Needs-based Climate Finance Project

TECHNICAL ASSESSMENT OF CLIMATE FINANCE FOR ISLAND STATES IN THE INDIAN OCEAN

ANNEX TO THE ISLAND STATES IN THE INDIAN OCEAN CLIMATE FINANCE ACCESS AND MOBILIZATION STRATEGY

United Nations
Framework Convention on
Climate Change

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Abbreviations and acronyms

ADB	Asian Development Bank
AF	Adaptation Fund
AfDB	African Development Bank
BNEF	Bloomberg New Energy Finance
BUR	biennial update report
CDM	clean development mechanism
CIF	Climate Investment Funds
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
COP	Conference of the Parties
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
CVF	Climate Vulnerable Forum
DAC	Development Assistance Committee
EIB	European Investment Bank
GCF	Green Climate Fund
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
ISIO	island State in the Indian Ocean
LDC	least developed country
LDCF	Least Developed Countries Fund
LULUCF	land use, land-use change and forestry
MDB	multilateral development bank
MSMEs	micro-, small- and medium-sized enterprises
NAP	national adaptation plan
NAPA	national adaptation programme of action
NC	national communication
NCCAS	National Climate Change Adaptation Strategy for Sri Lanka
NDA	national designated authority
NDC	nationally determined contribution
non-Annex I Party	Party not included in Annex I to the Convention
OECD	Organisation for Economic Co-operation and Development
PSIP	Public Sector Investment Programme
SCCF	Special Climate Change Fund
SMEs	small and medium-sized enterprises
TAP	technology action plan
TNA	technology needs assessment
UNFCCC	United Nations Framework Convention on Climate Change
V20	Vulnerable Twenty
WB	World Bank

Executive summary

In 2017, COP 23, in the decision pertaining to long-term climate finance, requested the UNFCCC 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.

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 in their key national policies, including NDCs and NAPs.

The six ISIOs, represented by the Government of Maldives, have assumed overall responsibility for the implementation of the project, which includes three phases: a situation analysis (technical assessment of current climate finance flows and needs); the development of a climate finance mobilization and access strategy; and, finally, the actual mobilization of resources. This technical assessment document is the output of the first phase, which has been informed through workshops, meetings and engagement with country experts.

The purpose of the technical assessment is to inform and thereby facilitate the development of a climate finance mobilization and access strategy for ISIOs for priority mitigation and adaptation activities. As an annex to the strategy, this document comprises section II, which contains information on the regional socioeconomic context, climate vulnerability, emissions profile, and policy and regulatory environment. Sections III and IV cover climate finance needs, priorities and flows, and a detailed analysis of finance flows by source is presented in section V.

ISIOs are already facing the adverse effects of climate change, such as sea level rise, coastal erosion, storms, cyclones, floods, higher temperatures, drought and of late a global pandemic. Accordingly, they have prioritized support and climate finance for the infrastructure, water, health, food security, coastal zone protection, tourism, energy, transport, forestry and land use, and waste sectors. ISIOs have also expressed a priority need for capacity-building, including on accessing climate finance, transparency, governance and regulation, data, monitoring and reporting, and research and development. Private sector engagement is also important.

To mitigate GHG emissions and adequately adapt to the impacts of climate change, the ISIO region needs approximately USD 49.6 billion up to 2030 — USD 9.5 billion for mitigation and USD 33.0 billion for adaptation — or approximately USD 4 billion per year between 2020 and 2030. Currently, three times more funding is required for mitigation than for adaptation in the region.

To mitigate GHG emissions and adequately adapt to the impacts of climate change, the ISIO region needs approximately USD 49.6 billion up to 2030.

[1] Comoros, Madagascar, Maldives, Mauritius, Seychelles and Sri Lanka are collectively referred to as the ISIOs in this document.

[2] The estimated data is based on available information provided by ISIOs through various national reports, such as NDCs and NAPs, consequently, it may not reflect all the financial needs for mitigation and adaptation of ISIOs. This report does not include information on financial needs for loss and damage in the region.

Public climate finance from developed countries to ISIOs through bilateral and multilateral channels totalled USD 6.18 billion between 1991 and 2020. Broadly speaking, a minimum 8-fold increase in the historic flow of international climate finance into the region up to 2030 would be required to meet current ISIOs needs. Madagascar, Seychelles and Sri Lanka received finance for mostly adaptation activities, while mitigation activities were predominant in the Comoros, Maldives and Mauritius. Most of the finance was provided in the form of loans (62.7%), most of which went to Mauritius and Sri Lanka. Adaptation finance was provided for water supply and sanitation, while mitigation finance tended to be for the energy sector.

The most critical barriers to climate finance mobilization and access include institutional capacity in two areas: (i) the ability to meet minimum criteria set by climate funds, financial institutions and money markets; and (ii) the ability to develop technically feasible and economically viable climate change projects and programmes. Other barriers include an insufficiently enabling environment to incentivize climate-friendly and resilient investments. There is also inadequate coordination between climate change stakeholders in the region, especially those that provide funding, capacity-building and project design.

Public climate finance from developed countries to ISIOs through bilateral and multilateral channels totalled USD 6.18 billion between 1991 and 2020.

This document shows the status of climate finance in the ISIOs at a single point in time and contains information that is neither conclusive nor a replacement for official national sources of information. Considerable effort has been made to include the most up-to-date information available. Owing to a lack of comprehensive data, means to report and measure and a standard approach for tracking and reporting needs and climate finance estimates are to be treated as initial and subject to revision.

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I. Introduction

A. Framing and mandate

1. At COP 23, the UNFCCC secretariat, in collaboration with the operating entities of the Financial Mechanism, United Nations agencies and bilateral, regional or other multilateral channels, was requested 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] The secretariat was also requested to support the CDM Executive Board in facilitating the financing of projects.[2]

2. Collectively, these mandates form a secretariat-wide initiative called the Needs-based Climate Finance project, which aims to facilitate access to, and the mobilization of, climate finance and investment by supporting the needs identified by developing countries for the implementation of their priority projects and programmes as outlined in their NDCs, NAPs and other relevant national policies and strategies.

B. Aim and purpose

3. The objective of this technical assessment is to inform and thereby facilitate the development of a climate finance mobilization and access strategy for the ISIOs[3] to enhance access to, and the mobilization of, finance and to catalyse climate finance and investment for the implementation of priority mitigation and adaptation actions.

4. This technical annex, developed in collaboration with the ISIOs, provides a technical assessment of finance flows, stocks and technology and capacity-building needs and priorities identified by the ISIOs in their official communications to the UNFCCC and in national policies and other relevant documents, where available. The assessment also includes international climate-related financial flows to ISIOs.

C. Rationale

5. This document serves as an information source on priority finance, technology, and capacity-building needs of the ISIOs and gaps and barriers to accessing and mobilizing climate finance. The information can be reviewed and used by the ISIOs as a basis for the formulation of a consolidated climate finance mobilization and access strategy for the region.

D. Methodology

6. This document provides a technical assessment of climate finance, technology and capacity-building needs and priorities, and overarching climate-related financial flows at the domestic, regional and international level. It is primarily a desk-based assessment complemented by relevant stakeholder engagement, both virtual and in-person, as guided by the region's governments and the UNFCCC secretariat.

7. Data sources for financial flows include the OECD Creditor Reporting System database, data published by climate funds, as well as domestic and private climate finance data, where available.

8. In order to arrive at a description of climate finance needs for the region, an assessment was conducted of communications from each ISIO. Data sources for the needs include documents submitted to the UNFCCC secretariat such as BURs, NAPs, NAPAs,

[1] Decision 6/CP.23, para. 10.

[2] Decisions 3/CMP.1, annex, paras. 4(d) and 5(i); 6/CMP.11, para. 8; 3/CMP.12, para. 4; and 3/CMP.13, para. 2.

[3] Comoros, Madagascar, Maldives, Mauritius, Seychelles and Sri Lanka are collectively referred to as ISIO in this document.

NCs, NDCs, TNAs. Furthermore, MDB country programming and strategies, including those by the AfDB and WB, as well as relevant information from the AF, the GEF, and the GCF country programming, were consulted. In addition, work done on strategies and policies were consulted, where available (see table 1).

9. Further information from representations made by countries during a technical workshop on needs-based climate finance for the ISIOs conducted from 4 to 5 March 2020 in Male, in collaboration with the Government of Maldives, partners and the UNFCCC secretariat, has also been incorporated in this document.

10. Information on 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. These adjustments include:

(a) Combining "energy policy", "energy generation, renewable sources" and "energy generation, non-renewable sources" into one collective "energy" sector;

(b) Extracting "waste management/disposal" from the "water supply and sanitation" sectoral classification and making "waste" a stand-alone sector; and

(c) Extracting "flood prevention/control" and "biodiversity" from "general environmental protection" and making them both stand-alone sectors.

11. No comprehensive data were available on the breakdown of investments by financial instrument for the region.

12. 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. Efforts to harmonize these definitions are ongoing. The core definition adopted by the OECD, MDBs and the International Development Finance Club is generally in accordance with the definition suggested in the 2014 Biennial Assessment and Overview of Climate Finance Flows Technical Report: "Climate finance aims at reducing emissions and enhancing sinks of GHG and aims at reducing vulnerability of, and maintaining and increasing the resilience of, human and ecological systems to negative climate change impacts." It should be noted that Article 2.1(c) of the Paris Agreement refers to finance flows that are "consistent with", rather than aimed at, a pathway towards low-GHG and climate-resilient development.

Table 1
Overview of official country communications to the UNFCCC by year of submission up to January 2021

	NDC	NAP	NAPA	NC1	NC2	NC3	TNA	TAP	BUR
Comoros	2016	–	2006	2003	2013	–	2006	–	–
Madagascar	2016	–	2006	2004	2010	2017	2018	2018	–
Maldives	2020 updated	–	2008	2001	2016/ 2018 revised	–	–	–	2019
Mauritius	2016	–	–	1999	2011	2016	2012	2013	2021
Seychelles	2016	–	–	2000	2013	–	2017	2018	–
Sri Lanka	2016	2016	–	2002	2012	–	2011	2012	–

Note: The most recent NC, TAP or TNA was assessed for each ISIO.
Source: UNFCCC secretariat.

II. Regional context

A. Socioeconomic context

13. The six ISIOs have a combined land area of 657,566 km², with Madagascar the largest at 587,295 km² and Maldives the smallest at approximately 300 km². The region's combined exclusive economic zone spans over 6 million km², with Mauritius having the largest at 1.9 million km² and the Comoros the smallest at 160,000 km².

14. The most populous countries in the region are Madagascar and Sri Lanka; the remaining countries have populations of less than 1.5 million (see table 2).

15. Most of the population (ranging from approximately 20% in Mauritius to 100% in Maldives) and economic activity of the ISIOs is concentrated along the coastline, which is already exposed to the impacts of sea level rise (see table 3).

Table 2
Total population of the island States in the Indian Ocean in 2018

	Total population
Comoros	832 322
Madagascar	26 262 368
Maldives	515 696
Mauritius	1 265 303
Seychelles	96 762
Sri Lanka	21 670 000

Source: WB. 2018.

Table 3
Coastal population

	Coastal population (%)	Source
Comoros	65	TNA (2006)
Madagascar	–	–
Maldives	100	UN definition of coastal zones (2007)
Mauritius	~20	TNC (2016)
Seychelles	85	Government of Seychelles, Report on Climate Change and its Possible Security Implications (2009)
Sri Lanka	32	ADB, Sri Lanka: Coastal Resource Management Project (2010)

1. Regional integration

16. The ISIO group of countries comprising the Comoros, Madagascar, Maldives, Mauritius, Seychelles and Sri Lanka share common geographies and hence face similar climate challenges and impacts. While some ISIOs may be members of regional organizations such those listed below, as a group there is no single organization handling regional climate affairs:

(a) United Nations Economic and Social Commission for Asia and the Pacific: Maldives and Sri Lanka are members;

(b) United Nations Economic Commission for Africa: Comoros, Madagascar, Mauritius and Seychelles are members;

(c) Southern African Development Community: Comoros, Madagascar, Mauritius and Seychelles are members;

(d) Indian Ocean Commission, which comprises five African Indian Ocean nations: Comoros, Madagascar, Mauritius and Seychelles are members;

(e) Common Market for Eastern and Southern Africa: Comoros, Madagascar, Mauritius and Seychelles are members;

(f) South Asia Co-operative Environment Programme: Maldives and Sri Lanka are members; and

(g) Alliance of Small Island States: Comoros, Maldives, Mauritius and Seychelles are members.

2. Economic landscape

17. Collectively, the GDP of the six ISIOs was approximately USD 123.9 billion in 2018. However, there are large differences in GDP between the countries, with Sri Lanka at approximately USD 88 billion and the Comoros at USD 1.178 billion.[4]

18. The debt-to-GDP ratio in table 4, although based on information from 2017, shows that some countries have greater fiscal space than others to take on debt or increase public spending despite being debt stressed.

19. Agriculture, fisheries and tourism are responsible for a large share of the total employment in the ISIOs. In Madagascar and the Comoros, the agriculture and fisheries sectors account for 68% and 57% of the total employment, respectively. The services sector, of which tourism is a part, accounts for 73%, 66% and 46% of the total employment in Maldives, Mauritius and Sri Lanka, respectively.

20. Similarly, major economic sectors in the ISIOs are tourism, agriculture and fisheries, with tourism receipts accounting for a significant proportion of total exports in all the ISIOs (see table 5).

21. However, food exports account for a significant proportion of the merchandise exports the economies of these countries, making them sensitive to global commodity prices. The Comoros and Madagascar export vanilla, ylang-ylang, cloves and coffee, while Maldives, Mauritius and Seychelles export fresh and processed fish (see table 6).

Table 4
Public debt as a percentage of gross domestic product

	Debt as a percentage of GDP (2017) (%)
Comoros	28 381
Madagascar	37 286
Maldives	68 051
Mauritius	60 150
Seychelles	63 315
Sri Lanka	79 424

Source: WB. 2019.

Table 5
International tourism receipts

	International tourism receipts (% of exports)	Latest available year
Comoros	51.1	2019
Madagascar	23.3	2019
Maldives	85.3	2019
Mauritius	39.1	2019
Seychelles	38.4	2019
Sri Lanka	24.0	2019

Source: WB. 2020.

4 WB. 2018.

Table 6 Food exports		
	Food (% of merchandise exports)	Latest available year
Comoros	44	2019
Madagascar	36	2019
Maldives	98	2018
Mauritius	36	2019
Seychelles	78	2019
Sri Lanka	26	2017

Source: WB.

22. The region also imports most of its fuel to meet energy needs. The proportion of fuel and food imports in the ISIOs, while higher than the world average (13% and 8%, respectively, in 2018), are comparable with those of the Pacific islands (20% and 19%, respectively, in 2018). Food also accounts for a significant proportion of imports in these countries (see table 7).

Table 7 Fuel and food imports			
	Fuel (% of merchandise imports)	Food (% of merchandise imports)	Latest available year
Comoros	1	13	2013
Madagascar	17	17	2018
Maldives	16	17	2018
Mauritius	20	21	2018
Seychelles	21	28	2018
Sri Lanka	16	13	2017

Source: WB. 2019.

23. Except for Mauritius, private sector banks in the region lend comparatively less into their own domestic markets compared with the global average (see table 8).

24. MSMEs make up a large share of the economies of ISIOs, contributing nearly half of GDP, and employ almost half the population (see table 9). MSMEs have limited access to finance, specifically climate finance, on account of various economic and regulatory barriers, size considerations and a lack of awareness.[5]

Furthermore, given their potential local networks, MSMEs are uniquely positioned to provide climate technologies and solutions to bottom-of-the-pyramid consumers, thereby contributing to effective channelling of international climate finance, especially for adaptation to local communities.[6]

Table 8
Domestic credit to the private sector

	Domestic credit to the private sector by banks (% of GDP)			
	2015	2016	2017	2018
Comoros	15.61	15.93	16.26	15.73
Madagascar	12.29	11.85	12.63	12.84
Maldives	26.62	27.60	28.42	28.13
Mauritius	102.68	96.24	102.43	78.01
Seychelles	25.32	26.94	29.40	30.41
Sri Lanka	41.48	45.22	46.91	49.47
World average	**86.25**	**87.43**	**86.60**	**89.07**

Source: WB. 2019.

Table 9
Contribution by micro-, small- and medium-sized enterprises to gross domestic product and employment in the island States in the Indian Ocean

	Percentage of GDP (%)	Percentage of total employment (%)	Source
Comoros	–	20	World Bank. 2019
Madagascar	–	–	–
Maldives	–	45	Department of National Planning. 2013
Mauritius	40	54.6	Government of Mauritius. 2017. Vision 2030
Seychelles	–	–	–
Sri Lanka	52	45	Government of Sri Lanka. National Policy Framework for SME Development, Ministry of Industry and Commerce

5 Climate and Development Knowledge Network. 2015.
6 Termed "Elevator function" (Adelphi. 2019).

25. The ease of doing business index measures how business-friendly an economy is; the higher the score, the more difficult it is to run or establish a business in a country. Apart from Mauritius, most ISIOs are not that business-friendly (see table 10).

26. Microfinance institutions play an important role in the lending ecosystems of these countries. Table 11 provides highlights of microfinance in the ISIOs.

Table 10
Ease of doing business index

	Debt as a percentage of GDP (2017) (%)
Comoros	28 381
Madagascar	37 286
Maldives	68 051
Mauritius	60 150
Seychelles	63 315
Sri Lanka	79 424

Source: WB. 2019.

Table 11
Highlights of microfinance in the island States in the Indian Ocean

	Microfinance status	Source
Comoros	Credit is provided by institutions such as Mutuelle d'épargne et de crédit des Comores and Union des Sanduk, or by financial intermediaries, mostly with a short-term maturity and an annual interest rate close to 20%. Mutuelle is a non-profit institution that is slowly growing to become the largest banking network in the Comoros.	World Bank. 2019
Madagascar	There are more than 30 players in the microfinance sector, and they reach about a quarter of the population. This contrasts with the banking sector, which reaches only an estimated 3% of the population.	Aga Khan Development Network. 2018
Maldives	Microfinance is provided primarily by the Development Banking Cell of the Bank of Maldives. The Cell provides credit to underdeveloped atolls that are distant from Malé. In 2018, the Government of Maldives established the SME Development Finance Corporation, a State-owned entity, to manage the Government's SME loan schemes.	ADB. 2019
Mauritius	Several microfinance and credit schemes are provided by the Development Bank of Mauritius and the National Empowerment Foundation to support activities such as training programmes, integrated social development, circular migration, technical assistance to SMEs, placement and financial assistance.	National Empowerment Foundation. 2020 University of Mauritius. 2012. Research Journal of Economics and Business Studies

Table 11 (continued)
Highlights of microfinance in the island States in the Indian Ocean

	Microfinance status	Source
Seychelles	To increase lending to small businesses, Seychelles has established the Small Business Financing Agency, which focuses on microfinance.	Government of Seychelles. 2013
Sri Lanka	There are several institutions dealing in microfinance, including governments, commercial banks, specialized banks, registered finance companies and informal lenders. Overall, 65% of all microcredit is provided by the Government.	German Agency for International Cooperation. 2010

B. Climate and environment context

1. Vulnerability and disaster risk

27. Despite ISIOs making a negligible contribution to global GHG emissions (see table 13), they are among the most vulnerable to climate change. Sea level rise, coastal erosion, storms, cyclones, floods, and increasing temperatures and droughts will have implications for the islands' economic activities, such as agricultural exports and tourism. Between 1900 and 2018, an average of annual 239 natural hazards, such as storms, floods, epidemics and droughts, were recorded in the region (see table 12).

28. Average annual direct losses to the economies of the Comoros, Madagascar, Mauritius and Seychelles from cyclones, flooding and earthquakes as determined in 2014 amounted to over USD 600 million (see table 13).

2. Emissions profile

29. The region's contribution to global GHG emissions in 2018 was by all accounts small (0.1663 % of global GHG emissions). Total GHG emissions are presented in table 14.

Table 12
Average annual natural hazard occurrence, 1900–2018

	Storm	Epidemic	Drought	Flood	Earthquake	Volcanic activity	Insect infestation	Landslide
Comoros	7	6	1	2	1	6	–	–
Madagascar	55	7	8	7	–	–	2	–
Maldives	1	2	–	2	1	–	–	–
Mauritius	19	2	1	1	–	–	–	–
Seychelles	2	2	–	2	1	–	–	–
Sri Lanka	10	10	11	64	–	–	–	6

Source: WB. 2019.

Table 13
Average annual direct losses, 2014
(USD million)

	Average annual direct loss
Comoros	~5.7
Madagascar	~100
Maldives	–
Mauritius	~110
Seychelles[a]	~2.8
Sri Lanka	~380
Total	**~600**

Source: Global Facility for Disaster Reduction and Recovery, South West Indian Ocean Risk Assessment and Financing Initiative. WB. 2020.
[a] Mahé and the Inner Islands.

Table 14
Total greenhouse gas emissions, 2018

	GHG emissions	Remaining balance (based on USD 10 million country cap)
Comoros	590	0.0013
Madagascar	30 570	0.0666
Maldives	2 380	0.0052
Mauritius	6 740	0.0147
Seychelles	780	0.0017
Sri Lanka	35 240	0.0768
Total	**76 300**	**0.1663**

Source: AF. 2000.

30. The agriculture sector contributes over 70% of GHG emissions in the Comoros and Madagascar, whereas in Maldives, Mauritius, Seychelles and Sri Lanka, energy-related emissions amount to two thirds or more of total emissions, mainly from the energy industries and transport subsectors (see table 15).

C. Climate-related policies

31. All countries have submitted official communications to the UNFCCC wherein they elaborate on existing and planned policies to support the implementation of domestic mitigation and adaptation action. Table 16 below includes non-exhaustive information on climate-related policies in each country in the region.

Table 15
Emissions breakdown by sector (percentage of total greenhouse gas emissions) [a]

Sector/subsector	Comoros (2000)	Madagascar (2010)	Maldives (2015)	Mauritius (2016)	Seychelles (2000)	Sri Lanka (2000)
Energy	**29.25**	**10.78**	**95.84**	**80.26**	**79.31**	**61.51**
Energy industries	30.61	16.25	69.55	57.91	56.39	28.91
Manufacturing industries and construction	0.00	13.11	0.00	8.18	3.24	8.26
Transport	53.63	33.10	25.88	27.96	25.38	43.97
Other sectors	15.76	37.54	4.56	5.93	14.99	18.84
Industrial processes	**0.03**	**0.71**	**–**	**5.97**	**–**	**2.62**
Agriculture	**70.70**	**86.67**	**–**	**3.03**	**4.72**	**25.05**
Enteric fermentation	25.21	29.02	–	14.93	28.32	26.61
Manure management	0.82	21.50	–	8.81	0.00	3.88
Rice cultivation	0.00	10.72	–	0.00	0.00	52.37
Agricultural soils	73.97	38.46	–	73.13	71.68	16.12
Prescribed burning of savannahs	0.00	0.28	–	0.00	0.00	0.00
Field burning of agricultural residues	0.00	0.00	–	1.84	0.00	1.02
Waste	**0.02**	**1.85**	**4.16**	**10.73**	**15.97**	**10.82**

Note: UNFCCC.
[a] Data in bold refer to sectoral emissions, whereas italicized data refers to subsectoral emissions, where available.

Table 16
Summary of climate-related policies

	Overarching policies for mitigation and adaptation			Sectoral policies			
	Overarching climate change policies	Energy-focused (including transportation)	Adaptation-focused	Tourism	Agriculture	Coastal zones and marine systems	Finance
Comoros	• Plan Comoros Emergent 2030 • Poverty Reduction and Growth Strategy (strategy for accelerated growth and sustainable development) 2017–2021				• Biodiversity strategy 2016 • National Agricultural Policy 2012 • Revised water code 2020	• National Integrated Water Resources Management Plan 2018–2030 Decree on marine pollution (under study)	
Madagascar	• National Climate Change Policy 2011 • Vision 2030 (2018)	• New Energy Policy 2015 • Scaling Up Renewable Energy in Low Income Countries investment plans — in process					
Maldives	• Maldives Climate Change Policy Framework 2015 • Maldives Climate Emergency Act 2021	• Energy Policy and Strategy 2016 • Maldives Energy Act 2021		• Fifth Tourism Master Plan 2020–2025	• National Fisheries and Agricultural Policy 2019-2029		• National Strategic Framework to Mobilize International Climate Finance to address Climate Change in the Maldives 2020-2024 (2019)
Mauritius	• Climate Change Act 2020 • Vision 2030 (2017)	• Energy Policy 2007–2025 • Renewable Energy Roadmap 2030 for the Electricity Sector	• National Climate Change Adaptation Policy Frame-work 2021	• Tourism Strategic Plan 2018–2021			• PSIP 2016–2018
Seychelles	• National Climate Change Policy 2020	• Energy Policy 2010–2030		• Tourism Master Plan 2012–2020	• Seychelles National Agricultural Investment Plan 2015–2020	• Seychelles Blue Economy Strategic Framework and Roadmap 2018 • Seychelles Coastal Management Plan 2019–2024	
Sri Lanka	• National Climate Change Policy 2012	• National Energy Policy and Strategies 2019	• NCCAS 2011–2016				• Sustainable Finance Roadmap 2019

Table 17
Policies and incentives for the renewable energy sector in the island States in the Indian Ocean

	Regulatory policies	Fiscal incentives and public financing
Comoros	–	–
Madagascar (energy, power)	Tendering	• Tax incentives • Reductions in sales, energy, CO2, value-added or other taxes
Maldives (energy, power)	• Net metering/billing • Energy Efficiency Labelling Programme • Power Purchase Agreement framework for private renewable energy investments	• Tax incentives - Duty exemption for renewable energy imports
Mauritius (power)	• Net metering/billing • Tendering	• Tax incentives • Reductions in sales, energy, CO2, value-added or other taxes • Public investment, loans, grants, capital subsidies or rebates (includes renewable heating and/or cooling technologies)
Seychelles (power)	• Net metering/billing • Tendering (national tender held in 2018)	• Tax incentives • Investment or production tax credits • Reductions in sales, energy, CO2, value-added or other taxes • Public investment, loans, grants, capital subsidies or rebates
Sri Lanka (power, transport)	• Feed-in tariff/premium payment • Electric utility quota obligation/renewable portfolio standard • Net metering/billing • Biofuel blend obligation/mandate • Tendering (national tender held in 2018)	• Tax incentives • Reductions in sales, energy, CO2, value-added or other taxes • Energy production payments Public investment, loans, grants, capital subsidies or rebates

Note: Renewables 2019 Global Status Report (Renewable Energy Policy Network for the 21st Century).

32. All the ISIOs place a priority on energy security and on increasing the share of renewables in their energy mix to decrease dependence on energy imports. Table 17 provides an overview of regulatory measures, fiscal incentives and public financing measures that have been put in place to enhance investment in renewable energy.

33. Notable examples of further policy action include a green tourist tax, which accounts for approximately 5% of all tax revenues in Maldives,[7] The revenues are channelled into the Maldives Green Fund and then reinvested in renewable energy, energy efficiency, water supply and waste management.[8] Efforts are under way or planned in almost all the ISIOs to explore carbon pricing or market-based instruments. Sri Lanka is a member of the World Bank's Partnership for Market Readiness, which supports countries in readiness activities for the establishment of domestic carbon pricing instruments.

In 2016, Sri Lanka also introduced the Sri Lanka Carbon Crediting Scheme.[9] Mauritius announced in 2008 the introduction of the Maurice Ile Durable concept, which puts a levy on fossil fuels; the revenues raised are used to finance climate-friendly projects.[10] Comoros, Madagascar, Maldives and Sri Lanka are part of the V20 Group of Ministers of Finance of the CVF, which is a dedicated cooperation initiative of economies systemically vulnerable to climate change.

7 International Monetary Fund. 2019.

8 Transparency Maldives. 2012.

9 WB. 2017.

10 UNFCCC. 2019. Collaborative Instruments for Ambitious Climate Action.

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III. Climate finance needs and priorities

34. The following section outlines ISIOs' mitigation and adaptation needs as priority sectors, including technology and capacity-building needs and the associated amount of finance required, where data were available.

A. Mitigation needs

35. All ISIO country NDCs (as at December 2021) had set emission reduction targets conditional on the availability of climate finance, technology and capacity-building, with Sri Lanka setting a lower unconditional emission reduction target achievable without international support. All the countries aim to achieve their targets by 2030 and use a 'business as usual' scenario as the reference baseline (see table 18).

Table 18
Overview of NDC emission reduction targets of the island States in the Indian Ocean

	Emission reduction (unconditional)	Emission reduction (conditional)	Quantifiable activity-related targets
Comoros	–	23% of 'business as usual' in 2030	***Renewable energy:*** • Increase the share in the energy mix from 3% to 43% between 2010 and 2030, with geothermal energy accounting for 16%
Madagascar	–	14% of 'business as usual' in 2030 32% expected absorption increase from the LULUCF sector	***Renewable energy:*** • Reinforce the renewable energy share (hydraulic and solar) from the current level of 35% to 79% • Have 50% of households adopt improved stoves by 2030
Maldives	–	26% of 'business as usual' in 2030, and striving to achieve net zero by 2030	***Renewable energy:*** • Make efforts to increase the renewable energy share to 15% of the energy mix, including in the public and private sectors

Table 18 (continued)
Overview of NDC emission reduction targets of the island States in the Indian Ocean

	Emission reduction (unconditional)	Emission reduction (conditional)	Quantifiable activity-related targets
Mauritius	–	40% of 'business as usual' in 2030	***Renewable energy:*** • Production of 60% of Mauritius energy needs from renewable/green sources and Phasing out of coal before 2030 ***Renewable energy:*** • Duty Free purchase of electric cars, reduction in registration and road tax for electric cars • Removal of excise duty on electric vans of up to 180 kW • Installation of a photovoltaic system not exceeding 10 kW by electric vehicles owners and export any surplus production to the CEB grid
Seychelles	–	26.4% of 'business as usual' in 2030, and commitment to achieve net zero by 2050	***Renewable energy:*** • Increase the contribution of renewable energy to the energy mix by between 15 and 20% by 2030. In the long term, the Energy Policy envisages that 100% of the energy supply will be met by renewable energy sources ***Transport:*** • Reduce oil imports for transport purposes by between 15 and 30% by 2030 compared with the baseline, as per the projection for the transport sector in the Energy Policy • Make 30% of private vehicles electric by 2030
Sri Lanka	4%	10.5% of 'business as usual' in 2030, and expects to achieve carbon neutrality by 2050	***Energy sector:*** • Reduce emissions by 20%, of which 4% is unconditional and 16% conditional ***Other sectors:*** • Reduce emissions in transport, industry, forestry and waste by 10%, of which 3% is unconditional and 7% conditional ***Renewable energy:*** • Increase the share from the present 50% to 60% in 2020 and maintain that level until renewable energy technology is further developed ***Forestry:*** • Increase forest cover from 29% to 32% by 2030 ***Transport:*** • Reduce unproductive vehicles by 25% by 2025 unconditionally, with the option of increasing this target to 50% with conditions

Table 19
Priority sectors in mitigation for the island States in the Indian Ocean

	Energy	Transport	Agriculture	Industry	Forestry and land use	Waste
Comoros	✓		✓		✓	
Madagascar	✓		✓		✓	✓
Maldives	✓	✓				✓
Mauritius	✓	✓	✓	✓	✓	✓
Seychelles	✓	✓				
Sri Lanka	✓	✓		✓	✓	✓

Table 20
Priority sectors in adaptation for the island States in the Indian Ocean

	Critical infrastructure	Tourism	Water supply and sanitation	Health	Biodiversity	Food security (agriculture, livestock, fisheries)	Coastal zone protection and marine resources	Disaster risk reduction
Comoros			✓	✓		✓		✓
Madagascar	✓	✓	✓	✓		✓	✓	✓
Maldives	✓	✓	✓	✓	✓	✓	✓	✓
Mauritius	✓	✓	✓	✓	✓	✓	✓	✓
Seychelles	✓	✓	✓	✓	✓	✓	✓	
Sri Lanka	✓	✓	✓	✓	✓	✓	✓	

36. Mitigation needs include climate finance for the energy, transport, agriculture, industry, forestry and land use, and waste sectors (see table 19).

B. Adaptation needs

37. Adaptation needs include climate finance for critical infrastructure, tourism, water supply and sanitation, health, biodiversity, food security (agriculture, livestock, fisheries), coastal zone protection and marine resources, and disaster risk reduction (see table 20).

C. Technology needs

38. Five of the six ISIOs have conducted the TNA process. Of these, four have also prepared a TAP detailing estimated costs and timelines of priority technology-related actions. Maldives has not undertaken a TNA; however, its BUR (2019) and NDC provide information on technology needs.

39. The technology needs prioritized are contained in tables 21 and 22. In addition to these sectors, most of the countries have identified technology transfer requirements related to the systematic observation and monitoring of climate change and its impacts through measurement, reporting and verification, and the establishment of monitoring and evaluation systems and technology hubs.

40. The estimated costs of adaptation and mitigation technology needs are approximately USD 682 million and USD 2,153 billion respectively. It is noted that each country has varied time frames for the implementation of priority action, ranging from 2 to 12 years. Therefore, the cost estimates are indicative of the needs and are likely to change over time (see table 23).

Table 21
Sectors prioritized by the island States in the Indian Ocean for mitigation
(USD million)

	Mitigation technology	Mitigation action and time frame, where available	Cost of mitigation technology	Total
Comoros	Energy	Hydroelectricity	15	**150**
		Improvement of electricity network	14.6	
		Biomass	2.4	
		Geothermal energy	118	
Madagascar	Energy	Large hydropower plant (three years starting from 2018)	2.09	**19.29**
		Small hydropower plant (four years starting from 2019)	15.7	
		Light emitting diode lamps (three years starting from 2019)	1.5	
	Industry	Bioplastics (three years)	3.5	**8.0**
		Industrial waste valorization (sawdust) (three years)	4.5	
Maldives	Energy	–	–	**–**
Mauritius	Energy	Wind (utility scale) (13 years)	30.5	**>31.6**
		Photovoltaics (> 1 MW)	TAP (2012) does not provide information on photovoltaics	
		High-efficiency boilers (heat recovery) (2013–2020)	1.1	
Seychelles	Energy	Waste heat recovery at Roche Caiman power station	0.34	**1.2**
		Waste to energy using centralized biodigester	0.4	
		Biomass power generation	0.44	
	Land transport	Low-carbon car fleet (hybrid and electric cars)	0.14	**0.5**
		Victoria traffic management plan	0.32	
		Electric scooter	0.02	
Sri Lanka	Energy	Conversion of biomass and waste to energy	617	**1 848.4**
		Smart-grid technology for wind and solar integration with hydroelectric	1210	
		Building management systems	21.36	
	Transport	Integration of non-motorized transport methods along with a regularized public transport system	28.5	**88.3**
		Promotion of carpooling and park-and-ride systems during rush hour and on roads with heavy volumes of vehicles	11	
		Electrification of the existing railway system	48.8	
	Industry	Energy-efficient motors	1.28	**>4.5**
		Variable speed drives for motors	104 563 USD/t CO_2	
		Biomass residue-based cogeneration combined heat and power	3.22	

Table 22
Sectors prioritized by the island States in the Indian Ocean for adaptation technology
(USD million)

	Adaptation technology	Adaptation action and time frame, where available	Cost of adaptation technology	Total
Comoros	Measurement, reporting and verification	Conversion of biomass and waste to energy	617	**1 848.4**
	Water	Drinking water coverage	0.8	**0.8**
	Infrastructure	Housing	1.02	
		Protection of economic infrastructure	11.8	
		Work on alternative inland roads	43.4	
Madagascar	Agriculture	Resilient rice technology packages or integrated resilient rice models (five years)	6.4	**17.8**
		Association of fruit crops and other food crops along contour lines or with agroforestry (five years)	7	
		Production of quality organic fertilizers (five years)	4.4	
	Water	Integrated water resources management (five years)	24	**240**
		Drinking water supply by gravity (five years)	108	
		Drinking water supply by drilling equipped with hand pump or motorized pump (six years)	108	
Maldives	Measurement, reporting and verification	–	–	**–**
	Disaster risk reduction; early warning systems	–	–	**–**
	Food security	–	–	**–**
	Health	–	–	**–**
	Water	–	–	**–**
	Costal protection	–	–	**–**
Mauritius	Water	Desalination	31.5	**> 114.6**
		Rainwater harvesting	> 83	
		Hydrological model	0.116	
	Agriculture	Scaling up of locally proven integrated pest management technologies	1.6	**3.4**
		Micro-irrigation (gravity-fed drip and mini- and micro-sprinkler irrigation)	1.8	
	Costal zones	Dune and vegetation restoration	3.1	**5.8**
		Wetlands protection	1	
		Rock revetment	1.7	

Table 22 (continued)
Sectors prioritized by the island States in the Indian Ocean for adaptation technology
(USD million)

	Adaptation technology	Adaptation action and time frame, where available	Cost of adaptation technology	Total
Seychelles	Coastal zones	Coastal risk mapping and monitoring (12 years)	19	**25.6**
		Coastal ecosystem restoration: wetlands and dunes (12 years)	6.6	
	Water	Rooftop rainwater harvesting (12 years)	0.317	**0.672**
		Ground surface rainwater harvesting (12 years)	0.127	
		Water-efficient appliances and fixtures	0.228	
Sri Lanka	Food security	Sustainable culture-based fisheries	53.75	**154.85**
		Sustainable land-use management	40.05	
		Crop diversification and precision farming	61.05	
	Health	Early warning systems and network information exchange	0.113	**0.5**
		Transfer of knowledge and skills to health personnel	0.285	
		Management of health-care waste	0.111	
	Water	Restoration of minor tank networks	18.83	**41.6**
		Rooftop rainwater harvesting	8.07	
		Boreholes/tube wells as a drought intervention for domestic water supply	14.67	
	Coastal zones	Sand dune rehabilitation	2.395	**5.528**
		Mangrove restoration	0.698	
		Coral reef restoration	2.435	
	Biodiversity	Restoration of degraded areas inside and outside the protected area network to enhance resilience	7.5	**14.25**
		Increasing connectivity through corridors; landscape and matrix improvement and management	6.75	

D. Capacity-building needs

41. The following collective needs for addressing barriers through capacity-building are identified by ISIOs:

(a) *Transparency*

(i) Building national capacity in terms of enhanced transparency with regard to reporting and tracking the implementation of NDC action, GHG inventory processes, and reporting and tracking support received and needed; and

(ii) Enhancing technical and organizational aspects related to the various steps of GHG inventory preparation and of measurement, reporting and verification at the level of line ministries.

(b) *Governance and regulation*

(i) Building structured capacity within the governance bodies of the country to focus on climate finance in support of the development of a more accurate understanding of climate finance needs stemming from mitigation and adaptation action; and

(ii) Building the long-term domestic capacity to access various climate funds, considering the diverse procedures and timelines. The need to have dedicated resources and efficient institutional arrangements in ministries for this specific purpose was highlighted.

(c) *Data, monitoring and research*

(i) Strengthening institutional frameworks and coordination, building capacity for evidence-based policy and planning, and enhancing the infrastructure for data collection and monitoring through community and private sector participation;

(ii) Enhancing monitoring mechanisms and infrastructure for tracking and reporting on climate

impacts, disaster management, climate action related needs and flows of climate finance across sectors at the local, island, national and regional level;

(iii) Improving technical and organizational capacity for data acquisition, analysis, management and dissemination in order to enhance the accuracy of data gathered and reduce data uncertainties; and

(iv) Conducting research and providing education to underpin all climate adaptation efforts in order to ensure their success and resilience.

(d) *Access to finance*

(i) Increasing understanding of, and the capacity to engage with, the complex and diverse processes for gaining accreditation with, and access to, international climate and environment funds;

(ii) Improving domestic capacity to create quality projects and proposals to enhance access to finance, considering that the lack of national capacity in the preparation and documentation of project concepts and proposals has been cited as a vulnerability by the ISIOs;

(iii) Increasing domestic awareness of, and the capacity to access, climate finance; and

(iv) Building the awareness of national financial institutions and their capacity to initiate and complete the accreditation processes for various funds.

(e) *Private sector engagement*

(i) Building capacity within the public sector to establish and develop linkages with the private sector to promote the transfer of technology and finance;

(ii) Building the capacity of domestic private sector investors to engage with and invest in climate action; and

(iii) Enhancing, in the public and private sectors, awareness of domestic and international private finance flows and the capacity to track and report on them.

(f) *Informational*

(i) Undertaking mitigation and adaptation studies on a sectoral basis to identify priority options in accordance with key development initiatives and policies;

(ii) Building networks to facilitate the sharing of climate-related information and experiences;

(iii) Enhancing education related to climate change at all levels;

(iv) Developing activity databases for all key socioeconomic sectors; and

(v) Improving the analysis and tracking of public and private climate finance flows.

Table 23
Compilation of technology costs by sector
(EUR million)

Sector	Estimated cost of technology
Mitigation priority technology	
Energy	2 050.5
Industry	12.5
Transport	88.8
Measurement, reporting and verification	1.0
Total	**2 152.8**
Adaptation priority technology	
Water	397.7
Infrastructure	56.2
Food security (agriculture, irrigation, fisheries)	176.1
Coastal zones	36.9
Health	0.5
Biodiversity	14.3
Total	**681.7**

(g) *Institutional*

Strengthening domestic institutional arrangements in relevant line ministries to address climate change related issues in a coordinated manner.

(h) *Technological*

Establishing incentive schemes targeted at the private sector to encourage the uptake of climate-friendly technology.

(i) *Regulatory*

(i) Supporting the development of enabling national policy frameworks to facilitate the implementation of identified adaptation and mitigation strategies and plans, including sectoral action plans and strategies;

(ii) Mainstreaming climate action in sectoral development plans; and

(iii) Reviewing existing legislation and regulations to ensure they are facilitative of climate action and contribute to the mobilization of finance.

(j) *Financial*

(i) Enhancing the availability of, and access to, low-cost financial resources; and

(ii) Providing an incentives framework to enhance private sector investment.

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IV. Climate finance flows

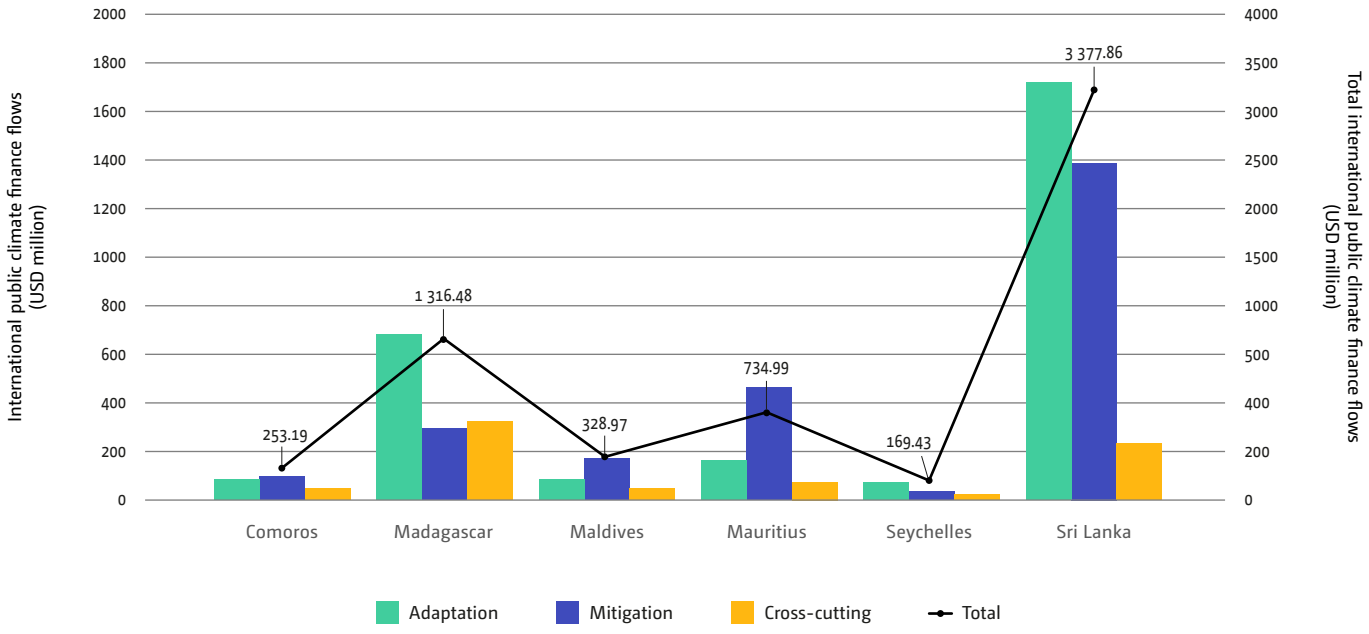
A. International climate finance

42. The ISIOs have received a total of USD 6.18 billion[11] in international public climate funds from developed countries between 1991 and 2020. Sri Lanka received USD 3.38 billion, Madagascar received USD 1.32 billion, Mauritius USD 734.99 million, Maldives USD 328.97 million, the Comoros USD 253.19 million and Seychelles USD 169.43 million (see figure 1).

43. USD 2.87 billion of the flows was channelled into adaptation activities, USD 2.50 billion into mitigation activities and USD 807.44 million into cross-cutting activities. Flows towards adaptation activities were greater in Madagascar, Seychelles and Sri Lanka, while flows towards mitigation activities were greater in the Comoros, Maldives and Mauritius.

44. Bilateral donors, climate funds and MDBs have also provided climate finance to the ISIOs. Bilateral donors have committed USD 3.10 billion in climate finance to the ISIOs, accounting for 50.1% of the total commitments to the region. Climate funds and MDBs have contributed USD 1.59 billion and USD 1.50 billion, respectively, with both accounting for approximately 25% of the total (see figure 2).

Figure 1
Overall international public climate finance flows to the island States in the Indian Ocean between 1991 and 2020

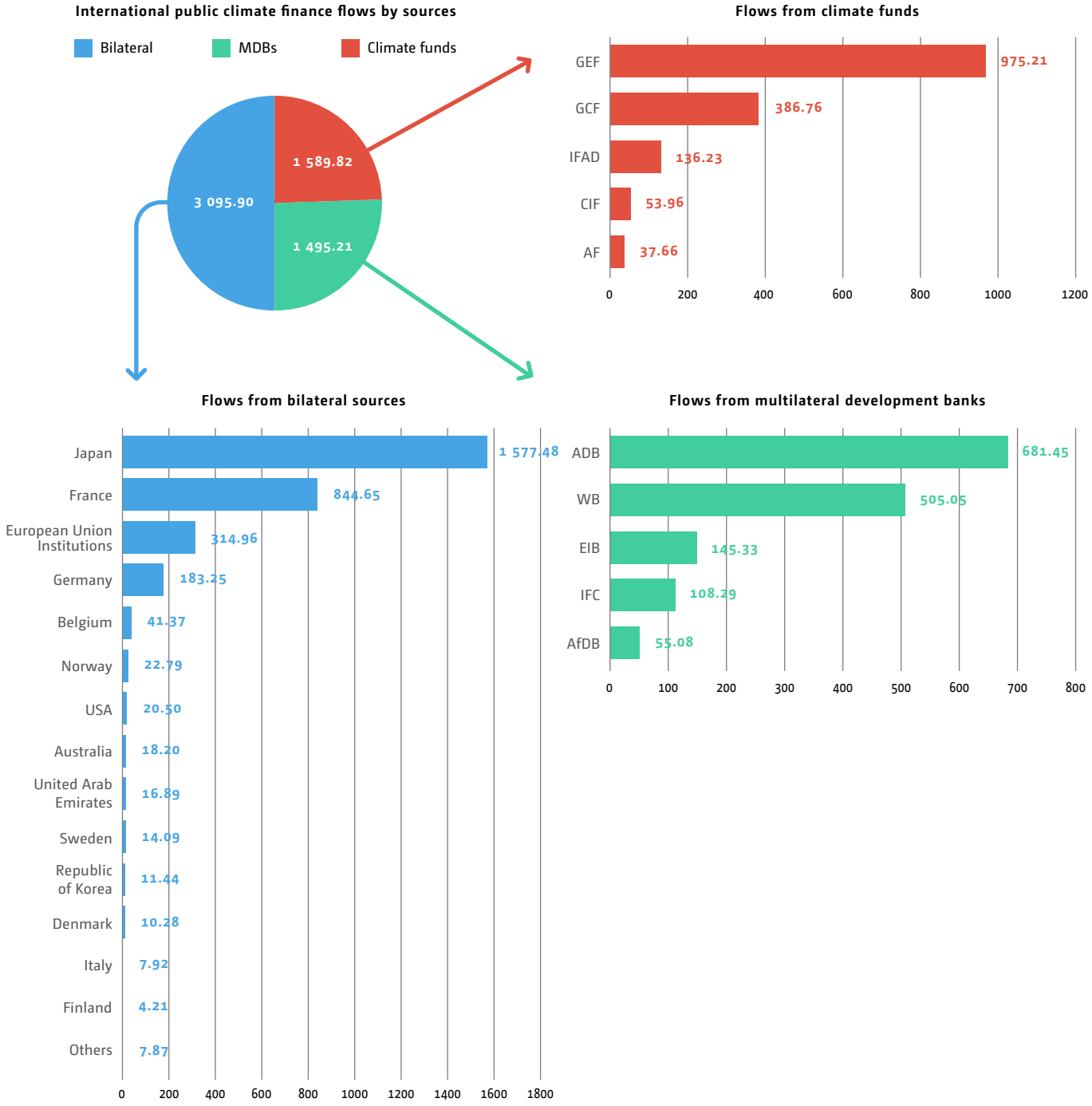


[11] The total of USD 6.18 billion includes the flows through bilateral and multilateral channels, including the USD 975.21 million from the GEF to the ISIOs between 1991 and 2020.

45. Loans account for 62.7% of the total amount received by the ISIOs, while grants and equities make up 34.3% and 3.1%, respectively. However, while loans make up the biggest share in Mauritius and Sri Lanka, grants make up the biggest share in the other countries.

46. MDBs have committed amounts in the same order of magnitude to both adaptation and mitigation activities. However, commitments to cross-cutting activities are significantly smaller, as reflected in figure 3. MDBs tend to provide climate finance commitments in the form of loans. USD 1.43 billion was committed through loans, while USD 65.21 million was committed through grants (see figure 4).

Figure 2
Breakdown of climate finance flows from various sources to the island States in the Indian Ocean between 1991 and 2020
(USD million)



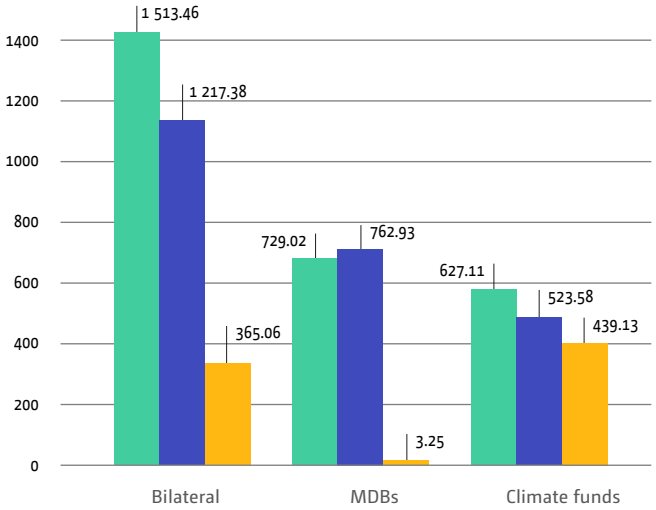
Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

47. USD 631.28 million was channelled into adaptation activities in the ISIOs from climate funds. The financial flows channelled into mitigation and cross-cutting activities were smaller, at USD 523.58 million and USD 439.13 million, respectively (see figure 4). Grants from climate funds amounted to USD 1.24 billion and were the instrument of choice for most of the flows to mitigation, adaptation and cross-cutting activities. The GCF is the only climate fund to channel finance in the form of equities.

48. Like climate funds, bilateral donors have channelled the largest financial commitments into adaptation activities (USD 1.51 billion), followed by mitigation activities, with USD 1.22 billion, and cross-cutting activities, with USD 365.06 million. Figures 3 and 4 summarize this information.

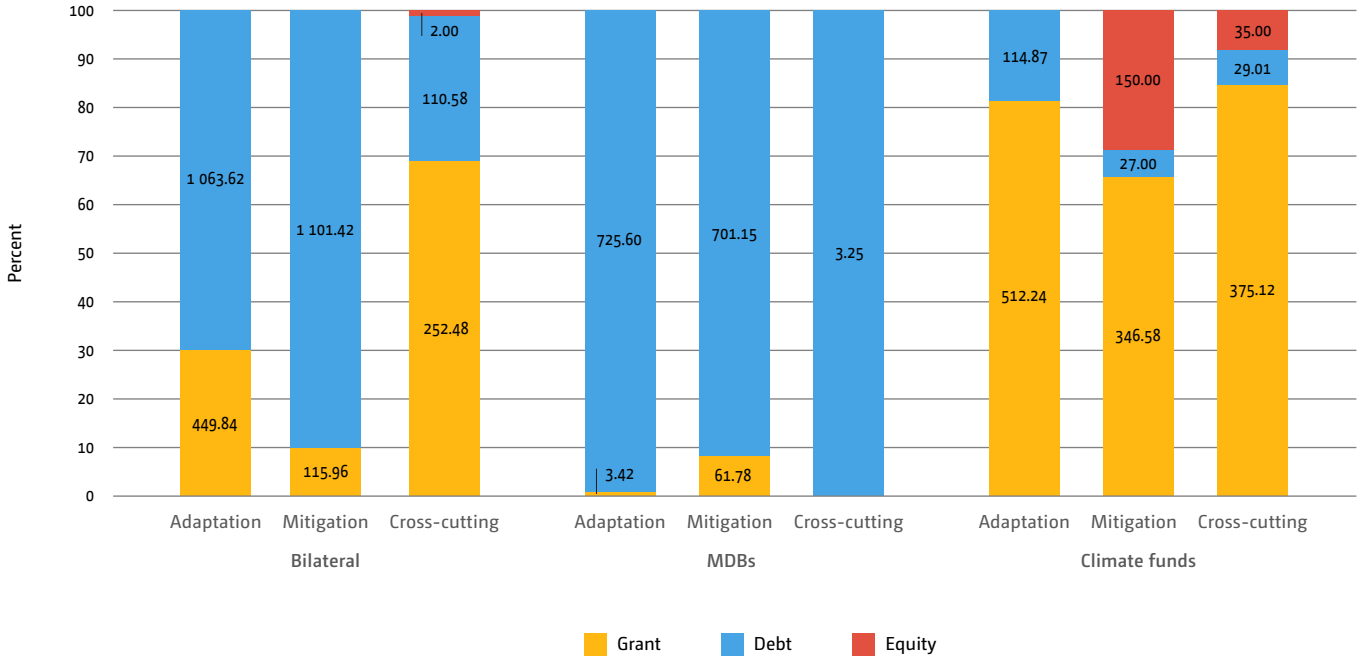
49. Climate finance commitments were received across a wide variety of sectors, as reflected in figure 5. The energy (USD 1.77 billion) and water supply and sanitation (USD 1.38 billion) sectors have received the largest amount of climate finance, accounting for 50.9% of the totals received by these countries.

Figure 3
Breakdown of climate finance commitments to the different activities by type of source in the island States in the Indian Ocean
(USD million)



Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

Figure 4
Breakdown of climate finance commitments by type of source and financial instrument in the island States in the Indian Ocean



Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

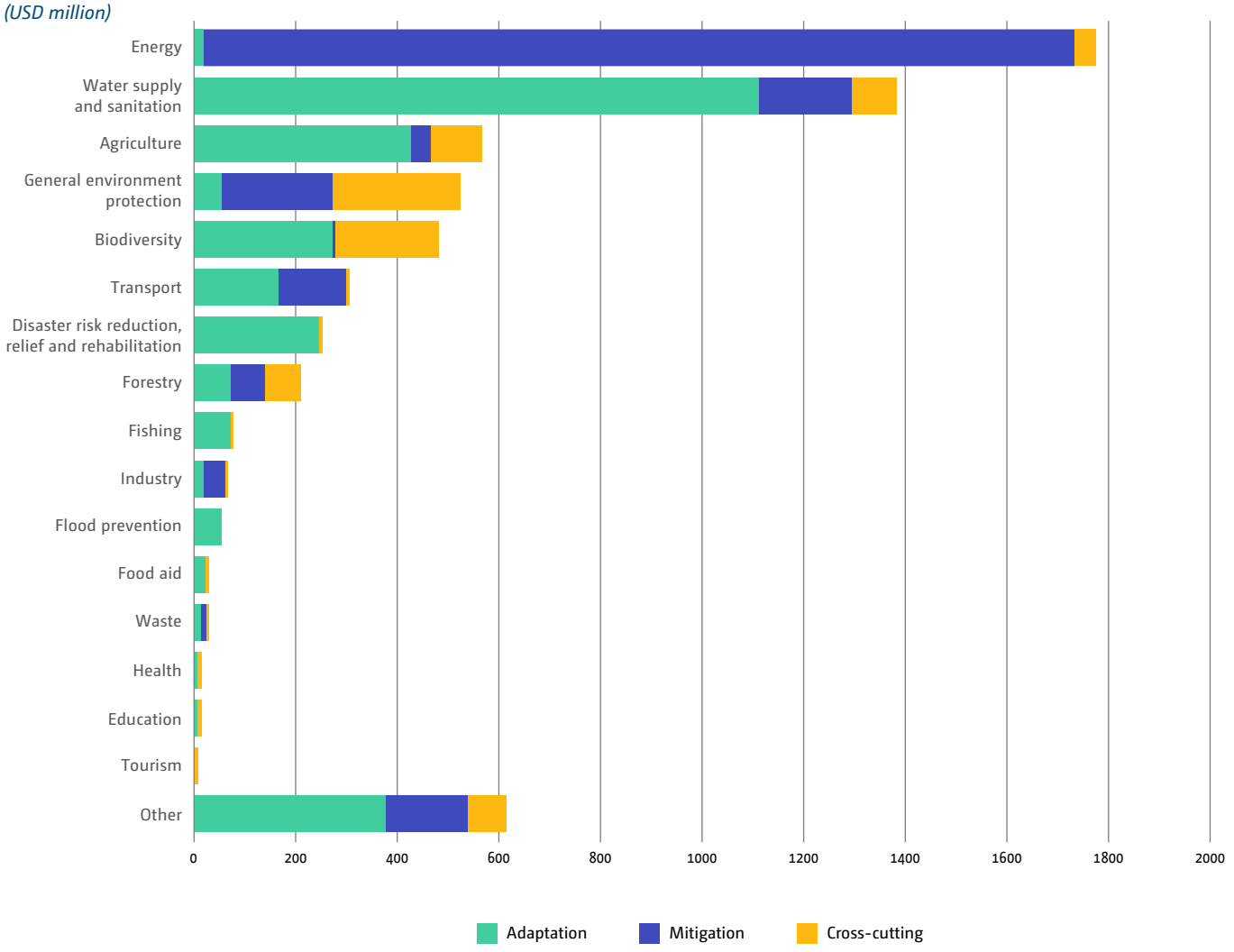
Agriculture, general environment protection, disaster risk reduction, relief and rehabilitation, biodiversity and transport are other sectors that have received relatively significant commitments. Among individual sectors, the tourism sector has received the smallest commitments, amounting to only USD 1.83 million. Figure 5 summarizes the commitments received by the main sectors.

Adaptation

50. Among adaptation activities, water supply and sanitation received the largest commitments, amounting to USD 1.11 billion. This was followed by agriculture (USD 422.62 million), biodiversity (USD 269.69 million), and disaster risk reduction, relief and rehabilitation (USD 241.06 million). Tourism, on the other hand, received the least, with only USD 1.65 million committed (see figure 6).

51. Most climate finance flows (USD 1.90 billion) to adaptation activities in the ISIOs are channelled via debt instruments. Commitments from Japan, France, ADB, WB, EIB, AfDB and IFAD are mostly channelled as debt instruments, with a small proportion, or even

Figure 5
Climate finance commitments to the island States in the Indian Ocean by sector
(USD million)

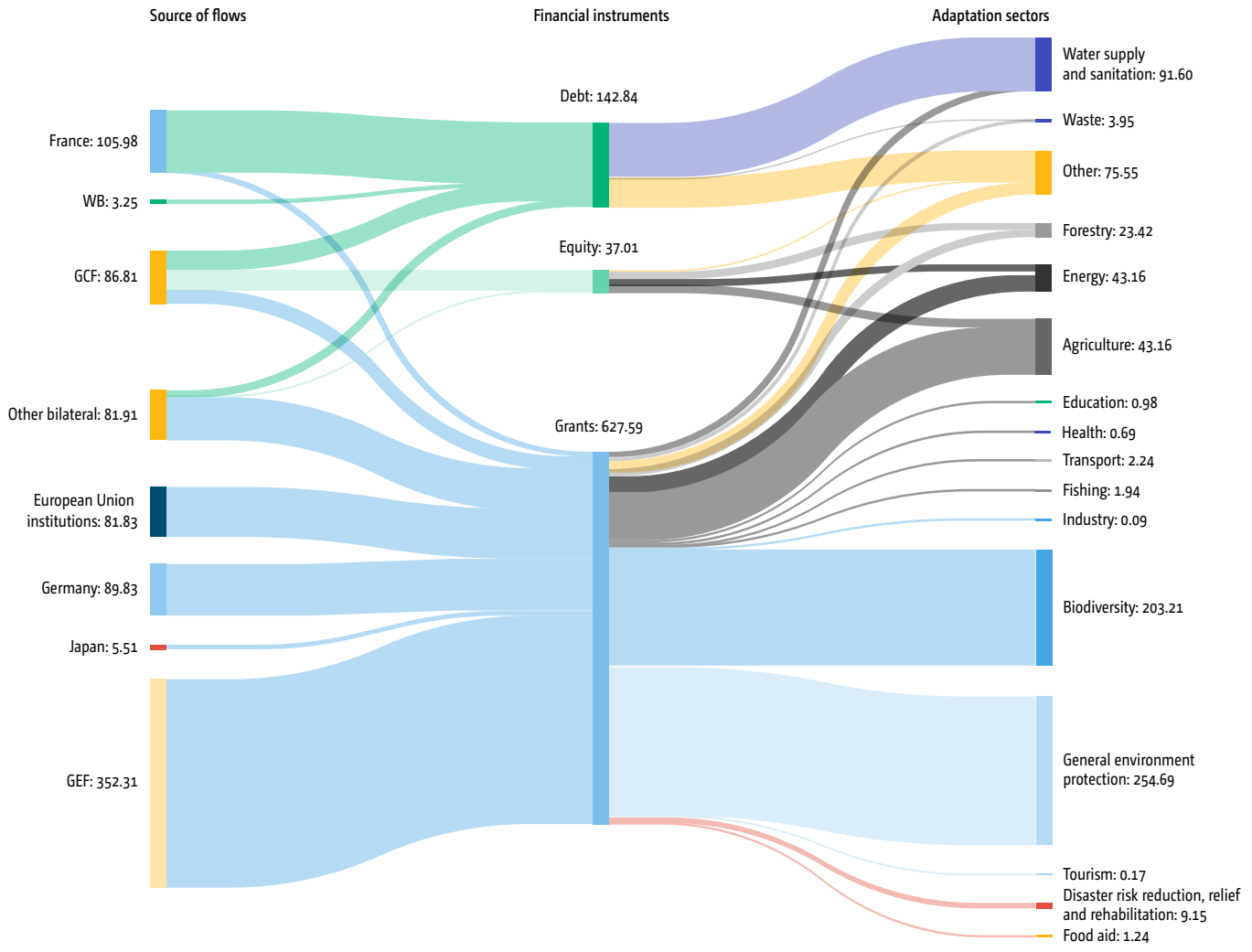


Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

none, channelled as grants (see figure 6). In contrast, commitments from Germany, European Union institutions other than EIB, the GCF, the GEF and the AF are all made via grants, with no proportion channelled as debt. Other bilateral donors channel most of their commitments as grants and a small proportion as debt.

52. Water supply and sanitation, disaster risk reduction, relief and rehabilitation, transport, flood prevention and fishing are the main sectors to have received most of their commitments via debt instruments (see figure 6). On the other hand, the biodiversity, forestry and general environment protection sectors receive most of their commitments via grants. Agriculture is the only main sector to have received equivalent amounts via grants and debt instruments. These trends hint at the instruments that could be used in the various sectors to mobilize greater amounts of adaptation finance.

Figure 6
Sankey diagram summarizing international public climate finance flows by financial instrument to the various adaptation sectors in the island States in the Indian Ocean
(USD million)



Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

Mitigation

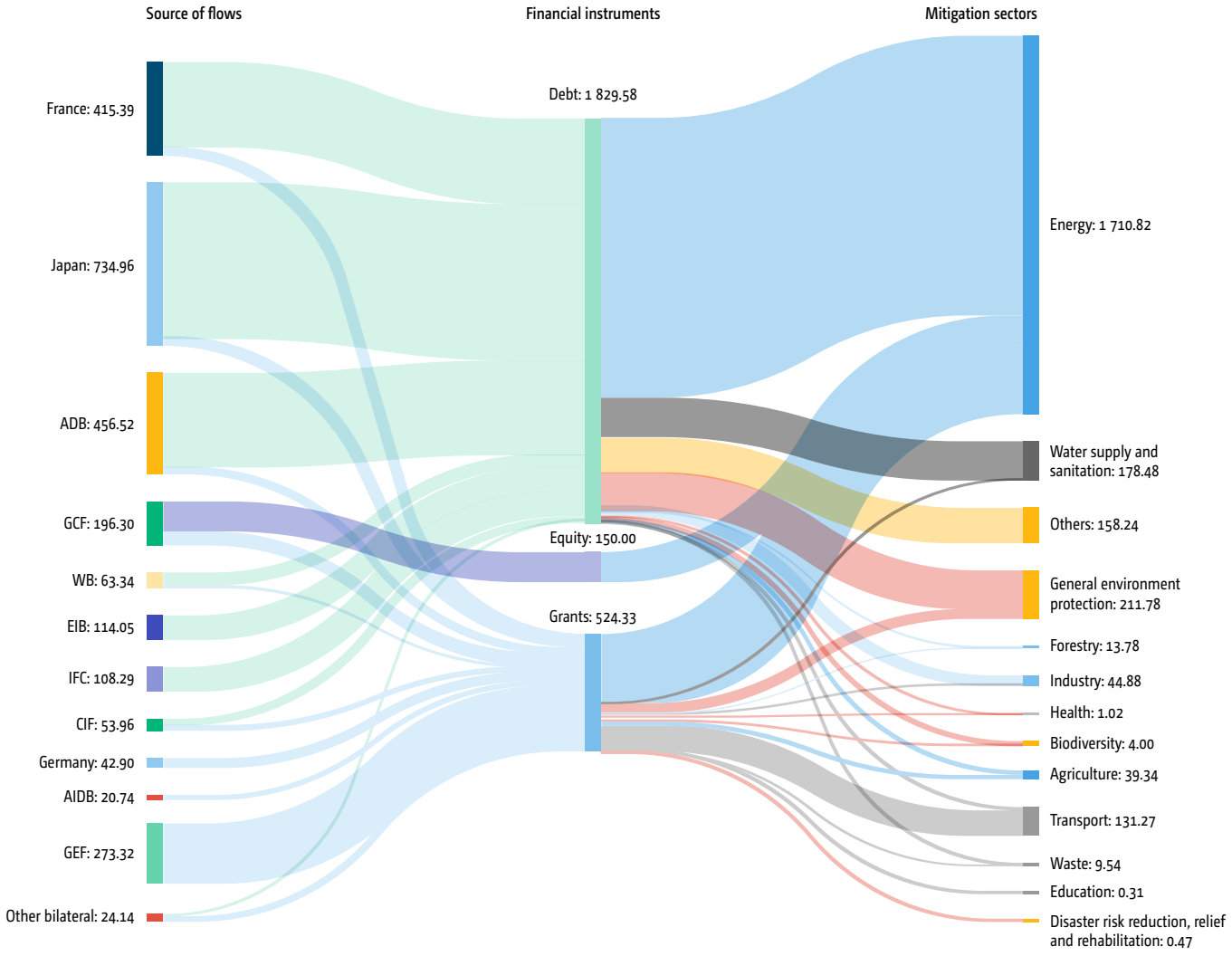
53. Among mitigation activities, flows to the energy sector (USD 1.71 billion) account for 68.3% of the total commitments. General environment protection (USD 211.78 million), water supply and sanitation (USD 178.48 million) and transport (USD 131.27 million) are the other sectors to have received at least 5% of the total commitments to mitigation activities. While many other sectors have received mitigation commitments, the amounts are significantly smaller. Figure 7 shows the amounts received by each sector.

54. As with adaptation activities, most commitments (USD 1.83 billion) to mitigation activities are channelled through debt instruments (see figure 7). USD 524.33 million was channelled as grants and USD 150.00 million as equities.

55. Japan, France, ADB, WB, EIB and IFC channel most of their commitments in the form of debt, with much smaller proportions channelled as grants. On the other hand, Germany, AfDB, the GEF, CIF and other bilateral donors channel their commitments only as grants. Other bilateral donors have a more equal split between the use of grants and debt instruments in their commitments. The GCF is the sole provider of equity flows (see figure 7).

56. Commitments to the energy sector include a mixture of debt instruments, grants and equities, with the first of these accounting for the largest share. Water supply and sanitation, general environment protection, forestry and industry are the other sectors to have received most commitments via debt instruments. In contrast, the transport and agriculture sectors received most of their commitments via grants. Figure 7 shows the breakdown of commitments received by the sectors by financial instrument. These trends hint at the instruments that could be used in the various sectors to mobilize greater amounts of mitigation finance.

Figure 7
Sankey diagram summarizing international public climate finance flows by financial instrument to the various mitigation sectors in the island States in the Indian Ocean
(USD million)



Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

Cross-cutting

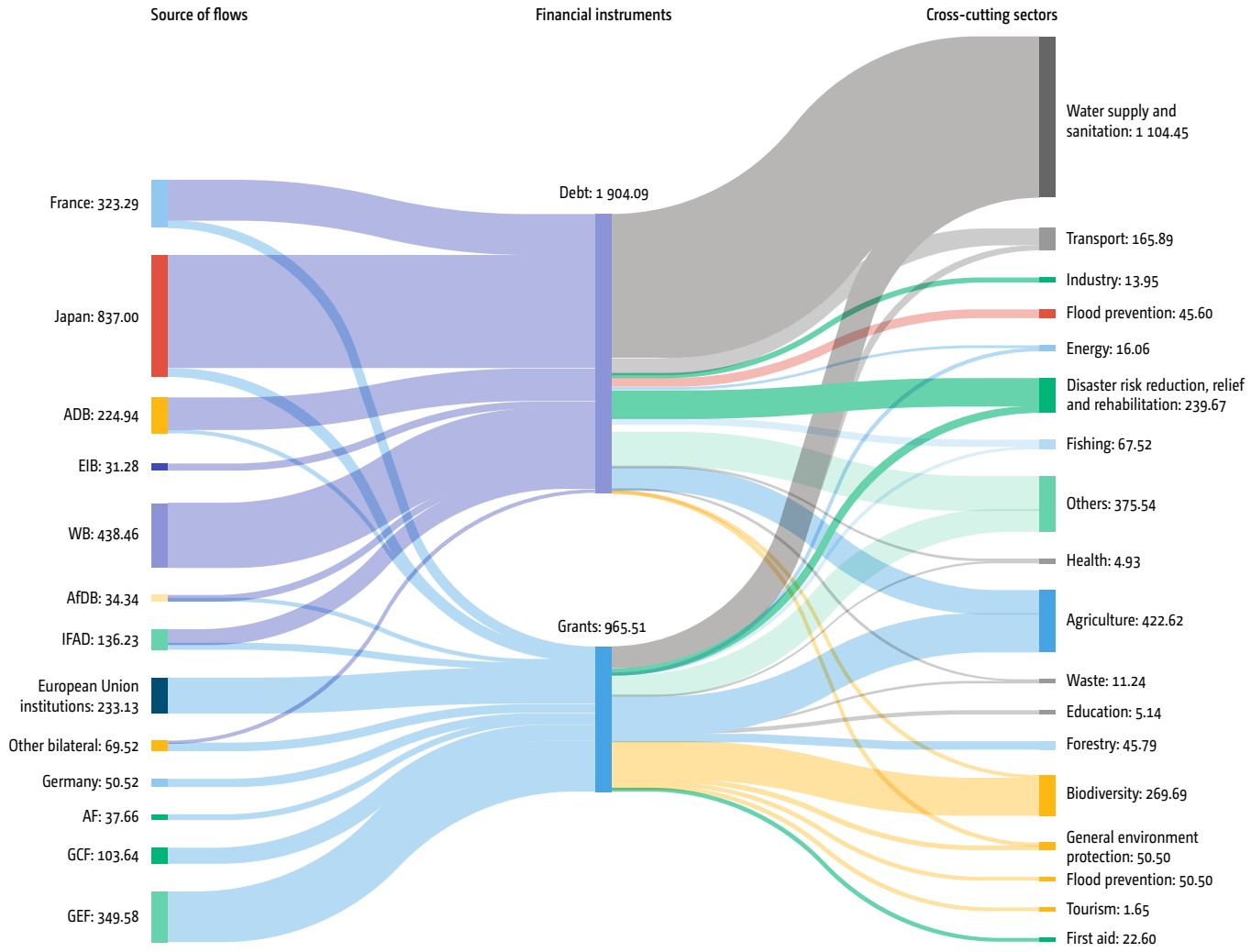
57. The general environment protection sector received the largest commitments among cross-cutting activities (USD 254.69 million). The other sectors that received at least 5% of the total commitments to cross-cutting activities are biodiversity (USD 203.21 million), agriculture (USD 95.35 million), water supply and sanitation (USD 91.60 million), energy (USD 43.16 million) and forestry (USD 23.42 million). Figure 8 summarizes the amounts received by all the cross-cutting sectors.

58. Unlike with adaptation and mitigation activities, most commitments for cross-cutting activities are channelled as grants. Grants to cross-cutting activities amounted to USD 627.59 million, while debt instruments and equities amounted to USD 142.84 million and USD 37.01 million, respectively.

59. The commitments from Japan, Germany, European Union institutions other than EIB, and the GEF were fully grant-based for cross-cutting activities. The commitments from WB were fully debt-based. The contributions of France were made mostly via debt, with a small proportion channelled as grants. Other bilateral donors and the GCF channelled commitments via grants, debt instruments and equities. However, the GCF provided the overwhelming majority of flows via equities, accounting for 95% of the total equity commitments for cross-cutting activities.

60. General environment protection and biodiversity are the main sectors to have received all commitments as grants. The agriculture and energy sectors received commitments via grants and equities, with most commitments flowing as grants. The forestry sector

Figure 8
Sankey diagram summarizing international public climate finance flows by financial instrument to the various cross-cutting sectors in the island States in the Indian Ocean
(USD million)



Source: OECD. 2020; ADB. 2020; GEF. 2020; GCF. 2020; and CIF. 2020.

received commitments as grants and equities in equivalent amounts. The water supply and sanitation sector received the majority of its commitments in the form of debt and a smaller proportion as grants. Figure 8 summarizes the breakdown of commitments received by the sectors by financial instrument.

B. Domestic public climate finance

Public Sector Investment Programme

61. Accounting and tracking domestic public climate finance are challenging as data are sparse. None of the countries has taken up the methodology put forward in the Climate Public Expenditure and Institutional Review. Furthermore, data sources on domestic public expenditure, where available, are fragmented. Reference was made to the national PSIP documents of Maldives, Mauritius, Seychelles and Sri Lanka, based on the amounts set aside for environmental protection. Activities falling under environmental protection include solid waste management, disaster risk reduction, and coastal rehabilitation and protection projects. Public expenditure on renewable energy is often classified under the economic affairs or electricity sector, with no indication of the breakdown of expenditure on renewable and non-renewable sources. Thus, these values, as reflected in table 24, reflect only a portion of domestic public expenditure on climate change.

62. Government expenditure is typically funded through domestic taxation and sovereign aid in the form of grants and loans. Thus, the budget for PSIP comes from a mixture of both. In order to avoid double counting, where the data allow, this section considers the domestic contribution to these investments. This is because sovereign aid is already reflected in the previous section on international public climate finance. However, data on the domestic contribution are available only for Maldives and Sri Lanka, while data for Mauritius and Seychelles are aggregated values, without a breakdown of the contributions from domestic taxation and sovereign aid.

63. For the Comoros and Madagascar, reference was made to the NC documents owing to the unavailability of the PSIP documents.

64. In absolute terms, domestic expenditure on environmental protection was highest in Maldives in 2019 and 2020, and in Sri Lanka in 2019 and 2020 (see table 24). The environment-related share of public expenditure is highest in Maldives, where it makes up between 7.39% and 32.38% of the total public sector investment, followed by Mauritius and Seychelles, where it ranges from 1.5% to 6.72% and 4.07% to 5.94%, respectively. The share ranges are in Sri Lanka, where it ranges from 0.96% to 1.01%.

C. Private climate finance

65. Private investment data on financial instruments used in renewable energy projects are available for Madagascar and Sri Lanka only (see figure 9). Investment in these countries originated from China, France, India, Singapore and the United States of America.

66. Investments flowed to four types of technology: solar, small hydro, wind, and biomass and waste. Private investments in small hydro were the largest, amounting to USD 45.5 million, followed by solar (USD 39.3 million), wind (USD 20.9 million), and biomass and waste (USD 8.6 million). Madagascar received private investments in solar and small hydro, while Sri Lanka received investments in small hydro, wind, and biomass and waste. Overall, the private investments received by Sri Lanka totalled USD 65.7 million, while Madagascar received USD 48.6 million.

67. Loans and equity were the two main instruments used, with the former accounting for USD 37.3 million and the latter for USD 77.0 million. The amount of equity received by the two countries was in the same order of magnitude (figure 9). However, Sri Lanka received approximately three times more in loans than Madagascar.

68. Mauritius is the only ISIO to have reported domestic private finance investments in key sectors in its NC. The total domestic private investment amounted to USD 140.69 million. No breakdown of investments by financial instrument was available.

69. Madagascar has received private climate finance amounting to USD 160.5 million through the co-financing of GCF-approved projects. USD 0.5 million has been committed from the Althelia Climate Fund in the form of senior equity for project "FP026: Sustainable Landscapes in Eastern Madagascar" to co-finance renewable energy and sustainable agriculture projects. In project "FP099: Climate Investor One", Madagascar has the potential to receive up to USD 160 million[12] in private climate finance for renewable energy activities from a fund managed by the Dutch bilateral private sector international financial institution Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden.

D. Clean development mechanism

70. Projects registered with the CDM were carried out only in Madagascar, Mauritius and Sri Lanka. Based on available data, Sri Lanka received the most CDM investments (USD 741.97 million), followed by Mauritius (USD 134.56 million) and Madagascar (USD 18.45 million). As can be observed from figure 10, mixed renewables (solar and wind) received the largest amount of CDM investments (USD 278.83 million), followed by hydro (USD 238.89 million), wind (USD 186.21 million), biomass (USD 132.26 million), landfill gas (USD 57.10 million) and methane avoidance (USD 1.70 million).

[12] The word "potential" is used here as FP099 is a multi-country project and there is thus a cap on the amount of funds that can be received by any one country.

Figure 9
Proportion of financial instruments used in renewable energy projects in two countries
(USD million)

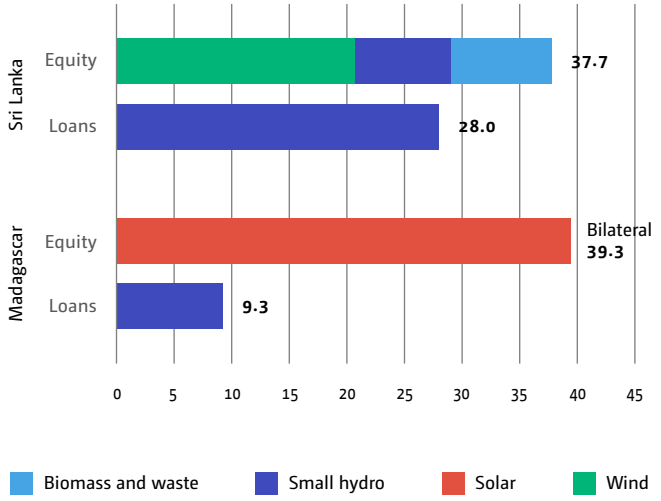
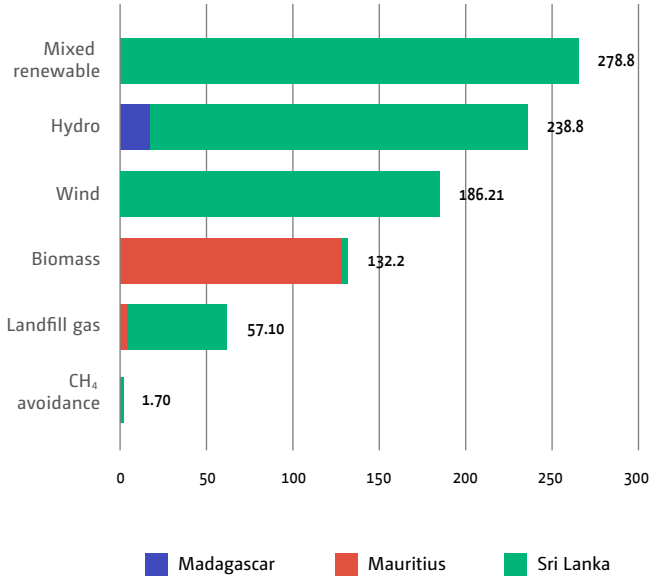


Figure 10
Capital investments in climate-related activities registered as clean development mechanism projects



Source: BNEF. 2020.

Table 24
Tabulation of available data on domestic public environment-related expenditure

	Environment-related public sector investment expenditure (USD million)[a]				Environment-related share of public sector investment expenditure (%)			
	2020	2019	2018	2017	2020	2019	2018	2017
Comoros[b]	–	–	–	–	–	–	–	–
Madagascar	–	–	–	–	–	–	–	–
Maldives	63.58	71.33	17.61	25.29	15.43	32.38	7.39	8.90
Mauritius[c]	45.18	37.92	23.16	6.48	4.02	6.29	6.72	1.50
Seychelles	3.66	3.24	2.90	2.90	5.94	5.11	4.62	4.07
Sri Lanka	58.81	50.12	45.28	38.00	1.00	0.96	1.01	0.97

Source: PSIP, Maldives; PSIP, Mauritius; PSIP, Seychelles; PSIP, Sri Lanka.

Note: Percentage of environment-related share of public sector investment expenditure of Mauritius excludes state-owned enterprises and Loans and Equity to Parastatal Bodies and environmental investment in sectoral ministries such as Ministry of Energy, Land, Transport and other.

[a] The following exchange rates are applied: USD 1 = 15.37 rufiyaa; USD 1 = 36.92 Mauritian rupees; USD 1 = 13.95 Seychelles rupees; USD 1 = 181.38 Sri Lanka rupees..

[b] In its NC2, the Comoros mentioned that the Government draws up a Public Investment Programme annually. However, the funds allocated to climate change are insufficient to implement the priority projects outlined in its NAPA. The Public Investment Programme is not publicly available.

[c] Mauritius reported environmental-related share of public sector investment expenditures on fiscal years, including 2017-2018 (2017), 2018-2019 (2018), 2019-2020 (2019), 2020-2021 (2020), other ISIOs reported on calendar years.

E. Joint Crediting Mechanism

71. Maldives joined the Japanese Joint Crediting Mechanism in 2013. Under the Mechanism, Maldives has one registered project, entitled "Solar Power on Rooftop of School Building Project",[13] and two projects funded via the ADB Japan Fund for the Joint Crediting Mechanism, namely a waste-to-energy project[14] and a smart micro-grid project, respectively.[15] With the "Preparing Outer Islands for Sustainable Energy Development Project",[16] ADB is helping Maldives transform existing energy grids into a hybrid renewable energy system of solar photovoltaics, energy storage and energy-efficient diesel generators with energy management systems in 160 outer islands. The smart micro-grid project is the first project using the fund of the Joint Crediting Mechanism. The waste-to-energy project is funded by ADB, which has issued a USD 73.39 million concessional loan and grant to Maldives to develop the USD 151.13 million plant.

F. Instruments

72. Various financial instruments have been used to channel climate finance to the ISIOs. International public climate finance was channelled predominantly via debt and grants, while equities accounted for only a small proportion.

73. Beyond domestic taxation and sovereign aid, Seychelles has also issued sovereign blue bonds and undertaken debt swaps to raise funds for climate activities. In 2018, Seychelles became the first country to issue a sovereign blue bond. The bond raised USD 15 million, which will be used to provide grants and loans to support sustainable marine and fishery projects.

74. In addition, a debt swap amounting to USD 20 million was completed in 2016, with Seychelles agreeing to designate 20,000 square kilometres of its ocean as "marine protected areas".[17] This limits the use of this ocean area to research and regulated tourism and prohibits dredging and oil and gas exploration. While this debt swap is more strongly related to environmental protection than to the climate, it does present an alternative way of raising funds for climate activities.

75. Unsurprisingly, market-rate loans and equity are the financial instruments used to channel private finance for climate-related investments.

[13] Available at: http://gec.jp/jcm/projects/14pro_mdv_01/.

[14] Available at: https://www.adb.org/news/adb-approves-73-million-package-develop-waste-energy-facility-maldives.

[15] Available at: http://gec.jp/jcm/projects/15jfjcm_mdv_01/.

[16] Available at: https://www.adb.org/projects/46122-003/main.

[17] Cornish C. 2018. Debt swap paves way to protect Seychelles ocean. *Financial Times*. 24 February. Available at https://www.ft.com/content/568f9fbc-189d-11e8-9e9c-25c814761640.

V. Climate finance gap

A. Estimated finance needs

76. All six ISIOs have reported on the amount of climate finance needed in their NDCs in one way or another. The Comoros, Madagascar, Mauritius and Seychelles provided estimates for both mitigation and adaptation, Madagascar provided estimates of finance needed for capacity-building and technology transfer only and Maldives provided estimates for mitigation in an update to its NDC in December 2020. The amounts of finance needed are shown in table 25 below.

Table 25
Estimated volume of finance needed to 2030 for the ISIO region
(USD billion)

	Finance needs for mitigation	Finance needs for adaptation	Finance needs for technology and capacity-building
Comoros	0.3	0.375	–
Madagascar	6.4	28.7	7.016
Maldives	1.001	–	–
Mauritius	2.0	4.5	–
Seychelles	0.309	0.295	–
Sri Lanka	–	0.057	–
Total	**10.01**	**33.927**	**7.016**

Source: Comoros NDC. 2016; Madagascar NDC. 2016; Maldives NDC (updated in 2020); Mauritius NDC. 2016; Seychelles NDC. 2015; Sri Lanka NDC. 2016; Sri Lanka NAP. 2016.

77. The finance needs for the region amount to USD 42.937 billion based on NDC estimates. This lower-bound estimate comprises USD 9.51 billion for mitigation and USD 33.427 billion for adaptation, which may also include capacity-building and technology needs. Including Madagascar's separate estimates of capacity-building and technology development and transfer needs of USD 1.754 billion and USD 5.262 billion, respectively, brings the total finance needed up to 2030 for the ISIO region to approximately USD 49.6 billion (see tables 26 and 27).[18]

78. Adaptation priorities vary across small States, with infrastructure representing the largest cost. Other priorities include the protection of coastal zones (including through infrastructure measures), water security, food security, tourism and human health.

B. Finance flows

79. Based on section IV, the ISIOs have received public climate finance from developed countries totalling USD 6.18 billion between 1991 and 2020, of which USD 2.87 billion was for adaptation activities, USD 2.50 billion for mitigation activities and USD 807.44 million cross-cutting activities. The inflow from public international sources averaged USD 213 million annually between 1991 and 2020. The distribution of the climate finance across the ISIOs has been varied, with the majority going to Sri Lanka, amounting to USD 3.38 billion. Madagascar has received USD 1.32 billion, Mauritius USD 734.99 million, Maldives USD 328.97 million, the Comoros USD 257.36 million and Seychelles USD 169.43 million.

C. Finance gap

80. Assuming a 10-year implementation period to 2030, the total estimated climate finance needs of ISIOs amount to USD 49.6 billion which equate to about USD 5 billion annually. Broadly speaking, a minimum 8-fold increase in the historic flow of international climate finance into the region up to 2030 would be required to meet current ISIOs needs.

[18] The estimated data is based on available information provided by ISIOs through various national reports, such as NDCs and NAPs, consequently, it may not reflect all the financial needs for mitigation and adaptation of ISIOs. This report does not include information on financial needs for loss and damage in the region.

Table 26
Mitigation finance needs
(USD million)

	Finance needs for mitigation	Water security	Coastal zone protection	Tourism
Comoros	–	–	–	–
Madagascar	–	–	–	–
Maldives	501[a]	-	–	200++[a]
Mauritius	1 310[b]	50[b]	10[b]	100[b]
Seychelles	191.7[d]	96.5[e]	-	20.8[e]
Sri Lanka	–	–	–	–

[a] Data derived from a cost–benefit analysis conducted by Maldives to support the 2020 update of the NDC.
[b] Mauritius Third National Communication. 2016.
[c] Time frame: 2020–2030.
[d] Public electricity, Seychelles NDC. 2016.
[e] Seychelles NDC. 2016.

Table 27
Adaptation finance needs
(USD million)

	Finance needs for mitigation	Water security	Health	Food security [a]	Coastal zone protection	Tourism
Comoros	–	–	–	6.6[b]	–	–
Madagascar	–	–	–	–	–	–
Maldives	–	64[c]–	–	–	Between 500 and 8 800[d]	–
Mauritius	2 149.4[e]	1 366.8[e]	15[e]	234.8[e]	–	–
Seychelles	125[f]	85[g]	30[g]	64[h]	45[g]	
Sri Lanka	1.5[i] 110[j]	45[k]	2.4[i] 2.1[j]	5.3[i] 116[j]	15[i] 2.5[j]	1.5[i]

[a] Food security includes agriculture, fisheries and irrigation.
[b] Comoros second NC. 2013.
[c] Direct communication between the Ministry of National Planning, Housing and Infrastructure and Ministry of Environment, Climate Change & Technology, Green Building. 2021.
[d] Maldives second NC. 2016.
[e] Mauritius third NC. 2016.
[f] Seychelles Infrastructure Action Plan. AfDB. 2015.
[g] Seychelles NDC. 2016.
[h] Seychelles National Agricultural Investment Plan 2015–2020. 2015.
[i] Sri Lanka NAP. 2016.
[j] Sri Lanka NCCAS 2011–2016. 2010.
[k] Sri Lanka NDC. 2016.

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VI. Barriers to accessing and mobilizing climate finance

81. Accessing climate finance from climate funds is typically a long-drawn-out process that requires potential projects in beneficiary countries to adhere to many regulations and countries to follow a bureaucratic institutional set-up to obtain approval for project submission. The main barriers to climate finance mobilization and access include the institutional capacity and ability to meet minimum criteria set by climate funds and financial institutions, and the ability to develop viable projects and programmes which would be technically and economically feasible.

82. Furthermore, there is a lack of coordination among climate change stakeholders in the region, especially those stakeholders that are focusing on climate investments, building capacity and designing climate projects. The enabling environment which would attract climate-friendly and resilient investments is insufficient.

83. As small island nations, the ticket size of potential investments in the ISIOs may not be sufficiently large to attract institutional investors. Furthermore, the ISIOs tend to have low domestic credit to the private sector by banks. This suggests that there could be a lack of liquidity in the domestic financial markets of these countries, which is a potential barrier to the mobilization of greater amounts of private finance for climate-related investments.

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VII. Climate finance access

A. Green Climate Fund

84. The GCF has committed financial assistance to the ISIOs, except for Seychelles, totalling USD 386.76 million. However, the present disbursements of the total amount committed vary from project to project. Table 28 summarizes the amounts disbursed to the ISIOs and the amounts pending.

Table 28
Tabulation of Green Climate Fund commitments and disbursements to the island States in the Indian Ocean
(USD million)

	Amount approved for readiness	Amount disbursed	Readiness type
Comoros	7.96	54.74	**62.70**
Madagascar	9.06	59.40	**68.46**
Maldives	19.39	4.25	**23.64**
Mauritius	2.36	79.03	**81.39**
Seychelles	0.00	19.40	**19.40**
Sri Lanka	16.38	61.57	**77.95**

Source: GCF. 2020.

85. Madagascar has received USD 69.90 million, Mauritius has received USD 81.40 million, Comoros has received USD 62.70 million, Sri Lanka has received USD 77.90 million, Maldives has received USD 23.64 million, and Seychelles has received USD 19.40 million.

1. Readiness Programme

86. In addition, the GCF has established the Readiness Programme, a funding scheme aimed at enhancing country ownership and access to the Fund. The main objective of the Programme is to strengthen the institutional capacities of NDAs or focal points and direct access entities. Each non-Annex I Party is able to access up to USD 1 million per year, of which up to USD 300,000 could be requested to establish or strengthen the NDA or focal point in order to deliver on the Fund's requirements. Additionally, up to USD 3 million can be requested by countries for the formulation of NAPs and/or other adaptation planning processes.

87. As reflected in table 29, all the ISIOs have accessed funding from the GCF Readiness Programme. Most readiness programmes supported the strengthening of NDA capacity and country programming. However, of the ISIOs, the only country programme available on the GCF database is that of Maldives.

Table 29
Tabulation of Green Climate Fund Readiness Programme support to the island States in the Indian Ocean
(USD thousand)

	Amount approved for readiness	Amount disbursed	Readiness type
Comoros	426.1	425.8	NDA strengthening and country programming
Madagascar	1 800.0	1 100.0	NDA strengthening and country programming Adaptation planning
Maldives	300.0	300.0	NDA strengthening and country programming
Mauritius	624.8	449.8	NDA strengthening and country programming Strategic frameworks
Seychelles	903.0	339.2	NDA strengthening and country programming Entity support
Sri Lanka	3 900.0	1 400.0	Strategic frameworks

Source: GCF. 2020.

2. Accreditation

88. The GCF mobilizes climate finance and channels it to countries by working through a wide range of organizations known as "accredited entities". Any organization — private, public, non-governmental, subnational, etc. — can apply to be an accredited entity of the GCF. Organizations are assessed to ensure that they meet the standards of the GCF in terms of their fiduciary capacity, environmental and social safeguards, and gender policy and procedures. Accredited entities play an important role in channelling GCF funding, as they are responsible for developing proposals to be considered by the Fund and, once these are approved, for the oversight, supervision, management and monitoring of the respective projects.

89. There are no direct (national) access entities in the ISIOs. However, there are many international access entities that the ISIOs can partner with to access GCF funding. Based on the GCF projects approved in the ISIOs so far, the following is a list of international access entities that the ISIOs have partnered with:

(a) Nederlandse Financierings-Maatschappij voor Ontwikkelingslanden;

(b) Agence française de développement;

(c) United Nations Development Programme;

(d) EIB;

(e) Conservation International Foundation;

(f) Kreditanstalt für Wiederaufbau;

(g) International Union for Conservation of Nature; and

(h) Japan International Cooperation Agency.

B. Global Environment Facility

90. The GEF was established in 1992 as a pilot programme of the WB to assist in protecting the global environment and promote environmentally sustainable development. It administers several trust funds, the main ones being the GEF Trust Fund, the LDCF, the SCCF and the Capacity-building Initiative for Transparency.

91. The GEF Trust Fund supports the implementation of multilateral environmental agreements and serves as a financial mechanism of the UNFCCC. It is also the oldest public climate change fund and has seen seven rounds of funding replenishment to date. In addition to climate change, the GEF Trust Fund supports the following focal areas: biodiversity, international waters, land degradation, sustainable forest management, ozone layer depletion and persistent organic pollutants.

92. The LDCF was established at COP 7 in 2001 with the aim of supporting the world's most vulnerable countries in their efforts to adapt to the effects of climate change, including by assisting them in preparing and implementing NAPAs: country-driven strategies that identify the most immediate needs of the LDCs in adapting to climate change. Presently, the LDCF is also assisting the LDCs in developing their NAPs.

93. As the name of the Fund suggests, eligibility to access the LDCF is restricted to the LDCs. Therefore, among the ISIOs, only the Comoros and Madagascar are allowed access to the LDCF. Maldives was formerly eligible to receive LDCF support but has since graduated out of the LDC grouping.

94. The SCCF was also established at COP 7 in 2001. It complements the LDCF and is open to all vulnerable developing countries (non-Annex I Parties). Compared to the LDCF, the SCCF funds a wider range of activities related to climate change. The SCCF prioritizes the funding of climate change adaptation. However, it also finances technology transfer, climate change mitigation in selected sectors, and economic diversification.

95. Financial flows received by the ISIOs as reported by the GEF up until 2020 amounted to USD 1.75 billion, of which USD 979.38 million was marked as climate change related. Madagascar has received the most finance for climate change related activities from the GEF (USD 304.24 million), followed by Sri Lanka and Mauritius. Table 30 shows the amount received for climate change related activities in each ISIO.

Table 30
Tabulation of the total funding received for climate change related activities by the island States in the Indian Ocean from the Global Environment Facility
(USD million)

	Amount received
Comoros	91.83
Madagascar	304.24
Maldives	98.53
Mauritius	177.79
Seychelles	108.56
Sri Lanka	198.44

Source: GEF. 2020.

96. The GEF Trust Fund provided the largest financial flows for climate-related projects in the ISIOs (USD 827.14 million), followed by the LDCF (USD 51.45 million), the SCCF (USD 12.13 million) and the Capacity-building Initiative for Transparency (USD 2.21 million).

97. Funding for each country from the GEF Trust Fund is allocated for each replenishment period through the System for Transparent Allocation of Resources, which aims to allocate resources to countries in a transparent and consistent manner based on global environmental priorities and country capacity, policies and practices relevant to the successful implementation of GEF projects and programmes.[19] Table 31 summarizes the country allocations for the seventh replenishment period for the climate change focal area.

Table 31
Indicative allocations in the Global Environment Facility Trust Fund's seventh replenishment for the climate change focal area
(USD million)

	Indicative allocation
Comoros	1.5
Madagascar	1.5
Maldives	1.0
Mauritius	1.0
Seychelles	1.0
Sri Lanka	1.5

Source: GEF. 2020.

98. Before July 2018, each LDC was eligible to access up to USD 50 million cumulatively from the LDCF. However, since then, an access cap has been in place, limiting the amount that each LDC can draw to USD 10 million in LDCF resources towards the USD 50 million cumulative ceiling during the seventh replenishment of the GEF. According to the 27th meeting of the LDCF/SCCF Council, this was to ensure more timely access to resources by as many LDCs as possible, while also maintaining the practice of equitable access (GEF, 2019). Only the Comoros and Madagascar are eligible to access LDCF funding. Neither country has accessed LDCF resources in the seventh replenishment of the GEF. However, the Comoros has cumulatively accessed USD 29.96 million in LDCF resources, while Madagascar has accessed USD 19.62 million (see table 32).

[19] GEF, 2018.

Table 32
Least Developed Countries Fund resources allocated and remaining balance in eligible island States in the Indian Ocean
(USD million)

	Cumulative approved and pending work programme approval	Resources accessed in the seventh replenishment of the GEF	Balance under the seventh replenishment of the GEF	Balance under cumulative ceiling
Comoros	29.96	0.00	10.00	20.04
Madagascar	19.62	0.00	10.00	30.38

Source: GEF. 2019.

Therefore, the Comoros and Madagascar are still able to access USD 20.04 million and USD 30.38 million, respectively, in LDCF resources. Table 32 reflects the status of the Comoros and Madagascar in terms of their access to funding from the LDCF.[20]

C. Adaptation Fund

99. The AF was established in 2001 and launched in 2007 to finance concrete adaptation projects and programmes in developing country Parties to the Kyoto Protocol that are particularly vulnerable to the adverse effects of climate change. In December 2018, the Parties to COP 24 decided that the Fund would also serve the Paris Agreement.

100. The ISIOs, with the exception of the Comoros, have received funding from the Fund. Mauritius has received the most, at USD 9.12 million. Maldives has received USD 8.99 million, Sri Lanka USD 7.99 million, Seychelles USD 6.46 million and Madagascar USD 5.10 million (see table 31).

101. The amount of AF funding that individual countries are able to access is currently capped at USD 10 million. While the ISIOs have not reached this cap, the remaining funding amounts available to Mauritius, Maldives and Sri Lanka are relatively small. Thus, it may be challenging for these countries to continue accessing AF funding with the current country cap.

102. As with the GCF, funding under the AF is accessed via entities accredited by the Fund. There are three types of entities: national implementing entities, regional implementing entities and multilateral implementing entities. There are no national implementing entities or regional implementing entities in the ISIOs. Access to the AF in the ISIOs has so far been gained through the United Nations Development Programme and the United Nations Environment Programme.

Table 33
Adaptation Fund resources accessed and remaining balances in the island States in the Indian Ocean
(USD million)

	Amount accessed	Remaining balance (based on USD 10 million country cap)
Comoros	0.00	10.00
Madagascar	5.10	4.90
Maldives	8.99	1.01
Mauritius	9.12	0.88
Seychelles	6.46	3.54
Sri Lanka	7.99	2.01

Source: AF. 2020.

D. Climate Investment Funds

103. Countries are invited to join CIF, following which they are engaged in a multistage process to plan and implement strategic and climate-smart investments. CIF has four programmes: (i) the Clean Technology Fund, (ii) the Forest Investment Programme, (iii) the Pilot Programme for Climate Resilience and (iv) the Scaling Up Renewable Energy in Low Income Countries programme. Among the ISIOs, only Madagascar and Maldives are currently involved with CIF. However, only Maldives has accessed climate finance from CIF: USD 23.96 million from the Scaling Up Renewable Energy in Low Income Countries programme and USD 30 million from the Clean Technology Fund.

[20] GEF. 2019.

E. Bilateral channels of climate finance

104. As seen in section IV, there are many bilateral sources of international public climate finance. However, the flows from these sources are often based on the bilateral relationship between the donor and recipient countries. Thus, accessibility is dependent on the countries' relations. Nonetheless, there are several bilateral sources that recipient countries can access through open calls. These include the Global Climate Change Alliance Plus initiative, the International Climate Initiative and the Sustainable Use of Natural Resources and Energy Finance programme.

1. Global Climate Change Alliance Plus initiative

105. The Global Climate Change Alliance Plus is a European Union initiative that targets mainly small island developing States and the LDCs to increase their resilience to the impacts of climate change.

106. All the ISIOs, with the exception of Sri Lanka, have received climate finance commitments under this initiative. Maldives has received EUR 5 million, while Seychelles, the Comoros and Mauritius have each received EUR 3 million. Madagascar has a programme under the initiative. However, the programme's budget was not indicated.

2. International Climate Initiative

107. The International Climate Initiative of the German Federal Ministry of the Environment, Nature Conservation and Nuclear Safety has been financing climate and biodiversity projects in developing countries since 2008.

108. All the ISIOs have received funding from the Initiative. However, the projects funded by the Initiative tend to be transnational, with no indication of the amounts received by each country. There were only two national projects, one in Maldives and the other in Mauritius. Table 34 summarizes the total climate finance flows of the projects in which individual ISIOs are involved.

Table 34
Total climate finance commitments of the projects in which individual island States in the Indian Ocean are involved
(EUR million)

	Total
Comoros	7.90
Madagascar	9.79
Maldives	20.41
Mauritius	14.22
Seychelles	39.41
Sri Lanka	91.58

Source: International Climate Initiative. 2020.

3. Sustainable Use of Natural Resources and Energy Finance programme

109. The programme is the "green finance" label of the Agence française de développement. It establishes a credit line that local banks in developing countries can tap into to lend to companies or individuals for projects at the intersection of development and environmental protection. Among the ISIOs, only Mauritius has received funding, in the amount of EUR 42.01 million.

F. Domestic market development

110. The development of sustainable finance capacity in local financial institutions in the ISIOs is either in its infancy or absent. Sri Lanka is the most advanced among the ISIOs and published a sustainable finance road map in April 2019. Mauritius announced in its 2019 budget that it would introduce a framework for green finance and concretized this announcement by signing the Marrakech Pledge.[21] No such plans have been announced by the other four countries.

[21] The Marrakech Pledge is a coalition of African capital market regulators and exchanges committed to acting collectively in favour of green finance.

111. The Sri Lanka sustainable finance road map lays out an action plan to develop domestic sustainable finance capacity. This plan consists of six pillars and describes in detail the roles that the regulator and financial institutions have to play in achieving the objectives of the road map. The pillars are:

(a) Financing Vision 2030: Vision 2030 identifies investment needs in priority sectors. Thus, this pillar targets the development, by financial institutions, of innovative sustainable finance products that would enable the financing of identified investment needs. These include the development of green loans, green bonds, green public equity, etc.;

(b) Environmental, social and governance integration into the financial market: this includes developing environmental, social and governance disclosure guidelines and facilitating the development of environmental, social and governance risk management strategies;

(c) Financial inclusion: this pillar aims to increase the financial literacy of MSMEs, low-income households, youth and women, and their access to the formal financial sector;

(d) Capacity-building: this pillar seeks to train finance professionals in new green products and technologies, and in environmental, social and governance risk management and opportunities;

(e) International cooperation: this pillar seeks to accelerate collective progress with regard to sustainable finance in Sri Lanka through knowledge-sharing and capacity-building with international networks, such as the Sustainable Banking Network, and to mobilize international, regional and local funding sources to accelerate the implementation of the road map; and

(f) Measurement and reporting: this pillar aims to develop tools and statistics that will help to track sustainable financial flows in the country, monitor and evaluate the effectiveness of measures and identify areas for improvement.

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Further information, related to the NBF Project
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https://unfccc.int/NBF_Project

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