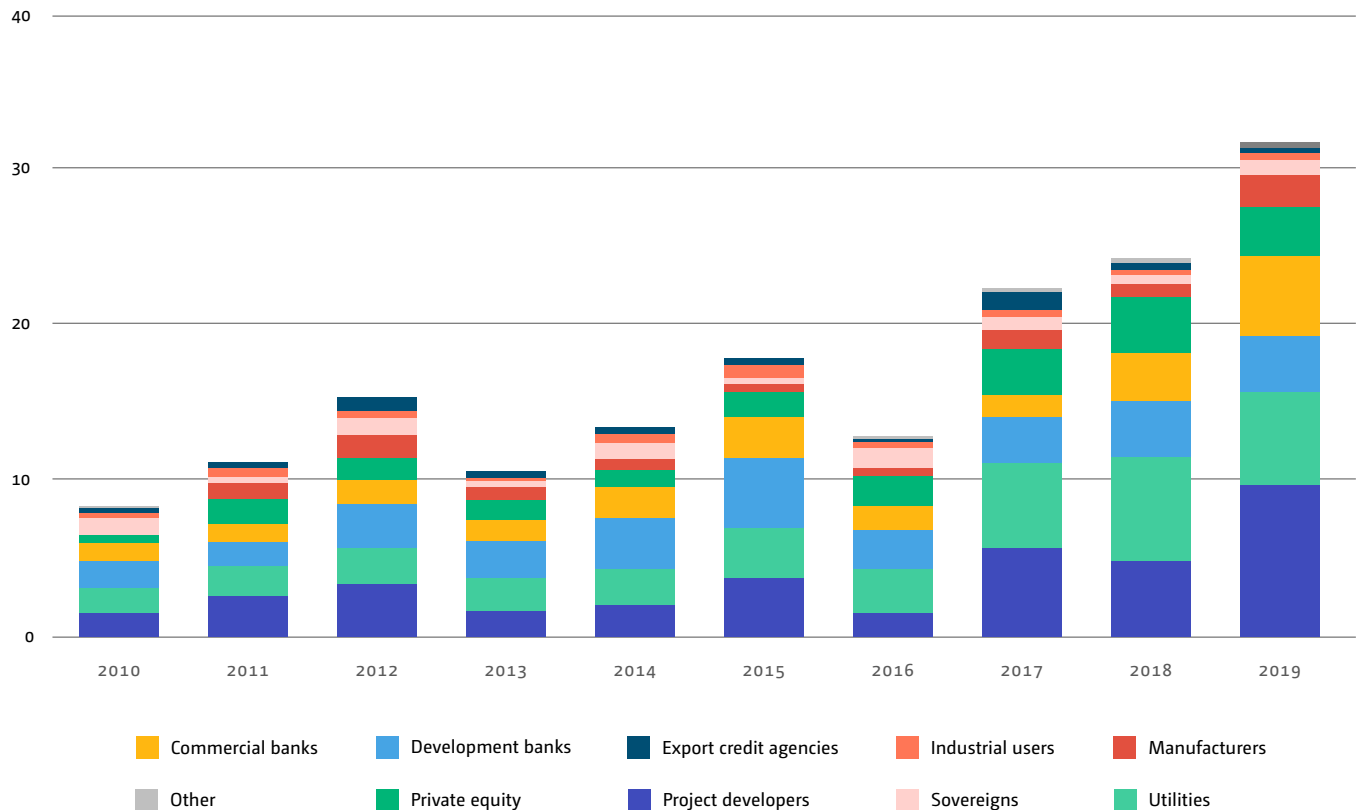
36 Ainger J. 2022. Much-Needed Climate Funds Flee Sinking Caribbean Islands. *Bloomberg UK*. 4 March. Available at <https://bloomberg.com/news/articles/2022-03-04/climate-funds-flee-sinking-caribbean-islands>.

D. International private finance

103. Data on climate finance flows from private sector sources are not widely available across all sectors and activities. Overseas investors and lenders deployed a record USD 32 billion to expand clean energy capacity

in emerging markets in 2019. Private capital accounted for 84% of the total, up from 70% in 2015 and 62% in 2010. Despite numerous pledges from governments to provide more support, contributions from their proxies – development finance institutions – fell to their lowest level in a decade at 11%. (see figure 25).

Figure 25
Emerging market clean energy foreign direct investment by investor type



Source: Adapted from BloombergNEF.

104. Attracting private finance for infrastructure in a sustained way requires additional reforms that improve the enabling environment for private investments to take place. The main task of governments is to create the enabling environment that would reduce certain types of risk, such as political, contractual, legal and regulatory, so that private financiers and operators can assume the financial and commercial risk. Creating an adequate framework upstream would require reforms and institutional capacity to be able to manage the participation of private operators in development.³⁷

E. Carbon finance

1. International carbon markets and Article 6

105. The mechanisms under Article 6 of the Paris Agreement are positioned to play a key role in supporting countries in achieving their NDCs as well as harnessing international cooperation and enabling more ambitious climate action. Carbon markets allow countries and other entities that reduce their carbon emissions (for example, by switching to renewable energy) to trade with other entities, which can then use these carbon credits to meet their emission reduction commitments. The market-based and non-market-based mechanisms under Article 6 can assist countries to lower costs and increase the flexibility for achieving mitigation outcomes.

37 World Bank. 2018. *Mobilizing Private Finance for Development in Latin America and the Caribbean*. Available at <https://openknowledge.worldbank.org/bitstream/handle/10986/29387/MobilizingPrivateSector.pdf?sequence=1>.

2. Carbon market development in the Caribbean region

106. In 2016, a regional carbon market initiative was rolled out by the Energy Chamber of Trinidad and Tobago. The CCPI stemmed from the search for a way to monetize the carbon offset potential of the region. It intended to put a price on carbon emissions and generate capital for renewable energy and methane emission reduction investments, with a view to transforming the region's energy sector. The CCPI envisaged the development of a voluntary market-based mechanism that aimed to provide finance and equity for climate mitigation activities in the region and carbon offset opportunities for investors; that is, a new cooperative approach that facilitates upfront carbon finance for the mitigation efforts rather than paying for carbon credits after the fact.

107. In particular, the initiative adopts the concept of international "cooperative approaches" defined in Article 6, which states that "the use of internationally transferred mitigation outcomes to achieve nationally determined contributions under this Agreement shall be voluntary and authorized by participating Parties." Under the CCPI, demand for mitigation outcomes (offsets or carbon credits) will be driven by large-scale fossil fuel industry emitters operating in the region and in the United States, while the potential for low-carbon development in Caribbean and neighbouring countries creates opportunities to supply those outcomes.³⁸ This mechanism was first proposed in 2016; however, to date it still lies at the planning and design stage.

108. Efforts towards carbon markets capacity-building are being held in the region by international organizations. In 2022, OECS gathered with the WBG Transformative Carbon Asset Facility, GIZ, the Global Carbon Market project and the UNFCCC regional collaboration centre at St. George's to introduce carbon pricing, Article 6 and related projects of interest to the Caribbean.³⁹ The Regional Center of Collaboration of St. George's also led a Carbon Markets workshop in 2020.

Efforts towards carbon markets capacity-building are being held in the region by international organizations.



³⁸ See <https://energynow.tt/blog/the-caribbean-carbon-pricing-initiative-ccpi>.

³⁹ Caribbean National Determined Contribution Finance Initiative. 2022. *Caribbean Private Sector Dialogue on Carbon Markets and Carbon Finance*.



V. Climate finance gap

109. As derived from countries' NAPs, NDCs and TNAs, the region has reported a total cost of implementing their adaptation and mitigation needs in 2017–2021 of an estimated between USD 3,275,979,070 and 4,576,360,698. This equates to approximately USD 490,771,235.50 annually needed in climate finance for both adaptation and mitigation from all sources – international, domestic, public and private – up to 2030.

110. As shown the inflow from public international sources averaged USD 76,370,661.84 annually in 2010–2019. Although the time frames are not directly comparable and private and domestic funding are not accounted for, it could be broadly inferred that the region needs approximately 6 times the annual funding it has received for the needs expressed in national reports submitted to the secretariat to date.⁴⁰

The region needs approximately 6 times the annual funding it has received.



⁴⁰ Information and data contained herein (e.g. climate finance flows, needs and priorities, policies etc.) from developing countries are to be treated as status quo at time of drafting, may not contain all sources of information, and are subject to change as these are revised or submitted / published by countries. Hence quantitative data may be underestimated.



VI. Climate funds

111. The funding of needs can be covered through international public sources (including bilateral sources and multilateral development funds and climate funds), domestic public sources (including ecotaxes or carbon taxes, national funds and green or climate bonds) and international and domestic private investments. Scaling up private climate finance is frequently stressed as a priority in increasing the funding for climate projects.



A. Public climate finance

1. Green Climate Fund

112. The GCF was established in 2010 under the Cancun Agreements as a dedicated financial vehicle for developing countries within the global climate architecture. It is an operating entity of the Financial Mechanism of the Convention and serves the Paris Agreement. The GCF operates through a network of over 200 accredited entities (national and international) and delivery partners that work directly with developing countries in developing and implementing projects. It can provide financial support through combinations of grant, concessional debt, guarantees or equity instruments to leverage blended finance and crowd in private investment for climate action in developing countries. The GCF is mandated to invest 50% of its resources to mitigation and 50% to adaptation in grant equivalent terms. At least half of its adaptation resources must be invested in the most climate vulnerable countries – African States, LDCs and SIDS (see [table 22](#)).

113. The GCF provides support, in terms of readiness or country programming, through its Project Preparation Facility and with funding proposals. The Readiness and Preparatory Support Programme was created to enhance country ownership and help countries to access GCF resources. The Readiness Programme provides resources to strengthen the institutional capacities of NDAs or focal points and direct access entities to effectively engage with the GCF. It also assists countries in undertaking adaptation planning and the development of strategic frameworks to build their programming with the GCF.

Table 22
Projects funded by the Green Climate Fund as of June 2022

	Actual funding project	Budget (USD million)	Disbursed (%)
Antigua and Barbuda	Resilience to hurricanes in the building sector	46.2	18 (up to 06/2022)
Dominica	NDA Strengthening and country programming support through UNDP (2017)	0.46	–
	Adaptation planning through the Ministry of Health and Environment of Antigua and Barbuda (2018)	2.9	–
	Strategic framework support through the Ministry of Planning and Economic Development (2019)	0.75	–
	Establishment and operationalization of National Financing Vehicle (2020)	0.29	–
	Low Carbon Transport (2020)	0.28	–
Grenada	Strategic framework support through the Ministry of Health and Environment of Antigua and Barbuda (2019)	0.18	–
	Getting Grenada Private Sector Ready for Climate Finance (GPS-4-GCF) (2021)	0.6	–
	National adaptation planning for improved food security (2021)	1.1	–
	NDA strengthening and country programming support with CCCCC (2019)	0.39	–
	Strategic frameworks support for Grenada through New York University (2018)	0.6	–
	NDA strengthening and country programming support for Grenada (2017)	0.34	–
	Under preparation – Strategic Framework.	0.65	–
Saint Kitts and Nevis	NDA strengthening and country programming support through Food and Agriculture Organization (2018)		–
	Readiness proposal for institutional capacity and coordination and country programming (2019)	0.59	–
	Capacity building to support accreditation, planning, programming and Implementation of GCF-funded activities (2020)	0.6	–
	Capacity-building to facilitate climate resilience in disaster risk management and private sector access to climate finance (2020)	0.6	–

Table 22 (continued)
Projects funded by the Green Climate Fund as of June 2022
(USD million)

	Actual funding project	Budget (USD million)	Disbursed (%)
Saint Lucia	NDA strengthening and country programming support through CCCCC (2018)	0.37	–
	Enhancing Saint Lucia's understanding, capacity, institutional and strategic frameworks to access climate finance for low-emission climate resilient pathways (2020)	0.6	–
	Mobilizing international climate finance and private investments for low-carbon development (2021)	0.67	–
	Improving the capacity of the fisheries sector (2021)	0.68	–
Saint Vincent and the Grenadines	Capacity-building to support Institutional strengthening, planning, and programming to enable increased climate finance mobilization (2021)	0.7	–
	Resilient Recovery Rapid Readiness Support (2021)	0.7	–
	NDA strengthening and country programming support through CCCCC (2019)	0.63	–
	NDA strengthening and country programming support through Ministry of Economic Planning, Sustainable Development, Industry, Labour and Information (2017)	0.3	–

Source: GCF.

114. Table 23 provides an overview of the national projects in OECS for which the GCF has provided funding.

Table 23
Projects funded by the Green Climate Fund (multi-country) as of June 2022

Projects	Budget (USD million)/ Disbursed (%)	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines
Entity support through CCCCC	1.8		✓			✓	✓
Strategic framework support through Caribbean Disaster Emergency Management Agency	1.75	✓	✓	✓	✓	✓	✓
Strengthening the foundation for a climate responsive agricultural sector	1.2		✓		✓	✓	✓
Sustainable Energy Facility	192.4 / 3		✓	✓	✓	✓	✓
Enhancing climate change resilience of health systems in seven CARICOM States	1.1				✓	✓	

Table 23 (continued)
Projects funded by the Green Climate Fund (multi-country) as of June 2022

Projects	Budget (USD million)/ Disbursed (%)	Antigua and Barbuda	Dominica	Grenada	Saint Kitts and Nevis	Saint Lucia	Saint Vincent and the Grenadines
Strategic frameworks and entity support through OECS Commission	0.5	✓	✓	✓	✓	✓	
Strategic framework support through Caribbean Natural Resources Institute	1.3	✓	✓	✓	✓	✓	
Strategic frameworks support through CARICOM Development Fund	0.12					✓	
Entity support through CCCCC	1.8		✓			✓	✓
Institutionalizing a common framework for climate finance measurement, reporting, and verification to enhance complementarity and coherence for climate action in CARICOM States	–				✓		
Integrated physical adaptation and community resilience through an enhanced direct access pilot in the public, private, and civil society sectors	22.6 / 65	✓	✓	✓			
Global Subnational Climate Fund – Equity	–		✓				
Global Subnational Climate Fund – Technical Assistance Facility	28.0 / 12		✓				

Source: GCF. 2022.

Table 24
Green Climate Fund Readiness Programme activities implemented in the region

	Number of readiness activities	Support approved (USD million)
Antigua and Barbuda	5	5.9
Dominica	4	4.7
Grenada	6	3.2
Saint Kitts and Nevis	4	2.6
Saint Lucia	5	2.6
Saint Vincent and the Grenadines	4	1.9
Total	30	20.9

Source: GCF. 2022.

2. Global Environment Facility

115. GEF funds are allocated to projects addressing biodiversity, climate change, land degradation, international waters, chemicals and waste.

116. The main recipients of the GEF Trust Fund have been Saint Kitts and Nevis and Saint Lucia, receiving approximately USD 6 million. In total, the region has received USD 30.68 million for national projects related to climate resilient development in the region.

Table 25
Funding received or expected to be received by member States of the Organization of Eastern Caribbean States from the Global Environment Facility (USD million)

	GEF Trust Fund	Capacity-building Initiative for Transparency	Special Climate Change Fund	Total finance
Antigua and Barbuda	6.1	1	5	12.1
Dominica	1.99	–	–	4.00
Grenada	1.34	–	–	1.34
Saint Kitts and Nevis	6.59	–	–	6.59
Saint Lucia	6.48	–	–	6.48
Saint Vincent and the Grenadines	2.18	–	–	2.18
Total	24.68	1	5	30.68

Source: GEF. 2022.

Note: Proposals, approved and complete national projects as at July 2022.

1. Adaptation Fund

117. As at July 2022, AF funding for projects totalled USD 19.7 million (see [table 26](#)).

Table 26
Projects of member States of the Organization of Eastern Caribbean States funded by the Adaptation Fund
(USD million)

	Status	Sector	Finance
Antigua and Barbuda	Under implementation	Multisector projects	9.9
Dominica	–	–	–
Grenada	–	–	–
Saint Kitts and Nevis	–	–	–
Saint Lucia	Under implementation	Agriculture	9.8
Saint Vincent and the Grenadines	–	–	–
Total	–	–	19.7

Source: AF. 2022.

118. OECS countries have received a total of USD 9.9 million in readiness funding from the AF, but only Antigua and Barbuda and Saint Lucia have accessed this fund (see [table 27](#)).

Table 27
Readiness funding received from member States of the Organization of Eastern Caribbean States from the Adaptation Fund
(USD million)

	Finance
Antigua and Barbuda	9.970
Dominica	–
Grenada	–
Saint Kitts and Nevis	–
Saint Lucia	–
Saint Vincent and the Grenadines	–
Total	9.970

Source: AF. 2022.

B. Other sources of climate finance

1. Multilateral

119. Several organizations, multilateral agencies and private donors also support climate-related needs with finance resources. These are important in terms of filling the financial gap to meet Paris Agreement goals for the mitigation and adaptation actions.

120. The GEF Small Grants Programme helps countries to mitigate the negative effects of climate change and to contribute to the objective of the Convention. It supports community and non-governmental organizations in providing access to clean energy and sustainable transport and improving energy efficiency and land-use practices. In addition to reducing emissions and achieving global environmental benefits, the GEF Small Grants Programme climate change interventions help to develop the capacity of local communities and improve their livelihoods, empowering them to become more resilient to severe climate events and variability.

121. CIF is a multi-donor fund, set up by WBG in 2008 to provide climate financing to developing countries through MDBs. The International Bank for Reconstruction and Development, which operates as CIF Trustee. All non-Annex I Parties are eligible for CIF funding and must develop an approach that consists of a programming phase (an investment plan in line with national development priorities) and an implementation phase.

122. The Sustainable Energy and Climate Change Initiative, established in 2009, is a specialized instrument of IADB created to provide support to concrete climate change and renewable energy related projects in Latin America and the Caribbean and to mainstream climate change into IADB operations. It is a multi-donor fund, through which governmental and non-governmental institutions, NGOs and the private sector can support its initiatives. It addresses climate adaptation and mitigation under four strategic pillars: renewable energy and energy efficiency; sustainable biofuel development; access to carbon markets; and adaptation to climate change. Grants under the Sustainable Energy and Climate Change Initiative should not exceed USD 1 million per project, ensuring its own contribution (in cash or in-kind) of at least 20%.

123. Climate finance provided by the European Union and the European Development Fund has greatly increased since 2010. One of the climate finance flagship programmes with an NGO window is the Global Climate Change Alliance+, which was established in 2007 to strengthen the climate dialogue and cooperation with stakeholders from developing countries, particularly LDCs and SIDS. It mainly finances from the regular European Union budget, and to a lesser degree from individual European Union member countries and the European Development Fund. Governments, regional and international organizations and NGOs provide support mainly through grants on open calls of the European Union in the priority areas of REDD+, mainstreaming climate change, global conferences, regional workshops and technical support.

2. Bilateral climate-related finance

124. OECS works closely with its development partners through several bilateral agreements to advance the development agenda for the Eastern Caribbean region. Country development agencies have provided development assistance to the Caribbean, aiming to mitigate the risks resulting from the region's high susceptibility to climate change impacts, particularly in view of the increased storms, drought and other climate-related natural disasters that have been causing more widespread damage in recent years. Bilateral agencies with ongoing programmes in the region include the following:

(a) United States Agency for International Development

125. The United States Agency for International Development has been present in the Caribbean region for over 40 years, funding diverse initiatives and programmes. As at July 2021, its activities in the region included (i) building technical capacity to collect and analyse climate data; (ii) strengthening the use of climate science and analysis in decision-making; (iii) supporting pilot initiatives to demonstrate innovative strategies to adapt to climate change; (iv) increasing access to climate financing for the scale-up and replication of successful pilot global climate change adaptation initiatives through, for example, applying cost-benefit analysis to assess impact; (v) building an evidence base of successful models to a range of global climate change adaptation issues facing

small island and low-lying developing States; (vi) enhancing public awareness of climate change issues and actions to reduce vulnerability; (vii) strengthening local, national and regional institutions' capacity to promote climate change adaptation; and (viii) hosting annual events to highlight and promote evidence-based approaches to global climate change adaptation.

(b) German Agency for International Cooperation

126. GIZ has been working in the Caribbean for over 30 years. Its priority activities in the region include environmental policy, conservation and sustainable management of natural resources, as well as renewable energies and energy efficiency. GIZ programmes in the region (i) climate resilience of the water sector in Grenada; (ii) human mobility in the context of climate change; (iii) management of coastal resources and conservation of marine biodiversity in the Caribbean; (iv) systemic resource management in the Caribbean; and (v) NDC Assist II – financing and implementing nationally determined contributions; and strengthening the involvement of the private sector in biodiversity conservation.

3. Private sector climate finance

127. Climate finance from the private sector includes concessional instruments, including low-interest loans, lines of credit, equity investments and risk mitigators, such as guarantees, first-loss protection and grant-based capacity-building programmes. The actors in this sector include institutional investors, project sponsors and financial institutions. Venture capital may support the identification and possible commercialization of climate solutions. Construction and energy companies can also provide additional equity and strategic private debt to initiatives in energy, water mobility and agriculture. Cooperation with institutional investors, such as pension funds, to buy green bonds and invest in pooled clean energy infrastructure funds is an additional path to explore.

128. Other sources of climate finance include philanthropic funds. The Bloomberg Philanthropies gives loans on clean energy (including the global phase-out of coal; sustainable cities; and the 50 Reefs initiative to identify the most resilient coral reefs and protect them from climate-induced extermination). The ClimateWorks Foundation provides climate services, including climate data analysis, identification of opportunities for emission reductions and other services on clean power, transportation sector, energy efficiency, forests and land use. The Ford Foundation aims to finance institutions and NGOs whose work is in line with responsible and sustainable management of forests and rural lands, effective governance and greater community rights over resources. Finally, the William and Flora Hewlett Foundation supports long-term programmes that focus on education, environment, global development and population.

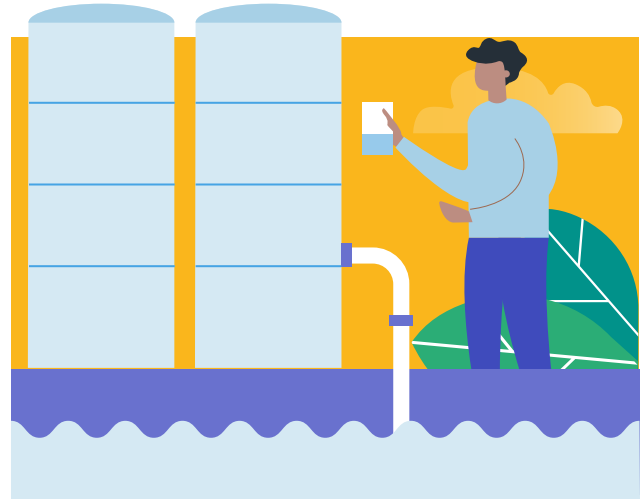
Other sources of climate finance include philanthropic funds.



VII. Challenges and opportunities to address needs

129. The OECS countries face a range of barriers to meeting the adaptation and mitigation needs stated in their national reports and communications. These include:

- (a) Limited availability of quality and updated data, which forms a barrier to meeting adaptation needs. As noted in the overview of NCs, documents submitted to the secretariat and climate-related reports, some countries lack updated, sector-specific and quantitative data (costs) on their adaptation and mitigation needs. Technical assistance to retrieve and present data is needed;
 - (b) Insufficient awareness and information about potential sources of funding and how to access them, and the difficulty in understanding funds' procedures;
 - (c) Limited institutional capacity and human resources to develop and implement projects, which leads to long periods awaiting policy approval, and obstructions to the integration of adaptation actions into political and community structures;
 - (d) Limited national funding. OECS countries have limited access to local affordable financing opportunities. This reduces the competitiveness of the already small private sector in the Eastern Caribbean region;
 - (e) Fragmented national mandates on climate change. While the coordination of climate change often lies as a responsibility of a country's environment ministry, issues related to climate change are addressed within sectors such as energy, industry, agriculture and health, as well as within planning ministries, which do not necessarily identify these actions as directly related to climate change; and which do not sufficiently coordinate their interventions;
 - (f) Limited communication and dialogue across governments. This applies not only to climate change but also to many other policy issues. A whole government approach is called for to ensure integration and policy coherence;
 - (g) Uneven availability of technical skills and knowledge. Environment ministries, institutions in charge of disaster risk reduction and meteorological offices are often the main repositories of climate change knowledge and data. Awareness and skills related to climate change adaptation planning should be more widely disseminated across other stakeholders;
 - (h) Perceived conflict between climate change and development agendas. The risks and opportunities linked to climate change are often overlooked and the synergies between climate change and development are not capitalized;
 - (i) Restricted political support from key decision makers such as parliamentarians and thought leaders beyond the environmental arena. Climate change is still often perceived as solely an environmental issue. Political support from the wider decision-making community, arising from their awareness of the linkages between climate change and development, needs to be enhanced; and
 - (j) Limited access to highly concessional finance: Antigua and Barbuda and Saint Kitts and Nevis are classified as high-income countries, which limits their access to highly concessional financing for climate and development.
130. These barriers are a high risk to the transition to a low-emission and climate-resilient economy. Without addressing these risks, the Eastern Caribbean could face high vulnerability in the coming years. It is therefore crucial to urgently address the financing needs.



Institutional capacity and human resources to develop and implement projects are limited.

131. There remains an opportunity for the region to reach its adaptation goals by addressing some of the barriers experienced. Several opportunities have been identified, such as:

(a) Updating information relevant and adequate for the region. Information on specific needs related to adaptation and mitigation provides an opportunity to access international financing in a directed and purposeful manner. The availability of this information is a starting point for submissions to international climate-related finance projects;

(b) Sustainable use of ocean resources: 'blue economy'. The concept of blue economy comprises economic activities that directly take place in the ocean and seas or use outputs from the sea for consumption or as a source of income. It emphasizes the sustainable use of natural resources in oceans, seas and coastal areas. The Caribbean region has a strong potential in this sector, with the possibility of opportunities for development in areas such as fisheries and aquaculture, aquaponics, blue biotechnology, research and innovation;

(c) Additionally, the generation of knowledge and capacity may implicate the participation of wider stakeholders, generating the means to implement improved climate initiatives, development plans and adaptation projects. This may catalyse the expansion of institutional and legal frameworks that are replicated at the regional level with governance arrangements, searching for collaboration through all OECS member States; and

(d) The participation of domestic markets in climate-related financial solutions is an additional alternative yet to be explored. Research on finance instruments such as green bonds or loans remains of relevance in the region.



Acknowledgements

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